

FILED  
DEC 15 1997  
MISSOURI  
PUBLIC SERVICE COMMISSION

SCHEDULE RMS-1

CASE NO. EM-97-515



**BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. EC97-\_\_\_\_-000**

**REGARDING THE MERGER OF  
WESTERN RESOURCES, INC.  
AND  
KANSAS CITY POWER & LIGHT COMPANY**

**DIRECT TESTIMONY OF  
DR. ROBERT M. SPANN**

**ON BEHALF OF  
WESTERN RESOURCES, INC.  
AND  
KANSAS CITY POWER & LIGHT COMPANY**

## TABLE OF CONTENTS

|      |  |    |
|------|--|----|
| I.   | <u>INTRODUCTION AND QUALIFICATIONS</u> .....   | 1  |
| II.  | <u>SUMMARY OF TESTIMONY</u> .....  | 4  |
|      | A. Overview of Approach and Conclusions .....  | 4  |
|      | B. Overview of Methodology .....   | 7  |
|      | C. Product Market.....   | 7  |
|      | D. Geographic Market.....  | 8  |
|      | E. Analysis of Concentration .....   | 14 |
|      | F. Other Considerations/Remedial Matters.....  | 18 |
| III. | <u>OVERVIEW OF ANALYTICAL FRAMEWORK AND RESULTS</u> .....  | 19 |
| IV.  | <u>WESTERN RESOURCES' AND KCPL'S ACTIVITIES AS BUYERS AND SELLERS OF POWER</u> .....                           | 26 |
| V.   | <u>APPLICATION OF MERGER POLICY STATEMENT AND MERGER GUIDELINES TO THE WESTERN RESOURCES-KCPL MERGER</u> ..... | 34 |
|      | A. Overview.....   | 34 |
|      | B. Product Markets Analyzed.....   | 35 |
|      | C. Relevant Geographic Market.....   | 36 |
|      | D. HHIs Based on Total Capacity.....   | 55 |
|      | E. HHIs for Baseload Coal and Nuclear Capacity .....   | 58 |
|      | F. HHIs Based on Peaking Capacity .....  | 60 |
|      | G. HHIs Based on Uncommitted Capacity .....  | 61 |
|      | H. HHIs Based on Economic Capacity .....   | 63 |
|      | I. HHIs Based on Marginal Economic Capacity.....   | 84 |

|  |     |
|--|-----|
| J. HHIs Based on Individual Destination “Markets” .....    | 96  |
| VI. <u>GAS-ELECTRIC VERTICAL MARKET POWER ISSUES</u> ..... | 102 |

11 A. I received both my Bachelor's and Master's degrees in Economics from North  
12 Carolina State University in 1970. I received my Ph.D. in Economics, with a  
13 co-major in Statistics, from the same university in 1973. While doing graduate

1 work at North Carolina State, I taught courses in the principles of economics. I  
2 was also the recipient of a National Science Foundation Fellowship and a  
3 Resources for the Future Dissertation Fellowship. I have served on the faculties  
4 of Virginia Polytechnic Institute and State University, Montana State University,  
5 the University of Chicago, and George Washington University. I have taught  
6 courses in econometrics, economic theory, applied microeconomics, and  
7 regulatory economics.

8 During the period 1975-1989, I was a Principal of ICF Incorporated, a  
9 Washington, DC, consulting firm. I have been actively involved as a consultant  
10 in the areas of energy, utility, and antitrust economics since 1972. During the last  
11 25 years, I have performed consulting assignments for state regulatory bodies,  
12 federal government agencies, regulated utilities, energy companies, and utility  
13 consumers. I have testified before state and federal regulatory bodies and courts  
14 on numerous occasions. I also have assisted in the competitive analysis of  
15 mergers in a wide range of industries including banking, glass containers, natural  
16 gas, utilities, and frozen foods for presentation to the Department of Justice (DOJ)  
17 and Federal Trade Commission (FTC).

18 I am a member of both the American Economic Association and the  
19 American Statistical Association, and an associate member of the American Bar  
20 Association Section on Antitrust.

21 I have published numerous articles on regulatory economics in  
22 professional journals. Exhibit \_\_\_\_ (RMS-1) is my résumé.

1    **Q.    HAVE YOU ANALYZED OR TESTIFIED REGARDING MARKET**  
2           **POWER IN OTHER RECENT PROCEEDINGS INVOLVING ELECTRIC**  
3           **UTILITIES?**

4    A.    Yes. In August of 1997, I filed testimony at the Federal Energy Regulatory  
5           Commission (FERC, or the Commission) regarding the competitive effects of the  
6           Long Island Power Authority acquiring Long Island Lighting Company's  
7           transmission and distribution assets, as well as certain other assets. In March of  
8           1997, I filed testimony at both FERC and the New York Public Service  
9           Commission on behalf of Long Island Lighting Company regarding the  
10          competitive effects of the proposed business combination of Long Island Lighting  
11          Company and the Brooklyn Union Gas Company. I filed testimony at FERC in  
12          February 1997 on behalf of Duke Power Company and PanEnergy Corp.  
13          regarding the competitive effects of their proposed merger. I testified at FERC in  
14          1996 on behalf of Southwestern Public Service (SPS) and Public Service  
15          Company of Colorado (PSCo) regarding the competitive effects of their proposed  
16          merger. I also testified in 1996 on behalf of SPS and PSCo in merger-related  
17          proceedings in Texas, and I filed testimony in New Mexico regarding the  
18          competitive effects of their proposed merger. I filed testimony at FERC in 1996  
19          as part of Western Resources' application for approval of its acquisition of Kansas  
20          City Power & Light. In 1995, I analyzed market power for Duke Power Company  
21          and for PSCo in connection with their applications to FERC in support of market-  
22          based rates. Also in 1995, I testified regarding antitrust issues on behalf of Texas  
23          Utilities Electric Company in a complaint proceeding before the Public Utility



Commission of Texas. In 1994, I filed testimony at FERC on behalf of Washington Water Power and Sierra Pacific Power Company regarding the competitive effects of their proposed merger.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

A. I have been asked by Western Resources and KCPL ("Applicants") to conduct an economic analysis of the competitive effects of their proposed merger. In addition to my direct testimony and exhibits, I have also prepared a substantial amount of material that has been provided on CD-ROM. This information includes electronic versions of all of my exhibits and supporting databases, as well as system load and lambda data from Form 714 filings and the 1997 Southwest Power Pool (SPP) peak transmission assessments. This information is being provided in response to the data requirements of Appendix B of the *Merger Policy Statement*.

**II. SUMMARY OF TESTIMONY**

**A. Overview of Approach and Conclusions**

**Q. PLEASE SUMMARIZE THE ANALYSIS YOU HAVE CONDUCTED.**

A. I have analyzed the competitive effects of the proposed merger following the approach outlined by FERC in its Order No. 592, *Merger Policy Statement Establishing Factors the Commission Will Consider in Evaluating Whether a Proposed Merger Is Consistent with the Public Interest (Merger Policy Statement)*. In its *Merger Policy Statement*, the Commission states that it has adopted the Department of Justice/Federal Trade Commission Merger Guidelines

1       (*Merger Guidelines*) as the analytical framework for evaluating the effects of a  
2       merger on competition. Thus, I also have drawn on my understanding of the  
3       *Merger Guidelines* in performing my analysis.

4               The *Merger Policy Statement* screen analysis involves evaluating market  
5       concentration as measured by the Herfindahl-Hirschman Index (“HHI”) and  
6       changes in market concentration due to a merger for the relevant geographic  
7       market. If the post-merger level of market concentration (post-merger HHI) and  
8       the change in market concentration are below specified threshold or “safe harbor”  
9       levels, the merger is deemed to have no adverse effect on competition, and no  
10      further analysis is required.

11   **Q. PLEASE DESCRIBE GENERALLY WHERE THE APPLICANTS**  
12   **OPERATE.**

13   A. Western Resources operates a utility system in the eastern half of Kansas. KCPL  
14       operates a utility system in Kansas City, Missouri; east-central Kansas; and  
15       central Missouri. Both Western Resources and KCPL are members of the  
16       Southwest Power Pool (SPP). Members of the SPP include utilities in Kansas,  
17       Missouri, Louisiana, Arkansas, Oklahoma, and parts of Texas and Mississippi.  
18       Western Resources and KCPL sell wholesale power to entities throughout the  
19       SPP. Both merging parties also sell wholesale power to Union Electric Company  
20       (Union), which is located in eastern Missouri. Union is part of the MidAmerican  
21       Interconnected Network (MAIN). Union sells power to wholesale customers of  
22       the merging parties. The merging parties sell some power in the Mid-Continent

1 Area Power Pool (MAPP), the reliability council that includes Nebraska, Iowa,  
2 Minnesota, North Dakota, South Dakota, and parts of Montana, Wisconsin,  
3 Saskatchewan, and Manitoba. However, power generally flows from north to  
4 south in this region, and MAPP utilities are competitors to the merging parties  
5 more than they are customers of the merging parties. Finally, the merging parties  
6 sell significant amounts of wholesale power to power marketers, who resell that  
7 power to other utilities in the SPP as well as to neighboring reliability councils.  
8 Exhibit \_\_\_\_ (RMS-9), page 1 of 2, is a map showing the service areas of  
9 wholesale utility customers of the merging parties.

10 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

11 A. Based on my analysis of this merger using the approach outlined in the *Merger*  
12 *Policy Statement* and in the *Merger Guidelines*, I conclude that the proposed  
13 merger of Western Resources and KCPL does not raise any competitive concerns.  
14 My conclusions from the formal analysis are reinforced by an examination of the  
15 nature of competition in the relevant geographic market.

16 Entities directly interconnected with the merging parties have purchased  
17 power from as far east as Carolina Power and Light and Kentucky Utilities, as far  
18 south as Louisiana, as far southwest as the Texas Panhandle, and as far north as  
19 Minnesota. One Tier 1 entity to both merging parties, Union, and one Tier 2  
20 entity, Entergy, which is a major customer of the merging parties, are  
21 interconnected with the Tennessee Valley Authority (TVA) and purchase  
22 significant amounts of power from TVA.

1           The merging parties face numerous competitors. Many wholesale  
2 customers of the merging parties can substitute their own generation for purchases  
3 from the merging parties. Many members of the SPP can purchase power from  
4 any other SPP member by incurring one or two wheeling charges. Several  
5 members of the SPP have significant interconnections with other reliability  
6 councils.

7           **B. Overview of Methodology**

8   **Q. PLEASE SUMMARIZE THE METHODOLOGY YOU FOLLOWED IN**  
9   **YOUR FORMAL ANALYSIS.**

10 A. The major elements of the analysis outlined in Appendix A to the *Merger Policy*  
11 *Statement* are as follows: 1) define the relevant product market(s); 2) define the  
12 relevant geographic market; 3) analyze concentration in these markets by  
13 calculating market shares, the HHI, and the change in the HHI occasioned by the  
14 merger and comparing these results to thresholds set forth in the *Merger*  
15 *Guidelines* and adopted in the *Merger Policy Statement*; and 4) address other  
16 considerations and remedial measures if necessary (*Merger Policy Statement*,  
17 Appendix A, pp. 1-24). I implemented each of these steps.

18           **C. Product Market**

19   **Q. WHAT IS THE RELEVANT PRODUCT MARKET?**

20 A. The relevant product is non-firm and short-term firm energy. As I explain later in  
21 my testimony, there is no need to measure concentration in long-term capacity. If  
22 a firm is unable to exercise market power in the short run, it will be unable to

1 exercise market power in the longer run. Focusing the analysis on non-firm and  
2 short-term firm energy is consistent with FERC's methodology in *Ohio Edison*  
3 (Docket Nos. EC97-5-000).

4 **D. Geographic Market**

5 **Q. HOW DID YOU DEFINE THE RELEVANT GEOGRAPHIC MARKET?**

6 A. I have calculated HHIs using two different approaches to geographic market  
7 definition. Under my first approach I define the relevant regional geographic  
8 market. In the second I treat individual customers as distinct "markets." In my  
9 opinion, the first approach is the appropriate method for analyzing this merger.  
10 As I discuss below, the second approach -- treating destination utilities as if they  
11 were antitrust markets -- does not reflect the realities of today's wholesale power  
12 markets.

13 **Q. WHY HAVE YOU PRESENTED HHIs BASED ON THESE TWO**  
14 **APPROACHES?**

15 A. In the past, when analyzing the competitive effects of electric utility mergers, the  
16 Commission sometimes has treated individual destination utilities as distinct  
17 geographic markets. While this may have been appropriate in the past, recent  
18 changes in wholesale power markets -- brought about largely in response to  
19 FERC's Order No. 888 -- have significantly diminished the usefulness of this  
20 approach. Specifically, open transmission access and greatly increased trading in  
21 electricity by both utilities and power marketers mean that it is now possible and

1 more economically appropriate to follow the approach to market definition set  
2 forth in the *Merger Guidelines*.<sup>1</sup>

3 Under the *Merger Guidelines*,

4 Absent price discrimination, the Agency will delineate the  
5 geographic market to be a region such that a hypothetical  
6 monopolist that was the only present or future producer of the  
7 relevant product at locations in that region would profitably impose  
8 at least a "small but significant and nontransitory" increase in  
9 price, holding constant the terms of sale for all products produced  
10 elsewhere. That is, assuming that buyers likely would respond to a  
11 price increase on products produced within the tentatively  
12 identified region only by shifting to products produced at locations  
13 of production outside the region, what would happen? If those  
14 locations of production outside the region were, in the aggregate,  
15 sufficiently attractive at their existing terms of sale, an attempt to  
16 raise price would result in a reduction in sales large enough that the  
17 price increase would not prove profitable, and the tentatively  
18 identified geographic area would prove to be too narrow. (*Merger*  
19 *Guidelines*, §1.21)  
20

21 Following the standards outlined in the *Merger Guidelines*, the relevant  
22 geographic market should be defined as the region that includes the capacity that  
23 constrains the ability of the merged entity to increase prices. Relevant geographic  
24 markets tend to be regional in scope. Individual destination utilities will be  
25 distinct geographic markets only if it can be shown that the merged entity could  
26 engage in price discrimination and target specific buyers for price increases.  
27 Systematic and sustained price discrimination is unlikely in the post-Order No.  
28 888 world. However, at the request of the Applicants, I calculated HHIs based on

---

<sup>1</sup> As noted above, the Commission states in the *Merger Policy Statement* that it has adopted the analytical framework laid out in the DOJ/FTC *Merger Guidelines*.

1 individual destination utilities. Appendix 1 to my testimony discusses the  
2 principles relevant to geographic market definition and provides several  
3 illustrative examples.

4 **Q. DID YOU CONSIDER WHETHER INDIVIDUAL BUYERS COULD BE**  
5 **TARGETED FOR PRICE INCREASES BY THE MERGED COMPANY?**

6 A. Yes. I considered whether the merged firm could raise prices to some buyers but  
7 not to others. While such price discrimination (i.e., targeted price increases) may  
8 have been possible in the past, it is unlikely today. Order No. 888 substantially  
9 increased transmission access. As my testimony explains, the increased  
10 transmission access and the increased trading in electricity that have occurred in  
11 the last year have reduced significantly any ability utilities might have once had to  
12 selectively increase prices to individual buyers. In many cases, when Western  
13 Resources or KCPL sells power, the buyer is a power marketer and the seller does  
14 not know the ultimate purchaser of the power. Entities purchasing power from  
15 Western Resources have altered the delivery points during the course of a  
16 transaction. When Western Resources or KCPL offers to sell power on the  
17 Continental Power Exchange (discussed in more detail below), it does not know  
18 the potential buyer's identity until after an offer to sell is accepted. If the merged  
19 entity attempted to selectively increase prices to some buyers, power marketers  
20 and/or customers of the merged entity whose prices were not increased would  
21 simply resell power purchased from the merged entity to the buyer whose prices

1 had been increased. Such arbitrage possibilities substantially reduce or eliminate  
2 the ability of firms to engage in selective price increases.

3 Power marketers have grown very rapidly. Sales by power marketers  
4 increased eight-fold from 1995 to 1996. Total sales by power marketers in the  
5 second quarter of 1997 (216 million MWH) almost equaled total sales by power  
6 marketers for the entire year in 1996 (see *Power Markets Week*, August 18, 1997,  
7 pp. 1,7). I discuss this point in greater detail later in my testimony.

8 In light of these facts, I have determined that the geographic market  
9 relevant to the analysis of the proposed merger is regional in scope, and I have  
10 consequently calculated HHIs in that regional market. I believe this is the most  
11 economically appropriate way to analyze concentration in this case, and most of  
12 my testimony focuses on those calculations.

13 **Q. PLEASE DESCRIBE THE REGIONAL MARKET YOU BELIEVE IS**  
14 **RELEVANT FOR THE ANTITRUST ANALYSIS OF THE PROPOSED**  
15 **MERGER.**

16 **A.** Defining the relevant geographic market involves determining the customers that  
17 might be affected by the merger and the suppliers that compete with the merging  
18 parties to serve those customers. The merging parties sell wholesale power  
19 primarily to customers in the SPP and also to Union. Union is in the Eastern  
20 Missouri portion of MAIN. These are the customers that might be affected by the  
21 merger.



1 Under the DOJ/FTC *Merger Guidelines*, the relevant geographic market  
2 for purposes of analyzing a merger should be defined to include the capacity  
3 owned by others that constrains the ability of the merged entity to increase prices.  
4 This means that the relevant geographic market should be defined to include the  
5 capacity that might supply additional output if the merged entity reduced output  
6 and attempted to increase prices. At a minimum, for purposes of analyzing this  
7 merger, the suppliers in the relevant market must include all of the other entities  
8 that own generating capacity in the SPP. In addition, Union can substitute its own  
9 generation for purchases from the merging parties. Union also sells power to  
10 other customers of the merging parties. Capacity owned by Union constrains the  
11 ability of the merging firms to raise prices and, thus, is part of the relevant market.  
12 Utilities in MAPP own low-cost coal capacity and sell power to customers of the  
13 merging parties in the SPP. Capacity owned by utilities in MAPP competes with  
14 the merging parties and is also part of the relevant market, subject to transmission  
15 availability between MAPP and the SPP. TVA sells significant amounts of power  
16 to two major customers of the merging parties, and its capacity constrains prices  
17 in the relevant market. In 1996 TVA's sales of non-firm and short-term firm  
18 power in the SPP/Union area exceeded the combined sales of non-firm and short-  
19 term firm power by the Applicants. TVA's capacity is part of the relevant market.  
20 The Southern Company (Southern) is a Tier 2 entity to many of the utilities that  
21 are directly interconnected with the merging parties. In 1996, Southern  
22 Company's sales to Entergy were about three times as large as KCPL's sales to  
23 Entergy. Entergy was one of KCPL's ten largest customers of non-firm and short-

1 term firm power in 1996. As I describe in more detail below, I report HHI  
2 statistics both with and without inclusion of capacity from TVA and Southern.

3 **Q. HAVE YOU ALSO ANALYZED CONCENTRATION TREATING**  
4 **INDIVIDUAL CUSTOMERS AS DISTINCT GEOGRAPHIC**  
5 **"MARKETS"?**

6 A. Yes. At the request of the Applicants, I have calculated HHIs assuming that  
7 individual destination utilities are relevant antitrust markets. The results of those  
8 calculations are presented in Exhibit \_\_\_\_ (RMS-25). However, I do not believe  
9 that the destination utility analysis should be used to evaluate the competitive  
10 effects of the proposed merger. Destination utilities are too narrow to be  
11 considered relevant antitrust markets.

12 **Q. DO YOUR CONCLUSIONS CHANGE IF YOU TREAT INDIVIDUAL**  
13 **CUSTOMERS AS DISTINCT GEOGRAPHIC "MARKETS" RATHER**  
14 **THAN ANALYZING THE REGIONAL MARKET YOU HAVE DEFINED?**

15 A. No. Using either approach to market definition, it is clear that the proposed  
16 merger poses no threat to competition. I have calculated HHIs for the relevant  
17 regional geographic market using numerous alternative measures of capacity. The  
18 overall conclusion from those calculations is that the Applicants have a small  
19 share of a broad market. In virtually all cases, the post-merger HHIs indicate that  
20 the market is either moderately concentrated or unconcentrated. The changes in  
21 the HHIs are generally within the range for which no further antitrust analysis is  
22 required.

1           In most cases, the level of the post-merger HHI and the change in the HHI  
2           for each individual destination "market" are well within the safe-harbor limits of  
3           the *Merger Policy Statement*. In almost all cases, the post-merger HHIs indicate  
4           that the market is either moderately concentrated or unconcentrated. In the  
5           instances in which the change in the HHI exceeds the safe-harbor levels, other  
6           factors clearly indicate that this merger raises no competitive concerns. More  
7           importantly, as I discuss in more detail below, individual destination utilities are  
8           too narrow to be relevant antitrust markets in today's electric market. The results  
9           for destination markets are shown in Exhibit \_\_\_\_ (RMS-25). The details of the  
10          calculations are contained in my workpapers, supplied on CD-ROM with this  
11          testimony.

12       **E.       Analysis of Concentration**

13       **Q.       PLEASE SUMMARIZE YOUR ANALYSIS OF CONCENTRATION**  
14       **BASED ON TOTAL CAPACITY.**

15       A.       I analyzed concentration for a number of different types of capacity. The first  
16       measure I examined was total capacity. Total capacity in the relevant regional  
17       market as just defined is at least 76,279 MW. This amount excludes capacity  
18       from TVA and Southern. It includes only a small amount of capacity from MAPP  
19       and the southwestern part of the SPP because of transmission limitations.

20               Western Resources owns 5,333 MW of generating capacity while KCPL  
21       owns 3,134 MW of generating capacity. Western Resources' share of the total  
22       capacity of the SPP plus Union plus the capacity of MAPP I included in the

1 market is 7.0 percent and KCPL's share is 4.1 percent. The post-merger market  
2 share of the combined entity is 11.1 percent; the change in the HHI is 57.<sup>2</sup>  
3 Including TVA and Southern capacity would result in an even lower change in the  
4 HHI.

5 The post-merger HHI for total capacity in the relevant market is 1,399.  
6 These calculations are shown in Exhibit \_\_\_\_ (RMS-15). The level of this post-  
7 merger HHI combined with a change in the HHI of 57 is well within the safe-  
8 harbor provisions of the *Merger Policy Statement* and the DOJ/FTC *Merger*  
9 *Guidelines*. This means that the merger is unlikely to adversely affect  
10 competition, and no further analysis is required.

11 **Q. DID YOU CONSIDER THE EFFECT OF THE MERGER ON ANY**  
12 **SPECIFIC COMPONENTS OF TOTAL CAPACITY?**

13 A. Yes. I also have considered the impact of the merger based on baseload capacity  
14 versus peaking capacity.

15 **Q. PLEASE DESCRIBE YOUR ANALYSIS OF CONCENTRATION FOR**  
16 **BASELOAD CAPACITY.**

17 A. Coal-fired plants represent about 45 percent of total capacity in the market  
18 consisting of the SPP, Union, and the constrained amount of MAPP capacity I  
19 include. Nuclear plants account for about 7 percent of total capacity in that  
20 market. The vast majority of the remaining 48 percent is gas-fired. A substantial

---

<sup>2</sup> As discussed below, the change in the HHI due to a merger is computed as two times the product of the merging firms' market shares. Two times the product of 7.0 percent and 4.1 percent is approximately 57.

1 amount of wholesale power market activity in the SPP involves utilities that own  
2 baseload coal or nuclear capacity selling power to other entities that have  
3 significant amounts of gas-fired capacity when coal-fired capacity is available to  
4 displace generation from higher-cost, gas-fired capacity. During off-peak periods  
5 and during lower load hours of peak periods, coal-fired capacity can be the  
6 marginal generation source in the SPP, and so it is coal-fired capacity that  
7 determines prices during those time periods. As a result, one possible concern  
8 might be that if the merger substantially increased the concentration of ownership  
9 of such capacity, it might lead to price increases. These price increases would be  
10 most likely to occur, if they occurred at all, during off-peak hours or under lighter  
11 load conditions.

12 I have calculated the change in the HHI due to this merger as well as the  
13 post-merger HHI based on baseload coal and nuclear capacity in the relevant  
14 geographic market. The post-merger HHI is 1,210. See Exhibit \_\_\_\_ (RMS-16).  
15 This post-merger HHI is in the lower end of the moderately concentrated range.  
16 The change in the HHI is 122. Viewed in context, the magnitude of this increase  
17 is of no practical significance. The *Merger Guidelines* consider levels of the HHI  
18 and changes in the HHI just above and just below the safe-harbor levels to have  
19 the same competitive significance. A change in the HHI of just over 100, in a  
20 market with a post-merger HHI at the lower end of the moderately concentrated  
21 range, indicates that the merger raises no competitive concerns. More  
22 importantly, these calculations are for baseload or off-peak capacity. It is under  
23 these conditions that supply is most elastic, i.e., there is the most capacity

1 available to respond to and defeat an attempt by the merged entity to increase  
2 prices. Finally, these calculations exclude coal-fired and nuclear capacity owned  
3 by TVA and Southern that might deliver output to the SPP or Union. Including  
4 TVA and/or Southern capacity would result in even lower changes in the HHI due  
5 to this merger. The HHI calculations for baseload capacity present no cause for  
6 concern.

7 **Q. DID YOU ANALYZE THE EFFECTS OF THE MERGER ON PEAKING**  
8 **CAPACITY?**

9 **A.** Yes. I also analyzed concentration in the ownership of peaking capacity. Another  
10 concern that might be raised is whether the merger would substantially increase  
11 the concentration of ownership of peaking capacity, leading to price increases  
12 during peak periods. This is not an issue in this merger. KCPL does not have any  
13 economic peaking capacity, and so the change in the HHI based on peaking  
14 capacity due to this merger is zero. KCPL has 503 MW of very high-cost, older  
15 combustion turbine capacity. Although KCPL's total capacity of 3,134 MW  
16 exceeds its 1996 peak demand of 2,987 MW, 503 MW of this capacity are not  
17 economic.<sup>3</sup> As a result, KCPL has substantial net purchases of capacity at the  
18 time of its peak. This means that KCPL's peaking capacity should be given zero  
19 weight in the HHI calculations. As noted in the Appendix (p. 8) of the

---

<sup>3</sup> The 503 MW of capacity are at two plants, Northeast and Grand Avenue. Northeast is a gas-turbine plant; Grand Avenue is a steam-turbine plant. The Northeast plant ran for a total of 7 hours in 1996 and the Grand Avenue plant ran for 42 hours. Northeast had energy costs of over 50 mills per KWH in 1996, and Grand Avenue's costs were approximately 80 mills per KWH.

1 Department of Justice Comments in Docket No. RM96-6-000, "[G]eneration  
2 resources should be assigned market shares of zero if it can be established that  
3 they would have marginal operating cost far in excess of foreseeable prevailing  
4 prices."

5 **Q. WHAT OTHER MEASURES OF CAPACITY DID YOU ANALYZE?**

6 A. I have also calculated the post-merger HHI and the change in the HHI due to the  
7 merger for the relevant geographic market based on economic capacity and  
8 marginal economic capacity. Economic capacity is all capacity from which  
9 output could be delivered to the market at a cost less than or equal to the market  
10 price. Marginal economic capacity is capacity with costs near the market-clearing  
11 price. It represents the additional capacity that would become economic if prices  
12 were to increase slightly. This is capacity that might respond to price increases  
13 and so limits the ability of any one supplier to increase prices. The level of the  
14 post-merger HHI and the change in the HHI are generally within the safe-harbor  
15 range under the *Merger Policy Statement*. This means that the merger has no  
16 adverse effect on competition and no further analysis is required. See Exhibit  
17 \_\_\_\_ (RMS-21) and Exhibit \_\_\_\_ (RMS-23).

18 **F. Other Considerations/Remedial Matters**

19 **Q. DID YOU ADDRESS OTHER CONSIDERATIONS OR ANALYZE**  
20 **REMEDIAL POSSIBILITIES?**

21 A. No, I did not. My analysis demonstrates that the merger poses no threat to  
22 competition in the relevant geographic market; thus, there is no need to address  
23 measures that mitigate adverse effects on competition.

1    **III. OVERVIEW OF ANALYTICAL FRAMEWORK AND RESULTS**

2    Q.    HOW IS YOUR DISCUSSION OF THE FRAMEWORK FOR  
3    ANALYZING MERGERS ORGANIZED?

4    A.    I first will discuss the framework used for analyzing a merger under the  
5    DOJ/FTC's *Merger Guidelines* and FERC's *Merger Policy Statement*. I then will  
6    apply that analytical framework to the facts of this merger.

7    Q.    WHAT IS THE PURPOSE OF AN ECONOMIC ANALYSIS OF THE  
8    COMPETITIVE EFFECTS OF A MERGER OR A SIMILAR BUSINESS  
9    COMBINATION?

10   A.    The purpose of the analysis is to determine whether the merger would create or  
11   enhance market power and, as a result, have an adverse effect on competition.

12   Q.    WHAT DO YOU MEAN BY THE TERM "MARKET POWER"?

13   A.    The *Merger Guidelines* define market power as the ability of a firm profitably to  
14   maintain prices above competitive levels for a significant period of time (*Merger*  
15   *Guidelines*, §0.1). I adopt this definition.

16   Q.    HOW IS THIS CONCEPT UTILIZED IN ANALYZING THE EFFECTS  
17   OF A MERGER ON COMPETITION?

18   A.    One attempts to determine whether or not the merged firm would be able to  
19   increase prices to customers in situations in which neither merging entity, absent  
20   the merger, would have such an ability.

21            The focus of an analysis of the competitive effects of a merger is on how  
22   the proposed merger would change the alternatives available to buyers and sellers  
23   and what, if any, adverse competitive consequences likely would result from those



1 changes. Thus, the focus of the analysis is on markets in which the merging  
2 parties are actual or potential competitors. The goal of the analysis is to  
3 determine whether competition among sellers would be significantly reduced and,  
4 ultimately, whether there is a likelihood that customers would be harmed as a  
5 result.

6 For example, if two merging firms both sell output to some of the same  
7 buyers, a merger might eliminate one of the competitive alternatives available to  
8 those buyers. If the two merging parties, plus one other firm, were the only  
9 options available to buyers both pre- and post-merger, the merger would reduce  
10 the number of options available to the buyers from three to two, which could have  
11 an adverse effect on competition. On the other hand, if customers of the two  
12 merging parties had numerous alternatives to the merging parties, eliminating  
13 only one of those suppliers as a result of a merger would have little or no adverse  
14 effect because each buyer would still have numerous competitive options  
15 following the merger. The effect of mergers in situations between these two  
16 extremes depends on a more detailed analysis of the data.

17 A very different example would be a market in which the two merging  
18 parties are not actual or potential competitors to each other before the merger. In  
19 this case, the merger would not have an adverse effect on buyers because there  
20 would be no change in the number of competitive alternatives available to them.  
21 The focus of a merger analysis is on the *changes* that result from the merger. If a

1 merger does not decrease competitive alternatives, a merger cannot have any  
2 adverse effects on competition.

3 **Q. HOW DID YOU ANALYZE THE COMPETITIVE EFFECTS OF THE**  
4 **PROPOSED MERGER?**

5 A. As I noted earlier, I followed the steps outlined in Appendix A to the *Merger*  
6 *Policy Statement*. These are: 1) define the relevant product market(s); 2) define  
7 the relevant geographic market; 3) analyze concentration in these markets by  
8 calculating market shares, the Herfindahl-Hirschman Index (HHI), and the change  
9 in the HHI occasioned by the merger, and comparing these results to thresholds  
10 set forth in the *Merger Guidelines* and adopted in the *Merger Policy Statement*;  
11 and 4) address other considerations and remedial measures if necessary (*Merger*  
12 *Policy Statement*, Appendix A, pp. 1-24).

13 **Q. HOW DOES ONE DETERMINE THE RELEVANT MARKET FOR THE**  
14 **PURPOSE OF THIS TYPE OF ANALYSIS?**

15 A. The first step in defining the market is to identify the products as to which the two  
16 merging firms are competitors prior to the merger, and the geographic areas in  
17 which they compete. Next, one determines all of the other suppliers that compete  
18 for the same business. Competitors include both current competitors and firms  
19 that would sell output in competition with the merging parties at prices slightly  
20 higher than current market prices.

1           The objectives are to delineate the product and geographic markets in  
2           which the two firms are competitors absent the merger, and to identify competing  
3           suppliers that may limit the ability of the merged entity to increase prices.

4   **Q.   HOW DO YOU MEASURE MARKET CONCENTRATION?**

5   A.   The level of market concentration is measured by computing the HHI. The HHI  
6           is the sum of the squared market shares of all of the sellers of the relevant product  
7           in the relevant geographic market. The HHI calculation measures the number of  
8           sellers and their market shares weighted by their significance in the market. (See  
9           *Merger Guidelines*, §1.5.)

10           For example, if there are four sellers of the relevant product, with market  
11           shares of 10 percent, 50 percent, 5 percent, and 35 percent, respectively, the HHI  
12           is 3,850 (10 squared plus 50 squared plus 5 squared plus 35 squared equals  
13           3,850). In this same example, if there had been four equally sized sellers, each  
14           with a 25 percent market share, the HHI would be 2,500. If there are four sellers  
15           with unequal market shares, the HHI will be greater than 2,500.

16           The higher the HHI, the greater the degree of market concentration. If  
17           there were only one seller of the relevant product, the HHI would be 10,000. If  
18           there were 100 sellers of the product, each with a 1 percent market share, the HHI  
19           would be 100. If all of the sellers of the product have the same market shares, the  
20           HHI is 10,000 divided by the number of sellers. Thus, the HHI measures both the  
21           number of sellers and the degree to which some sellers of the product may be  
22           significantly larger or smaller than other sellers.

1           Market shares for a homogeneous product, such as electricity, are  
2           calculated using production or generating capacity rather than actual sales.  
3           Generating capacity measures both the ability of firms to sell output and each  
4           firm's competitive significance.

5   **Q.   HOW DO YOU COMPUTE THE CHANGE IN THE HHI AS A RESULT**  
6   **OF A MERGER?**

7   A.   The *Merger Guidelines* (§1.51, fn. 18) describe the mathematical formula used for  
8       computing the change in the HHI as a result of a merger. This formula states that  
9       the change in the HHI as a result of a merger is equal to two times the product of  
10      the pre-merger market shares of the merging firms. Market concentration after the  
11      merger is computed by adding the change in the HHI as a result of the merger to  
12      the HHI calculated using pre-merger market shares. For example, if the pre-  
13      merger HHI is 1,500 and two firms with market shares of 5 percent and 7 percent,  
14      respectively, are merging, the change in the HHI is 70 ( $2 \times 5 \times 7 = 70$ ). The post-  
15      merger HHI is 1,570 ( $1,500 + 70 = 1,570$ ).

16   **Q.   ARE THERE GENERALLY ACCEPTED STANDARDS FOR**  
17   **INTERPRETING LEVELS OF MARKET CONCENTRATION AND THE**  
18   **CHANGES IN MARKET CONCENTRATION THAT RESULT FROM A**  
19   **MERGER?**

20   A.   Yes, there are. The *Merger Policy Statement* adopts a screening threshold to  
21       determine whether the merger could raise significant competitive concerns and  
22       require further analysis. This screen analysis is based on the *Merger Guidelines*.

1           The HHI measures should be compared with the thresholds  
2           given in the DOJ *Merger Guidelines*. The Guidelines address three  
3           ranges of market concentration: (1) an unconcentrated post-merger  
4           market—if the post-merger HHI is below 1000, the merger is  
5           unlikely to have adverse competitive effects regardless of the  
6           change in HHI; (2) moderately concentrated post-merger market—  
7           if the post-merger HHI ranges from 1000 to 1800 and the change in  
8           HHI is greater than 100, the merger potentially raises significant  
9           competitive concerns; and (3) highly concentrated post-merger  
10          market—if the post-merger HHI exceeds 1800 and the change in  
11          the HHI exceeds 50, the merger potentially raises significant  
12          competitive concerns; if the change in HHI exceeds 100, it is  
13          presumed that the merger is likely to create or enhance market  
14          power.\*

15          \* DOJ *Guidelines*, at 41,558.

16          [“Merger Policy Statement,” Appendix A, p. 16]  
17

18           In effect, the *Merger Policy Statement* and the *Merger Guidelines* state  
19           that if both of the two merging firms have a small market share for the same  
20           products, the merger is unlikely to have an adverse effect on competition. The  
21           greater the number of sellers in the market, post-merger, the less likely it is that  
22           any given change in the HHI indicates that the merger will have adverse effects on  
23           competition.

24   **Q.   IF THE CHANGE IN THE HHI EXCEEDS THE LEVELS YOU HAVE**  
25   **DISCUSSED, DOES THIS MEAN THAT THE MERGER HAS ADVERSE**  
26   **EFFECTS ON COMPETITION?**

27   **A.**   No, not necessarily. The numerical criteria regarding concentration listed above  
28           represent a “safe harbor.” Under FERC’s *Merger Policy Statement*, the HHI  
29           levels are used to determine the point at which no further analysis of the merger is  
30           required. If the initial screening analysis indicates that the changes in the HHIs

1 are within these "safe-harbor" levels, no further analysis of the merger is required.  
2 If the changes in the HHIs exceed these levels, further analysis may be required,  
3 but the merger will not necessarily have an adverse effect on competition.

4 Similarly, under the DOJ/FTC *Merger Guidelines*, the change in the HHI  
5 is used to determine the conditions under which the DOJ/FTC will decide *not* to  
6 challenge a merger. The agencies' decision to challenge a merger as one that  
7 creates or enhances market power is based on both the numerical criteria listed  
8 above and additional analyses of other significant market factors. For example, if  
9 a proposed merger results in a post-merger HHI exceeding 1,800 and the change  
10 in the HHI exceeds 50 points, the antitrust agencies still may decide not to  
11 challenge the merger based on an analysis of other factors. These other factors  
12 include the potential for lessening competition through coordinated interactions or  
13 through unilateral actions, entry conditions, efficiencies that result from the  
14 merger, and the financial strength of the merging firms.

15 It also is worth noting that only on very rare occasions has the FTC or  
16 DOJ challenged a merger when the post-merger HHI is under 1,800 or the change  
17 in the HHI is less than 200 points. (See the supplemental testimony of Richard  
18 Gilbert on behalf of the Applicants in the FERC merger proceedings regarding the  
19 Baltimore Gas and Electric Company-Potomac Electric Power Company merger,  
20 Docket EC96-10-000; Malcolm B. Coate, "Economics, the Guidelines and the  
21 Evolution of Merger Policy," *The Antitrust Bulletin*, Volume XXXVII, No. 4  
22 (Winter 1992), pp. 997-1024; and Malcolm B. Coate, "Merger Enforcement at the

Reagan/Bush FTC,” in Malcolm B. Coate and Andrew N. Kleit (editors), *The Economics of the Antitrust Process*, Kluwer Academic Publishers, 1996.)

**IV. WESTERN RESOURCES’ AND KCPL’S ACTIVITIES AS BUYERS AND SELLERS OF POWER**

**Q. PLEASE DESCRIBE WESTERN RESOURCES’ ELECTRIC UTILITY OPERATIONS GENERALLY.**

A. Western Resources operates the KPL and KGE electric utility systems and provides retail electric service to approximately 600,000 customers in 462 Kansas communities. The company also provides wholesale electric sales and transmission service to 64 communities, 3 rural cooperatives, and the Kansas Electric Power Cooperative, Inc. (KEPCo). Western Resources generally serves the eastern half of Kansas but also sells wholesale power to numerous other entities in Kansas, Missouri, Nebraska, Arkansas, Oklahoma, and Louisiana.

Western Resources’ actual 1996 peak system load was 3,997 MW. The company owns 5,333 MW of generating capacity. Western Resources has 348 MW of capacity sales.

Additional information concerning the Western Resources utility system is contained in the testimonies of Mr. Morgan and Mr. Dixon.

**Q. BRIEFLY DESCRIBE KCPL’S ELECTRIC UTILITY OPERATIONS.**

A. KCPL operates a utility system in the city of Kansas City, Missouri, and in the surrounding areas of Kansas and Missouri. KCPL’s actual 1996 peak system load was 2,987 MW, and it currently owns generating plants with a total accredited

1 capacity of 3,298 MW. KCPL's utility system and its operations are described in  
2 more detail in the testimony of Mr. Branca.

3 **Q. PLEASE DESCRIBE THE UTILITIES INTERCONNECTED WITH**  
4 **WESTERN RESOURCES AND KCPL.**

5 A. Exhibit \_\_\_\_ (RMS-2) is a bubble diagram showing the interconnections of the  
6 merging parties as well as other entities in the SPP and surrounding regions. The  
7 area for each utility is proportional to the generating capacity owned by that  
8 entity. Exhibit \_\_\_\_ (RMS-3) lists the utilities (other than transmission-dependent  
9 utilities) directly interconnected with Western Resources and KCPL (Tier 1  
10 entities) and their total generating capacity.

11 As these two exhibits indicate, the merging parties are interconnected with  
12 numerous other entities. Virtually all of the entities that are interconnected with  
13 both of the Applicants are interconnected with numerous other entities.

14 Entities directly interconnected with both merging parties include  
15 Associated Electric Cooperative (AEC), Empire District Electric Company  
16 (Empire), Kansas City Board of Public Utilities (KCBPU), Missouri Public  
17 Service (MPS), Omaha Public Power District (OPPD), and Union.

18 Western Resources is directly interconnected with Central and SouthWest  
19 Corp. (CSW), Midwest Energy (MWE), Oklahoma Gas and Electric (OKGE), and  
20 UtiliCorp (WestPlains Energy-Kansas). These utilities are not directly  
21 interconnected with KCPL.

22 KCPL is directly interconnected with City of Independence, Mo.  
23 (Independence), Lincoln Electric System (LES), MidAmerica Energy, Nebraska



1 Public Power District (NPPD), Northern States Power, and St. Joseph Light and  
2 Power (SJLP). These utilities are not directly interconnected with Western  
3 Resources.

4 As Exhibit \_\_\_\_ (RMS-2) indicates, TVA is directly interconnected with  
5 Union, AEC, and Entergy. Union and AEC are directly interconnected with both  
6 merging parties. Entergy, a Tier 2 entity to the merging parties, is a major  
7 purchaser of power in the SPP.

8 Many smaller entities that are directly interconnected with both merging  
9 parties also are interconnected with other large purchasers of power that have  
10 numerous interconnections. For example, Empire District is interconnected with  
11 Entergy as well as both merging parties. Entergy has numerous direct  
12 interconnections and, as I discuss in more detail below, Entergy is becoming a  
13 regional market hub for wholesale electric transactions. MPS is directly  
14 interconnected with Union and to both merging parties. Union is interconnected  
15 with numerous entities in the SPP, MAIN, the East Central Area Reliability  
16 Coordination Agreement (ECAR), and the South East Reliability Coordination  
17 Agreement (SERC).

18 KCPL, Missouri Public Service (Utilicorp), St. Joseph Light & Power, and  
19 Sunflower Electric are in the SPP but also are part of the MAPP Regional  
20 Transmission Committee (RTC). The MAPP RTC permits members to provide  
21 transmission service to each other at non-pancaked megawatt mile rates that are

significantly lower than Order No. 888 ceiling rates. Other entities in the SPP can join the MAPP RTC. KCPL currently is part of the MAPP RTC.

**Q. PLEASE DESCRIBE THE OVERALL LEVEL OF PURCHASES AND SALES OF WHOLESALE ELECTRICITY BY WESTERN RESOURCES AND KCPL.**

A. Exhibit \_\_\_\_ (RMS-4) contains two tables: one for Western Resources and one for KCPL. The tables show the total purchases and total sales of wholesale electricity, separated into non-firm and short-term firm versus long-term firm for each entity. Western Resources is a net seller of long-term firm power as well as non-firm and short-term firm power. KCPL is a net seller of non-firm and short-term firm power but is a net purchaser of long-term firm power. Although KCPL's total capacity of 3,134 MW exceeds its 1996 peak demand of 2,987, as I noted earlier, a substantial amount -- 503 MW -- of this capacity is not really economic capacity because it is high-cost capacity. As a result, KCPL has substantial net purchases of capacity at the time of its peak.

**Q. PLEASE DISCUSS SALES OF NON-FIRM AND SHORT-TERM FIRM POWER BY WESTERN RESOURCES AND KCPL.**

A. Exhibit \_\_\_\_ (RMS-5) shows sales of non-firm and short-term firm power by Western Resources and KCPL in 1995 and 1996. The figures reported in this exhibit are all sales for resale reported on each company's FERC Form 1, except for sales classified as requirements sales, long-term firm sales, or unit power sales.

The following entities bought non-firm or short-term firm power in 1995 from both Western Resources and KCPL:

Arkansas Rural Electric Co-op  
AEC  
Central & South West  
Empire District Electric  
Enron Power Marketing  
Entergy  
Kansas City Board of Public Utilities  
Koch Power Services Marketing  
Louisville Gas & Electric Marketing  
Missouri Public Service (Utilicorp)  
Union Electric

In 1996, in addition to the entities just listed for 1995, the following firms purchased non-firm and short-term firm power from both Western Resources and KCPL:

Aquila Power Corporation  
Delhi Energy Services  
Electric Clearinghouse Inc.  
Federal Energy Services  
Grand River Dam Authority  
Louis Dreyfus Electric Power  
Rainbow Energy Marketing  
Sonat Power Marketing  
Valero Power Services  
Vitol Gas & Electric  
West Plains Energy (Utilicorp)

**Q. THIS APPEARS TO BE A SIGNIFICANT INCREASE IN THE NUMBER OF COMMON CUSTOMERS OF THE TWO COMPANIES. WHAT ACCOUNTS FOR THIS?**

**A.** The increase in common customers from 1995 to 1996 is indicative of the changes that are occurring in wholesale power markets. In 1995, the common customers

1 of Western Resources and KCPL were primarily utilities. In 1996, a substantial  
2 number of power marketers were added to this list, reflecting the increased trading  
3 that has occurred in wholesale power markets as a result of near-universal open  
4 transmission access.

5 **Q. WERE THERE ANY SIGNIFICANT CHANGES IN THE NATURE OF**  
6 **WESTERN RESOURCES' AND KCPL'S NON-FIRM AND SHORT-TERM**  
7 **FIRM SALES BETWEEN 1995 AND 1996?**

8 A. There were significant changes in both companies' non-firm and short-term firm  
9 sales between 1995 and 1996. These changes reflect the general broadening of  
10 markets and increased trading in electricity that have occurred as a result of  
11 FERC's open access NOPR and Order No. 888.

12 The first change was the significant increase in the number of entities  
13 purchasing power from both Western Resources and KCPL. As shown in  
14 Exhibit \_\_\_\_ (RMS-6), Western Resources' total number of non-firm and short-term  
15 firm customers increased from 35 in 1995 to 51 in 1996. Similarly, KCPL's total  
16 non-firm and short-term firm customers increased from 30 in 1995 to 42 in 1996.  
17 In large part, this is the result of the substantially increased number of power  
18 marketers purchasing power from both companies. The number of power  
19 marketers purchasing from Western Resources increased from 3 in 1995 to 18 in  
20 1996. The number of power marketers purchasing from KCPL increased from 4  
21 in 1995 to 14 in 1996.

1           Total sales (in MWH) to power marketers increased substantially -- 150  
2           percent in the case of KCPL and 3,600 percent in the case of Western Resources.  
3           In 1996, sales to power marketers accounted for about 25 percent of Western  
4           Resources' total non-firm and short-term wholesale sales.

5           A comparison of the top ten customers in 1995 and 1996 also indicates a  
6           significant shift in the nature of wholesale transactions during this period. Exhibit  
7           \_\_\_\_ (RMS-7) consists of four pages. The first two pages show the ten largest  
8           purchasers of non-firm and short-term firm power from Western Resources in  
9           1995 and 1996, respectively. The last two pages show similar information for  
10          KCPL.

11          Three of Western Resources' top ten customers for non-firm and short-  
12          term firm power were power marketers in 1996. In 1995, none of Western  
13          Resources' top ten customers were power marketers. In 1995, only one of  
14          KCPL's top ten customers for non-firm and short-term firm power was a power  
15          marketer. In 1996, two power marketers were among KCPL's top ten customers,  
16          and their purchases had increased substantially. Moreover, Entergy (a Tier 2  
17          entity to KCPL) was not among KCPL's top ten customers in 1995 but was in  
18          1996.

19   **Q.   WHY ARE THESE CHANGES BETWEEN 1995 AND 1996 IMPORTANT**  
20   **TO YOUR ANALYSIS?**

21   A.   These changes are important for two reasons. First, they show the general  
22          broadening of markets and trading that have occurred in response to widespread  
23          open transmission access. Second, the substantial amount of transactions with

1 power marketers reduces the likelihood that individual customers can be targeted  
2 for price increases. If the merged entity attempted to increase prices to some  
3 customers but not to others, power marketers could simply resell power they are  
4 already purchasing to the customers whose prices were increased. The ability of  
5 large traders to take advantage of such arbitrage possibilities reduces the  
6 likelihood of price discrimination and targeted price increases. Targeting  
7 individual customers for price increases is possible only when sellers can prevent  
8 buyers whose prices are not increased from reselling output to customers whose  
9 prices are increased.<sup>4</sup> Western Resources and KCPL make significant sales to  
10 power marketers whose primary business is buying and reselling electricity. This  
11 reduces the likelihood of targeted price increases to individual utility customers.

12 **Q. PLEASE DISCUSS WESTERN RESOURCES' AND KCPL'S SALES OF**  
13 **LONG-TERM FIRM POWER.**

14 A. Exhibit\_\_\_\_(RMS-8) shows Western Resources' and KCPL's sales of long-term  
15 firm power in 1995 and 1996. Virtually all of the long-term firm sales by both  
16 parties are requirements sales, pursuant to FERC-approved contracts that will not  
17 change as a result of the merger.

---

<sup>4</sup> This point is discussed in more detail in Appendix 1 attached to my testimony.

V. APPLICATION OF MERGER POLICY STATEMENT AND MERGER GUIDELINES TO THE WESTERN RESOURCES-KCPL MERGER

A. Overview

Q. HAVE YOU CONDUCTED AN ANALYSIS OF THIS MERGER USING THE METHODOLOGY DESCRIBED IN THE *MERGER POLICY STATEMENT AND MERGER GUIDELINES*?

A. Yes, I have. My analysis follows the procedures outlined in Appendix A to the *Merger Policy Statement* and the *DOJ/FTC Merger Guidelines*.

Q. HOW IS YOUR TESTIMONY CONCERNING THE APPLICATION OF THE *MERGER POLICY STATEMENT AND MERGER GUIDELINES* ORGANIZED?

A. The organization of this section of my testimony generally follows the steps outlined in the *Merger Policy Statement* and *DOJ/FTC Merger Guidelines*.

First I define the product or products to be analyzed. This is relatively straightforward. I will analyze near-term wholesale markets.

Next, I determine the scope of the relevant geographic market. Because FERC has stated in its *Merger Policy Statement* that it has adopted the *DOJ/FTC Merger Guidelines*, I utilize the *Merger Guidelines* approach to market definition. As I explain, defining the relevant geographic market involves determining the competitors to the merging firms, or the identity of other suppliers and/or owners of electric-generating capacity that place significant limits on the ability of the merged firm to increase prices.

1           Finally, I present calculations of the post-merger HHI and changes in the  
2           HHI for the relevant geographic market using several different measures of  
3           capacity. The capacity measures I analyze are total capacity, baseload coal and  
4           nuclear capacity, uncommitted capacity, economic capacity, and marginal  
5           economic capacity. These capacity measures are discussed in more detail in the  
6           part of this section that describes the HHI calculations.

7           **B.       Product Markets Analyzed**

8           **Q.       WHAT PRODUCT MARKETS DID YOU ANALYZE?**

9           A.       I analyzed near-term wholesale power markets. In performing this analysis I  
10           focused on non-firm and short-term firm wholesale power. This is consistent with  
11           the products analyzed in FERC's recent Ohio Edison Order. There is no need to  
12           analyze long-term capacity markets. If a firm is unable to exercise market power  
13           in the short run, it will be unable to exercise market power in the long run. In the  
14           long run, entry will prevent price increases. Hence, it is appropriate to focus the  
15           analysis of a merger on the near-term impacts of the merger.

16          **Q.       WHY DID YOU NOT COMPUTE CONCENTRATION MEASURES FOR**  
17          **LONG-TERM CAPACITY?**

18          A.       I concluded that it was not necessary to analyze concentration for long-term  
19                   capacity because, absent barriers to entry, in the long run any attempt to increase  
20                   prices above the competitive level would attract entry. These new entrants would  
21                   produce increased output, which reduces prices.

22                   The results of my analysis for near-term power markets also indicate that it  
23                   is not necessary to analyze long-term capacity markets. The results of that



1 analysis show that the merged entity will be unable to exercise market power in  
2 the short run. If it is not possible to raise prices in the short run, it also will not be  
3 possible to raise prices in the long run when, in addition to competition from  
4 existing generators, there is competition from new entry.

5 **Q. HAVE YOU CONSIDERED WHETHER THERE ARE ANY BARRIERS**  
6 **TO ENTRY INTO THE MARKET FOR LONG-TERM CAPACITY THAT**  
7 **WOULD AFFECT YOUR CONCLUSION?**

8 A. Yes, I considered this issue and concluded that there are no barriers to entry into  
9 the market for long-term capacity. Numerous firms can and do build power  
10 plants. Open-access transmission is available in the SPP for generation from  
11 power plants built by both utilities and other entities.

12 **C. Relevant Geographic Market**

13 **Q. WHAT IS THE RELEVANT GEOGRAPHIC MARKET FOR PURPOSES**  
14 **OF EVALUATING THIS MERGER?**

15 A. As I discuss below, the changes in wholesale electric markets that have resulted  
16 from FERC's open-access transmission policies are such that relevant geographic  
17 markets are now regional in scope, not limited to individual destination utilities.  
18 For purposes of evaluating this merger, the customers in the relevant geographic  
19 market are purchasers of wholesale power in the SPP plus the eastern Missouri  
20 portion of MAIN, or the Union control area. The suppliers in this relevant market  
21 include, at a minimum, all entities owning capacity in the SPP, Union, and entities  
22 in MAPP that currently sell power or could begin selling power in response to a  
23 small price increase in the SPP or to Union. I have also included TVA as a

1 supplier in the relevant market because TVA sells significant amounts of power to  
2 two major customers of the merging parties -- Entergy and Union. These sales in  
3 aggregate exceed the combined non-firm and short-term firm power sales by the  
4 Applicants to all buyers. TVA is discussed in more detail later in my testimony. I  
5 present HHI calculations that show the effects of either including or excluding  
6 TVA. I also present HHI calculations that show the effects of including or  
7 excluding Southern from the relevant market.

8 I present HHIs both excluding and including Southern for the following  
9 reasons. An examination of transaction data shows that Southern did not make  
10 significant purchases from or sales to many SPP members other than Entergy in  
11 1995 or 1996. However, the relevant geographic market should be defined to  
12 include all of the capacity that can impose a meaningful constraint on the ability  
13 of the merged firm to raise prices. This means that the relevant test is not whether  
14 a particular firm has made substantial sales to particular customers in the past, but  
15 whether it could increase its sales into the market in response to a price increase.  
16 Southern certainly fits this criterion for inclusion in the market. I also note that  
17 where I have included Southern, I have only included its economic capacity, i.e.,  
18 capacity that could be sold into the market at current prices. Finally, although the  
19 data indicate that in 1996 Southern's sales within the SPP were only to Entergy,  
20 those sales are not insignificant. In 1996 Entergy was one of KCPL's ten largest  
21 customers. Southern's sales to Entergy were three times as large as KCPL's sales  
22 to Entergy.

1           The conclusions are the same whether TVA and/or Southern are included  
2           or excluded from the market.

3   **Q.   HOW IS YOUR DISCUSSION OF THE RELEVANT GEOGRAPHIC**  
4   **MARKET ORGANIZED?**

5   A.   First I explain the *Merger Guidelines* concept of a relevant geographic market.  
6       Defining the relevant geographic market involves determining the competitors to  
7       the merging firms and identifying other suppliers and/or owners of electric  
8       generating capacity that place significant limits on the ability of the merged firm  
9       to increase prices. Then, in order to determine the competitors to the merging  
10      firm, I examine where the merging firms sell power, who else sells power in that  
11      same area, and where the power flows in the area in which the merging firms  
12      operate. Finally, I discuss the relevant geographic market and the identity of the  
13      suppliers in that market. The capacities of these suppliers are then used to  
14      compute HHIs in the next section of my testimony.

15   **Q.   HOW ARE MARKETS DEFINED IN THE *MERGER GUIDELINES***  
16   **METHODOLOGY?**

17   A.   Under the DOJ/FTC *Merger Guidelines*, the relevant market for purposes of  
18       analyzing a merger should include the capacity owned by others that constrains  
19       the ability of the merged entity to increase prices. This means that the relevant  
20       market should be defined by identifying the capacity that currently competes with  
21       the merging parties and/or capacity that might supply additional output if the  
22       merged entity attempted to increase prices. Under the *Merger Guidelines*,

1 markets are defined as groups of producers or suppliers, not as individual buyers  
2 or customers. Relevant wholesale electric markets tend to be regional in scope.  
3 Individual buyers or individual groups of customers generally do not constitute  
4 relevant geographic markets.

5 **Q. ARE THERE INSTANCES IN WHICH INDIVIDUAL DESTINATION**  
6 **BUYERS OR GROUPS OF CUSTOMERS MAY CONSTITUTE**  
7 **RELEVANT GEOGRAPHIC MARKETS?**

8 A. Individual buyers or individual groups of customers constitute separate relevant  
9 geographic markets only if the merged entity can engage in price discrimination  
10 and target specific buyers or groups of customers for price increases.<sup>5</sup> Open-  
11 access transmission, accompanied by increased trading in electricity and the  
12 ability of buyers to engage in arbitrage, has reduced significantly the ability of  
13 utilities to selectively increase prices and engage in price discrimination.

14 **Q. WOULD AN ANALYSIS FOCUSING ON SUCH INDIVIDUAL**  
15 **DESTINATION "MARKETS" REFLECT CONDITIONS IN TODAY'S**  
16 **ELECTRICITY MARKET?**

17 A. No. Analyzing individual destination utilities as separate antitrust markets  
18 ignores two important facts of the post-Order 888 world. First, absent  
19 transmission constraints that actually limit otherwise economic transactions from  
20 occurring, prices at any two destination utilities cannot differ by more than the  
21 transmission costs between those two points for any sustained period of time.

---

<sup>5</sup> See *Merger Guidelines*, §2.1.

Second, use of individual destination utilities as separate relevant geographic markets ignores the fact that electricity can be resold. Sustained and systematic price discrimination is unlikely when sellers of a product cannot prevent resale of that product.<sup>6</sup>

**Q. IS YOUR APPROACH TO DEFINING RELEVANT ANTITRUST MARKETS BASED ON THE IDENTITY OF COMPETING SUPPLIERS (OR POINTS OF PRODUCTION) RATHER THAN ON INDIVIDUAL BUYERS CONSISTENT WITH GENERALLY ACCEPTED ECONOMIC PRINCIPLES?**

**A.** Yes, it is. Gregory Werden, an economist at the Department of Justice Antitrust Division, has authored numerous articles in scholarly journals discussing market definition. In a 1993 article in the *Antitrust Bulletin*, Dr. Werden stated:

Under the Guidelines, markets are initially delineated under the assumption that price discrimination is not possible, and in doing so markets are delineated on the basis of points of production, rather than points of consumption. The Guidelines' approach better focuses the analysis on the real issue of identifying the important competitors of the merging firms. If price discrimination is possible, the Guidelines permit the delineation of additional markets by identifying groups of customers that could be discriminated against.

[Gregory Werden, "Market Delineation Under the Merger Guidelines: A Tenth Anniversary Retrospective," *Antitrust Bulletin*, Fall 1993, pp. 541-42.]

---

<sup>6</sup> This point is well established in economics textbooks. See, for example, Browning, Edward K. and Jacqueline M. Browning, *Microeconomic Theory and Applications*, Second Edition, 1986, pp. 387-388; or Glahe, Fred R. and Dwight R. Lee, *Microeconomics: Theory and Applications*, 1981, pp. 305-306.

1           As Dr. Werden explains, the DOJ/FTC approach of identifying suppliers is  
2           appropriate when price discrimination is absent, as generally is the case in today's  
3           electricity market.

4   **Q.    ARE YOU AWARE OF PRIOR CASES IN WHICH FERC HAS DEFINED**  
5       **THE RELEVANT MARKET TO BE A REGION OR GROUP OF**  
6       **PRODUCERS, RATHER THAN INDIVIDUAL BUYERS?**

7   A.   Yes, I am. In its order approving the Baltimore Gas and Electric-Potomac  
8       Electric Power Company merger, Docket No. EC96-10-000, the FERC adopted  
9       the Pennsylvania-Jersey-Maryland (PJM) power pool as the relevant market. In  
10      the Primergy case, Docket No. EC95-16-000, FERC's analysis of the relevant  
11      geographic market focused on the Wisconsin-Upper Michigan System (WUMS).  
12      In its recent order (July 30, 1997) in the Atlantic Electric-Delmarva merger,  
13      Docket No. EC97-7-000, the geographic market analyzed was PJM.

14   **Q.    HOW DID YOU IDENTIFY THE COMPETITORS TO THE MERGING**  
15       **FIRMS?**

16   A.   I first determined where the merging firms sell wholesale power. Next, I  
17       identified other suppliers who own capacity in the same areas where the merging  
18       firms sell wholesale power. Finally, I examined power flows in the area in which  
19       the merging firms sell wholesale power.

20   **Q.    WHERE DO THE MERGING FIRMS SELL WHOLESALE POWER?**

21   A.   Exhibit\_\_\_\_(RMS-5) and Exhibit\_\_\_\_(RMS-8) list all of the entities that purchased  
22       wholesale power from Western Resources or KCPL in 1995 and 1996. Exhibit

\_\_\_\_ (RMS-9) is a map that shows the general areas where the merging parties sold power in 1996. Page 1 shows the service areas of entities that purchased power from the merging parties. Page 2 shows the service areas of the merging firms and their wholesale customers, as well as the service areas of utilities that sold power to wholesale customers of either Western Resources or KCPL.

Page 1 of the exhibit shows that the merging parties have sold power throughout the middle of the country including the SPP and MAPP regions. However, utilities in MAPP tend to act more as competitors than as customers of the merging parties. Page 2 of the exhibit shows that wholesale customers of the merging parties have purchased power from as far east as Kentucky, as far south as Louisiana, as far southwest as the Texas Panhandle, and as far north as Minnesota.

Exhibit \_\_\_\_ (RMS-10) shows the 1995 and 1996 purchases of non-firm and short-term firm power by customers of the merging parties. These data were used to prepare page 2 of Exhibit \_\_\_\_ (RMS-9). That exhibit also indicates the large number of other suppliers to the wholesale customers of the merging parties.<sup>7</sup>

**Q. WHY IS THE LOCATION OF CUSTOMERS OF THE MERGING PARTIES AND OTHER SELLERS TO THOSE SAME CUSTOMERS**

---

<sup>7</sup> Note that the data in Exhibit \_\_\_\_ (RMS-10) are taken from the Forms 1 filed with FERC by the utilities. Since only investor-owned utilities file Form 1, Exhibit \_\_\_\_ (RMS-10) shows fewer customers than Exhibit \_\_\_\_ (RMS-5) or Exhibit \_\_\_\_ (RMS-6).

**IMPORTANT FOR DETERMINING THE RELEVANT GEOGRAPHIC  
MARKET?**

A. Any supplier that owns generating capacity in the same general area in which the merging parties are sellers of power is a competitor to the merging parties. Similarly, capacity owned by customers of the merging parties is an alternative source of supply to capacity owned by the merging parties. Finally, other entities that have sold or can sell power to customers of the merging parties are competitors to the merging parties.

**Q. YOUR EXHIBITS \_\_\_\_ (RMS-5) AND \_\_\_\_ (RMS-6) INDICATE THAT BOTH  
WESTERN RESOURCES AND KCPL MADE SIGNIFICANT SALES TO  
POWER MARKETERS. DID POWER MARKETERS ALSO MAKE  
SIGNIFICANT SALES IN THE SPP?**

A. Yes, they did. In 1996, power marketers sold 11.1 million MWH in the SPP. Of this amount, 6.8 million MWH were sales to utilities and 4.3 million MWH were sales to other power marketers (see *Power Markets Week*, April 21, 1997, pp. 1,7). To put this amount in perspective, the combined non-firm and short-term firm sales by KCPL and Western Resources were 7.5 million MWH in 1996 (see Exhibit \_\_\_\_ (RMS-6)). In the aggregate, KCPL and Western Resources sold 1.5 million MWH to power marketers and 6.0 million MWH to other utilities (including each other). Aggregate sales of non-firm and short-term firm power by both merging parties to utilities were less than aggregate sales by power marketers to utilities in the SPP. If I eliminate sales to Union (which is in MAIN), the combined Western Resources and KCPL 1996 sales of non-firm and short-term



1 firm power to utilities in the SPP totaled 4.7 million MWH -- or about 30 percent  
2 less than sales by power marketers to utilities in the SPP.

3 Exhibit\_\_\_\_(RMS-10) shows that all customers of Western Resources and  
4 KCPL that identify specific customers on FERC Form 1 made some purchases  
5 from power marketers in 1996. I also have examined sales by power marketers to  
6 other customers of Western Resources. Reports filed by power marketers at  
7 FERC indicate some sales by power marketers to smaller entities such as the  
8 Kansas City Board of Public Utilities, Kansas Municipal Energy Agency, and  
9 Midwest Energy.

10 **Q. ARE THERE ANY OTHER FACTORS THAT LIMIT THE ABILITY OF**  
11 **THE MERGED FIRM TO TARGET INDIVIDUAL CUSTOMERS FOR**  
12 **PRICE INCREASES?**

13 A. Yes. There are two such factors. First, both Western Resources and KCPL, as  
14 well as many other utilities in this area, are members of the Continental Power  
15 Exchange (CPEX). The CPEX is a computerized one-hour-ahead electricity  
16 market. CPEX members seeking to sell electricity input offers to sell into a  
17 computer. These offers show up on the computer screens of other CPEX  
18 members. Buyers do not know the identity of the sellers until after a transaction  
19 is agreed upon. The fact that the identities of both buyers and sellers are not  
20 known until after the transaction is agreed upon reduces the likelihood of targeting  
21 individual buyers for price increases.

1           The second factor is the MAPP RTC that I mentioned earlier. KCPL, St.  
2           Joseph Light & Power, Missouri Public Service, and Sunflower Electric are part  
3           of the MAPP RTC. A utility in the SPP can join the MAPP RTC. The MAPP  
4           RTC transmission rate is a megawatt mile rate that is substantially less than the  
5           Order 888 ceiling rates. A utility joining the MAPP RTC can purchase power  
6           from any other MAPP RTC member at lower transmission charges than it would  
7           pay if it were not a MAPP RTC member. This provides an option to entities in  
8           the northern SPP that substantially lowers transmission costs of purchasing power  
9           from MAPP RTC members. The presence of such an option limits the ability of  
10          the merged entity to target individual customers for price increases.

11   **Q.   PREVIOUSLY YOU MENTIONED THE GROWING IMPORTANCE OF**  
12   **POWER MARKETERS. ARE THERE ANY EXAMPLES OF SMALLER**  
13   **ENTITIES FORMING ALLIANCES WITH POWER MARKETERS?**

14   A.   Yes, there are. KCBPU has formed an alliance with Aquila Energy. Aquila  
15   Energy is the sixth-largest power marketer in the country. According to a story in  
16   the June 23, 1997, issue of *Electric Utility Week*:

17           The Kansas City, Kansas Board of Public Utilities [BPU] and  
18           UtiliCorp United unit Aquila Energy announced a strategic alliance  
19           June 18 that initially will focus on power sales and purchases.

20  
21           Specifically, BPU will work with Aquila Power Marketing, a high-  
22           volume marketer that operates a trading floor in the Kansas City  
23           area.

24  
25           "As technology and deregulation change the energy world, we are  
26           looking to alliances like this one with Aquila Energy to improve  
27           revenues and reduce costs, while at the same time providing our  
28           customers with all types of services they want and need. This

1 arrangement serves as an umbrella under which the two companies  
2 can do a variety of things that are in our best interest," said E. Leon  
3 Daggett, BPU general manager.

4  
5 V.J. Horgan, Aquila Energy senior vice president, said, "What we  
6 are bringing to BPU is a nationwide capability to buy and sell  
7 electric power. As energy deregulation continues to evolve,  
8 alliances like this one with Kansas City, Kansas will spread the  
9 benefits to all customers."  
10

11 **Q. WHY DID YOU EXAMINE THE WHOLESALE TRANSACTIONS AND**  
12 **POWER FLOWS IN THE REGION IN WHICH THE MERGING**  
13 **PARTIES OPERATE?**

14 **A.** Examining power flows within a region together with the purchase and sales data  
15 I described previously helps to identify the pattern of transactions. Only investor-  
16 owned utilities are required to file FERC Form 1. This means that often one  
17 cannot obtain detailed data on sales by many public power entities. Both  
18 investor-owned utilities and public power authorities that operate control areas are  
19 required to file scheduled interchange data as part of their Form 714 filings. The  
20 Form 714 provides data on the pattern of transactions that augment the FERC  
21 Form 1 data I discussed earlier.

22 **Q. WHAT POWER FLOW DATA DID YOU ANALYZE?**

23 **A.** I analyzed scheduled receipts and deliveries of power between control areas as  
24 reported on Form 714. Control areas report scheduled receipts from and  
25 deliveries to adjacent control areas on Form 714.

26 Receipts of energy and deliveries of energy in this analysis are not  
27 necessarily the same as purchases and sales of energy. Two factors lead to a  
28 difference. First, some utilities have power plants in their control areas that are

1 owned by other utilities. For example, UtiliCorp owns 345 MW (16 percent) of  
2 the Jeffrey Energy Center in the Western Resources control area. Similarly,  
3 KCPL owns 581 MW (47 percent) of the Wolf-Creek Nuclear Unit in the Western  
4 Resources control area. The deliveries of UtiliCorp's energy from its ownership  
5 share of the Jeffrey Energy Center are recorded as deliveries of energy from the  
6 Western Resources control area, or exports of energy. Second, transmission  
7 transactions count as both a receipt and a delivery. For example, if Western  
8 Resources is providing transmission service for a sale of energy from Omaha  
9 Public Power District (OPPD) to CSW, this will be recorded as a scheduled  
10 receipt of energy by Western Resources from OPPD and a scheduled delivery of  
11 energy by Western Resources to CSW.

12 The first step in my analysis was to determine which control areas were  
13 net exporters of energy and which control areas were net importers of energy. For  
14 simplicity, I refer to this analysis as an import/export analysis.

15 **Q. PLEASE DESCRIBE THE RESULTS OF YOUR IMPORT/EXPORT**  
16 **ANALYSIS.**

17 A. Exhibit \_\_\_\_ (RMS-11) lists control areas that were net exporters of energy  
18 (scheduled deliveries of energy exceeded scheduled receipts) and control areas  
19 that were net importers of energy (scheduled deliveries of energy were less than  
20 scheduled receipts). This exhibit shows the volume of net exports for the  
21 exporting control areas and the volume of net imports for the importing control

1 areas. The Form 714 data for 1996 are not available for all utilities. I show 1995  
2 data for all of these utilities; I show 1996 data where available.

3 Western Resources and KCPL both are net exporters of power on an  
4 annual basis. Exhibit \_\_\_\_ (RMS-11) also shows that MAPP utilities such as  
5 NPPD and OPPD are substantial net exporters of power. Entergy, Union, Empire  
6 District and CSW's SPP utilities are substantial net importers of power.

7 **Q. DID YOU PERFORM ANY ADDITIONAL ANALYSIS OF SCHEDULED**  
8 **INTERCHANGES BETWEEN CONTROL AREAS?**

9 A. Yes, I did. I also analyzed scheduled interchanges for Western Resources, KCPL,  
10 Entergy, Union, AEC, CSW, and OKGE. 1996 data show that Entergy and Union  
11 are large net importers; power flows from the merging parties toward Union,  
12 CSW, and OKGE; and power flows from Union, OKGE, and, in 1995, CSW,  
13 towards Entergy. This is shown in Exhibit \_\_\_\_ (RMS-12). Schedule 1 of Exhibit  
14 \_\_\_\_ (RMS-12) contains 1995 data, while Schedule 2 contains 1996 data.

15 **Q. PLEASE DESCRIBE THE SCHEDULED INTERCHANGES OF THESE**  
16 **CONTROL AREAS.**

17 A. The general pattern is that power flows from the north to the south and, to a lesser  
18 degree, to the east (or towards Union). The data also show that a substantial  
19 amount of power flows through AEC and also Union, from MAPP to the southern  
20 portion of the SPP. Power flows south towards Entergy, east towards Union, and  
21 also from Union to Entergy.

1 KCPL exports a significant amount of power to Union, SJLP, City of  
2 Independence, and Empire. KCPL imports power from MidAmerican Energy and  
3 NPPD. The power flow from KCPL to Empire also reflects Empire's ownership  
4 share in the Iatan plant, which is located in KCPL's control area. Western  
5 Resources is a significant net exporter to UtiliCorp, CSW, and OKGE. Utilicorp  
6 owns both MPS and West Plains. The exports to UtiliCorp reflect, in part, the  
7 fact that MPS and WestPlains own interests in the Jeffrey Energy Center, which is  
8 located in Western Resources' control area.

9 MAPP utilities generally export power to Western Resources, KCPL,  
10 AEC, and Union. AEC and Union are net exporters to Entergy.

11 Entergy imports power from AEC, Empire, OKGE, TVA, and Union.  
12 Several of the utilities, which are net importers of power from one or both  
13 merging parties, are net exporters of power to Entergy. Although Union is a net  
14 importer, it has significant net exports to Entergy. Similarly, in 1995 Empire and  
15 CSW -- which were net importers -- were net exporters to Entergy.

16 **Q. WHAT DID YOU CONCLUDE FROM YOUR ANALYSIS OF NET**  
17 **POWER FLOWS BETWEEN CONTROL AREAS IN THIS REGION?**

18 A. The power flow data indicate that wholesale electric power market activity in this  
19 region tends to focus toward the Entergy system. Entergy tends to be a regional  
20 "hub." The level and pattern of regional wholesale prices are strongly influenced  
21 by economic activity at such regional "hubs." The data show large net flows of  
22 power into the Entergy system. Many systems that are importing power (such as  
23 Empire, AEC, and Union) tend also to export power to Entergy. Entities

1 interconnected with one or both of the merging parties that import from one or  
2 both of the merging parties -- such as AEC, OKGE, CSW, Union, and Empire --  
3 tend to be net exporters of power to Entergy.

4 **Q. WHY DOES POWER FLOW FROM THE NORTH TO THE SOUTH IN**  
5 **THE SPP?**

6 A. There is a substantial amount of low-cost, coal-fired capacity available to the  
7 north of the merging parties in MAPP. Utilities to the south of the merging  
8 parties have higher-cost generation than do entities in the Iowa, Nebraska, Kansas,  
9 and Missouri area.

10 Exhibit \_\_\_\_ (RMS-13) shows the average cost of coal purchased by  
11 various utilities in MAPP (Nebraska and Iowa), the northern part of the SPP  
12 (Kansas and Missouri), and the southern part of the SPP (Oklahoma, Arkansas,  
13 and Louisiana). The average cost of coal delivered to power plants in Nebraska  
14 and Iowa is about ten cents per million BTU less than the average cost of coal  
15 delivered to power plants in Kansas and Missouri. The average cost of coal  
16 delivered to power plants in Kansas and Missouri is about 35 cents per million  
17 BTU less than the average cost of coal delivered to power plants in Oklahoma,  
18 Arkansas, and Louisiana. At a typical heat rate of 10,500 BTU per KWH for a  
19 large coal unit, a lower coal cost of ten cents per MMBTU translates into about  
20 1.0 to 1.1 mills/KWH (\$1.00 to \$1.10 per MWH) lower marginal generation costs.

21 Exhibit \_\_\_\_ (RMS-13) also shows that the percent of fossil steam capacity  
22 (i.e., total capacity less hydro and nuclear) that is gas-fired is higher in the

1 southern part of the SPP than in the northern part of the SPP or in MAPP. The  
2 cost of gas delivered to power plants in dollars per MMBTU exceeds the cost of  
3 coal delivered to power plants. The heat rates for gas and coal-fired steam-  
4 generating stations are similar.

5 The cost differentials discussed above mean that, during most hours of the  
6 year, power generally flows from north to south and east in the SPP.

7 **Q. HAVE YOU EXAMINED ANY OTHER DATA THAT ARE CONSISTENT**  
8 **WITH YOUR OPINION THAT THE RELEVANT GEOGRAPHIC**  
9 **MARKET IS REGIONAL IN SCOPE?**

10 A. Yes, I have. *Power Markets Week*, a McGraw-Hill publication, publishes daily,  
11 weekday electricity prices for different regions of the country and for widely  
12 traded contracts such as "Into Entergy." I examined prices for transactions in the  
13 SPP, MAIN, TVA, MAPP, and Into Entergy. "Into Entergy" transactions refer to  
14 transactions in which the seller has satisfied its obligations to the buyer if the  
15 seller delivers the power to any Entergy interface.

16 If wholesale power markets are broad regions rather than individual  
17 destination utilities, one would expect electricity prices at different locations  
18 move together. If two locations were not in the same market, prices in those two  
19 locations would not necessarily move together. I should note that price  
20 relationships such as those I will discuss below can be used as a consistency check  
21 with other data (such as power flows and actual transactions) that indicate markets



1 are broad. By themselves, they do not “prove” or “disprove” whether or not two  
2 locations are part of the same market.

3 Page 1 of Exhibit \_\_\_\_ (RMS-14) lists the price series I examined, the  
4 number of observations, and the beginning date of the data series in my analysis.  
5 I used a full year of data, where available. Two series, TVA prices and Into  
6 Entergy, were not available for a full year. In these two cases, I used all of the  
7 data that were available.

8 Pages 3 through 7 of Exhibit \_\_\_\_ (RMS-14) are graphs of the SPP price  
9 versus prices at Entergy, TVA, SERC, MAIN and MAPP.<sup>8</sup> As these five graphs  
10 show, all of these prices move together.

11 This graphical information can be summarized by computing the  
12 correlation coefficients between various pairs of prices. A correlation coefficient  
13 measures the degree to which two variables are related. If two variables always  
14 move in lock step, the correlation coefficient will be one. If there is no relation  
15 between two variables and they move independently of each other, the correlation  
16 coefficient is zero. The square of the correlation coefficient is a measure of how  
17 much of the variation in one variable is “explained” by the other. For example, a  
18 correlation coefficient of .9 between two variables can be interpreted as meaning

---

<sup>8</sup> I should note that the SPP price includes all transactions in the SPP. Thus, it includes the transactions at Entergy that are in the Into Entergy price index. This means that the chart of SPP prices versus Into Entergy prices may overstate the closeness of prices at Entergy versus the rest of the SPP.

1 that 81 percent (.9 times .9) of the variation in one variable is “explained” by  
2 movements in the other variable.

3 Page 8 of Exhibit \_\_\_\_ (RMS-14) shows the correlations between various  
4 pairs of prices. Page 9 shows the correlations between changes in prices, or the  
5 correlation coefficient for first differences, or the daily change in prices. For  
6 example, the correlation coefficient of .9708 for TVA and Into Entergy at page 9  
7 means that the correlation between the daily change in price at TVA (today’s price  
8 less yesterday’s price) and the daily change in price at Entergy is .97.

9 Overall, the data show a high correlation in prices across various regions.  
10 The correlation between the first differences in MAPP prices and prices in other  
11 regions is somewhat lower than the other pairs. This probably reflects  
12 transmission constraints, which I discuss below and, subsequently, incorporate  
13 into my analysis.

14 The rest of the price correlations tend to be very high and consistent with  
15 the concept that wholesale power markets are broad regions. For example, the  
16 correlation coefficient of .89 for the changes in MAIN and SPP prices means that  
17 about 79 percent of the variability in the daily change in MAIN prices can be  
18 “explained” by variability in the daily change in the SPP prices (.89 squared is  
19 .79). Similarly, the correlation coefficient of .80 for changes in SPP prices and  
20 SERC prices means that about 64 percent of the variation in changes in the daily  
21 SPP price can be “explained” by variations in the daily change in the SERC price.

1           Page 11 of Exhibit \_\_\_\_ (RMS-14) shows, for each pair of prices, the  
2           percent of the time that the two prices differed by less than 4 mills per KWH.  
3           This amount is about equal to one or two "wheels." If two locations are in the  
4           same market, one would not expect prices to differ by more than transmission  
5           costs and losses for any sustained periods of time. Prices at two locations should  
6           differ by less than transportation costs a high percentage of the time.

7           This is generally what one observes. For example, prices in the SPP are  
8           within 4 mills of prices at TVA 87 percent of the time. Prices in the SPP are  
9           within 4 mills of prices in the MAIN 79 percent of the time.

10          Page 10 is identical to page 11, except for the fact that it calculates the  
11          percent of the time that a pair of prices were within two mills of each other.  
12          Prices in the SPP were within two mills of SERC prices 64 percent of the time,  
13          were within two mills of TVA prices 77 percent of the time, and were within two  
14          mills of MAIN prices 56 percent of the time.

15          These data are consistent with the concept that markets are broad regions.  
16          There are, of course, other factors that contribute to a relationship between prices  
17          in different regions. For example, weather is correlated among regions and will  
18          result in some price correlation even if two locations are not part of the same  
19          market. However, the fact that one observes both high correlations among regions  
20          and small differences in prices between regions a substantial percent of the time is  
21          consistent with the other data I have examined, which indicate that relevant  
22          markets are broad regions, not individual destination utilities.

**D. HHIs Based on Total Capacity**

**Q. WHY DID YOU CALCULATE THE HHI BASED ON TOTAL CAPACITY?**

**A.** Total capacity measures the competitive significance of each of the suppliers in the relevant market. Depicting concentration in the ownership of total capacity is the most straightforward way of presenting market-share data for purposes of a competitive analysis. Moreover, unless different suppliers have very different mixes of capacity or very different reserve margins, calculations of market concentration based on total capacity will generally produce the same or similar results as calculations of market concentration based on other measures of capacity.

**Q. WHAT SUPPLIERS DID YOU INCLUDE IN THE RELEVANT MARKET?**

**A.** I included all entities in the SPP, Union, and all MAPP utilities that sell into the SPP. I have assumed that Union and CIPSCo are merged. (The FERC ALJ has recommended approval of the merger, and state regulatory authorities have already given their approval.) This is a very conservative definition of the suppliers in the relevant market. I have excluded TVA and Southern. TVA is interconnected with Union, AEC, and Entergy. TVA sells power to Entergy and Union. Southern sells significant amounts of power to Entergy. Because Southern is directly interconnected with Entergy, it is a Tier 2 entity to many of the utilities in the SPP. Later, in my discussion of economic and marginal economic capacity, I include some capacity from TVA and Southern.

1    **Q.    DID YOU INCLUDE ANY TRANSMISSION CONSTRAINTS IN YOUR**  
2       **CALCULATIONS?**

3    A.    Yes, I did. The transmission constraints that one includes in the analysis should be  
4       those constraints that are most likely to be encountered and most likely to  
5       influence economic activity in the relevant wholesale electric market. There are  
6       two such transmission limits that I have included in my analysis.<sup>9</sup> First, I have  
7       limited the aggregate capacity of MAPP utilities to 1,200 MW.<sup>10</sup> This is the  
8       summer transfer capability between MAPP and the SPP. Second, I have limited  
9       SPS's capacity to the rest of the SPP to 300 MW. This is the transfer capacity  
10      from SPS to the rest of the SPP.<sup>11</sup>

11   **Q.    WHY DID YOU LIMIT THE AGGREGATE CAPACITY OF MAPP**  
12       **UTILITIES TO 1,200 MW?**

13   A.    As I indicated earlier, there is a substantial amount of low-cost, coal-fired capacity  
14       in MAPP that competes with capacity within the SPP. In addition, several SPP

---

<sup>9</sup> In the late summer, 1997, there were north to south and some east to west transmission binding constraints encountered in the SPP. These transmission limits curtailed transactions. As discussed by Mr. Dixon, these curtailments were primarily the result of severe storm damage to a 345 KW line connecting Western Resources and OKGE. In addition, Public Service of Oklahoma requested line-loading relief several times in the summer of 1997 due to sudden loss of generation and overloaded facilities. As discussed in Mr. Dixon's testimony, the line between Western Resources and OKGE was returned to service on September 13, 1997. Hence, I have not included any additional constraints in my analysis.

<sup>10</sup> See Exhibit A-1-1, *1997 Main Summer Transmission Assessment Including MAIN-ECAR-TVA and MAIN-MAPP-SPP Interregional Appraisals*.

<sup>11</sup> See Direct Testimony of David T. Hudson on behalf of Applicants, in the Public Service Company of Colorado-Southwestern Public Service Company merger proceedings, Docket EC96-2-000, at page 10.

1 utilities have joined the MAPP RTC. Thus, the amount of coal-fired capacity in  
2 MAPP that can actually reach the SPP is important in the analysis.

3 In order to determine if transmission constraints were limiting power  
4 flows from MAPP to the SPP, I examined the frequency with which schedules  
5 between MAPP and the SPP were reduced due to transmission constraints in  
6 MAPP.

7 MAPP has a procedure known as "line-loading relief" that can be  
8 implemented whenever flows on individual interfaces or transmission lines  
9 exceed certain limits. When MAPP implements line-loading relief procedures, all  
10 schedules within MAPP can be reduced to the extent that flows on the line or  
11 interface may be affected.

12 In 1996, there were about 1,700 hours in which MAPP line-loading relief  
13 procedures resulted in schedule reductions from MAPP to the SPP. In all but 70  
14 hours, the schedule reductions were due to other flows in MAPP. There were  
15 only 70 hours in 1996 in which excessive flows between MAPP and the SPP led  
16 to reductions in schedules.

17 **Q. WHY DID YOU LIMIT SPS'S TRANSFER CAPACITY TO THE REST OF**  
18 **THE SPP TO 300 MW?**

19 A. The 300 MW limit from SPS to the rest of the SPP reflects the weak  
20 interconnections between SPS and the SPP.

21 **Q. DID YOU INCLUDE ANY TRANSMISSION CONSTRAINTS THAT ARE**  
22 **NOT BINDING?**

1 A. No, I did not include any transmission constraints that were not binding for other  
2 than short durations or under extraordinary circumstances. If power flows  
3 generally are less than available transfer capability, and there is no reason to  
4 believe that the merger will change this fact, then the economics of the  
5 transaction, not transmission constraints, determine power flows. The approach I  
6 have taken properly distinguishes between those transmission limits that have  
7 actually constrained the ability of customers to reach alternative suppliers and  
8 those that do not.

9 **Q. WHAT ARE THE RESULTS OF YOUR HHI CALCULATIONS FOR**  
10 **TOTAL CAPACITY?**

11 A. The pre- and post-merger HHIs and the change in the HHI for the relevant market  
12 are shown in Exhibit \_\_\_\_ (RMS-15). The post-merger HHI is 1399. The change in  
13 the HHI due to the merger is 57. This calculation is overly conservative because  
14 it excludes capacity from TVA and Southern. Had I included capacity from TVA  
15 and/or Southern, the change in the HHI would have been even smaller. The level  
16 of this post-merger HHI and the change in the HHI are well within the safe-harbor  
17 provisions of the *Merger Policy Statement* and the *Merger Guidelines*. This  
18 means that the merger has no adverse effect on competition and no further  
19 antitrust analysis is required.

20 **E. HHIs for Baseload Coal and Nuclear Capacity**

21 **Q. WHY DID YOU CALCULATE THE HHI BASED ON COAL AND**  
22 **NUCLEAR CAPACITY?**

1 A. Coal-fired plants represent about 37 percent of total SPP capacity and natural gas-  
2 fired plants about 49 percent of SPP capacity. Nuclear plants account for about 4  
3 percent of capacity in the SPP. A substantial amount of wholesale power market  
4 activity in the SPP consists of sales from utilities that own coal or nuclear  
5 capacity to utilities that have significant amounts of gas-fired capacity when such  
6 coal-fired and nuclear capacity is available to displace generation from higher-  
7 cost, gas-fired capacity. During off-peak periods and lower load hours during  
8 peak periods, coal-fired capacity can be the marginal generation source in the  
9 SPP, and it is coal-fired capacity that determines prices during those time periods.  
10 Thus, one potential concern is that a single entity controlling a substantial portion  
11 of the coal-fired and nuclear capacity in the geographic market (or a merger that  
12 would substantially increase the concentration of ownership of coal and nuclear  
13 capacity) might lead to price increases. These price increases would be most  
14 likely to occur, if they occurred at all, in off-peak or under lighter load conditions.

15 **Q. WHAT ARE THE HHIs AND THE CHANGE IN THE HHI BASED ON**  
16 **COAL-FIRED AND NUCLEAR CAPACITY IN THE RELEVANT**  
17 **MARKET?**

18 A. This calculation is shown in Exhibit \_\_\_\_ (RMS-16). I have used the same suppliers  
19 and same transmission constraints as used for total capacity in Exhibit \_\_\_\_ (RMS-  
20 15). The post-merger HHI is 1,210; the change in the HHI is 122. This is a post-  
21 merger HHI that is at the low end of the moderately concentrated range. The  
22 *Merger Guidelines* consider HHI levels and changes in the HHI just above and  
23 just below the safe-harbor levels as having the same competitive significance. A



change in the HHI of only slightly more than 100 in a market with a post-merger HHI at the very lower end of the moderately concentrated range indicates a merger that raises no competitive concerns. Moreover, this calculation is overly conservative because it includes no TVA or Southern capacity. Had I included capacity from TVA and/or Southern, the change in the HHI would have been even lower. As I indicated earlier, TVA is a Tier 1 entity and sells significant amounts of power to Entergy and also to Union. Southern is directly interconnected with Entergy and is Tier 2 to many SPP utilities and to Union. Thus, this merger should be considered within the safe-harbor range and no further analysis is required.

**F. HHIs Based on Peaking Capacity**

**Q. WHY DID YOU CALCULATE THE HHI BASED ON PEAKING CAPACITY?**

A. Another concern that might be raised is that a single entity controlling a substantial portion of the peaking capacity within a defined geographic market, or a merger that substantially increases the concentration of ownership of peaking capacity, might lead to price increases. If a single utility or a small number of utilities controlled substantially all of the peaking capacity within a relevant geographic market, they might be able to profit by withholding small amounts of capacity and spiking prices upward. In its *Merger Policy Statement*, FERC noted that "peak periods may be more problematic than other periods, because the opportunity to exercise market power likely would lead to significantly higher prices during those hours" (*Merger Policy Statement*, Appendix A, p. 18).

1    **Q.    IS CONTROL OF PEAKING CAPACITY AN ISSUE IN THIS MERGER?**

2    A.    Control of peaking capacity is not an issue in this merger. The change in the HHI  
3           based on peaking capacity due to this merger is zero because KCPL does not have  
4           any economic peaking capacity. As noted earlier, KCPL has 503 MW of very  
5           high-cost, older combustion turbine capacity. Although KCPL's total capacity of  
6           3,134 MW exceeds its 1996 peak demand of 2,987 MW, 503 MW of this capacity  
7           are not really economic capacity because they are high-cost capacity. As a result,  
8           KCPL has substantial net purchases of capacity at the time of its peak. This  
9           means that zero weight in HHI calculations should be given to KCPL's peaking  
10          capacity. As noted in the Appendix (p. 8) of the Department of Justice Comments  
11          in Docket No. RM96-6-000, "[G]eneration resources should be assigned market  
12          shares of zero if it can be established that they would have marginal operating cost  
13          far in excess of foreseeable prevailing prices."

14    **G.      HHIs Based on Uncommitted Capacity**

15   **Q.    WHY DID YOU EXAMINE THE HHI BASED ON UNCOMMITTED**  
16   **CAPACITY?**

17   A.    In prior merger and market-power cases, FERC has used uncommitted capacity as  
18          a measure of the ability of firms to sell power on a year-round basis.  
19          Uncommitted capacity is defined as a utility's total capacity less its peak demand  
20          and required reserves.

21   **Q.    WHAT IS THE CHANGE IN THE HHI BASED ON UNCOMMITTED**  
22   **CAPACITY?**

1 A. This merger results in no change in the HHI for uncommitted capacity. Because  
2 the change in the HHI is zero, there is no need to calculate the level of the post-  
3 merger HHI.

4 **Q. PLEASE EXPLAIN WHY THIS MERGER RESULTS IN NO CHANGE IN**  
5 **HHI FOR UNCOMMITTED CAPACITY PROPERLY MEASURED AND**  
6 **DEFINED.**

7 A. Western Resources has uncommitted capacity that can be economic for sales in  
8 the market. Its total capacity forecast for 1998 is 5,319 MW; its 1998 forecast  
9 peak demand is 4,041 MW. Western Resources also has net firm contract sales of  
10 364 MW. Assuming a 15 percent reserve margin of 606 MW, this results in  
11 uncommitted capacity of 308 MW.

12 KCPL's 1998 forecast peak demand is 3,125 MW and its forecast capacity  
13 is 3,298 MW. This total includes 503 MW of very high-cost, older combustion  
14 turbine capacity. Although KCPL's forecast capacity of 3,298 MW exceeds its  
15 forecast peak demand, 503 MW of this capacity are not economic capacity  
16 because they are high-cost capacity. As a result, KCPL makes substantial net  
17 purchases of capacity at the time of its peak. KCPL is also a net purchaser of firm  
18 long-term capacity -- in part to meet its peaking requirements. Because KCPL  
19 effectively has no uncommitted capacity, the merger leads to no change in the  
20 HHI for uncommitted capacity.

21

22

**H. HHIs Based on Economic Capacity**

**Q. WHY DID YOU CALCULATE THE PRE- AND POST-MERGER HHIs AND CHANGE IN THE HHI BASED ON ECONOMIC CAPACITY?**

A. Economic capacity is the total amount of capacity owned by suppliers to the relevant market from which output can be delivered to a market point at a cost less than or equal to a given market price. FERC has stated that economic capacity "is the most important measure because it determines which suppliers may be included in the geographic market" (*Merger Policy Statement*, Appendix A, p. 10).

I calculate economic capacity at different market-price levels. Different price levels are reflective of different load and market conditions. Low prices represent off-peak conditions; high prices represent peaking conditions.

**Q. WHAT SUPPLIERS DID YOU INCLUDE IN YOUR ECONOMIC CAPACITY ANALYSIS?**

A. I included all of the suppliers that I included in the total capacity, baseload capacity, peaking capacity, and uncommitted capacity analyses. In addition, I included capacity from TVA and the Southern Company. However, to test the sensitivity of the results to inclusion of Southern and TVA, I also calculated HHIs excluding Southern and then excluding both Southern and TVA.

**Q. WHY IS TVA INCLUDED IN THE RELEVANT GEOGRAPHIC MARKET?**

1 A. TVA is included in the relevant geographic market because generating capacity  
2 owned by TVA constrains the ability of the Applicants to increase prices. TVA  
3 also can provide power directly to entities that had exchange agreements with  
4 TVA in 1957. These entities (or their current owners) include CINergy, Duke,  
5 CP&L, Union, Entergy, CIPSCo, Illinois Power, Louisville Gas and Electric,  
6 Kentucky Utilities, East Kentucky Cooperative, and the Southern Companies.  
7 The result of such provision of power by TVA is that third-party generation that  
8 might otherwise be sold to these entities is available for sale to other customers in  
9 the geographic market. Moreover, when one of these entities is purchasing from  
10 TVA, such a transaction increases the likelihood that the purchasing entity has  
11 capacity available for sale in the market.

12 Entergy and Union can and do purchase power from TVA. In 1996, TVA  
13 was one of the largest suppliers of non-firm and short-term firm power to Entergy.  
14 Purchases from TVA accounted for 36 percent of Entergy's non-firm and short-  
15 term firm purchases. TVA was the seventh-largest supplier of non-firm and short-  
16 term firm power to Union and accounted for about 6 percent of Union's  
17 purchases. In 1996, TVA sold 8,104,243 MWH to Entergy and sold 521,545  
18 MWH to Union Electric, for total sales in the SPP/Union area of 8,625,788 MWH  
19 [see Exhibit \_\_\_\_ (RMS-10)]. In 1996 Western Resources sold 3,846,384 MWH of  
20 non-firm and short-term firm power and KCPL sold 3,666,691 MWH of non-firm  
21 and short-term firm power. Non-firm and short-term firms sales by both  
22 Applicants totaled 7,513,075 MWH [see Exhibit \_\_\_\_ (RMS-5)]. This means that  
23 TVA's sales of non-firm and short-term firm power in the SPP/Union area of

1 8,625,788 MWH exceeded the combined non-firm and short-term firm sales by  
2 the Applicants of 7,513,075 MWH.

3 **Q. WHY DID YOU CONDUCT SENSITIVITY ANALYSES INCLUDING**  
4 **THE SOUTHERN COMPANY IN THE RELEVANT GEOGRAPHIC**  
5 **MARKET?**

6 A. The Southern Company accounted for about 2 percent of Entergy's purchases in  
7 1996. There are strong interconnections from Southern and TVA to Entergy. All  
8 SPP entities interconnected with Entergy are Tier 2 entities to the Southern  
9 Company. In 1996 Southern sold to Entergy but I did not find sales by Southern  
10 to Union or other SPP members. Southern's sales to Entergy are not insignificant.  
11 In 1996 Southern sold 477,810 MWH to Entergy. Entergy is one of KCPL's ten  
12 largest customers. KCPL sold 161,070 MWH to Entergy, or about one-third the  
13 amount sold by Southern. I show HHI calculations with and without Southern as  
14 a supplier to the relevant market. I similarly show HHI calculations both  
15 including and excluding TVA. The results of the calculations are shown in  
16 Exhibit \_\_\_\_ (RMS-21).

17 **Q. HOW DID YOU IMPLEMENT THE ECONOMIC CAPACITY TEST?**

18 A. I calculated the marginal operating cost of each generating unit in the SPP and in  
19 Union's control area as well as the generating units that might supply power into  
20 the SPP or Union in competition with the Applicants. For each entity in the SPP,  
21 I added that entity's ceiling transmission rate to its border. I also include losses  
22 when I calculate ceiling transmission rates. For entities outside the SPP/Union  
23 area, I added transmission charges to the nearest SPP utility. This calculation

1 results in each unit's delivered costs to the SPP/Union area. The market shares  
2 and measures of market concentration for the regional market were computed at  
3 different delivered price levels.

4 An alternative calculation, which I have also performed, would be to  
5 recognize that Entergy is becoming a regional hub. Power usually flows from  
6 north to south within the SPP. It is economic activity at regional market hubs that  
7 strongly influences prices throughout the region. This means that market  
8 concentration should be calculated on the basis of economic capacity delivered to  
9 a market hub, or in this case, Entergy. I have calculated economic and marginal  
10 economic capacity based on delivered costs to the Entergy border.

11 Finally, I show HHI calculations in which I do not add transmission  
12 charges to the fuel costs of capacity within the SPP area, but do add transmission  
13 charges to the fuel cost of capacity outside of the SPP. This calculation would  
14 reflect the concept that output capacity outside the SPP area incurs an additional  
15 wheeling charge (relative to capacity within the SPP area) in order to reach buyers  
16 within the SPP/Union area.

17 In order to calculate economic capacity, a substantial amount of data is  
18 required. Those data include estimates of market prices in the SPP, the capacity  
19 and fuel costs of each generating unit owned by each supplier, and transmission  
20 rates for each supplier. Each of these data items is discussed separately.

21 **Q. DID YOU ACCOUNT FOR THE FACT THAT THE RELEVANT**  
22 **PRODUCTS MAY BE DIFFERENTIATED BY TIME?**

1 A. Yes, I did. The *Merger Policy Statement* notes that, because buyers cannot store  
2 electricity, products may be differentiated by time. As a consequence, peak and  
3 off-peak energy may be distinct products (*Merger Policy Statement*, Appendix A,  
4 p. 4). I have taken this into account by measuring economic capacity and  
5 marginal economic capacity at different market price levels. Different price levels  
6 reflect different load and market demand conditions. Low prices represent off-  
7 peak conditions; high prices represent peaking conditions.

8 In general, measuring capacity and HHIs at different price levels better  
9 reflects different market conditions, compared to using arbitrary time periods that  
10 can actually include a variety of market conditions. For example, one could  
11 define a "Summer Peak" time period as the hours of noon to 7 p.m. between May  
12 15 and September 15. This time period will actually include a wide range of load  
13 and market conditions. If the temperature is in the 90s, loads will be at or near  
14 peak conditions. Conversely, temperatures can fall into the 60s during this same  
15 time period, making load levels more similar to Spring/Fall or off-peak  
16 conditions. Thus, I have chosen to measure economic and marginal economic  
17 capacity at different price levels to understand concentration under different load  
18 conditions.

19 **Q. WHAT PRICE LEVELS DID YOU UTILIZE IN YOUR ANALYSIS OF**  
20 **ECONOMIC CAPACITY?**

21 A. I have calculated economic capacity at delivered prices of 14, 20, 25, and 35 mills  
22 per KWH. I have chosen 14 mills to represent off-peak conditions. The price of  
23 20 mills reflects typical daily weekday conditions. Based on the data I have



1 examined, 20 mills is about or slightly above the median price for daily  
2 transactions in the SPP. It also is near or slightly above the average price for non-  
3 firm and short-term firm power sold by the Applicants. The price of 20 mills also  
4 is at or near the average prices paid for non-firm and short-term firm power by  
5 customers in the region. See Exhibit \_\_\_\_ (RMS-19) and Exhibit \_\_\_\_ (RMS-20).  
6 The data I have examined suggest that 25 mills and 35 mills are reasonable prices  
7 to use to reflect capacity that would be economic at peak conditions.

8 **Q. WHAT DATA DID YOU EXAMINE IN ORDER TO DETERMINE**  
9 **WHICH PRICES TO USE IN YOUR ECONOMIC CAPACITY**  
10 **ANALYSIS?**

11 A. I examined actual spot market prices for both Continental Power Exchange  
12 transactions and the spot market prices reported by *Power Markets Week*. In  
13 addition, I examined the prices at which both Western Resources and KCPL sold  
14 power and examined the prices paid by buyers.

15 **Q. WHAT IS THE CONTINENTAL POWER EXCHANGE?**

16 A. The Continental Power Exchange (CPEX) is a computerized, one-hour-ahead  
17 trading market. CPEX members can place offers to sell power into a computer  
18 system up to 20 minutes before the hour that the transaction is due to occur. The  
19 computer system then, for each offer to sell, calculates delivered prices to buyers  
20 by adding in transmission costs, and these offers appear as offers for the sale of  
21 power on the screens of buyers. Buyers can then choose whether or not to accept  
22 the offers they see on the computer terminals in their operation or trading centers.

1           The *Energy Daily* publishes daily minimum, maximum, and average  
2           prices for CPEX transactions. Exhibit \_\_\_\_ (RMS-17) is a map showing the  
3           control areas that are members of CPEX. Both Western Resources and KCPL, as  
4           well as other utilities in this region, are members of CPEX. Prices published by  
5           *Energy Daily* are for hourly transactions between 7:00 a.m. and 11:00 p.m.

6   **Q.   PLEASE DESCRIBE THE *POWER MARKETS WEEK* DATA YOU**  
7   **EXAMINED.**

8   A.   *Power Markets Week* is a publication of McGraw-Hill. It publishes an index of  
9           spot-market prices during the hours of 6:00 a.m. and 10:00 p.m. on weekdays for  
10          various regions in the country. The SPP is one region for which transaction prices  
11          are reported. In January of 1997, *Power Markets Week* began quoting prices on  
12          an "Into Entergy" basis.

13                The *Power Markets Week* prices are for pre-scheduled transactions. The  
14                reported price for each day is based on transactions made the previous weekday  
15                for delivery that day. For example, the price reported for Tuesday, April 22,  
16                1997, is based on transactions pre-scheduled on Monday, April 21, 1997, for  
17                delivery on Tuesday, April 22, 1997.

18   **Q.   WHAT WAS THE RESULT OF ANALYZING THE CPEX AND THE**  
19   ***POWER MARKETS WEEK* TRANSACTIONS PRICES?**

20   A.   Exhibit \_\_\_\_ (RMS-18), page 1 of 2, shows the cumulative frequency distribution  
21          of the minimum daily CPEX prices, maximum daily CPEX prices, and average

1 daily CPEX prices. Exhibit \_\_\_\_ (RMS-18), page 2 of 2, shows the frequency  
2 distribution of average daily prices reported by *Power Markets Week* for the SPP.

3 The cumulative frequency distribution of CPEX prices indicates, for  
4 example, that the average daily price is at or below 16 mills/KWH for 24 percent  
5 of the days of the year, and is at or below 20 mills/KWH for 56 percent of the  
6 days. The maximum daily price is at or below 20 mills/KWH one-quarter of the  
7 days. The average daily price is 14 mills or less for only 8 percent of the days of  
8 the year, and exceeds 25 mills on about 20 percent of the days of the year. The  
9 maximum daily CPEX price is less than 40 mills/KWH for about 85 percent of  
10 the days of the year.

11 The cumulative frequency distribution of SPP average daily prices, as  
12 reported in *Power Markets Week*, is similar to that reported by CPEX. The  
13 average daily SPP price reported by *Power Markets Week* is 16 mills/KWH or  
14 less for only 8 percent of the days of the year, and exceeds 35 mills/KWH for only  
15 6 percent of the hours of the year. The median SPP price is about 19 mills.

16 **Q. PLEASE DISCUSS YOUR ANALYSIS OF THE PRICES PAID BY**  
17 **BUYERS OF NON-FIRM AND SHORT-TERM FIRM POWER.**

18 Exhibit \_\_\_\_ (RMS-19) shows, for each Tier 1 entity to either merging party that  
19 files a FERC Form 1 and also for Entergy, the prices that entity paid to individual  
20 sellers for non-firm and short-term firm power in 1995 and 1996.

21 For an individual buying utility, the prices reported in these exhibits are  
22 the average prices across all transactions in which that seller sold to the indicated

1 buyer. Thus, the prices reflect a mix of transactions in both off-peak and peak  
2 periods. Nonetheless, they provide some indication of the overall level of market  
3 prices during 1995.

4 The average price paid by these entities in 1995 was 21.58 mills per KWH  
5 for Entergy, 23.6 mills per KWH for Empire, and 15.94 mills per KWH for  
6 Missouri Public Service.

7 The average price paid by these entities in 1996 was 23.05 mills per KWH  
8 for Entergy, 24.04 per KWH for Empire, and 17.29 mills per KWH for Missouri  
9 Public Service.

10 **Q. DID YOU ALSO EXAMINE THE PRICES AT WHICH KCPL AND**  
11 **WESTERN RESOURCES SOLD NON-FIRM AND SHORT-TERM FIRM**  
12 **POWER?**

13 **A.** Yes, I did. Exhibit \_\_\_\_ (RMS-20) consists of KCPL's and Western Resources'  
14 1995 and 1996 sales of non-firm and short-term firm power at wholesale, sorted  
15 by price received from the buyer.

16 The average price received by Western Resources was 20.0 mills per  
17 KWH in 1995 and 19.9 mills per KWH in 1996. The average price received by  
18 KCPL was 15.8 mills per KWH in 1995 and 16.59 mills per KWH in 1996.  
19 These exhibits also show that more than 90 percent of both Western Resources'  
20 and KCPL's sales of non-firm and short-term firm power were to buyers that paid  
21 an average price to Western Resources or KCPL of 25 mills or less.

1   **Q.   DID YOU EXAMINE ANY SYSTEM LAMBDA DATA WHEN YOU**  
2       **WERE CONSIDERING WHAT PRICE LEVELS TO ANALYZE?**

3   A.   Yes. Appendix A, p. 9, of the *Merger Policy Statement* suggests that system  
4       lambda may be used as a surrogate for competitive market price. In principle, if  
5       reported values for system lambda measured the incremental cost of power, then  
6       competitive prices should be close to system lambda plus transmission costs.

7               However, in my analysis of this merger, there was no reason to use system  
8       lambdas, as several alternative measures of market prices were available. The  
9       best estimate of market price is actual market price data, not proxies for market  
10      prices.

11   **Q.   WERE THERE ANY OTHER REASONS WHY YOU CHOSE NOT TO**  
12       **RELY ON SYSTEM LAMBDA IN YOUR ANALYSIS OF THIS**  
13       **MERGER?**

14   A.   Yes. Different utilities use different methodologies to calculate the hourly  
15       lambdas reported in their Form 714 filings. Thus, an hour-by-hour comparison of  
16       system lambdas between different utilities can be misleading. In some cases the  
17       hourly system lambda values reported in Form 714 are not the values being  
18       observed by system operators at the time buying and selling decisions were being  
19       made. Some utilities report system lambdas based on production cost simulations  
20       or other after-the-fact modeling. As a consequence, any conclusions based on  
21       comparing prices to system lambdas, or based on comparing power flows to  
22       system lambdas, are potentially incorrect and misleading. Moreover, as I show in

1 some examples below, even when different utilities report lambdas on a consistent  
2 basis, anomalous results can occur such as sellers reporting higher system  
3 lambdas than buyers.

4 The fact that different firms report lambdas in different ways became  
5 immediately apparent in the course of my analysis. To better understand how  
6 lambdas are calculated, I examined the methodologies used by each of the  
7 Applicants. There are several potentially important differences in the way the  
8 Applicants record lambda data that would make it very difficult to draw  
9 conclusions based on any comparisons of their data. The fact that even KCPL and  
10 Western employ different methodologies is especially striking when one considers  
11 that Western and KCPL operate adjacent control areas and jointly own two plants.  
12 It is quite likely that the methodological differences used to report lambdas vary  
13 among other utilities, just as they do between Western and KCPL. The  
14 instructions on FERC Form 714 appear to give utilities significant latitude in how  
15 they calculate and report system lambda. That is, it appears quite likely that  
16 different firms could interpret the instructions quite differently. Thus, any  
17 individual utility's own lambda data could be consistent with the instructions on  
18 Form 714 and useful if one knew exactly how the data were derived, and yet be  
19 inconsistent with data reported by other utilities.

20 **Q. CAN YOU GIVE SOME EXAMPLES OF DIFFERENT**  
21 **METHODOLOGIES FOR REPORTING LAMBDA THAT CAN LEAD**

1       **TO SIGNIFICANT DIFFERENCES IN THE RESULTS ACROSS**  
2       **UTILITIES?**

3       A.     Yes. I am aware of several such differences. The most important of these are  
4       discussed here. There may be other important differences of which I am not  
5       aware.

6             The first difference is that some utilities report a lambda only based upon  
7       the cost of generation from their own units. This is how Western reports its  
8       lambda. Other utilities include in their lambda determination both the costs of  
9       generation from their own units and purchases from others. For example, when  
10      KCPL is purchasing power, it often records the variable cost of the purchase as its  
11      lambda. This difference between the purchase price (and so lambda) and the cost  
12      of marginal generation can be significant, e.g., if a purchase has been scheduled in  
13      advance for any period of time of more than one hour. Decisions to purchase  
14      power at a given price are based on expected load and cost conditions at the time  
15      the purchase is negotiated. Hourly system lambdas calculated based on  
16      generating costs reflect actual loads and generating unit availability in that hour.  
17      If there has been a significant, unanticipated change in the load or generating unit  
18      availability and capability during the transaction, a system lambda calculated  
19      based on purchase power costs may be very different from a system lambda  
20      calculated based on that utility's or a neighboring utility's actual marginal  
21      generation cost that hour.

1           During any given hour, an individual utility may be simultaneously  
2 engaged in several purchase transactions and several sales transactions, each with  
3 different durations (e.g., some lasting one hour, others lasting up to several days).  
4 Each of these transactions may have different prices reflecting conditions  
5 anticipated at the time the transaction was agreed upon. When a utility buys  
6 power for a day or week, the price per KWH may be the same for all hours during  
7 which power is being received. If the buying utility includes purchased power  
8 costs in its lambda, it may report this constant price as its system lambda for  
9 several consecutive hours. A neighboring utility that does not include purchase  
10 power cost in its lambda (but is engaged in a similar transaction) would report  
11 lambdas that vary from hour to hour.

12           A second source of differences in system lambdas across utilities occurs  
13 because some utilities may report a system lambda based on the cost of the  
14 highest-cost unit that was operating and that could supply additional output.  
15 Other utilities include in the calculation of system lambda only the cost of  
16 generating units on automatic generating control (AGC). The energy  
17 management system (EMS) at most utilities calculates an instantaneous lambda  
18 based upon the cost of units that are on AGC. The units on AGC are those units  
19 or that unit following load on a minute-by-minute basis. KCPL has informed me  
20 that, on its system, there often are one or more units that are available to pick up  
21 load which, for various reasons, are not on AGC. When this happens, the lambda  
22 calculated based on the highest-cost unit running and available to supply



1 additional output can differ from the lambda calculated based on the cost of the  
2 unit or units on AGC.

3 A third difference in reported lambdas occurs when utilities report a  
4 lambda based on after-the-fact determination of incremental generation cost.  
5 Neither KCPL nor Western Resources reports the lambda calculated in the EMS  
6 system. KCPL examines its generation and load in each hour and calculates a  
7 lambda based upon an after-the-fact determination of incremental cost. Western  
8 Resources uses a production cost model to estimate lambdas. Such modeling can  
9 lead to differences in the methodology for computing lambda and result in  
10 differences in the lambda reported on Form 714. Western Resources uses unit  
11 availability over the entire month in its production cost model runs to estimate  
12 system lambdas. The results of these model runs may or may not reflect actual  
13 unit availability and generation on an hourly basis.

14 KCPL defines the lambda as the marginal cost of the next MWH of output  
15 that is not dedicated to spinning reserve. This may differ from the cost of the  
16 highest-cost unit actually running. In some cases a utility may be running a high-  
17 cost unit such as a combustion turbine (CT) or higher-cost gas unit for voltage  
18 support in one part of its control area. When KCPL is in such a situation it would  
19 not use that unit's cost as its estimate of system lambda even if that unit is the  
20 highest-cost unit running and supplying output. The unit is being run for voltage  
21 support, not because it is the optimal unit to supply system load.

It also is possible that the reported system lambda can exceed the cost of the highest-cost unit that is running and not fully loaded. Some units might not be fully loaded in reality, but considered fully loaded because of spinning reserve obligations. In this case KCPL might report the cost of a purchase as its system lambda.

The fact that a number of different methodologies are used by utilities to compute system lambda reported in Form 714-- and in particular the fact that two adjacent companies that jointly owned generating units use very different methodologies -- means that lambda values are not likely to be comparable across different systems.

**Q. CAN YOU ILLUSTRATE SOME OF THESE ISSUES WITH NUMERICAL EXAMPLES?**

**A.** Yes. I assume that there are two utilities, A and B, each with four 50 MW units. The units owned by each utility and their marginal generating costs are shown below.

| UTILITY A |               |                | UTILITY B |               |               |
|-----------|---------------|----------------|-----------|---------------|---------------|
| Unit      | Capacity (MW) | Cost Mills/KWH | Unit      | Capacity (MW) | Cost Mills/KW |
| A-1       | 50            | 12             | B-1       | 50            | 10            |
| A-2       | 50            | 16             | B-2       | 50            | 15            |
| A-3       | 50            | 20             | B-3       | 50            | 25            |
| A-4       | 50            | 30             | B-4       | 50            | 27            |

Assume that Utility A has a load of 120 MW in a given hour and that Utility B has a load of 125 MW in that same hour. Assume that there are no

1 transmission constraints that limit trading. Further assume that transmission  
2 charges are zero.<sup>12</sup>

3 Finally, assume that each utility must have a unit online, but less than fully  
4 loaded to follow minute-by-minute load fluctuations.

5 In this example, A would operate its units A-1, A-2, and A-3 and sell  
6 slightly more than 25 MW to Utility B. Utility B would operate only its units B-1  
7 and B-2. B buys slightly more than 25 MW from A. Utility B's unit B-2 is "on  
8 control" and following minute-by-minute load fluctuations. Utility A would  
9 generate slightly more than 145 MW and its unit A-3 would be "on control" and  
10 following load on a minute-by-minute basis. Utility A sells to Utility B at a price  
11 that exceeds 20 mills, but is less than 25 mills. For simplicity, assume A sells to  
12 B at a price of 22.5 mills.

13 If both utilities reported a system lambda based on the highest-cost unit  
14 operating and available to meet load, Utility A would report a lambda of 20 mills,  
15 or the cost of its unit A-3. This is the highest-cost unit operating on A's system.  
16 Utility B would report a system lambda of 15 mills, or the cost of its unit B-2.  
17 That unit is the highest-cost unit running on B's system and, in this example, is  
18 also the unit load following on B's system.

19 Note that in this example, B purchased from A to avoid running its unit B-  
20 3 which has a cost of 25 mills. This purchase lowered B's total and marginal cost.

---

<sup>12</sup> The assumption of zero transmission costs simplifies the example without changing the basic point.

1 After the fact, B reports a lower lambda (15 mills) than does A (20 mills). Thus,  
2 one observes the anomalous result that power is flowing from a utility with high  
3 lambda (Utility A reports a lambda of 20 mills) to a utility with a low lambda  
4 (Utility B reports a lambda of 15 mills). This anomalous result occurs because  
5 one is examining utility B's system lambda after the effect of the purchase. The  
6 correct comparison is between Utility A's incremental cost of 20 mills and the  
7 cost Utility B avoided by purchasing from Utility A, or the 25 mills associated  
8 with Utility B running its unit 3.

9 Alternatively Utility B might report the purchase cost as its lambda. In  
10 this case Utility B reports a lambda of 22.5 mills.

11 Still another alternative would be for Utility B to report a lambda of 25  
12 mills. This is the cost of its unit B-3 and would represent the cost B would incur  
13 if it had any significant increase in load. In this example, a significant increase in  
14 Utility B's load would require it to start its Unit B-3.<sup>13</sup>

15 In this example, Utility B's reported lambda could be 15 mills or 22.5  
16 mills depending on whether or not it included purchases in the calculation of its  
17 reported lambda. Utility B's reported lambda could be 15 mills or 27 mills  
18 depending on whether it reported the highest-cost unit actually running or  
19 reported the cost of the unit that would be running if load increased by more than  
20 a small amount.

1           This example illustrates three points. First, whether or not utilities include  
2           purchases in their computation of system lambdas can affect the reported lambdas.  
3           Second, when a utility is purchasing power to avoid running a higher-cost unit,  
4           the lambdas reported based on the highest-cost unit that actually ran on the buying  
5           utility's system will be lower than the costs avoided by entering the transaction.  
6           In this instance, the system lambda reported by the buying utility may be lower  
7           than the selling utility's reported lambda. Finally, the reported system lambda can  
8           vary depending on whether the reported lambda value is the cost of the highest-  
9           cost unit running, or whether the reported lambda is based on the cost of the next  
10          unit that might be run if load increased significantly.

11           To further complicate the issue, many units burn more than one type of  
12          fuel. For example, a unit might burn lower-cost coal up to maybe 90 percent of  
13          its rating, but the last 10 percent would be generated on a topping fuel such as gas  
14          or oil at a much higher price.

15           As my previous answer indicated, there are other methodological  
16          differences in the computation of system lambda beyond those covered in this  
17          example that can also lead to differences in reported system lambdas. As a result,  
18          system lambdas reported by different utilities are not likely to be calculated on a  
19          consistent basis, and comparisons of lambdas across utilities can be misleading.

---

*Footnote continued from previous page*

<sup>13</sup> This last case would be most relevant if Unit 3 were a peaking unit. Peaking units are designed to be started and brought on line quickly. Large steam units cannot be brought on line instantaneously.

1    **Q.    WHAT TRANSMISSION PRICES DID YOU USE IN YOUR ANALYSIS?**

2    A.    I generally used the Order No. 888 ceiling rates for non-firm transmission plus  
3        Schedule 1 and 2 ancillary services. For those entities that do not have Order No.  
4        888 transmission rates but that post tariffs, e.g., TVA and AEC, I used their  
5        posted ceiling rates. My transmission rate calculations include losses.

6    **Q.    WHAT DATA DID YOU USE FOR CAPACITY AND FUEL COSTS?**

7    A.    I used EIA Form 860 to obtain data on the capacity, type of fuel burned, and heat  
8        rate for each unit in my analysis. I obtained plant-specific fuel prices from EIA  
9        Form 423. I calculated variable cost at each unit as the cost of fuel delivered to  
10       the plant and burned by that unit multiplied by that unit's heat rate.

11                There were some units for which no Form 423 data were available. In  
12        these instances I used fuel costs reported in FERC Form 1. I also checked the  
13        accuracy of my database by comparing it to SEC 10Ks, OE-411s, and FERC  
14        Form 1 power plant data.

15   **Q.    HAVE YOU MADE ANY ADJUSTMENTS TO YOUR CAPACITY DATA**  
16        **TO REFLECT LONG-TERM CONTRACTS FOR THE PURCHASE AND**  
17        **SALE OF CAPACITY?**

18   A.    I examined the types of long-term purchase and sale arrangements included in the  
19        Applicants' resource plans. Although adjustments for long-term contracts can be  
20        appropriate in some circumstances, in this case I do not believe such an  
21        adjustment would have a significant effect on the results. Moreover, the pricing  
22        under some of these contracts is based on system incremental costs rather than the

1 fuel costs of a specific unit. This fact would make adjusting for long-term  
2 contracts particularly complex.

3 Western Resources has long-term sales of 364 MW forecast for 1998.  
4 KCPL has forecast purchases of 547 MW in 1998 and forecast capacity sales of  
5 150 MW.<sup>14</sup> The effect of adjusting for all of these contracts would be to decrease  
6 Western Resources' capacity by 364 MW and to increase KCPL's capacity by 397  
7 MW -- a net of 33 MW for the merged entity.

8 The effect of adjusting the capacity of all other suppliers in the relevant  
9 market for long-term purchase contracts would be to raise some suppliers'  
10 capacity and lower others', but it would not change total capacity in the relevant  
11 market by a substantial amount.<sup>15</sup>

12 Since incorporating long-term purchase and sales contracts will not change  
13 the merged firm's total capacity by any significant amount, and also is unlikely to  
14 change total capacity in the relevant market by a substantial amount, such  
15 adjustments will not change the merged firm's market share or the change in the  
16 HHI by very much. Thus, such adjustments do not affect the results and  
17 unnecessarily complicate the analysis.

---

<sup>14</sup> This consists of 195 MW of capacity purchases less 45 MW that are simultaneously resold.

<sup>15</sup> As a check, I examined the 1998 forecasts in the SPP OE-411. Total capacity after adjusting for the net effect of purchase and sales contracts was 69,956 MW. Total capacity prior to such adjustment was 68,955 MW of utility capacity and 918 MW of non-utility generation.

1 Q. WHAT WAS THE RESULT OF YOUR ECONOMIC CAPACITY  
2 ANALYSIS?

3 A. Exhibit\_\_\_\_(RMS-21) shows my economic capacity calculations under the  
4 alternative assumptions I discussed previously. Exhibit \_\_\_\_ (RMS-21) presents  
5 HHIs based on economic capacity at delivered costs to the regional market under  
6 three scenarios: 1) including TVA in the relevant market, but excluding Southern;  
7 2) excluding both TVA and Southern; and 3) including both TVA and Southern. I  
8 also show the HHIs and the change in the HHI based on economic capacity  
9 delivered to the Entergy border, or regional market hub, for the same three  
10 scenarios. The post-merger HHI and the change in the HHI due to the merger are  
11 shown for different price levels.

12 Regardless of which assumption is made concerning the inclusion of  
13 capacity from Southern and/or TVA, the HHI calculations based on economic  
14 capacity are generally within the safe-harbor provisions of the *Merger Policy*  
15 *Statement* and the *Merger Guidelines*. The post-merger HHIs are almost always  
16 less than 1,800. The small number of instances in which the change in the HHI  
17 exceeds 100 points generally occur only when I exclude all of TVA's and  
18 Southern's capacity. Given the magnitude of the sales of TVA and Southern in  
19 the region, exclusion of all of their capacity clearly overstates any impact of this  
20 merger. These results indicate that the merger, overall, should be viewed as  
21 within the safe-harbor levels and no further analysis is required.



Exhibit \_\_\_\_ (RMS-22) shows the details of the capacity calculations from each supplier at each price level.

**I. HHIs Based on Marginal Economic Capacity**

**Q. WHY DID YOU CALCULATE THE HHI BASED ON MARGINAL ECONOMIC CAPACITY?**

A. Marginal economic capacity measures capacity with costs at or near the general range of market prices. Marginal economic capacity also measures the capacity that might respond to price increases. It has been used in prior merger and market power cases at FERC. FERC staff witness David Patton used marginal economic capacity in his testimony regarding the PEPCO-Baltimore Gas & Electric merger (Docket No. EC96-10-000).

**Q. ARE YOU FAMILIAR WITH THE CONCEPT OF "AVAILABLE ECONOMIC CAPACITY"?**

A. Yes. I am aware that in some other merger cases, FERC has calculated HHIs based on "available economic capacity." Available economic capacity is calculated for each supplier, for different time periods (i.e., summer peak, summer off-peak, etc.), as that supplier's economic capacity less that supplier's native load.

I do not believe that HHIs based on available economic capacity are an appropriate way to analyze utility mergers. Rather, I believe that HHIs based on marginal economic capacity are more economically appropriate.

1    **Q.    WHY DO YOU THINK MARGINAL ECONOMIC CAPACITY IS A**  
 2    **SUPERIOR MEASURE TO AVAILABLE ECONOMIC CAPACITY?**

3    A.    Available economic capacity, as it is conventionally calculated, ignores the fact  
 4    that capacity at or above market price held by net buyers places a significant  
 5    constraint on the ability of the merged firm to increase prices. Marginal economic  
 6    capacity is the additional capacity that would become competitive at increased  
 7    prices. This capacity clearly constrains the ability of the merged firm to raise  
 8    prices. I believe that HHIs calculated on the basis of marginal economic capacity,  
 9    along with those calculated on the basis of economic capacity, are a superior  
 10    measure of a merger's impact compared to HHIs based on available economic  
 11    capacity.

12            Marginal economic capacity reflects the fact that the capacity available to  
 13    respond to a price increase consists of two components. The first is the economic  
 14    capacity held by net sellers that exceeds their native load obligations; the second  
 15    is the capacity owned by net buyers who might increase output in response to a  
 16    price increase.

17   **Q.    PLEASE EXPLAIN HOW MARGINAL ECONOMIC CAPACITY IS**  
 18   **CALCULATED.**

19   A.    Conceptually, marginal economic capacity is calculated as the additional amount  
 20   of generating capacity that can be delivered to the market at a given increase in  
 21   the market price. Consider the following example. Assume the current market  
 22   price of power is 18 mills per KWH. An entity thinking of raising its price above

1 18 mills would be concerned with the amount of capacity held by other entities  
2 with a variable cost of 18 mills or slightly above. In this situation, the capacity  
3 owned by competitors would constrain the firm's ability to raise prices, in that, if  
4 the firm raised its price, the competitors' capacity might enter the market and  
5 capture the firm's market share. This would render the price increase unprofitable  
6 and so would prevent the firm from raising prices. Thus, marginal economic  
7 capacity is the capacity whose output would be increased (decreased) if wholesale  
8 market prices were to increase (decrease).

9 Marginal economic capacity is calculated as the difference in economic  
10 capacity between two different price levels. For example, the marginal economic  
11 capacity between 14 mills and 20 mills would be the difference between the  
12 economic capacity held by each entity at a price of 20 mills and the economic  
13 capacity held by each entity at a price of 14 mills.

14 **Q. WOULD YOU PLEASE ILLUSTRATE THE CONCEPT OF MARGINAL**  
15 **ECONOMIC CAPACITY AND EXPLAIN HOW IT DIFFERS FROM**  
16 **"AVAILABLE ECONOMIC CAPACITY"?**

17 A. Yes. Consider a market with three utilities: A, B, and C. Table 1 lays out this  
18 example. As shown in Table 1, each utility has a native load of 200 MW for the  
19 period under analysis. Utilities A and B are proposing a merger. For simplicity, I  
20 will assume A and B have identical mixes of capacity. Each of the two merging  
21 entities has 100 MW of capacity with a marginal variable cost of 10 mills per  
22 KWH and 150 MW of capacity with a marginal variable cost of 20 mills per  
23 KWH. Utility C has 100 MW of capacity with a marginal variable cost of 15

mills per KWH and 100 MW of capacity with a marginal variable cost of 20.5 mills per KWH. I assume no transmission charges associated with off-system sales. This assumption simplifies the example but does not alter the basic point or results.

TABLE 1

| Utility | Plant | Capacity | Cost<br>(mills/KWH) | Production | Native<br>Load | Sales<br>(Purchases) | Economic<br>Capacity at<br>105% of<br>Market Price | Available<br>Economic<br>Capacity <sup>1</sup> at<br>105% of<br>Market Price |
|---------|-------|----------|---------------------|------------|----------------|----------------------|--|--|
| A       | 1     | 100      | 10                  | 100        |                |                      | 100  |  |
|         | 2     | 150      | 20                  | 150        |                |                      | 150  |  |
|         | Total | 250      |                     | 250        | 200            | 50                   | 250  | 50   |
| B       | 1     | 100      | 10                  | 100        |                |                      | 100  |  |
|         | 2     | 150      | 20                  | 150        |                |                      | 150  |  |
|         | Total | 250      |                     | 250        | 200            | 50                   | 250  | 50   |
| C       | 1     | 100      | 15                  | 100        |                |                      | 100  |  |
|         | 2     | 100      | 20.5                | 0          |                |                      | 100  |  |
|         | Total | 200      |                     | 100        | 200            | (100)                | 200  | 0  |

<sup>1</sup> Available economic capacity is economic capacity less native load.

In this example, utilities A and B each generate 250 MW. Each uses 200 MW to meet its native load obligations and sells 50 MW to Utility C. Utility C generates 100 MW and purchases 50 MW each from utilities A and B. The price of power sold by A and B to C is between 20 and 20.5 mills per KWH. At any price in excess of 20.5 mills per KWH, C runs its own generator rather than buying from A and B. Neither A nor B will find it profitable to sell to C at a price less than their marginal costs of 20 mills per KWH. C buys from A and B because it is less costly for C to buy power at 20.25 mills from A and B than it is to run its generator at 20.5 mills.

1           Economic capacity would be calculated as follows. The market price is  
2           about 20 to 20.5 mills per KWH. The market price plus 5 percent is about 21  
3           mills per KWH. Given that utilities A and B each have 100 MW of capacity with  
4           a marginal cost of 10 mills and 150 MW of capacity with a marginal cost of 20  
5           mills per KWH, A and B each have 250 MW of economic capacity, and native  
6           loads of 200 MW. Therefore, A and B each have 50 MW of available economic  
7           capacity.

8           Utility C has 100 MW of capacity with a marginal cost of 15 mills and  
9           100 MW of capacity with a marginal cost of 20.5 mills. This is a total of 200  
10          MW of economic capacity. Utility C has a native load of 200 MW. Thus, Utility  
11          C has zero available economic capacity.

12          If one only considered economic capacity held by net sellers in excess of  
13          their native load requirements to evaluate the effects of a merger of A and B in  
14          this example, one would conclude that A and B control all of the available  
15          economic capacity. One also might then conclude that utilities A and B could  
16          increase prices significantly to Utility C. This conclusion would be incorrect. If  
17          A and B attempted to increase prices to Utility C by any significant amount,  
18          Utility C could cease purchasing from A and B and run its 20.5 mill per KWH  
19          generator. This is because output from the capacity held by C with costs near the  
20          market price would increase if prices were to increase. As a result, Utility C's  
21          capacity also is available to limit the ability of the merged firm to increase prices.

22          The analysis ought to take into account all of the capacity that might  
23          respond to a price increase. This would include not just economic capacity in

1 excess of native load requirements owned by net sellers, but also capacity owned  
2 by buyers that could respond to a price increase. In the case of this example,  
3 Utility C had 100 MW of economic capacity at a cost between the market price  
4 and 105 percent of the market price. This capacity is available to defeat a price  
5 increase, yet Utility C has zero available economic capacity as it is conventionally  
6 calculated because its economic capacity is less than its native load. As this  
7 example has shown, the capacity owned by all market participants with costs at or  
8 near the market price should be included in the analysis. Marginal economic  
9 capacity reflects all capacity with costs near the market price, not just capacity  
10 held by net sellers.

11 **Q. CAN YOU PROVIDE OTHER EXAMPLES TO ILLUSTRATE THE**  
12 **PROBLEMS THAT CAN ARISE WHEN AVAILABLE ECONOMIC**  
13 **CAPACITY IS USED TO EVALUATE MERGERS?**

14 **A.** Yes. My previous example showed how available economic capacity calculations  
15 could result in an inference that a merger increases prices when, in fact, the  
16 merger would not lead to a price increase. There are also situations where  
17 calculations based on available economic capacity might lead one to infer that a  
18 merger would have no impact on wholesale prices when, in fact, the merger  
19 would result in a significant price increase.

20 Again I assume a market with three utilities: A, B, and C. This example  
21 is set out in Table 2. As Table 2 shows, each utility has a native load of 200 MW  
22 for the period being analyzed. Utilities A and B are proposing a merger. Utility  
23 A has 100 MW of capacity with a marginal variable cost of 10 mills per KWH

and 200 MW of capacity with a marginal variable cost of 18 mills per KWH. Utility B has 150 MW of capacity with a marginal variable cost of 15 mills per KWH and 50 MW of capacity with a marginal variable cost of 20 mills per KWH. Utility C has 150 MW of capacity with a marginal variable cost of 15 mills per KWH and 50 MW of capacity with a marginal variable cost of 21.7 mills per KWH. I assume no transmission charges associated with off-system sales. This assumption simplifies the example but does not alter the basic point or results.

TABLE 2

| Utility | Plant | Capacity | Cost<br>(mills/KWH) | Production | Native<br>Load | Sales<br>(Purchases) | Economic<br>Capacity at<br>105% of<br>Market Price | Available Economic<br>Capacity <sup>1</sup> at 105%<br>of Market Price |
|---------|-------|----------|---------------------|------------|----------------|----------------------|--|--|
| A       | 1     | 100      | 10                  | 100        |                |                      | 100  |  |
|         | 2     | 200      | 18                  | 200        |                |                      | 200  |  |
|         | Total | 300      |                     | 300        | 200            | 100                  | 300  | 100  |
| B       | 1     | 150      | 15                  | 150        |                |                      | 150  |  |
|         | 2     | 50       | 20                  | 0          |                |                      | 50   |  |
|         | Total | 200      |                     | 150        | 200            | (50)                 | 200  | 0  |
| C       | 1     | 150      | 15                  | 150        |                |                      | 150  |  |
|         | 2     | 50       | 21.7                | 0          |                |                      | 0  |  |
|         | Total | 200      |                     | 150        | 200            | (50)                 | 150  | 0  |

<sup>1</sup> Available economic capacity is economic capacity less native load. If the result of this subtraction is less than zero, available economic capacity is set equal to zero.

In this example, Utility A generates 300 MW. It uses 200 MW to meet its native load and sells 50 MW to each of utilities B and C. So long as the price Utility A charges is slightly under 20 mills per KWH, utilities B and C each generate 150 MW and purchase 50 MW from A. Utility A's profit-maximizing strategy is to charge a price just under 20 mills per KWH and sell to both B and C. At any price above 20 mills, B runs its 20 mill generator rather than purchasing

1 from A. At any price above 21.7 mills per KWH, C runs its 21.7 mill generator  
2 and A's wholesale sales are reduced to zero. Utility A's profit-maximizing price  
3 is just under 20 mills per KWH because Utility A makes more profit selling to  
4 both utilities B and C at this price than selling only to Utility C at a price between  
5 20 and 21.7 mills per KWH.<sup>16</sup>

6 Economic capacity would be calculated as follows. The market price is  
7 just under 20 mills per KWH. The market price plus 5 percent is about 21 mills  
8 per KWH. Utility A has 300 MW of capacity with marginal costs less than 21  
9 mills. Utility B has 200 MW of capacity with marginal costs less than 21 mills.  
10 Utility C has 150 MW of capacity with variable costs less than 21 mills.

11 Since each utility has 200 MW of native load, Utility A has 100 MW of  
12 available economic capacity (300 MW of economic capacity less 200 MW of  
13 native load). Utilities B and C have zero available economic capacity since both  
14 of them have economic capacity (at a price of 21 mills per KWH) of 200 MW or  
15 less.

16 If one used available economic capacity alone to evaluate the impact of a  
17 merger of utilities A and B, one would conclude that the merger has no adverse  
18 effect on competition. Since B has zero available economic capacity, the change  
19 in the HHI based on available economic capacity is zero.

---

<sup>16</sup> Utility A cannot charge a price of just under 20 mills to Utility B and a price higher than 20 mills to Utility C, pre-merger. If Utility A attempted to price-discriminate between utilities B and C, B would continue to purchase from Utility A and run its 20 mill generator to sell to Utility C.



1           This conclusion would be incorrect. Prior to the merger of A and B, the  
2           20 mill capacity Utility B owned prevented Utility A from increasing prices to  
3           Utility C. Post-merger, this constraint on Utility A is eliminated. After the  
4           merger, the price of power sold by Utility A to Utility C would increase from just  
5           under 20 mills per KWH to just under 21.7 mills per KWH. This is a price  
6           increase of about 8.5 percent.

7           The reason why calculations of available economic capacity would fail to  
8           detect the price increase that results from the merger is because available  
9           economic capacity calculations fail to recognize that capacity held by net buyers  
10          can limit the ability of net sellers to increase prices.

11   **Q.   ARE THERE ANY OTHER REASONS TO BE CONCERNED WITH**  
12   **RESULTS BASED ON "AVAILABLE ECONOMIC CAPACITY"?**

13   A.   Yes. The calculation of available economic capacity is very sensitive to small  
14   changes in the assumptions one makes as to capacity or native load. For example,  
15   if economic capacity is 1,000 MW and native load is 800 MW, available capacity  
16   is 200 MW. If native load increases by 5 percent, to 840 MW, available capacity  
17   falls by 20 percent, to 160 MW. If capacity increases from 1,000 MW to 1,100  
18   MW (a 10 percent increase), available economic capacity increases from 200 MW  
19   to 300 MW, or a 50 percent increase. This sensitivity of the results to small  
20   changes in the inputs in itself suggests that the measure should be scrutinized.

21   **Q.   HAS THE CONCEPT OF MARGINAL ECONOMIC CAPACITY BEEN**  
22   **DISCUSSED BY DOJ OR FTC IN PRIOR FERC PROCEEDINGS?**

1 A. Yes. At page 8 of its comments in Docket RM96-6-000, DOJ stated the  
2 following:

3 As in other industries, the proper analysis of market share and  
4 concentration will depend on the specific facts involved in each  
5 transaction. For example, the marginal costs of generation units in  
6 the same geographic areas may vary greatly. If markets are  
7 clearing properly, generators that produce power for use in that  
8 area will be "turned on" in economic merit order, from least cost  
9 up through greatest cost until demand is filled. If there is a market-  
10 clearing price, the units most affecting price are at the margin of  
11 the market as a whole. A firm controlling these marginal units  
12 may be able to influence price by restricting output from the  
13 marginal plants, which would raise the market-clearing price. This  
14 will be true even if the firm controls a very small percentage of the  
15 total generation available for sale in the market. Merger analysis  
16 must assess the profitability of such a strategy, which will depend  
17 on the cost characteristics of the firm's entire portfolio of units.  
18 Determining the anticompetitive effects of a merger involving  
19 ownership of these marginal units therefore requires a careful  
20 assessment of the firms in the market under specific load  
21 conditions.

22  
23 The FTC stated in its comments in that same docket, at pages 12 and 13:

24 Recent empirical work on electricity generation pricing in the  
25 United Kingdom may provide some insight about generator  
26 dominance and how to limit its effects. The U.K.'s electric power  
27 reforms have taken place within the context of high concentration  
28 in generation. The findings of the U.K.'s electricity regulator and  
29 recent academic research show that the two dominant generators  
30 have exercised considerable control over price in many periods.

31  
32 Most relevant for this inquiry, however, is that for most of the year,  
33 the market price in the U.K. is determined by relatively few plants  
34 -- those with middle levels of cost. Low cost plants are always  
35 dispatched (that is, operated). High cost plants are dispatched only  
36 at brief demand peaks or in emergencies. In most periods the  
37 marginal plants that set the price are the middle cost plants. Given  
38 this pattern, greater competition among middle cost plants could  
39 make the exercise of market power more difficult even if capacity  
40 at the extremes is concentrated.

41

1   **Q.   PLEASE EXPLAIN HOW YOU CALCULATED MARGINAL**  
2   **ECONOMIC CAPACITY IN THIS CASE.**

3   A.   I analyzed marginal economic capacity at two price ranges: 14-25 mills per KWH  
4       and 25-35 mills per KWH. I also show calculations of marginal economic  
5       capacity for 14-20 mills and 20-25 mills. The 14-25 mill price range would cover  
6       the majority of the transactions that occur. Plants with delivered costs below this  
7       range would be very low cost plants that almost always are base-loaded and/or  
8       dedicated to native load. Plants with costs in excess of 25 mills would tend to be  
9       very high cost units that are not run many hours of the year. This means that  
10      plants with delivered costs between 14-25 mills are likely to be the competitively  
11      significant plants during most hours of the year.

12               Prices in the 25-35 mill range represent very high load conditions. Plants  
13      with delivered costs in this range tend to be those that are at the margin during  
14      peak or very high load periods. Calculations of market concentration based on  
15      plants with delivered costs in this range would indicate who controls capacity that  
16      tends to be the marginal unit during peak or very high load periods.

17               I calculated marginal economic capacity for two relatively broad price  
18      ranges, rather than a series of small ranges, because I believe that the post-merger  
19      HHI and the change in the HHI over a broader range is more economically  
20      appropriate than using a series of very narrow ranges. Use of very narrow ranges  
21      may result in erroneous conclusions due to the fact that marginal cost estimates  
22      for different generators are subject to a margin of error. For example, making fine  
23      distinctions between generators with costs in the 18-20 mill range and generators

1 with costs in the 20-22 mill range may overstate the underlying precision of the  
2 data. Fuel prices and heat rates can change within these narrow bands from one  
3 year to the next.

4 Moreover, use of narrow bands might fail to detect overlaps between the  
5 two merging parties. Assume one merging party has a significant amount of  
6 capacity in the 18-20 mill band, but no capacity in the 20-22 mill price range.  
7 The other merging party has a substantial amount of capacity in the 20-22 mill  
8 price band but no capacity in the 18-20 mill price band. Calculation of HHIs and  
9 changes in HHIs using very narrow price bands of two mills could lead one to  
10 conclude that there is no overlap between the two merging firms. In fact, in this  
11 example, the two merging firms do place constraints on each other's ability to  
12 increase prices, pre-merger.

13 While I believe it is most appropriate to analyze marginal economic  
14 capacity using relatively broad price ranges, I have also calculated HHIs for  
15 ranges for two somewhat narrower price ranges. These are 14-20 mills per KWH  
16 and 20-25 mills per KWH.

17 **Q. WHAT WAS THE RESULT OF YOUR CALCULATION OF THE HHI**  
18 **BASED ON MARGINAL ECONOMIC CAPACITY?**

19 A. Exhibit \_\_\_\_ (RMS-23) shows the post-merger HHI for marginal economic capacity  
20 using the same assumptions as Exhibit \_\_\_\_ (RMS-21). Exhibit \_\_\_\_ (RMS-24)  
21 shows the details behind these calculations. Using either the two broad price  
22 ranges or the narrower price ranges, these results are consistent with the other  
23 capacity measures I examined. The HHIs and changes in HHIs taken together

1 indicate that the merger will have no adverse effects on competition. Again, the  
2 conclusion is that this merger raises no competitive concerns and no further  
3 analysis is required.

4 **J. HHIs Based on Individual Destination "Markets"**

5 **Q. FOR PURPOSES OF EVALUATING THIS MERGER, IS IT NECESSARY**  
6 **TO CALCULATE MARKET CONCENTRATION FOR NARROWER**  
7 **GEOGRAPHIC MARKETS OR INDIVIDUAL DESTINATION**  
8 **UTILITIES?**

9 A. No, it is not. As I explained earlier, under the *Merger Guidelines* approach to  
10 market definition, one defines narrow geographic markets such as individual  
11 destination utilities or groups of customers only if such customers can be targeted  
12 for price increases, this meaning that sellers can increase prices to some customers  
13 but not to others.

14 Although such price discrimination may have been possible in the past, it  
15 is much less likely today. Open transmission access and the increase in electricity  
16 trading that has occurred have eliminated or substantially reduced any ability  
17 utilities might have had in the past to selectively increase prices.

18 **Q. WHY IS SUSTAINED AND SYSTEMATIC PRICE DISCRIMINATION**  
19 **MUCH LESS LIKELY IN TODAY'S ELECTRICITY MARKET?**

20 A. In general, it is not possible to engage in price discrimination for a product that  
21 can be resold. If the buyers whose prices are not increased can resell a product to  
22 buyers whose prices are increased, price discrimination is not very likely. In

1 today's wholesale power markets, electricity is resold regularly. Power marketers  
2 and other traders are in the business of reselling power to take advantage of any  
3 market inefficiencies. As I noted earlier, about 25 percent of Western Resources'  
4 and about 10 percent of KCPL's sales of non-firm and short-term firm power are  
5 made to power marketers. As I have discussed elsewhere in my testimony, sales  
6 by power marketers in the SPP are substantial. Nationwide sales by power  
7 marketers have grown at an extremely rapid rate, particularly after the  
8 implementation of open transmission access under FERC Order 888.

9 The Applicants have requested that I include calculations of the post-  
10 merger HHI and the change in the HHI due to the merger for economic and  
11 marginal capacity for individual destination utilities. Although I do not believe  
12 that individual destination utilities constitute relevant geographic markets, I have  
13 made such calculations for entities directly interconnected with one or both of the  
14 merging parties.

15 **Q. PLEASE DESCRIBE THE METHODOLOGY YOU EMPLOYED IN**  
16 **THESE CALCULATIONS.**

17 **A.** For each supplier to each destination utility, I calculated the delivered cost from  
18 each generating unit to the destination utility. The delivered cost from each  
19 generating unit to an individual utility is the sum of the marginal fuel cost of the  
20 unit plus transmission charges at Order 888 rates plus losses to the border of the  
21 destination utility. These calculations include the same two transmission limits  
22 that I included in my regional market analysis. I have included capacity from

1 TVA in the calculations for only Entergy and Union. Entergy and Union can and  
2 do purchase significant amounts of power from TVA. Excluding TVA from the  
3 other "markets" clearly understates the effect of TVA on prices to those markets.  
4 For example, including TVA for Entergy and Union reflects the fact that TVA  
5 constrains the ability of the merged entity to raise prices to Entergy and Union.  
6 However, excluding TVA from the destination "market" consisting of CSW,  
7 which is directly interconnected with Entergy and a Tier 2 entity to Union,  
8 ignores the fact that the presence of TVA selling to Entergy or Union would  
9 constrain pricing to CSW. Thus, the analysis of destination "markets" is clearly  
10 very conservative, and the HHIs will tend to overstate any potential effects of the  
11 proposed merger. Capacity from Southern is included to the extent that such  
12 capacity is economic capacity to an individual destination "market." I have also  
13 shown, as a sensitivity analysis, the effect of excluding all of Southern's capacity  
14 in my HHI calculations.

15 **Q. WHAT WERE THE RESULTS OF YOUR HHI CALCULATIONS FOR**  
16 **INDIVIDUAL DESTINATION "MARKETS"?**

17 A. Exhibit \_\_\_\_ (RMS-25) summarizes the results of my HHI calculations based on  
18 economic capacity and marginal economic capacity for various destination  
19 "markets." The details of those calculations are shown in my workpapers. In  
20 general, the post-merger HHI is either in the lower half of the moderately  
21 concentrated range or in the unconcentrated range. In some cases, the change in  
22 the HHI exceeds 100 points when the post-merger HHI exceeds 1000. Several of  
23 these instances are in lower price periods that represent lower load or off-peak

1 conditions. These are the periods when one is least worried about market power  
2 because there are generally substantial amounts of surplus power available in such  
3 time periods. As I noted earlier, FERC has expressed particular concern about  
4 peak rather than other periods (*Merger Policy Statement*, Appendix A, p. 18).  
5 Moreover, there are no instances in which the post-merger HHI based on  
6 economic capacity exceeds 1800. As I noted earlier, antitrust agencies rarely  
7 challenge mergers when the post-merger HHI is less than 1800.

8 Finally, as I have discussed previously, I believe that relevant markets are  
9 broader than individual destination utilities. This means that HHIs calculated on  
10 the assumption that destination utilities are relevant antitrust markets should not  
11 be used to draw conclusions regarding the impacts of mergers on competition.

12 **Q. ARE THERE ANY OTHER REASONS WHY HHI CHANGES**  
13 **EXCEEDING 100 IN LOWER PRICE PERIODS SHOULD NOT RAISE**  
14 **CONCERN?**

15 A. Yes. Exhibit \_\_\_\_ (RMS-26) illustrates why one should be less concerned over  
16 larger changes in the HHI during lower-price time periods. That exhibit plots  
17 economic capacity in the relevant geographic market versus delivered cost of  
18 output from that capacity at Empire. As the Exhibit shows, small price changes  
19 lead to a substantial increase in the capacity from which output could be delivered  
20 to Empire (or other entities).

21 Exhibit \_\_\_\_ (RMS-26) shows for various delivered prices to Empire  
22 (vertical axis) the total amount of economic capacity (horizontal axis) from which



1 output could be delivered to Empire from all suppliers in the relevant market. At  
2 prices less than 25 mills, this curve is fairly elastic. That is, small changes in  
3 price lead to substantial increases in the amount of economic capacity from which  
4 output could be delivered to Empire. At prices in the 25-35 mills per KWH and  
5 higher range, the "supply curve" becomes slightly steeper, or somewhat less  
6 elastic. This means that the increase in economic capacity due to a price increase  
7 is less during peak than off-peak time periods.

8 The degree to which any seller is able to increase prices depends on both  
9 the ownership of capacity and the amount of capacity that might begin supplying  
10 output in response to a small price increase. The greater the amount of capacity  
11 that might begin supplying output in response to a small price increase, the less  
12 likely any seller will be able to increase prices. If a substantial amount of capacity  
13 will begin operating in response to small price increases, any seller attempting to  
14 increase prices is much more likely to lose significant amounts of business.  
15 Hence, price increases are less likely. If there is only a small increase in output  
16 when prices increase, sellers attempting a price increase are less likely to lose  
17 business, and the price increase is more likely to be successful.

18 Overall, the calculated HHIs and changes in the HHI for individual  
19 destination utilities do not lead me to alter my conclusion that this merger raises  
20 no competitive concerns.

21 **Q. HAVE YOU CALCULATED HHIs FOR INDIVIDUAL DESTINATION**  
22 **"MARKETS" BASED ON UNCOMMITTED CAPACITY?**

1 A. As I explained earlier in my testimony, for all practical purposes, KCPL has no  
2 uncommitted capacity. Therefore, the change in the HHI in all cases will be zero.  
3 The merger will have no effect on concentration in uncommitted capacity and thus  
4 there is no need to calculated HHIs for uncommitted capacity.

5 **Q. HAVE YOU CALCULATED HHIs INDIVIDUAL DESTINATION**  
6 **"MARKETS" BASED ON TOTAL CAPACITY?**

7 A. As a practical matter, I have. As I discussed earlier in my testimony, I calculated  
8 HHIs for the destination "markets" based on economic capacity at four different  
9 price levels. The HHIs based on the highest price level, 35 mills per KWH, will  
10 reflect concentration for most of the capacity that is economic under current  
11 conditions. Thus, the HHIs for economic capacity at the highest price level may  
12 be seen as a reasonable proxy for HHIs for total capacity for the individual  
13 destination "markets."

14 **Q. OVERALL, WHAT DO YOU CONCLUDE ON THE BASIS OF YOUR**  
15 **DESTINATION UTILITY ANALYSIS?**

16 A. The destination utility analysis does not change my opinion that the proposed  
17 merger of Western Resources and KCPL will have no adverse impact on  
18 competition. Although there were several instances in which the change in the  
19 HHI exceeded 100 points, the post-merger HHIs generally are in the  
20 unconcentrated range or the lower end of the moderately concentrated range. As I  
21 discussed earlier in my testimony, antitrust agencies such as DOJ and the FTC  
22 rarely have sought to block mergers for which the post-merger HHI is less than  
23 1,800.

Moreover, individual destination utilities are not relevant markets. Use of HHIs based on individual destination utilities to infer that the merger might increase prices substantially at destination Utility A but not at destination Utility B, when destination Utilities A and B are physically adjacent and directly interconnected, is unlikely in an open access transmission environment. Moreover, the use of individual destination utilities ignores the fact that charging different prices to different customers within a small geographic area creates arbitrage opportunities that can be exploited by large traders and power marketers. Exploitation of such arbitrage opportunities reduces or eliminates the ability of sellers to engage in systematic price discrimination.

**VI. GAS-ELECTRIC VERTICAL MARKET POWER ISSUES**

**Q. DO EITHER OF THE MERGING PARTIES OWN GAS DISTRIBUTION OR PIPELINE FACILITIES?**

A. Western Resources owns a gas distribution and pipeline system. KCPL does not own any gas distribution or pipeline facilities.

Western Resources has entered into a proposed transaction with ONEOK Inc. (ONEOK) in which Western Resources will be contributing its gas properties to a newly formed corporation (new ONEOK) in exchange for 45 percent of the equity in new ONEOK. Existing ONEOK shareholders will hold the remaining 55 percent. Western Resources has informed me that, because of limitations contained in the associated shareholder agreement, Western Resources' voting power will be a substantially smaller amount than the amount of stock it actually

owns in new ONEOK. Western Resources' voting interest will be less than 10 percent of the total voting interest of ONEOK.

As of the filing of this testimony, the ONEOK transaction has not yet been consummated. I have analyzed the vertical issues under two alternative assumptions: that the ONEOK transaction is not consummated, and that it is.

**Q. DOES THIS MERGER RAISE ANY VERTICAL MARKET POWER CONCERNS AS A RESULT OF WESTERN RESOURCES' OWNERSHIP OF PIPELINE CAPACITY?**

A. No, it does not. Although there are several gas-fired generators connected to the gas distribution system Western Resources owns today, the total capacity of these plants is about 1,000 MW. This is the capacity equivalent of one major power plant or less. Moreover, the data Western Resources provided to me shows that many of these power plants are within a few miles of another gas pipeline or distribution line. At least one of these power plants (KCBPU's Quindaro plant) is directly connected to another pipeline today. The fact that such a small amount of gas-fired capacity is connected to Western Resources' gas lines today means that this merger raises no vertical market power issues, given Western Resources' existing gas system, *i.e.*, assuming the ONEOK transaction is not consummated.

There are several power plants connected to the ONEOK system. Four Public Service of Oklahoma and one OGE plant account for almost 70 percent of

1 estimated ONEOK gas deliveries to electric generating units.<sup>17</sup> All five of these  
2 plants are connected to other pipelines. There are numerous gas pipelines in  
3 Oklahoma. This means that there is no vertical market power issue as a result of  
4 this merger, assuming that the ONEOK transaction is consummated.

5 **Q. WHAT ARE THE CONDITIONS UNDER WHICH AN ELECTRIC**  
6 **GENERATOR THAT ALSO OWNS GAS PIPELINE FACILITIES**  
7 **WOULD HAVE THE ABILITY AND INCENTIVE TO DENY GAS**  
8 **SUPPLIES TO ELECTRIC GENERATION COMPETITORS?**

9 A. An electric generator that also owns gas pipeline capacity only has an incentive to  
10 deny gas supplies to competitors only when it is both able to do so and when it  
11 can profit by doing so. For example, if generating plants connected to Western  
12 Resources' gas pipeline system are also connected to other pipelines, Western  
13 Resources has no ability to deny gas supplies to the power plant owned by an  
14 electric generation competitor.

15 There are two ways in which an electric generating utility like Western  
16 Resources might profit from denying gas supplies to electric generating  
17 competitors. First, if Western Resources supplied gas to power plants accounting  
18 for a large enough percentage of generating capacity in the relevant market,  
19 denying supplies to them, or increasing gas transportation rates to those power  
20 plants, might increase the market price of power in the Southwest Power Pool. If

---

<sup>17</sup> Gas deliveries may involve sales of gas by ONEOK or sales of gas transportation services.

1       that happened, the combined Western Resources-KCPL entity, as a seller of  
2       electricity, might profit from the increase in the price of power. If, however, the  
3       capacity of power plants connected to the Western Resources gas pipeline is only  
4       a small fraction of the relevant market, denying gas supplies to them or increasing  
5       the price of transportation will have no measurable effect on the market price of  
6       power, and Western Resources will not profit by denying or increasing the price  
7       of gas transportation services.

8               Western Resources also might profit from denying gas transportation  
9       service and/or increasing the price of gas to electric generating plants owned by  
10      competitors if such a denial or price increase would lead to increased purchases of  
11      electricity from Western Resources by that competitor. In that case, Western  
12      Resources would earn a profit on each sale of electricity to the competitor because  
13      it has restricted gas supplies and/or raised the price of gas to that competitor.  
14      Such a strategy is unlikely to be profitable in an open transmission access  
15      environment (for electric) because if Western Resources denied gas supplies to  
16      someone who might otherwise be a purchaser of electricity, Western Resources  
17      would not know if it could get the sale. The competitor that was denied gas  
18      supplies (or whose gas rates were increased) might purchase the replacement  
19      electricity from an entity other than Western Resources. Moreover, Western  
20      Resources would profit by such behavior only if the margin earned on sales of  
21      electricity exceeded the margin earned on sales of gas.

1 Q. ASSUMING THAT THE ONEOK TRANSACTION IS NOT  
2 CONSUMMATED, DOES THIS MERGER CREATE THE ABILITY AND  
3 INCENTIVE TO DENY GAS SUPPLIES TO COMPETITORS?

4 A. No, it does not. Western Resources remains a combination gas-electric utility  
5 regardless of the merger. The merger changes only the amount of electric  
6 generating capacity Western Resources owns.

7 Pre-merger, Western Resources is supplying gas and/or gas transportation  
8 services to a number of entities. The issue in the merger analysis is: Does the  
9 merger create or significantly increase the ability or the incentive to deny gas  
10 and/or transportation service to electric generation entities?

11 The merger creates the ability and the incentive to deny gas supplies to  
12 competitors only if all three of the following conditions are met. First, the amount  
13 of generating capacity owned by others that purchase gas and/or transportation  
14 services from Western Resources must be large enough that a denial of gas and/or  
15 transportation services to them would result in an increase in the market price of  
16 electricity and/or a significant increase in electric sales by Western Resources to  
17 these competitors. Second, Western Resources' post-merger share of electric  
18 generating capacity in the relevant market is large enough that, post-merger, such  
19 a denial of gas and/or gas transportation services is profitable. Finally, Western  
20 Resources must have the ability to deny gas and/or gas transportation services or  
21 to raise the price of those services. This can occur only if the gas customers of  
22 Western Resources do not have physical access to alternative pipeline suppliers.

1 Q. ARE THESE CONDITIONS PRESENT IN THE MERGER BETWEEN  
2 WESTERN RESOURCES AND KCPL?

3 A. No. These conditions are not met in the present merger. At my request, Western  
4 Resources provided me with a list of the electric generators that purchase gas  
5 from Western Resources, along with their 1996 purchases from Western  
6 Resources and an indication of whether other pipeline or gas distribution  
7 companies had facilities nearby. This information is shown in Exhibit \_\_\_\_ (RMS-  
8 27).

9 The total capacity of the gas plants connected to the Western Resources  
10 system is 1,011 MW.<sup>18</sup> This amount of capacity is equivalent to the capacity of a  
11 single, major power plant. It is less than 2 percent of total SPP capacity and is  
12 less than 4 percent of total gas capacity in the SPP. This means that the gas-fired  
13 capacity connected to the Western Resources gas system is a small enough  
14 percentage of total capacity that, even if Western Resources had the ability to  
15 deny gas and/or gas transportation to these customers (or increase prices to them),  
16 this would not lead to any significant increase in SPP electric prices.

17 Since the electric generation capacity connected to Western Resources'  
18 gas distribution and pipeline system is small, this merger raises no vertical market  
19 power issues.

---

<sup>18</sup> Some of these plants burn more than one fuel. For example, KCBPU's Quindaro and Kaw plants are multi-fuel plants. The Quindaro plant burns coal, oil, and gas. The Kaw plant burns both coal and gas.



1           Moreover, as shown in Exhibit \_\_\_\_ (RMS-27) many of these power plants  
2           are close to other pipelines or gas distribution facilities. At least one of these  
3           customers (KCBPU's Quindaro plant) also is connected to another pipeline. It  
4           buys only minimal transportation from Western and primarily relies on an  
5           alternative supplier. Western Resources could not deny gas and/or transportation  
6           services to customers connected to other pipelines. Eliminating just the Quindaro  
7           plant from the total gas-fired capacity connected to Western Resources means that  
8           less than 1 percent of total SPP capacity (other than Western Resources' own  
9           plants) are customers of Western Resources' gas system.

10   **Q.    ASSUME THAT THE ONEOK TRANSACTION IS CONSUMMATED.**  
11           **DOES THE MERGER CREATE THE ABILITY AND INCENTIVE TO**  
12           **DENY GAS TRANSPORTATION SERVICES OR INCREASE PRICES TO**  
13           **COMPETITORS?**

14   **A.**   No, it does not. The ONEOK transaction reduces the ability of Western Resources  
15           to deny gas transportation services and/or increase prices solely in order to  
16           increase profits in its electric business. Prior to the ONEOK transaction, the pre-  
17           and post-merger situations were that Western Resources owned 100 percent of the  
18           pipeline that was connected to these power plants. Pre- and post-merger, with the  
19           ONEOK transaction, Western Resources owns 45 percent interest in the pipeline  
20           that is connected to these plants. Western Resources' voting interest in the  
21           ONEOK pipeline is less than 10 percent.

1 Western Resources provided me a list of the power plants in Oklahoma  
2 connected to the ONEOK system. This data is shown in Exhibit \_\_\_\_ (RMS-28).  
3 Total estimated gas deliveries to these customers shown in Exhibit \_\_\_\_ (RMS-28)  
4 are 44.4 million MCF. Five of these customers are Public Service of Oklahoma  
5 power plants and one is an OKGE power plant. Estimated deliveries to these five  
6 power plants total 30.1 million MCF or almost 70 percent of total ONEOK gas  
7 deliveries to power plants. These six power plants are all connected to at least one  
8 other pipeline system. Clearly, this merger raises no vertical market power  
9 problems.

10 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

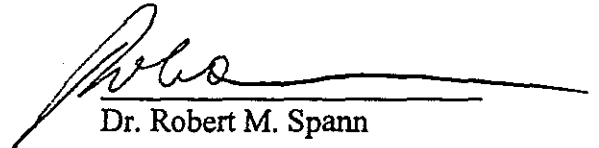
11 A. I have analyzed this merger using generally accepted economic principles. I have  
12 followed the principles outlined in FERC's *Merger Policy Statement* and in the  
13 DOJ/FTC *Merger Guidelines*. This merger will have no adverse impact on  
14 competition in the relevant market.

15 **Q. THANK YOU.**


# AFFIDAVIT

DISTRICT OF COLUMBIA ): ss.:

Robert M. Spann, being duly sworn, on his oath states: that he has participated in the preparation of the foregoing written testimony, in question and answer form, to be presented to the Federal Energy Regulatory Commission in Docket No. EC97-\_\_-00; that the answers therein contained were given by him; that he has knowledge of the matters set forth in said answers; and that such answers are true to the best of his knowledge and belief.

  
Dr. Robert M. Spann

Subscribed to before me this 15<sup>th</sup> day of September, 1997

  
Notary Public for District of Columbia

**My Commission Expires April 30, 1999**

## Appendix 1

### ELECTRIC UTILITY MARKET DEFINITION FOR ANTITRUST AND MERGER ANALYSIS

In the past, individual destination utilities have been treated as distinct geographic markets in analyzing electric utility mergers and/or market power. However, the advent of near universal open access transmission and the significant increase in electricity trading have substantially altered the operation of wholesale electric markets. These changes have, in turn, changed the appropriate definition of geographic markets for antitrust and merger analysis.

Under the DOJ/FTC *Merger Guidelines*, the relevant geographic market is the smallest area in which a hypothetical monopolist could profitably undertake a small but significant and sustained price increase (*Merger Guidelines* §1.1 and 1.2). Following this logic, an individual destination utility will be a relevant antitrust market only if it is possible to increase prices to that utility without increasing prices to other utilities. While treating individual customers (or groups of customers) as distinct markets may have been appropriate in the past, the assumptions involved in that approach are no longer realistic. Treating individual utilities as distinct markets ignores the fact that arbitrage opportunities generated by open transmission access have largely eliminated utilities' ability to engage in price discrimination. Thus, it generally will no longer be economically appropriate to treat individual customers as distinct markets for purposes of antitrust analysis.

I offer three examples to illustrate this point. These examples are depicted in Figures 1, 2, and 3.

### Example 1

Figure 1 is a bubble diagram showing several utilities. In this example, there are nine utilities labeled A through I. Each circle indicates a utility and the size of the circle is indicative of the capacity of the utility. The number inside the circle indicates that utility's marginal generating cost. Utilities A, B, and E through I have a marginal generating cost of 19 mills per KWH. Utilities C and D have marginal generating cost of 23 mills per KWH. Each utility has a transmission rate of 2 mills per KWH for transmission across its system or for sales out of its system.

The arrows indicate the direction of power sales and the numbers by an arrow indicate transaction prices. For example, utilities A and B are selling power at 21 mills per KWH to Utility C. Utilities A and E through I are selling power at 21 mills per KWH to Utility D.

If one applies an economic capacity test to utilities C and D assuming that they are separate destination markets, one would conclude that there are only two sellers to Utility C -- utilities A and B. Thus, one would conclude that sales to Utility C as a destination market are highly concentrated. In contrast, one would conclude that there is a larger number of sellers to Utility D, and that Utility D represents a relatively unconcentrated market. As I show below, this result would not reflect the commercial realities of current wholesale power markets. This approach yields the incorrect result because it assumes that utilities A and B can increase prices to Utility C without simultaneously increasing prices to Utility D.

In order to understand why treating utilities C and D as two separate antitrust markets is incorrect, given open access and substantial trading in electricity, one needs to review the mechanics of the economic capacity test.

The economic capacity test starts with the “competitive” price at Utility C. In this example the “competitive” price would be at least 21 mills per KWH (marginal costs of 19 mills at A and B plus a 2 mill transmission charge to Utility C). The “competitive” price at Utility C cannot exceed 23 mills per KWH since this is Utility C’s marginal cost of generation.

A calculation of economic capacity for a destination market defined as Utility C using a delivered price test would show that utilities D, E, F, G, H, and I could not economically supply Utility C at a price of 21 to 23 mills. Utility D would have a delivered price to Utility C of 27 mills per KWH. Utilities E through I would have delivered prices to Utility C of 25 mills per KWH.

Utility D’s delivered price to Utility C is the sum of Utility D’s marginal generating cost of 23 mills per KWH, a 2 mill transmission charge for Utility D, and a 2 mill transmission charge through Utility A. The delivered price for utilities E through I is the sum of 19 mills per KWH marginal generating cost, a 2 mill transmission charge across their own systems, a 2 mill transmission charge across Utility D, and a 2 mill transmission charge across Utility A.

An economic capacity test would conclude that the only sellers to Utility C are utilities A and B, but this result is incorrect because of substitution possibilities created by arbitrage opportunities. When one includes these additional factors in the analysis, one correctly concludes that Utility C is not a separate antitrust market.

Utility C is a separate market for antitrust purposes only if sellers A and B can profitably increase prices to Utility C without simultaneously increasing the price that Utility A is charging Utility D for the same product at the same time and under similar terms and conditions. Under today's market conditions, it is unlikely that A and B could profitably increase prices to utility C significantly above the price Utility A is charging Utility D at the same time.

The maximum possible price utilities A and B could charge Utility C is 23 mills, because I have assumed that Utility C's marginal costs are 23 mills per KWH. At prices above 23 mills, Utility C can choose to run its own generation rather than purchasing from A and B.

If utilities A and B jointly increased the price charged Utility C to 23 mills but continued to charge Utility D 21 mills, the price increase to C would not be sustainable. Utility D could profit from costless arbitrage in this situation. Utility D would simply request Utility A to schedule some of the power it (Utility D) is currently purchasing for delivery to Utility C. Utility D would replace the power it purchased from A but redirected to C with purchases from any one of utilities E through I. Utility C would stop purchasing from utilities A and B. A and B could profitably increase prices to Utility C only if Utility A were willing to forego all its sales to Utility D.

As long as Utility A is quoting different prices to different buyers at the same time for power sales under similar terms and conditions, such price differences will not be sustainable. The buyers paying the lower price—which may be power marketers—can simply reschedule their purchases for delivery to buyers paying the higher price. The

incentives to engage in costless arbitrage ensure that any such price differences cannot be sustained.

In this example, I have assumed that there is only one other buyer of power from A -- Utility D. In actual practice, there will probably be numerous other buyers of power from A, all of whom could engage in the type of arbitrage I described above. Power marketers trading with utilities A and B (as well as numerous other utilities) are likely to exploit such arbitrage possibilities and render selective price increases unprofitable. In the context of this example, the relevant market includes utilities A and B as well as E through I as sellers to C and D. Utilities C and D do not constitute two separate antitrust markets. Analyzing Utility C and Utility D as two separate "destination markets" would not result in either accurate market definition or accurate measures of market concentration.

The appropriate method of computing concentration in this example is first to recognize that utilities C and D are not two separate antitrust markets; there is only one antitrust market with participants A through I. Utilities C and D are net buyers and the remaining utilities are net sellers. In this example, Utility D is equivalent to a market hub, and it is economic activity at Utility D that determines the prices paid by both Utility C and Utility D. Thus, one should analyze market concentration at Utility D and across all owners of generation in the relevant area. The sellers in the relevant market include utilities A through I. One would not analyze utilities C and D as separate antitrust markets.

### Example 2



The same point can be illustrated using other, slightly different examples. Figure 2 represents a slightly different configuration of utilities. Utilities C and D both have marginal generating costs of 23 mills per KWH. Utilities A and B have marginal generating costs of 19 mills per KWH, and utilities E through I have marginal generating costs of 21 mills per KWH. Again, I have assumed that each utility has a transmission rate of 2 mills per KWH for transmission across its system or for sales out of its system.

Utilities A and B sell to Utility C at a price of 21 mills delivered to Utility C's border. This delivered price to Utility C is the sum of Utility A or Utility B's marginal generating cost of 19 mills plus a 2 mill transmission charge.

Utilities A and B, as well as utilities E through I, sell to Utility D at a price of 23 mills per KWH delivered to Utility D's border. In the case of utilities A and B, this price consists of a marginal generation cost of 19 mills, a 2 mill charge for use of their transmission systems, and a 2 mill transmission charge for use of Utility C's transmission system to deliver power to Utility D's borders. Similarly, the price utilities E through I charge Utility D is their marginal generation cost of 21 mills per KWH plus a 2 mill transmission charge.

An analysis of economic capacity using a delivered price test for a destination market defined as Utility C would indicate that utilities A and B, acting jointly, could increase prices to Utility C to almost 25 mills before utilities E through I would have economic capacity to supply C. The delivered prices for utilities E through I to Utility C are marginal generation costs of 21 mills, a 2 mill charge for use of their own transmission systems, plus a 2 mill charge for use of Utility D's transmission system. Such an analysis would conclude that utilities A and B could increase prices to Utility C

up to Utility C's marginal generation cost of 23 mills. This analysis would incorrectly conclude that utilities A and B are the only sellers in a destination market defined as Utility C.

In fact, so long as Utility D is a significant buyer from utilities A and B (or if there are several buyers in the same situation as Utility D), utilities A and B cannot increase the price to Utility C by any non-trivial amount above 21 mills. Utility D is purchasing from utilities A and B at a price that is equivalent to a 21 mill price at the border between utilities A (or B) and C. This is because the 23 mill delivered price to Utility D includes 2 mills of transmission charges paid to Utility C.

Utility D is in a situation in which it can profit from engaging in costless arbitrage. Utility D is purchasing power from Utility A and/or B at a price of 21 mills at the border between A and/or B and C. Utilities A and/or B are simultaneously selling power to C at a price of 23 mills at the border between utilities A and/or B and Utility C. Utility D can increase its purchases from A and/or B at a price of 21 mills and instantaneously resell the power to Utility C. Since this is a costless transaction from Utility D's standpoint, any price in excess of 21 mills it receives from C is pure profit. Utilities A and/or B clearly cannot increase the price to Utility D to a level that exceeds 21 mills at the border between A and/or B and Utility C because this price is equivalent to a price of 23 mills delivered to Utility D. At any price in excess of 23 mills delivered to Utility D, Utility D would substitute purchases from utilities E through I for purchases from utilities A and/or B. Again, utilities A and B can only increase prices to Utility C if they are willing to forego all sales to Utility D.

Market concentration should be calculated in the same manner as in my first example. The relevant market is the region and includes capacity owned by utilities A through F. Additionally, since it is economic activity at Utility D that determines the price paid by both utilities C and D, market concentration for the entire region is calculated at Utility D.

### Example 3

Finally, Figure 3 is another configuration of interconnections that illustrates the same point. Again, circles represent utilities and the number inside a circle represents that utility's marginal generating cost. I also continue to assume a 2 mill transmission charge for each utility.

This example depicts an equilibrium in which power would be flowing from lower-cost utilities at the top of the page toward higher-cost utilities lower on the page.

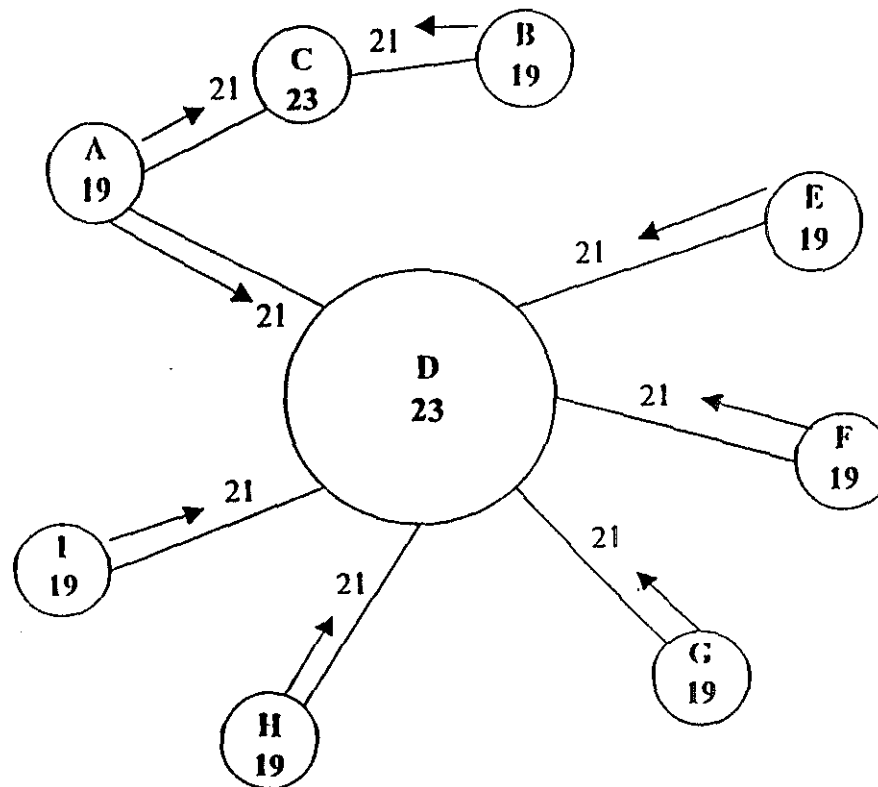
For example, utilities A and B would be selling to C, D, and, quite likely, utilities E through I. Similarly, D might be selling to utilities E through I.

In this example, defining individual utilities as destination markets would probably result in the conclusion that utilities A and B, acting jointly, could increase prices to Utility C. This is not necessarily the case. Assume that Utility E is buying from Utility A at a price of about 23 mills. This price is the sum of A's marginal generation cost of 19 mills plus two 2 mill wheeling charges for wheeling from A to D to E. If A and B attempted to increase prices to Utility C, Utility E could redirect to C power that it was purchasing from A, and Utility E would replace the power it was obtaining from A by either increasing its own generation or purchasing from D. Again, these transactions

could result if a power marketer was buying from A or B at the same time that A and/or B were selling directly to utilities.

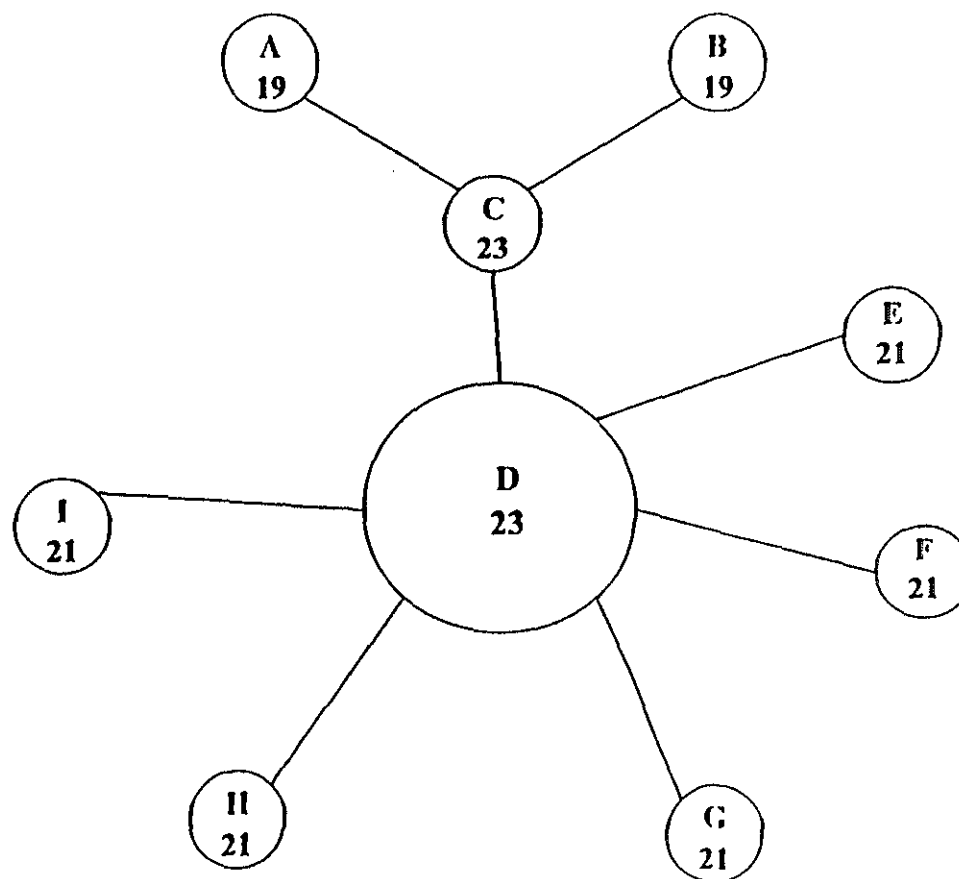
The point of this example is the same as that illustrated in the previous two examples. If a number of trading entities can exploit arbitrage opportunities, relevant markets become broad regions, not individual destination utilities. Individual destination utilities constitute relevant antitrust markets only if sellers can profitably engage in price discrimination and target selected customers or small groups of customers for price increases. Such price discrimination is not possible when there are traders in the market who can buy from one customer and resell to other customers. Such traders can always profit by buying from the customer whose prices were not increased (or buying directly) and reselling to the customer whose prices were increased. The ability to exploit such arbitrage opportunities largely eliminates profitable price discrimination, which in turn means individual destination utilities generally can no longer be considered relevant markets for antitrust or merger analysis.

# Electric Utility Market Definition For Antitrust Analysis Example 1

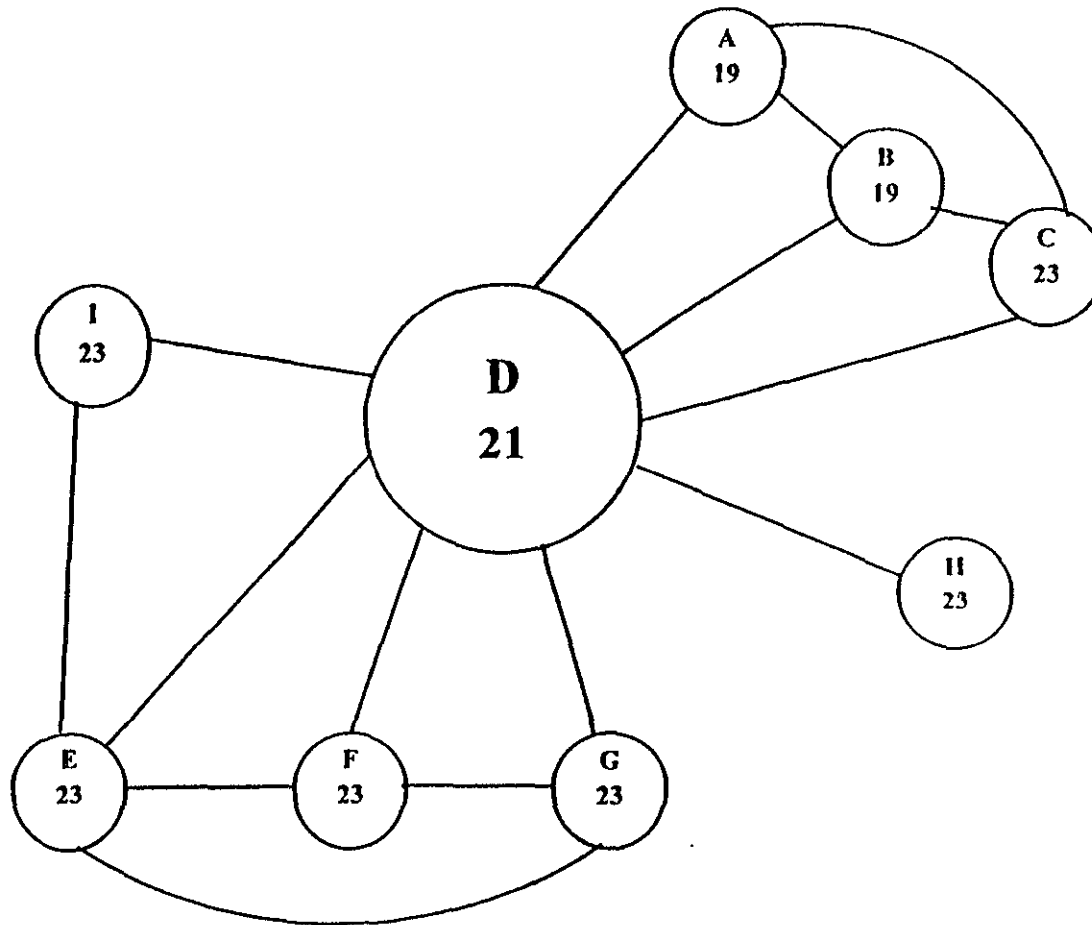


# Electric Utility Market Definition For Antitrust Analysis Example 2

EXHIBIT 1  
Page 2



# Electric Utility Market Definition For Antitrust Analysis Example 3



Charles  
River  
Associates

## ROBERT M. SPANN — Vice President

Ph.D.        Economics and Statistics, North Carolina State University  
M.A.        Economics, North Carolina State University  
B.S.        Economics, North Carolina State University

Dr. Robert M. Spann applies economic and statistical analyses to complex antitrust, regulatory, energy, and environmental issues. He has testified as an expert witness before numerous state and federal regulatory agencies, state courts, and arbitration boards. He also has assisted counsel in preparing briefs for the US Supreme Court and various state courts.

### PROFESSIONAL EXPERIENCE

- Professorial Lecturer in Economics, George Washington University (1989-1991).
- Senior Vice President, ICF Incorporated (1985-1989).
- Principal, ICF Incorporated (1975-1985).
- Associate Director, Northern Virginia Graduate Program in Economics, Virginia Polytechnic Institute and State University (1977-1979).
- Visiting Associate Professor, Department of Economics, Montana State University (1976).
- Visiting Research Fellow, Department of Economics, University of Chicago (1976).
- Associate Professor of Economics, Virginia Polytechnic Institute and State University (1974-1979).
- Assistant Professor of Economics, Virginia Polytechnic Institute and State University (1972-1974).
- Resources for the Future Dissertation Fellowship, North Carolina State University (1971-1972).

### PUBLICATIONS

#### Industrial Organization and Antitrust Economics

"The Economics of Railroading: The Beginning of Cartelization and Regulation." With E.W. Erickson. *Bell Journal of Economics and Management Science* 1, no. 2 (1970).





ROBERT M. SPANN — Page 2

"Mergers Involving Firms in Financial Decline: A Conceptual Model." With C.H. Ufen. *Southern Journal of Business* (July 1970).

"Competition, Prices and Tax Policy for the Petroleum Industry." With E.W. Erickson and S.W. Millsaps. Statement submitted to the United States Senate Committee on Finance, November 28, 1973.

"Competition in the Field Markets for New Natural Gas Supplies." With E.W. Erickson and S.W. Millsaps. Statement submitted to the United States Senate Committee on Finance, November 28, 1973.

"An Analysis of the Competitive Effects of Joint Ventures in the Bidding for Tracts in OCS Offshore Lease Sales." With E.W. Erickson. In *Hearings Before the Special Subcommittee on Integrated Oil Operations of the Senate Committee on Interior and Insular Affairs, Market Performance and Competition in the Petroleum Industry*. Washington, DC: US Government Printing Office, 1974.

### Electric Utility Economics

"Rate of Return Regulation and Efficiency in Production: An Empirical Test of the Averch-Johnson Thesis," *Bell Journal of Economics and Management Science* 5, no. 1 (1974).

"Strategic Planning for Power System Reliability and Vulnerability: An Optimization Model for Resource Planning Under Uncertainty." With I. H. Shavel and A. P. Sanghvi. *IEEE Transactions on Power Apparatus and Systems* 9, no. 2 (1982).

"The Effect of Electric Rate Design on Solar Heating." With K. P. Linder and E. Wessler. In *Energy and Communications in Transition*, MSU Public Utility Papers, 1981.

"Econometric Estimation of Peak Electric Utility Demands." With E. G. Beauvais. *Journal of Economics* 9 (1979).

"The Demand for Electricity in Virginia." With M. P. Murray, L. Puney, and E. G. Beauvais. *The Review of Economics and Statistics* 60, no. 4 (November 1978).

"The Regulatory Cobweb: An Analysis of Inflation, Deflation, and Alternative Administrative Rules in Public Utilities." *Southern Economic Journal* (July 1976).

"A Note on the Regulated Firm's Cost Function." *Industrial Organization Review* 3, no. 3 (1975).

"Restructuring the Electric Utility Industry: A Framework for Evaluating Public Policy Options in Electric Utilities." In *Electric Power Reform; The Alternative for Michigan*, edited by W.H.



Shaker and W. Steffy. Ann Arbor, MI: University of Michigan Institute of Science and Technology, 1976.

"Industrial and Commercial Rate Structures and Econometric Estimation of the Demand for Electricity." In *Proceedings of the Electric Power Research Institute Conference on Time of Day and Seasonal Load Forecasting*, edited by James Boyd. Palo Alto: EPRI, 1976.

### Petroleum Economics

*The Supply of Natural Resources: The Case of Oil and Natural Gas*. New York: The Arno Press, 1979.

"Supply Response in a Regulated Industry: The Case of Natural Gas." With E.W. Erickson. *Bell Journal of Economics and Management Science* 2, no. 1 (1970).

"The Political Economy of Crude Oil Price Controls." With E.W. Erickson, W.L. Peters, P.J. Tese. *Natural Resources Journal* 18, no. 4 (October 1978).

"Alternative Strategies for Dealing with the Natural Gas Shortage." With P. Staratt. In *The Energy Question*, edited by E.W. Erickson and L. Waverman. Toronto: The University of Toronto Press, 1974.

"Oil Imports, the Wellhead Price of Natural Gas, National Energy Policy and Joint Costs in Oil and Gas Exploration." With E.W. Erickson. In *Energy Policy Evaluation*, edited by D. Limaye. Lexington, MA: Lexington Books, 1974.

"An Economic Analysis of Substitution and Usage Effects in Industrial Energy Demand." With E.W. Erickson and R. Ciliano. In *Energy Policy Evaluation*, edited by D. Limaye. Lexington, MA: Lexington Books, 1974.

"Substitution and Usage in Energy Demand: An Econometric Estimation of Long-Run and Short-Run Effect." With E.W. Erickson and R. Ciliano. In *Energy Modeling: Art, Science, Practice*, edited by Milton F. Searl. Washington, DC: Resources for the Future, 1973.

"Joint Costs and Separability in Oil and Gas Exploration." With E.W. Erickson. In *Energy Modeling: Art, Science, Practice*, edited by Milton F. Searl. Washington, DC: Resources for the Future, 1973.

"Balancing the Supply and Demand for Natural Gas." With E.W. Erickson. In *Balancing the Supply and Demand for Energy in the United States*. Denver: University of Denver, 1972.



"Price, Regulation and the Supply of Natural Gas in the United States." With E.W. Erickson. In *Regulation of the Natural Gas Producing Industry*, edited by Keith Brown. Washington, DC: Resources for the Future, 1972.

"Natural Gas Prices, Crude Oil Prices and the Supply of Natural Gas." With E.W. Erickson. Written testimony for the US Senate, Committee on Interior and Insular Affairs, 91<sup>st</sup> Congress. Washington, DC: US Government Printing Office, 1972.

### **Taxation**

"Oil Supply and Tax Incentives." With E.W. Erickson and S.W. Millsaps. *Brookings Papers on Economic Activity* 2 (1974).

"Tax Revenue and Economic Effects of Tax Exempt State and Local Bonds: A General Equilibrium Approach of Tax Policy Analysis." In *Conference on Tax Research*. Washington, DC: US Treasury, Office of Tax Analysis, 1977.

"Percentage Depletion and the Price and Output of Domestic Crude Oil." With E.W. Erickson and S.W. Millsaps. US Congress, House Ways and Means Committee, Tax Reform Hearings, Natural Resources, February 8, 1973.

"Taxation and the Petroleum Industry." With E.W. Erickson, D.N. Hyman, and S.W. Millsaps. In Compendium prepared for the US House Ways and Means Committee and US Senate Committee on Finance. Washington, DC: Taxation with Representation, 1973.

"Taxation, Regulation, Electric Utility Pricing and the Efficient Allocation of Energy Resources." In *Studies in Electric Utility Regulation*, edited by C. Cicchetti and J. Jurewitz. Cambridge, MA: Ballinger Books, 1975.

"Tax Incentives in the Petroleum Industry." With E.W. Erickson and S.W. Millsaps. In *The Energy Question*, edited by E.W. Erickson and L. Waverman. Toronto: The University of Toronto Press, 1974.

### **Public Sector Economics**

"Macroeconomics of Unbalanced Growth and the Expanding Public Sector: Some Simple Tests of a Model of Government Growth". *Journal of Public Economics* 8, no. 3 (December 1977).

"The Effects of Public Spending on the Divisibility of Public Outputs in Consumption, Bureaucratic Power and the Size of the Tax Sharing Group." With T.E. Borcharding and W. Busch. In *Budgets and Bureaucrats: The Sources of Government Growth*, edited by T.E. Borcharding. Durham, NC: Duke University Press, 1977.



"Public vs. Private Production of Governmental Services." In *Budgets and Bureaucrats: The Sources of Government Growth*, edited by T.E. Borcharding. Durham, NC: Duke University Press, 1977.

"Rates of Productivity Change and the Growth of State and Local Government Expenditures." In *Budgets and Bureaucrats: The Sources of Government Growth*, edited by T.E. Borcharding. Durham, NC: Duke University Press, 1977.

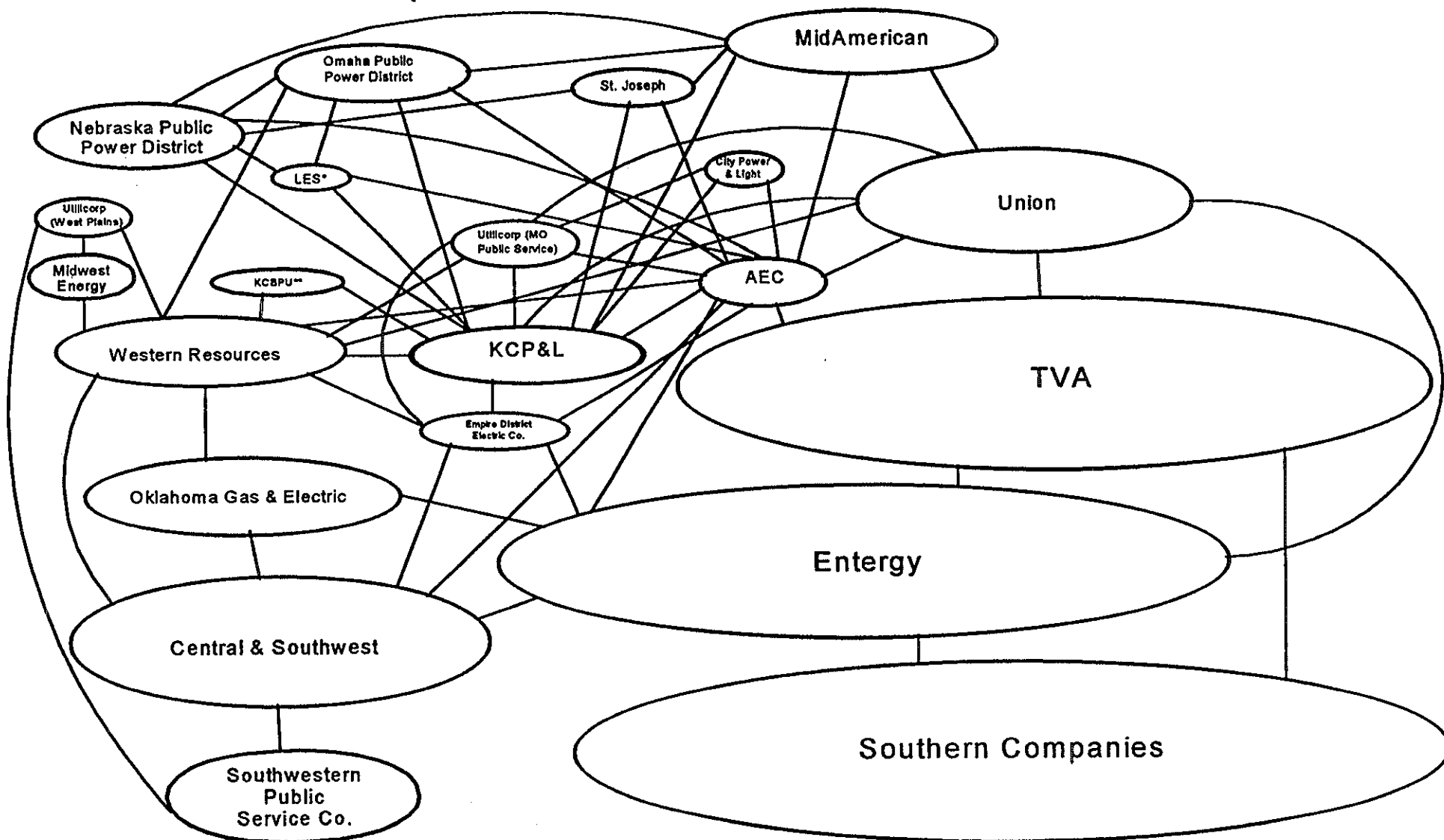
"Collective Consumption of Private Goods." *Public Choice* 20 (Winter 1974).

### **Telecommunications**

"Pricing Within Urban Telephone Networks: Welfare, Allocative and Distributional Effects of Alternative Pricing Policies." In *Expanding Economic Concepts of Regulation in Health, Postal and Telecommunications Services*, edited by C.F. Phillips, Jr. Lexington, VA: Washington and Lee University, 1977.



**Interconnections in the Regions Where the Merging Parties Operate**  
**(Drawn to Scale Based on Relative Generating Capacity)**



\* Lincoln Electric System  
 \*\* Kansas City Board of Public Utilities

Sources: 1995 FERC Forms 714.

## All Tier I Interconnections For KCPL-Western Resources Combined Company

| Utility  | Total Generating<br>Capacity<br>(MW) | Interconnected With |    |
|--|--------------------------------------|---------------------|----|
|  |                                      | KCPL                | WR |
| Kansas City Power & Light                                | 3,134                                |                     | X  |
| Western Resources  | 5,333                                | X                   |    |
| Associated Electric Cooperative                          | 2,547                                | X                   | X  |
| City Power & Light, Independence, MO                     | 288                                  | X                   |    |
| Empire District Electric Company                         | 723                                  | X                   | X  |
| Kansas City Board of Public Utilities                    | 676                                  | X                   | X  |
| Lincoln Electric System                                  | 102                                  | X                   |    |
| MidAmerican Energy Company                               | 3,923                                | X                   |    |
| Midwest Energy   | 32                                   |                     | X  |
| Missouri Public Service Company (Utilicorp) <sup>1</sup> | 1,625                                | X                   | X  |
| Nebraska Public Power District                           | 2,619                                | X                   |    |
| Oklahoma Gas & Electric Company                          | 5,638                                |                     | X  |
| Omaha Public Power District                              | 1,918                                | X                   | X  |
| Public Service Company of Oklahoma <sup>2</sup>          | 8,221                                |                     | X  |
| St. Joseph Light & Power Company                         | 382                                  | X                   |    |
| Union Electric   | 7,897                                | X                   | X  |
| WestPlains Energy - Kansas (Utilicorp) <sup>1</sup>      | 1,625                                |                     | X  |

Notes: <sup>1</sup> Represents UtiliCorp's SPP capacity.

<sup>2</sup> Represents Central and South West's SPP capacity.

Sources: 1995 EIA Form 860.

**Western Resources, Inc.**  
**Sales for Resale to and Purchases of Power from Others**  
**(MWH and Charges)**

| 1995                                |           |               |
|-------------------------------------|-----------|---------------|
|                                     | MWH       | (\$)          |
| <b>Non-Firm and Short-Term Firm</b> |           |               |
| Sales                               | 2,508,407 | 50,356,373    |
| Purchases                           | 738,702   | 11,856,318    |
| Net Sales                           | 1,769,705 | \$ 38,500,055 |
| <b>Long-Term Firm</b>               |           |               |
| Sales                               | 1,500,736 | 45,142,401    |
| Purchases                           | 18,820    | 2,262,980     |
| Net Sales                           | 1,481,916 | \$ 42,879,421 |

| 1996                                |           |               |
|-------------------------------------|-----------|---------------|
|                                     | MWH       | (\$)          |
| <b>Non-Firm and Short-Term Firm</b> |           |               |
| Sales                               | 3,846,384 | 84,247,034    |
| Purchases                           | 1,314,152 | 23,912,199    |
| Net Sales                           | 2,532,232 | \$ 60,334,835 |
| <b>Long-Term Firm</b>               |           |               |
| Sales                               | 1,613,309 | 48,472,666    |
| Purchases                           | 13,335    | 2,065,329     |
| Net Sales                           | 1,599,974 | \$ 46,407,337 |

Sources: Western Resources, Inc.'s 1995 and 1996 FERC Form 1;  
 Kansas Gas and Electric Company's 1995 and 1996 FERC Form 1.

**Kansas City Power & Light Company**  
**Sales for Resale to and Purchases of Power from Others**  
**(MWH and Charges)**

| 1995                                |           |                 |
|-------------------------------------|-----------|-----------------|
|                                     | MWH       | (\$)            |
| <b>Non-Firm and Short-Term Firm</b> |           |                 |
| Sales                               | 3,663,721 | 57,978,311      |
| Purchases                           | 614,865   | 12,102,348      |
| Net Sales                           | 3,048,856 | \$ 45,875,963   |
| <br><b>Long-Term Firm</b>           |           |                 |
| Sales                               | 78,212    | 3,148,562       |
| Purchases                           | 367,633   | 25,356,452      |
| Net Sales                           | (289,421) | (\$ 22,207,890) |
|                                     |           |                 |
| 1996                                |           |                 |
|                                     | MWH       | (\$)            |
| <b>Non-Firm and Short-Term Firm</b> |           |                 |
| Sales                               | 3,666,691 | 60,832,175      |
| Purchases                           | 942,622   | 17,919,313      |
| Net Sales                           | 2,724,069 | \$ 42,912,862   |
| <br><b>Long-Term Firm</b>           |           |                 |
| Sales                               | 101,001   | 3,551,564       |
| Purchases                           | 277,730   | 32,772,110      |
| Net Sales                           | (176,729) | (\$ 29,220,546) |

Sources: Kansas City Power & Light Company's 1995 and 1996 FERC Form 1.



**Western Resources  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995**

| Buyer                                 | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|----------------------|
| Arkansas Electric Corporation         | OS                            | 53,100           | 737,853               | 13.90                |
| Associated Electric Cooperative       | OS                            | 44,297           | 862,782               | 19.48                |
| Augusta, KS                           | OS <sup>1,2</sup>             | 57,058           | 1,153,826             | 20.22                |
| Burlington, KS                        | OS <sup>1,2</sup>             | 27,136           | 548,556               | 20.22                |
| Central and South West                | OS                            | 11,220           | 173,674               | 15.48                |
| Central Louisiana Electric            | OS                            | 880              | 30,600                | 34.77                |
| Chanute, KS                           | OS <sup>1,2</sup>             | 156,374          | 3,150,750             | 20.15                |
| Coffeyville, KS                       | OS <sup>2</sup>               | 108,499          | 2,142,561             | 19.75                |
| Empire District Electric Co.          | OS                            | 217,836          | 4,903,861             | 22.51                |
| Enron Power Marketing                 | OS                            | 20,900           | 350,421               | 16.77                |
| Entergy Services                      | OS                            | 14,905           | 261,420               | 17.54                |
| Erie, KS                              | OS <sup>1,2</sup>             | 10,541           | 215,889               | 20.48                |
| Fredonia, KS                          | OS <sup>1,2</sup>             | 7,009            | 147,496               | 21.04                |
| Girard, KS                            | OS <sup>1,2</sup>             | 29,374           | 606,761               | 20.66                |
| Grand River Dam Authority             | OS                            | 600              | 24,152                | 40.25                |
| Iola, KS                              | OS <sup>1,2</sup>             | 87,971           | 1,787,015             | 20.31                |
| Kansas City Board of Public Utilities | OS                            | 20,480           | 392,384               | 19.16                |
| Kansas City Power & Light             | OS                            | 48,780           | 1,259,377             | 25.82                |
| Kansas Electric Power Cooperative     | OS                            | 8,969            | 997,382               | 111.20               |
| Koch Power Services Marketing         | OS                            | 1,263            | 19,248                | 15.24                |
| Louisville Gas & Electric Marketing   | OS                            | 8,077            | 177,231               | 21.94                |
| Midwest Energy                        | OS                            | 724,346          | 13,620,692            | 18.80                |
| Missouri Public Service (Utilicorp)   | OS                            | 111,504          | 2,177,928             | 19.53                |
| Mulvane, KS                           | OS <sup>1,2</sup>             | 6,441            | 135,235               | 21.00                |
| Neodesha, KS                          | OS <sup>1,2</sup>             | 8,560            | 173,814               | 20.31                |
| Oklahoma Gas & Electric Co.           | OS                            | 93,112           | 1,423,543             | 15.29                |
| Oklahoma Municipal Power Agency       | OS                            | 320,796          | 6,470,874             | 20.17                |
| Omaha Public Power District           | OS                            | 46,472           | 1,159,039             | 24.94                |
| Oxford, KS                            | OS <sup>1,2</sup>             | 8,330            | 170,577               | 20.48                |
| Public Service Co. of Oklahoma        | OS                            | 608              | 14,179                | 23.32                |
| Southwestern Public Service           | OS                            | 200              | 6,400                 | 32.00                |
| Union Electric Co.                    | OS                            | 49,180           | 1,052,409             | 21.40                |
| Wellington, KS                        | OS <sup>1,2</sup>             | 66,400           | 1,339,506             | 20.17                |
| WestPlains Energy (Utilicorp)         | OS                            | 23,495           | 373,998               | 15.92                |
| Winfield, KS                          | OS <sup>1,2</sup>             | 113,694          | 2,294,940             | 20.19                |
| <b>Total</b>                          |                               | <b>2,508,407</b> | <b>50,356,373</b>     |                      |
| <b>Weighted Average Price per MWH</b> |                               |                  |                       | <b>20.08</b>         |

Notes: <sup>1</sup> Emergency Service<sup>2</sup> Supplemental Energy

Sources: Western Resources, Inc.'s 1995 FERC Form 1.

Kansas Gas and Electric Company's 1995 FERC Form 1.

**Western Resources  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1996**

| Buyer                                     | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|----------|-----------------------|-------------------------|
| Aquila Power Corporation                  | OS                            | 800      | 20,800                | 26.00                   |
| Arkansas Electric Cooperative Corporation | OS                            | 100      | 1,800                 | 18.00                   |
| Associated Electric Coop., Inc.           | OS                            | 58,455   | 1,059,833             | 18.13                   |
| Augusta, KS                               | OS                            | 56,618   | 1,203,410             | 21.25                   |
| Burlington, KS                            | OS                            | 30,753   | 687,287               | 22.35                   |
| Central & South West Services             | OS                            | 61,886   | 1,058,072             | 17.10                   |
| Chanute, KS                               | OS                            | 164,575  | 3,640,878             | 22.12                   |
| Citizens Lehman Power Sales               | OS                            | 600      | 15,000                | 25.00                   |
| Coffeyville, KS                           | OS                            | 130,855  | 2,745,418             | 20.98                   |
| Coral Power, LLC                          | OS                            | 750      | 10,325                | 13.77                   |
| Delhi Energy Services                     | OS                            | 21,139   | 382,611               | 18.10                   |
| Eastex Power Marketing                    | OS                            | 800      | 13,200                | 16.50                   |
| Electric Clearinghouse Inc.               | OS                            | 70,311   | 906,845               | 12.90                   |
| Empire District Electric Company          | OS                            | 321,607  | 8,242,599             | 25.63                   |
| Enron Power Marketing                     | OS                            | 174,407  | 2,977,557             | 17.07                   |
| Entergy Electric System                   | OS                            | 68,800   | 1,321,392             | 19.21                   |
| Entergy Power                             | OS                            | 34,675   | 436,495               | 12.59                   |
| Erie, KS                                  | OS                            | 10,512   | 232,384               | 22.11                   |
| Federal Energy Services                   | OS                            | 967      | 24,643                | 25.48                   |
| Fredonia, KS                              | OS                            | 6,147    | 151,585               | 24.66                   |
| Girard, KS                                | OS                            | 25,869   | 637,571               | 24.65                   |
| Grand River Dam Authority                 | OS                            | 3,125    | 82,413                | 26.37                   |
| Heartland Energy Services                 | OS                            | 2,483    | 49,810                | 20.06                   |
| Iola, KS                                  | OS                            | 94,217   | 2,049,544             | 21.75                   |
| Kansas City Board of Public Utilities     | OS                            | 62,490   | 1,553,701             | 24.86                   |
| Kansas City Power & Light                 | OS                            | 63,668   | 1,538,683             | 24.17                   |
| Kansas Electric Power Cooperative         | OS                            | 44,991   | 1,523,811             | 33.87                   |
| Koch Power Services, Inc.                 | OS                            | 47,851   | 1,124,031             | 23.49                   |
| Louis Dreyfus Electric Power              | OS                            | 122,499  | 1,791,550             | 14.63                   |
| Louisville Gas & Electric Marketing       | OS                            | 526,700  | 8,688,934             | 16.50                   |
| Midwest Energy, Inc.                      | OS                            | 801,160  | 23,056,460            | 28.78                   |
| Missouri Public Service                   | OS                            | 69,792   | 1,534,414             | 21.99                   |
| Mulvane, KS                               | OS                            | 7,872    | 191,781               | 24.36                   |
| Neodesha, KS                              | OS                            | 8,570    | 191,130               | 22.30                   |
| Noram Energy Services                     | OS                            | 7,709    | 138,632               | 17.98                   |
| Oklahoma Gas & Electric Co.               | OS                            | 167,635  | 2,934,873             | 17.51                   |
| Oklahoma Municipal Power Agency           | OS                            | 355      | 7,100                 | 20.00                   |
| Omaha Public Power District               | OS                            | 50,729   | 1,363,383             | 26.88                   |
| Oxford, KS                                | OS                            | 8,704    | 192,070               | 22.07                   |
| -Panenergy Power Services                 | OS                            | 52,995   | 827,188               | 15.61                   |

| Buyer                                | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Public Service Company of Oklahoma   | OS                            | 122,982          | 2,081,956             | 16.93                   |
| Rainbow Energy Marketing             | OS                            | 381              | 10,289                | 27.01                   |
| Sonat Power Marketing                | OS                            | 52               | 1,326                 | 25.50                   |
| Southwestern Public Service          | OS                            | 15,985           | 276,083               | 17.27                   |
| Sunflower Electric Power Corporation | OS                            | 21,305           | 795,236               | 37.33                   |
| Union Electric Co.                   | OS                            | 67,616           | 1,591,859             | 23.54                   |
| Valero Power Services                | OS                            | 72,869           | 1,410,799             | 19.36                   |
| Vitol Gas and Electric               | OS                            | 3,632            | 69,580                | 19.16                   |
| Wellington, KS                       | OS                            | 73,343           | 1,556,237             | 21.22                   |
| WestPlains Energy                    | OS                            | 48,338           | 1,009,886             | 20.89                   |
| Winfield, KS                         | OS                            | 35,710           | 834,570               | 23.37                   |
| <b>Total</b>                         |                               | <b>3,846,384</b> | <b>84,247,034</b>     |                         |
| <b>Weighted Average Cost per MWH</b> |                               |                  |                       | <b>21.90</b>            |

## Sources:

Western Resources, Inc.'s 1996 FERC Form 1.

Kansas Gas and Electric Company's 1996 FERC Form 1.

**Kansas City Power & Light Company  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995**

| Buyer                                 | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Arkansas Rural Electric Co-op         | OS <sup>2</sup>               | 285,210          | 3,227,403             | 11.32                   |
| Associated Electric Cooperative, Inc. | OS <sup>1</sup>               | 253,132          | 3,521,646             | 13.91                   |
| Baldwin, Kansas                       | OS <sup>1</sup>               | 3,853            | 76,369                | 19.82                   |
| Carrollton, Missouri                  | OS <sup>1</sup>               | 41,956           | 822,642               | 19.61                   |
| Central & South West Services, Inc.   | OS <sup>2</sup>               | 300              | 5,280                 | 17.60                   |
| Empire District Electric Company      | OS <sup>1</sup>               | 253,887          | 3,503,463             | 13.80                   |
| Enron Power Marketing, Inc.           | OS <sup>2</sup>               | 48,380           | 740,228               | 15.30                   |
| Entergy Electric System               | OS <sup>2</sup>               | 57,280           | 839,497               | 14.66                   |
| Gardner, Kansas                       | OS <sup>1</sup>               | 41,280           | 802,979               | 19.45                   |
| Garnett, Kansas                       | OS <sup>1</sup>               | 17,834           | 348,378               | 19.53                   |
| Higginsville, Missouri                | OS <sup>1</sup>               | 39,803           | 785,862               | 19.74                   |
| Independence, Missouri                | OS <sup>1</sup>               | 13,765           | 296,816               | 21.56                   |
| Independence, Missouri                | OS <sup>1</sup>               | 478              | 199,110               | 416.55                  |
| Interstate Power Company              | OS <sup>1</sup>               | 603              | 7,859                 | 13.03                   |
| Kansas City Board of Public Utilities | OS <sup>1</sup>               | 117,321          | 2,124,399             | 18.11                   |
| Koch Power Services, Inc.             | OS <sup>2</sup>               | 25               | 300                   | 12.00                   |
| Lincoln Electric Company              | OS <sup>1</sup>               | 175              | 184,966               | 1056.95                 |
| Louisville Gas & Electric             | OS <sup>2</sup>               | 64,000           | 927,464               | 14.49                   |
| Marshall, Missouri                    | OS <sup>1</sup>               | 105,046          | 1,803,436             | 17.17                   |
| MidAmerican Energy                    | OS <sup>1</sup>               | 27,890           | 612,961               | 21.98                   |
| Missouri Public Service Company       | OS <sup>1</sup>               | 158,092          | 2,275,054             | 14.39                   |
| Nebraska Public Power District        | OS <sup>1</sup>               | 25,660           | 486,226               | 18.95                   |
| NorAm Energy Services, Inc.           | OS <sup>2</sup>               | 34,675           | 497,593               | 14.35                   |
| Northern States Power Company         | OS <sup>1</sup>               | 107,428          | 2,215,038             | 20.62                   |
| Omaha Public Power District           | OS <sup>1</sup>               | 3,163            | 323,393               | 102.24                  |
| Osawatomie, Kansas                    | OS <sup>1</sup>               | 8,598            | 211,127               | 24.56                   |
| Ottawa, Kansas                        | OS <sup>1</sup>               | 31,851           | 662,365               | 20.80                   |
| Salisbury, Missouri                   | OS <sup>1</sup>               | 19,983           | 404,698               | 20.25                   |
| St. Joseph Light & Power Company      | OS <sup>1</sup>               | 111,843          | 1,806,467             | 16.15                   |
| Union Electric Company                | OS <sup>1</sup>               | 1,729,771        | 27,531,222            | 15.92                   |
| Western Resources                     | OS <sup>1</sup>               | 60,439           | 734,070               | 12.15                   |
| <b>Total</b>                          |                               | <b>3,663,721</b> | <b>57,978,311</b>     |                         |
| <b>Weighted Average Cost per MWH</b>  |                               |                  |                       | <b>15.82</b>            |

## Notes:

<sup>1</sup> The service to these customers is long-term service subject to availability.<sup>2</sup> FERC Rate is Supplement #13 to WSPP Rate Schedule FERC #1.

**Kansas City Power & Light Company  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1996**

| Buyer                                 | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|----------|-----------------------|-------------------------|
| Aquila Power Corporation              | OS <sup>2</sup>               | 1,600    | 27,200                | 17.00                   |
| Arkansas Rural Electric Coop          | OS <sup>2</sup>               | 286,800  | 3,421,715             | 11.93                   |
| Associated Electric Cooperative, Inc. | OS <sup>2</sup>               | 142,855  | 2,010,913             | 14.08                   |
| Associated Electric Cooperative, Inc. | OS <sup>1</sup>               | 146,884  | 2,179,743             | 14.84                   |
| Baldwin, KS                           | OS <sup>1</sup>               | 8,169    | 143,674               | 17.59                   |
| Carrollton, MO                        | OS                            | 42,837   | 826,632               | 19.30                   |
| Central and South West                | OS <sup>2</sup>               | 1,825    | 27,375                | 15.00                   |
| CNG Power Services                    | OS <sup>2</sup>               | 82       | 1,463                 | 17.84                   |
| Delhi                                 | OS <sup>2</sup>               | 10,925   | 162,545               | 14.88                   |
| Electric Clearinghouse, Inc.          | OS <sup>2</sup>               | 8,555    | 142,217               | 16.62                   |
| Empire District Electric Company      | OS <sup>2</sup>               | 865      | 13,267                | 15.34                   |
| Empire District Electric Company      | OS <sup>1</sup>               | 523,426  | 8,599,566             | 16.43                   |
| Enron Power Marketing Inc.            | OS <sup>2</sup>               | 180,353  | 2,708,395             | 15.02                   |
| Entergy Electric System               | OS <sup>2</sup>               | 161,070  | 2,865,679             | 17.79                   |
| Federal Energy Sales, Inc.            | OS <sup>2</sup>               | 3,270    | 68,258                | 20.87                   |
| Gardner, KS                           | OS                            | 18,320   | 353,054               | 19.27                   |
| Gardner, KS                           | OS                            | 47,291   | 927,729               | 19.62                   |
| Grand River Dam Authority             | OS <sup>2</sup>               | 825      | 13,200                | 16.00                   |
| Higginsville, MO                      | OS <sup>1</sup>               | 21,680   | 417,287               | 19.25                   |
| Independence, MO                      | OS <sup>1</sup>               | 16,630   | 304,085               | 18.29                   |
| Independence, MO                      | OS <sup>2</sup>               | 20       | 530                   | 26.50                   |
| Independence, MO                      | OS <sup>1</sup>               | 315      | 203,120               | 644.83                  |
| Interstate Power                      | OS <sup>1</sup>               | 5,575    | 93,131                | 16.71                   |
| Kansas City Board of Public Utilities | OS <sup>1</sup>               | 161,790  | 3,658,163             | 22.61                   |
| Kansas Gas & Electric                 | OS <sup>2</sup>               | 28,243   | 503,435               | 17.83                   |
| Kansas Gas & Electric                 | OS                            | 22       | 440                   | 20.00                   |
| Kansas Power & Light                  | OS <sup>2</sup>               | 9,525    | 148,649               | 15.61                   |
| Kansas Power & Light                  | OS <sup>1</sup>               | 5,928    | 111,873               | 18.87                   |
| Koch Power Services, Inc.             | OS <sup>2</sup>               | 18,716   | 306,193               | 16.36                   |
| Louis Dreyfus Electric Power          | OS <sup>2</sup>               | 31,356   | 584,132               | 18.63                   |
| Louisville Gas & Electric             | OS <sup>2</sup>               | 105,545  | 1,625,830             | 15.40                   |
| Marshall, MO                          | OS <sup>1</sup>               | 109,610  | 1,866,558             | 17.03                   |
| MidAmerican Energy                    | OS                            | 12,386   | 235,239               | 18.99                   |
| Missouri Public Company               | OS                            | 99,638   | 1,561,654             | 15.67                   |
| Missouri Public Service Co.           | OS <sup>2</sup>               | 10,792   | 186,166               | 17.25                   |
| Nebraska Public Power District        | OS <sup>1</sup>               | 5,523    | 134,350               | 24.33                   |

| Buyer                                 | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| NorAm Energy Services, Inc.           | OS <sup>2</sup>               | 1,400            | 91,122                | 65.09                   |
| Northern States Power Company         | OS                            | 56,586           | 1,392,983             | 24.62                   |
| Omaha Public Power District           | OS <sup>2</sup>               | 1,525            | 23,500                | 15.41                   |
| Omaha Public Power District           | OS                            | 7,990            | 146,180               | 18.30                   |
| Osawatomie, KS                        | OS <sup>1</sup>               | 9,325            | 175,880               | 18.86                   |
| Ottawa, KS                            | OS <sup>1</sup>               | 48,675           | 870,905               | 17.89                   |
| Rainbow Energy Marketing Corp.        | OS <sup>2</sup>               | 125              | 2,000                 | 16.00                   |
| Salisbury, MO                         | OS <sup>1</sup>               | 20,825           | 411,552               | 19.76                   |
| Sonat Power Marketing                 | OS <sup>2</sup>               | 200              | 3,260                 | 16.30                   |
| St. Joseph Light & Power Co.          | OS                            | 24,743           | 435,165               | 17.59                   |
| Union Electric Company                | OS                            | 1,256,371        | 20,661,257            | 16.45                   |
| Valero Power Services                 | OS <sup>2</sup>               | 2,100            | 35,830                | 17.06                   |
| Vitol Gas & Electric                  | OS <sup>2</sup>               | 4,700            | 57,895                | 12.32                   |
| West Plains Energy                    | OS <sup>2</sup>               | 2,880            | 91,186                | 31.66                   |
| <b>Total</b>                          |                               | <b>3,666,691</b> | <b>60,832,175</b>     |                         |
| <b>Weighted Average Price Per MWH</b> |                               |                  |                       | <b>16.59</b>            |

## Notes:

<sup>1</sup> These sales are long-term, subject to availability.<sup>2</sup> These sales were made under Supplement #13 to WSPP Rate Schedule FERC #1.

Source: Kansas City Power &amp; Light's 1996 FERC Form 1, pp. 310-311.4.

**Western Resources  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995 and 1996  
Power Marketers vs. Utilities**

|                                 | 1995         | 1996         | Percent Change |
|---------------------------------|--------------|--------------|----------------|
| <b>Customers</b>                |              |              |                |
| <b>Total</b>                    | 35           | 51           | 45.71%         |
| <b>Power Marketers</b>          | 3            | 18           | 500.00%        |
| <b>Utilities</b>                | 32           | 33           | 3.13%          |
| <b>MWH Sold</b>                 |              |              |                |
| <b>Total (MWH)</b>              | 2,508,407    | 3,846,384    | 53.34%         |
| <b>To Power Marketers (MWH)</b> | 30,240       | 1,106,945    | 3560.53%       |
| <b>To Utilities (MWH)</b>       | 2,478,167    | 2,739,439    | 10.54%         |
| <b>Sales</b>                    |              |              |                |
| <b>Total</b>                    | \$50,356,373 | \$84,247,034 | 67.30%         |
| <b>Power Marketers</b>          | \$546,900    | \$18,463,120 | 3275.96%       |
| <b>Utilities</b>                | \$49,809,473 | \$65,783,914 | 32.07%         |

Sources: Kansas Power & Light's 1995 and 1996 FERC Form 1.  
Kansas Gas and Electric's 1995 and 1996 FERC Form 1.  
Power Markets Week, QPM Database.

**Kansas City Power & Light  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995 and 1996  
Power Marketers vs. Utilities**

|                                 | 1995         | 1996         | Percent Change |
|---------------------------------|--------------|--------------|----------------|
| <b>Customers</b>                |              |              |                |
| <b>Total</b>                    | 30           | 42           | 40.00%         |
| <b>Power Marketers</b>          | 4            | 14           | 250.00%        |
| <b>Utilities</b>                | 26           | 28           | 7.69%          |
| <b>MWH Sold</b>                 |              |              |                |
| <b>Total (MWH)</b>              | 3,663,721    | 3,666,691    | 0.08%          |
| <b>To Power Marketers (MWH)</b> | 147,080      | 368,927      | 150.83%        |
| <b>To Utilities (MWH)</b>       | 3,516,641    | 3,297,764    | -6.22%         |
| <b>Sales</b>                    |              |              |                |
| <b>Total</b>                    | \$57,978,311 | \$60,832,175 | 4.92%          |
| <b>Power Marketers</b>          | \$2,165,585  | \$5,816,340  | 168.58%        |
| <b>Utilities</b>                | \$55,812,726 | \$55,015,835 | -1.43%         |

Source Kansas City Power & Light Co.'s 1995 and 1996 FERC Form 1.  
Power Markets Week, QPM Database.



**Top Ten Customers  
Western Resources  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995**

| Buyer                               | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|-------------------------------------|-------------------------------|----------|-----------------------|-------------------------|
| Midwest Energy                      | OS                            | 724,346  | 13,620,692            | 18.80                   |
| Oklahoma Municipal Power Agency     | OS                            | 320,796  | 6,470,874             | 20.17                   |
| Empire District Electric Company    | OS                            | 217,836  | 4,903,861             | 22.51                   |
| Chanute, KS                         | OS <sup>1</sup>               | 154,477  | 3,097,608             | 20.05                   |
| Winfield, KS                        | OS <sup>1</sup>               | 112,756  | 2,268,064             | 20.11                   |
| Missouri Public Service (Utilicorp) | OS                            | 111,504  | 2,177,928             | 19.53                   |
| Coffeyville, KS                     | OS <sup>1</sup>               | 108,499  | 2,142,561             | 19.75                   |
| Oklahoma Gas & Electric Company     | OS                            | 93,112   | 1,423,543             | 15.29                   |
| Iola, KS                            | OS <sup>1</sup>               | 87,747   | 1,781,298             | 20.30                   |
| Wellington, KS                      | OS <sup>1</sup>               | 66,367   | 1,338,570             | 20.17                   |

Notes: <sup>1</sup> Supplemental Energy

Sources: Western Resources' 1995 FERC Form 1.  
Kansas Gas & Electric Company's 1995 FERC Form 1.

**Top Ten Customers  
Western Resources  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1996**

| <b>Buyer</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH Sold</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per MWH<br/>(\$)</b> |
|-------------------------------------|---------------------------------------|-----------------|-------------------------------|------------------------------|
| Midwest Energy, Inc.                | OS                                    | 801,160         | 23,056,460                    | 28.78                        |
| Louisville Gas & Electric Marketing | OS                                    | 526,700         | 8,688,934                     | 16.50                        |
| Empire District Electric Company    | OS                                    | 321,607         | 8,242,599                     | 25.63                        |
| Enron Power Marketing               | OS                                    | 174,407         | 2,977,557                     | 17.07                        |
| Oklahoma Gas & Electric Company     | OS                                    | 167,635         | 2,934,873                     | 17.51                        |
| Chanute, KS                         | OS                                    | 164,575         | 3,640,878                     | 22.12                        |
| Coffeyville, KS                     | OS                                    | 130,855         | 2,745,418                     | 20.98                        |
| Public Service of Oklahoma          | OS                                    | 122,982         | 2,081,956                     | 16.93                        |
| Louis Dreyfus Electric Power        | OS                                    | 122,499         | 1,791,550                     | 14.63                        |
| ola, KS                             | OS                                    | 94,217          | 2,049,544                     | 21.75                        |

Sources: Western Resources' 1996 FERC Form 1.

Kansas Gas & Electric Company's 1996 FERC Form 1.

**Top Ten Customers  
Kansas City Power & Light Company  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1995**

| Buyer                                 | Statistical<br>Classification | MWH Sold  | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|-----------|-----------------------|-------------------------|
| Union Electric Company                | OS <sup>1</sup>               | 1,729,771 | 27,531,222            | 15.92                   |
| Arkansas Rural Electric Cooperative   | OS <sup>2</sup>               | 285,210   | 3,227,403             | 11.32                   |
| Empire District Electric Company      | OS <sup>1</sup>               | 253,887   | 3,503,463             | 13.80                   |
| Associated Electric Cooperative, Inc. | OS <sup>1</sup>               | 253,132   | 3,521,646             | 13.91                   |
| Missouri Public Service Company       | OS <sup>1</sup>               | 158,092   | 2,275,054             | 14.39                   |
| Kansas City Board of Public Utilities | OS <sup>1</sup>               | 117,321   | 2,124,399             | 18.11                   |
| St. Joseph Light & Power Company      | OS <sup>1</sup>               | 111,843   | 1,806,467             | 16.15                   |
| Northern States Power Company         | OS <sup>1</sup>               | 107,428   | 2,215,038             | 20.62                   |
| City of Marshall, MO                  | OS <sup>1</sup>               | 105,046   | 1,803,436             | 17.17                   |
| Louisville Gas & Electric Marketing   | OS <sup>2</sup>               | 64,000    | 927,464               | 14.49                   |

Notes: <sup>1</sup> The service to these customers is long-term service subject to availability.

<sup>2</sup> FERC Rate is Supplement #13 to WSPP Rate Schedule FERC #1.

Source: Kansas City Power & Light Company's 1995 FERC Form 1, pages 310 - 311.3.

**Top Ten Customers  
Kansas City Power & Light Company  
Non-Firm Wholesale Sales for Resale  
And Short-Term Firm Sales, 1996**

| Buyer                                 | Statistical<br>Classification | MWH Sold  | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|-----------|-----------------------|-------------------------|
| Union Electric Company                | OS                            | 1,256,371 | 20,661,257            | 16.45                   |
| Empire District Electric Company      | OS <sup>1</sup>               | 523,426   | 8,599,566             | 16.43                   |
| Associated Electric Cooperative, Inc. | OS <sup>1,2</sup>             | 289,739   | 4,190,656             | 14.46                   |
| Arkansas Rural Electric Cooperative   | OS <sup>2</sup>               | 286,800   | 3,421,715             | 11.93                   |
| Enron Power Marketing Inc.            | OS <sup>2</sup>               | 180,353   | 2,708,395             | 15.02                   |
| Kansas City Board of Public Utilities | OS <sup>1</sup>               | 161,790   | 3,658,163             | 22.61                   |
| Entergy Electric System               | OS <sup>2</sup>               | 161,070   | 2,865,679             | 17.79                   |
| City of Marshall, MO                  | OS <sup>1</sup>               | 109,610   | 1,866,558             | 17.03                   |
| Louisville Gas & Electric Marketing   | OS <sup>2</sup>               | 105,545   | 1,625,830             | 15.40                   |
| Missouri Public Service Company       | OS                            | 99,638    | 1,561,654             | 15.67                   |

Notes: <sup>1</sup> The service to these customers is long-term service subject to availability.

<sup>2</sup> FERC Rate is Supplement #13 to WSPP Rate Schedule FERC #1.

Source: Kansas City Power & Light Company's 1996 FERC Form 1, pages 310 - 311.4.

# Western Resources, Inc. Long-Term Firm Sales, 1995

| Buyer  | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--|-------------------------------|----------|-----------------------|-------------------------|
| Alma, KS                                       | RQ                            | 6,557    | 293,229               | 44.72                   |
| Altamont, KS                                   | RQ                            | 7,540    | 371,287               | 49.24                   |
| Arcadia, KS                                    | RQ                            | 1,832    | 89,647                | 48.93                   |
| Arma, KS                                       | RQ                            | 10,500   | 447,584               | 42.63                   |
| Axtell, KS                                     | RQ                            | 2,572    | 113,016               | 43.94                   |
| Blue Mound, KS                                 | RQ                            | 1,688    | 78,939                | 46.76                   |
| Board of Public Utilities - McPherson          | RQ                            | 557,373  | 12,907,817            | 23.16                   |
| Bronson, KS                                    | RQ                            | 2,218    | 104,962               | 47.32                   |
| Burlingame, KS                                 | RQ                            | 7,609    | 173,656               | 22.82                   |
| Burlington, KS                                 | RQ                            | 1,082    | 36,546                | 33.78                   |
| Centralia, KS                                  | RQ                            | 3,566    | 167,443               | 46.96                   |
| Chapman, KS                                    | RQ                            | 7,739    | 357,281               | 46.17                   |
| Clay Center, KS                                | RQ                            | 28,277   | 703,248               | 24.87                   |
| Doniphan County Cooperative                    | RQ                            | 17,188   | 598,344               | 34.81                   |
| Ellinwood, KS                                  | RQ                            | 14,010   | 348,615               | 24.88                   |
| Ellwood, KS                                    | RQ                            | 4,600    | 214,266               | 46.58                   |
| Elsmore, KS                                    | RQ                            | 442      | 23,354                | 52.84                   |
| Empire District Electric                       | OS <sup>1</sup>               | 7,426    | 255,107               | 34.35                   |
| Enterprise, KS                                 | RQ                            | 4,910    | 221,483               | 45.11                   |
| Eudora, KS                                     | RQ                            | 14,608   | 702,755               | 48.11                   |
| Eudora, KS #2                                  | RQ                            | 12,547   | 428,071               | 34.12                   |
| Fredonia, KS                                   | RQ                            | 139      | 6,750                 | 48.56                   |
| Haven, KS                                      | RQ                            | 10,467   | 451,538               | 43.14                   |
| Herington, KS                                  | RQ                            | 21,073   | 498,714               | 23.67                   |
| Hillsboro, KS                                  | RQ                            | 20,369   | 938,669               | 46.08                   |
| Holton, KS                                     | RQ                            | 33,485   | 755,488               | 22.56                   |
| Horton, KS                                     | RQ                            | 12,245   | 385,988               | 31.52                   |
| Kansas Electric Power Cooperative              | RQ                            | 259,147  | 8,952,757             | 34.55                   |
| Kaw Valley Electric Cooperative                | RQ                            | 105,261  | 3,625,227             | 34.44                   |
| LaHarpe, KS                                    | RQ                            | 2,900    | 134,163               | 46.26                   |
| Larned, KS                                     | RQ                            | 24,526   | 563,448               | 22.97                   |
| Lindsborg, KS                                  | RQ                            | 16,183   | 812,133               | 50.18                   |
| Marion, KS                                     | RQ                            | 16,102   | 768,610               | 47.73                   |
| Mindemines, MO                                 | RQ                            | 1,991    | 96,740                | 48.59                   |
| Minneapolis, KS                                | RQ                            | 12,874   | 298,413               | 23.18                   |
| Missouri Public Service (Utilicorp) - Eve      | RQ                            | 588      | 39,706                | 67.53                   |
| Missouri Public Service (Utilicorp) - Richards | RQ                            | 530      | 37,297                | 70.37                   |
| Moran, KS                                      | RQ                            | 4,644    | 201,000               | 43.28                   |
| Morrill, KS                                    | RQ                            | 1,313    | 58,411                | 44.49                   |
| Mt. Hope, KS                                   | RQ                            | 4,712    | 211,504               | 44.89                   |
| Mulberry, KS                                   | RQ                            | 2,825    | 138,823               | 49.14                   |
| Mulvane, KS                                    | RQ                            | 1,902    | 66,392                | 34.91                   |

| Buyer                                | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Muscotah, KS                         | RQ                            | 869              | 39,786                | 45.78                   |
| Nemaha-Marshall Electric Cooperative | RQ                            | 44,752           | 1,513,463             | 33.82                   |
| Neodesha, KS                         | RQ                            | 2,204            | 91,965                | 41.73                   |
| Osage City, KS                       | RQ                            | 19,877           | 465,714               | 23.43                   |
| Oxford, KS                           | RQ                            | 443              | 16,007                | 36.13                   |
| Robinson, KS                         | RQ                            | 1,765            | 76,849                | 43.54                   |
| Sabetha, KS                          | RQ                            | 35,924           | 820,328               | 22.84                   |
| Savonburg, KS                        | RQ                            | 484              | 26,260                | 54.26                   |
| Scranton, KS                         | RQ                            | 3,786            | 163,348               | 43.15                   |
| Seneca, KS                           | RQ                            | 20,562           | 896,752               | 43.61                   |
| Severance, KS                        | RQ                            | 480              | 20,966                | 43.68                   |
| St. John, KS                         | RQ                            | 9,381            | 230,916               | 24.62                   |
| St. Mary's, KS                       | RQ                            | 15,895           | 699,915               | 44.03                   |
| Stafford, KS                         | RQ                            | 8,638            | 227,924               | 26.39                   |
| Sterling, KS                         | RQ                            | 15,600           | 400,642               | 25.68                   |
| Toronto, KS                          | RQ                            | 2,281            | 106,989               | 46.90                   |
| Troy, KS                             | RQ                            | 7,054            | 304,142               | 43.12                   |
| Vermillion, KS                       | RQ                            | 716              | 32,855                | 45.89                   |
| Wamego, KS                           | RQ                            | 29,602           | 742,690               | 25.09                   |
| Waterville, KS                       | RQ                            | 4,859            | 226,089               | 46.53                   |
| Wathena, KS                          | RQ                            | 7,933            | 356,072               | 44.88                   |
| Winfield, KS                         | RQ                            | 71               | 4,308                 | 60.68                   |
| <b>Total</b>                         |                               | <b>1,500,736</b> | <b>45,142,401</b>     |                         |
| <b>Weighted Average Cost per MWH</b> |                               |                  |                       | <b>30.08</b>            |

## Note:

<sup>1</sup> Similar to LU except long-term service is from multiple designated units.

Sources: Western Resources, Inc.'s 1995 FERC Form 1; Kansas Gas and Electric Company's 1995 FERC Form 1.

# **Western Resources, Inc.** **Long-Term Firm Sales, 1996**

| Buyer                                  | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--|-------------------------------|----------|-----------------------|-------------------------|
| Alma, KS                               | RQ                            | 6,862    | 305,154               | 44.47                   |
| Altamont, KS                           | RQ                            | 7,756    | 386,466               | 49.83                   |
| Arcadia, KS                            | RQ                            | 1,672    | 89,153                | 53.32                   |
| Arma, KS                               | RQ                            | 10,596   | 474,083               | 44.74                   |
| Augusta, KS                            | RQ                            | 5,938    | 199,382               | 33.58                   |
| Axtell, KS                             | RQ                            | 2,627    | 117,014               | 44.54                   |
| Blue Mound, KS                         | RQ                            | 1,824    | 90,110                | 49.40                   |
| Board of Public Utilities - McPherson  | RQ                            | 581,864  | 13,331,111            | 22.91                   |
| Bronson, KS                            | RQ                            | 2,291    | 112,326               | 49.03                   |
| Burlingame, KS                         | RQ                            | 8,040    | 181,840               | 22.62                   |
| Centralia, KS                          | RQ                            | 3,698    | 171,073               | 46.26                   |
| Chapman, KS                            | RQ                            | 8,278    | 370,643               | 44.77                   |
| Clay Center, KS                        | RQ                            | 34,042   | 827,576               | 24.31                   |
| Doniphan County Cooperative            | RQ                            | 17,516   | 610,826               | 34.87                   |
| Ellinwood, KS                          | RQ                            | 14,598   | 392,408               | 26.88                   |
| Elsmore, KS                            | RQ                            | 441      | 24,607                | 55.80                   |
| Elwood, KS                             | RQ                            | 4,112    | 207,222               | 50.39                   |
| Enterprise, KS                         | RQ                            | 4,987    | 225,122               | 45.14                   |
| Eudora, KS                             | RQ                            | 3,018    | 168,305               | 55.77                   |
| Eudora, KS #2                          | RQ                            | 25,838   | 997,760               | 38.62                   |
| Fredonia, KS                           | RQ                            | 14       | 2,688                 | 192.00                  |
| Girard, KS                             | RQ                            | 3,615    | 120,177               | 33.24                   |
| Haven, KS                              | RQ                            | 10,759   | 476,787               | 44.32                   |
| Herington, KS                          | RQ                            | 21,998   | 525,713               | 23.90                   |
| Hillsboro, KS                          | RQ                            | 21,276   | 962,538               | 45.24                   |
| Holton, KS                             | RQ                            | 36,115   | 805,728               | 22.31                   |
| Horton, KS                             | RQ                            | 12,727   | 410,138               | 32.23                   |
| Kansas Electric Power Cooperative      | RQ                            | 310,926  | 10,586,701            | 34.05                   |
| Kaw Valley Electric Cooperative        | RQ                            | 109,483  | 3,808,948             | 34.79                   |
| LaHarpe, KS                            | RQ                            | 2,884    | 142,765               | 49.50                   |
| Lamed, KS                              | RQ                            | 28,039   | 663,923               | 23.68                   |
| Lindsborg, KS                          | RQ                            | 17,133   | 793,559               | 46.32                   |
| Marion, KS                             | RQ                            | 16,668   | 796,868               | 47.81                   |
| Mindemines, MO                         | RQ                            | 2,035    | 103,628               | 50.92                   |
| Minneapolis, KS                        | RQ                            | 13,421   | 306,351               | 22.83                   |
| Missouri Public Service Co. - Eve      | RQ                            | 581      | 41,411                | 71.28                   |
| Missouri Public Service Co. - Richards | RQ                            | 551      | 39,792                | 72.22                   |
| Moran, KS                              | RQ                            | 4,811    | 224,355               | 46.63                   |
| Morrill, KS                            | RQ                            | 1,316    | 59,434                | 45.16                   |
| Mt. Hope, KS                           | RQ                            | 4,930    | 233,211               | 47.30                   |
| Mulberry, KS                           | RQ                            | 2,846    | 146,565               | 51.50                   |
| Mulvane, KS                            | RQ                            | 949      | 36,907                | 38.89                   |

| Buyer                                | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Muscotah, KS                         | RQ                            | 866              | 41,531                | 47.96                   |
| Nemaha-Marshall Electric Cooperative | RQ                            | 45,894           | 1,553,236             | 33.84                   |
| Neodesha, KS                         | RQ                            | 1,660            | 73,799                | 44.46                   |
| Osage City, KS                       | RQ                            | 21,062           | 484,579               | 23.01                   |
| Oxford, KS                           | RQ                            | 710              | 25,577                | 36.02                   |
| Robinson, KS                         | RQ                            | 1,672            | 74,804                | 44.74                   |
| Sabetha, KS                          | RQ                            | 37,174           | 855,047               | 23.00                   |
| Savonburg, KS                        | RQ                            | 497              | 26,603                | 53.53                   |
| Scranton, KS                         | RQ                            | 3,998            | 178,490               | 44.64                   |
| Seneca, KS                           | RQ                            | 21,142           | 921,102               | 43.57                   |
| Severance, KS                        | RQ                            | 472              | 21,566                | 45.69                   |
| St. John, KS                         | RQ                            | 10,590           | 285,757               | 26.98                   |
| St. Mary's, KS                       | RQ                            | 16,447           | 733,333               | 44.59                   |
| Stafford, KS                         | RQ                            | 9,282            | 241,731               | 26.04                   |
| Sterling, KS                         | RQ                            | 17,008           | 435,416               | 25.60                   |
| Toronto, KS                          | RQ                            | 2,332            | 108,383               | 46.48                   |
| Troy, KS                             | RQ                            | 7,186            | 315,279               | 43.87                   |
| Vermillion, KS                       | RQ                            | 726              | 34,201                | 47.11                   |
| Wamego, KS                           | RQ                            | 31,416           | 758,221               | 24.13                   |
| Waterville, KS                       | RQ                            | 5,234            | 233,223               | 44.56                   |
| Wathena, KS                          | RQ                            | 8,110            | 373,552               | 46.06                   |
| Winfield, KS                         | RQ                            | 756              | 126,868               | 167.81                  |
| <b>Total</b>                         |                               | <b>1,613,309</b> | <b>48,472,666</b>     |                         |
| <b>Weighted Average Cost per MWH</b> |                               |                  |                       | <b>30.05</b>            |

Sources: Western Resources, Inc.'s 1996 FERC Form 1; Kansas Gas and Electric Company's 1996 FERC Form 1.



## Kansas City Power & Light Company Long-Term Firm Sales, 1995

| Buyer                                     | Statistical<br>Classification | MWH Sold      | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|---------------|-----------------------|-------------------------|
| Board of Public Utilities - KCK           | RQ                            | 127           | 2,269                 | 17.87                   |
| Garnett, KS                               | RQ                            | 4,540         | 120,021               | 26.44                   |
| Independence, MO                          | RQ                            | 997           | 14,958                | 15.00                   |
| Osawatomie, KS                            | RQ                            | 4,254         | 114,393               | 26.89                   |
| Pomona, KS                                | RQ                            | 6,035         | 283,184               | 46.92                   |
| Prescott, KS                              | RQ                            | 1,585         | 74,288                | 46.87                   |
| Slater, MO                                | RQ                            | 18,426        | 829,590               | 45.02                   |
| Kansas Electric Power Co-op (Coffey Co)   | RQ                            | 12,504        | 502,093               | 40.15                   |
| Kansas Electric Power Co-op (United Elec) | RQ                            | 26,261        | 1,065,365             | 40.57                   |
| Missouri Public Service Company           | RQ                            | 3,483         | 142,401               | 40.88                   |
| <b>Total</b>                              |                               | <b>78,212</b> | <b>3,148,562</b>      |                         |
| <b>Weighted Average Cost per MWH</b>      |                               |               |                       | <b>40.26</b>            |

Source: Kansas City Power & Light Company's 1995 FERC Form 1.

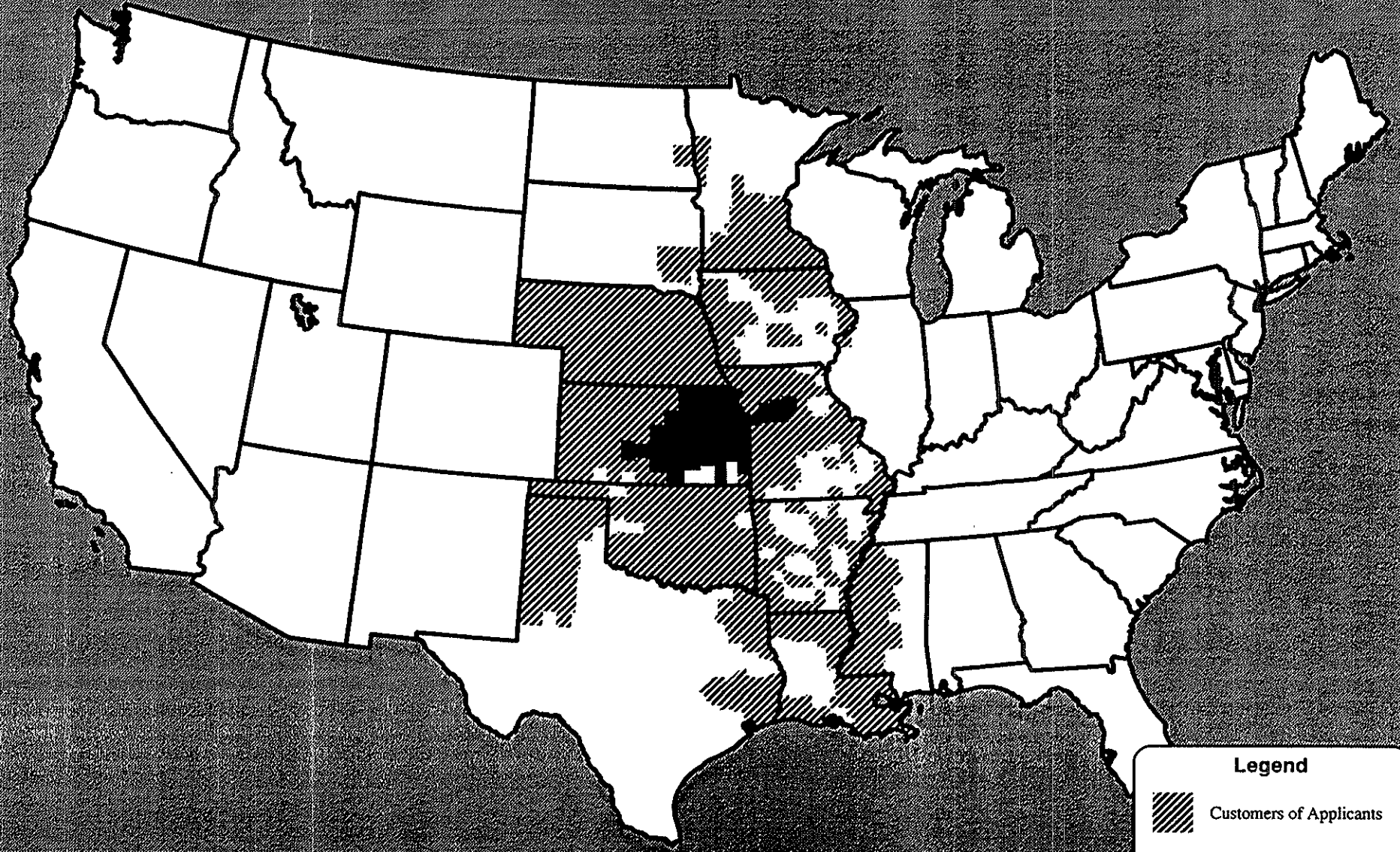
## Kansas City Power & Light Company Long-Term Firm Sales, 1996

| Buyer   | Statistical<br>Classification | MWH Sold       | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|----------------|-----------------------|-------------------------|
| Board of Public Utilities - KCK                 | RQ                            | 281            | 4,108                 | 14.62                   |
| Garnett, KS                                     | RQ                            | 4,211          | 115,314               | 27.38                   |
| Higginsville, KS                                | RQ                            | 19,990         | 468,625               | 23.44                   |
| Independence, MO                                | RQ                            | 1,096          | 16,440                | 15.00                   |
| Osawatomie, KS                                  | RQ                            | 4,324          | 131,260               | 30.36                   |
| Pomona, KS                                      | RQ                            | 6,241          | 291,815               | 46.76                   |
| Prescott, KS                                    | RQ                            | 1,720          | 65,696                | 38.20                   |
| Slater, MO                                      | RQ                            | 18,808         | 633,503               | 33.68                   |
| Kansas Electric Power Cooperative (Coffey Co.)  | RQ                            | 13,079         | 530,633               | 40.57                   |
| Kansas Electric Power Cooperative (United Elec. | RQ                            | 27,516         | 1,159,727             | 42.15                   |
| Missouri Public Service Company                 | RQ                            | 3,735          | 134,443               | 36.00                   |
| <b>Total</b>                                    |                               | <b>101,001</b> | <b>3,551,564</b>      |                         |
| <b>Weighted Average Cost per MWH</b>            |                               |                |                       | <b>35.16</b>            |



Source: Kansas City Power & Light Company's 1996 FERC Form 1.

## Service Areas of Utilities That Purchased Power from the Applicants

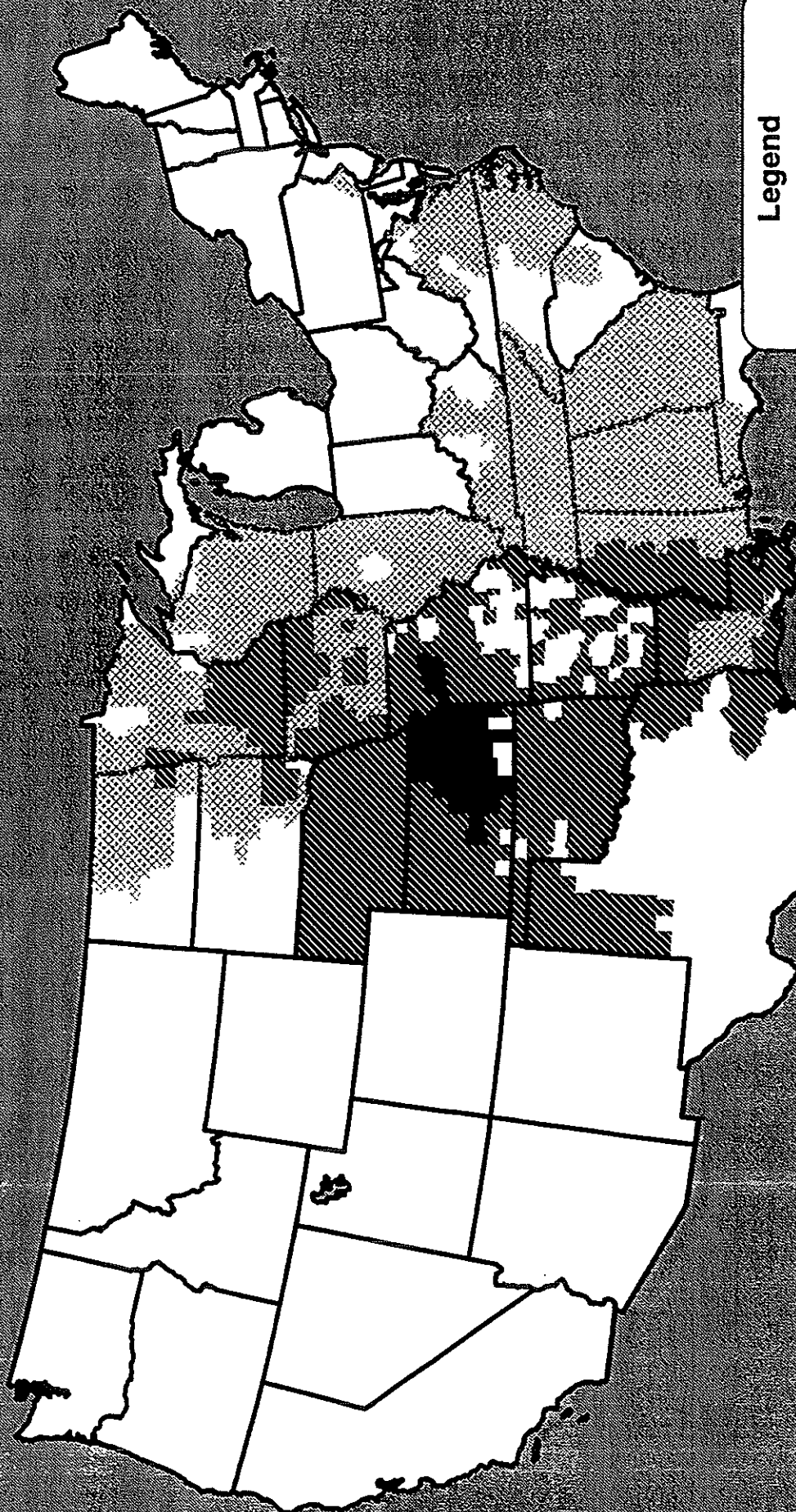
Exhibit (RMS-9)  
Page 1 of 2



### Legend

-  Customers of Applicants
-  Applicants

## Service Areas of Utilities That Sold Power to Customers of the Applicants



### Legend

Applicants



Utilities that Purchased Power From the Applicants



Utilities That Sold Power to Customers of the Applicants



## Entergy Services 1995 Non-Firm and Short-Term Firm Purchases

| Seller                                | Transaction<br>Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|---------------------------------------|---------------------|------------------|--------------------------|-------------------------|
| Agrielectric Power Partners, LTD      | OS                  | 77,366           | 2,740,289                | 35.42                   |
| Air Liquied                           | OS                  | 17,578           | 285,076                  | 16.22                   |
| Air Products Company                  | OS                  | 370              | 5,686                    | 15.37                   |
| American Petrofina                    | OS                  | 264              | 3,695                    | 14.00                   |
| Arkansas Electric Cooperative Corp.   | OS                  | 2,691,292        | 52,194,058               | 19.39                   |
| Associated Electric Cooperative, Inc. | OS                  | 1,477,914        | 24,925,322               | 16.87                   |
| B.P. Oil, Inc.                        | OS                  | 27,111           | 442,058                  | 16.31                   |
| BASF-Wyandotte Corporation            | OS                  | 2,522            | 40,832                   | 16.19                   |
| Cajun Electric Power Cooperative      | OS                  | 204,660          | 3,723,544                | 18.19                   |
| Calciner Industries                   | OS                  | 107,636          | 1,977,106                | 18.37                   |
| Central Louisiana Electric Co.        | OS                  | 36,241           | 1,442,792                | 39.81                   |
| Chevron                               | OS                  | 1,204            | 20,464                   | 17.00                   |
| City of Ruston                        | OS                  | 42               | 1,680                    | 40.00                   |
| Clark Refining                        | OS                  | 2,825            | 54,907                   | 19.44                   |
| Cogen Power, Inc.                     | OS                  | 1,874            | 30,051                   | 16.04                   |
| Dow Chemical Company                  | OS                  | 114,680          | 2,071,202                | 18.06                   |
| E.I. DuPont DeNemours Company         | OS                  | 1,626            | 26,763                   | 16.46                   |
| Empire District Electric Co.          | OS                  | 115,340          | 1,919,417                | 16.64                   |
| ENG Carbons                           | OS                  | 2,827            | 51,718                   | 18.29                   |
| Ergon Refining                        | OS                  | 2,010            | 37,758                   | 18.79                   |
| Exxon USA                             | OS                  | 9,910            | 168,774                  | 17.03                   |
| Formosa                               | OS                  | 1,865            | 31,272                   | 16.77                   |
| Freeport - McMoran                    | OS                  | 5,700            | 97,752                   | 17.15                   |
| Harding University                    | OS                  | 26               | 542                      | 20.85                   |
| International Paper Co.               | OS                  | 1,973            | 36,572                   | 18.54                   |
| James River Corporation               | OS                  | 2,797            | 51,546                   | 18.43                   |
| Kitchen Brothers Mfg., Co.            | OS                  | 644              | 11,999                   | 18.63                   |
| Lafayette                             | OS                  | 167              | 4,817                    | 28.84                   |
| Little Rock Wastewater                | OS                  | 258              | 5,190                    | 20.12                   |
| Louisiana Energy Power Assoc.         | OS                  | 111              | 4,816                    | 43.39                   |
| Mississippi Chemical Co.              | OS                  | 14,193           | 265,849                  | 18.73                   |
| Monochem, Inc.                        | OS                  | 4,747            | 82,735                   | 17.43                   |
| MUN                                   | OS                  | 17,277           | 291,298                  | 16.86                   |
| Municipal MEAM                        | OS                  | 13,839           | 233,697                  | 16.89                   |
| Murray Hydro                          | OS                  | 869,529          | 55,701,995               | 64.06                   |
| NISCO                                 | OS                  | 1,301            | 20,482                   | 15.74                   |
| Noram Energy Services, Inc.           | OS                  | 471              | 7,933                    | 16.84                   |
| Oklahoma Gas & Electric Company       | OS                  | 594,253          | 12,788,031               | 21.52                   |
| Phillips / Huber                      | OS                  | 5,455            | 89,290                   | 16.37                   |
| Potlatch Forest                       | OS                  | 48,720           | 902,272                  | 18.52                   |

| Seller                                    | Transaction Type | MWH Purchased     | Total Charges (\$) | Cost per MWH (\$) |
|---|------------------|-------------------|--------------------|-------------------|
| Sam Houston Electric Co-op.               | OS               | 127               | 10,796             | 85.01             |
| Sam Rayburn G & T, Inc.                   | OS               | 7,677             | 138,851            | 18.09             |
| Sam Rayburn Municipal Power Agency        | OS               | 492,131           | 10,612,879         | 21.57             |
| So. Cotton Oil                            | OS               | 871               | 12,617             | 14.49             |
| Southern Company Services, Inc.           | OS               | 141,486           | 4,806,827          | 33.97             |
| Southwest Power Administration            | OS               | 3,556             | 61,931             | 17.42             |
| Southwestern Electric Power Co.           | OS               | 446               | 8,768              | 19.66             |
| System Purchases From Others <sup>1</sup> | OS               | 2,317,217         | 41,624,547         | 17.96             |
| Tennessee Valley Authority                | OS               | 1,501,927         | 26,521,854         | 17.66             |
| Texaco (Star Enterprises)                 | OS               | 38,389            | 610,948            | 15.91             |
| Texaco Chemical Company                   | OS               | 52,185            | 840,768            | 16.11             |
| Toledo Bend                               | OS               | 90,786            | 1,484,661          | 16.35             |
| Union Electric Company                    | OS               | 1,519,596         | 22,900,555         | 15.07             |
| Vulcan Chemical Company                   | OS               | 31,540            | 531,977            | 16.87             |
| Western Systems Power Pool                | OS               | 143,536           | 3,651,782          | 25.44             |
| <b>Total</b>                              |                  | <b>12,820,088</b> | <b>276,611,041</b> |                   |
| <b>Weighted average cost per MWH</b>      |                  |                   |                    | <b>21.58</b>      |

Note:

<sup>1</sup> This entry represents Louisiana Power & Light's system purchases from others. It is reported as an aggregate figure on Louisiana Power & Light's 1995 FERC Form 1.

Sources:

Arkansas Power & Light Company's 1995 FERC Form 1.  
Entergy Power, Inc.'s 1995 FERC Form 1.  
Gulf States Utilities Company's 1995 FERC Form 1.  
Louisiana Power & Light Company's 1995 FERC Form 1.  
Mississippi Power & Light Company's 1995 FERC Form 1.  
New Orleans Public Service Inc.'s 1995 FERC Form 1.

## Entergy Services

### 1996 Non-Firm and Short-Term Firm Purchases

| Seller                                 | Transaction |               | Total           | Cost per    |
|--|-------------|---------------|-----------------|-------------|
|  | Type        | MWH Purchased | Charges<br>(\$) | MWH<br>(\$) |
| Agrielectric Power Partners, LTD       | OS          | 53,727        | 1,903,006       | 35.42       |
| Air Liquied                            | OS          | 12,673        | 263,737         | 20.81       |
| Air Products Company                   | OS          | 1,143         | 25,915          | 22.67       |
| American Petrofina                     | OS          | 202           | 3,957           | 19.59       |
| Arkansas Electric Cooperative Corp.    | OS          | 1,911,313     | 38,110,121      | 19.94       |
| Associated Electric Cooperative, Inc.  | OS          | 3,465,029     | 60,837,461      | 17.56       |
| B.P. Oil, Inc.                         | OS          | 36,134        | 722,461         | 19.99       |
| BASF-Wyandotte Corporation             | OS          | 3,579         | 94,857          | 26.50       |
| Cajun Electric Power Cooperative       | OS          | 454,929       | 8,747,545       | 19.23       |
| Calciner Industries                    | OS          | 117,066       | 2,224,726       | 19.00       |
| Cargill                                | OS          | 3,812         | 69,425          | 18.21       |
| Central and South West Services        | OS          | 7,685         | 225,627         | 29.36       |
| Central Louisiana Electric Company     | OS          | 234,594       | 3,405,387       | 14.52       |
| City of Jonesboro                      | OS          | 15,135        | 266,925         | 17.64       |
| Clark Refining                         | OS          | 4,959         | 99,850          | 20.14       |
| CNG Power Marketing                    | OS          | 1             | 13,536          | 13536.00    |
| Coastal Electric Service Company       | OS          | 1,200         | 28,200          | 23.50       |
| Cogen Power, Inc.                      | OS          | 1,859         | 36,226          | 19.49       |
| Crown Paper                            | OS          | 1,842         | 34,367          | 18.66       |
| Dow Chemical Company                   | OS          | 88,877        | 1,931,636       | 21.73       |
| E.I. DuPont DeNemours Company          | OS          | 236           | 10,923          | 46.28       |
| Electric Clearinghouse, Inc.           | OS          | 8,373         | 209,134         | 24.98       |
| Empire District Electric Company       | OS          | 238,763       | 4,213,319       | 17.65       |
| ENG Carbons                            | OS          | 11,439        | 209,510         | 18.32       |
| Ergon Refining Inc.                    | OS          | 1,196         | 22,404          | 18.73       |
| Exxon USA                              | OS          | 1,583         | 34,564          | 21.83       |
| Formosa                                | OS          | 10,772        | 190,038         | 17.64       |
| Harding University                     | OS          | 3             | 61              | 20.33       |
| Huntsman                               | OS          | 10,822        | 190,067         | 17.56       |
| IMC/Agrico                             | OS          | 11,425        | 211,186         | 18.48       |
| Intercoastal                           | OS          | 2,600         | 79,040          | 30.40       |
| International Paper Company            | OS          | 5,797         | 107,131         | 18.48       |
| James River Corporation                | OS          | 2,951         | 64,352          | 21.81       |
| Kitchen Brothers Manufacturing Company | OS          | 8             | 156             | 19.50       |
| Koch Power Services, Inc.              | OS          | 1             | 15,450          | 15450.00    |
| Koppers Industries, Inc.               | OS          | 1             | 15              | 15.00       |
| Lafayette                              | OS          | 7,505         | 201,903         | 26.90       |
| LG&E Power Marketing                   | OS          | 18,526        | 494,929         | 26.72       |
| Little Rock Wastewater                 | OS          | 137           | 2,694           | 19.66       |
| Louis Dreyfus Electric Power, Inc.     | OS          | 76,617        | 3,244,043       | 42.34       |
| Louisiana Energy Power Association     | OS          | 317           | 11,419          | 36.02       |
| Mississippi Chemical Company           | OS          | 4,834         | 89,587          | 18.53       |
| Monochem                               | OS          | 7,986         | 175,804         | 22.01       |
| MUN                                    | OS          | 347,554       | 6,514,304       | 18.74       |

| Seller                               | Transaction<br>Type | MWH Purchased     | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|--------------------------------------|---------------------|-------------------|--------------------------|-------------------------|
| Murray Hydro                         | OS                  | 882,003           | 56,277,910               | 63.81                   |
| Nelson Industrial Steam Company      | OS                  | 1,467,799         | 61,969,603               | 42.22                   |
| NISCO                                | OS                  | 759               | 144,627                  | 190.55                  |
| Oklahoma Gas & Electric Company      | OS                  | 595,640           | 12,408,843               | 20.83                   |
| PanEnergy Gas Services               | OS                  | 2                 | 26                       | 13.00                   |
| Potlatch Forest                      | OS                  | 39,961            | 724,900                  | 18.14                   |
| Sam Rayburn G & T, Inc.              | OS                  | 14,352            | 163,331                  | 11.38                   |
| Sam Rayburn Municipal Power Agency   | OS                  | 304,154           | 7,144,208                | 23.49                   |
| Southern Company Services, Inc.      | OS                  | 477,810           | 13,895,648               | 29.08                   |
| Southern Mississippi Electric Power  | OS                  | 11,220            | 252,263                  | 22.48                   |
| Southwest Power Administration       | OS                  | 126,706           | 2,513,628                | 19.84                   |
| Southwestern Electric Power Company  | OS                  | 31,297            | 722,257                  | 23.08                   |
| Tennessee Valley Authority           | OS                  | 8,104,243         | 166,417,336              | 20.53                   |
| Texaco (Star Enterprises)            | OS                  | 19,484            | 427,639                  | 21.95                   |
| Texaco Chemical Company              | OS                  | 19,743            | 383,467                  | 19.42                   |
| Toledo Blend                         | OS                  | 3,665             | 693,309                  | 189.17                  |
| Union Electric Company               | OS                  | 2,760,883         | 46,514,300               | 16.85                   |
| Valero Power Services Company        | OS                  | 4,800             | 108,225                  | 22.55                   |
| Vulcan Chemical Company              | OS                  | 23,418            | 446,527                  | 19.07                   |
| Western Power Services               | OS                  | 800               | 15,200                   | 19.00                   |
| Western Resources                    | OS                  | 34,675            | 436,495                  | 12.59                   |
| Western Systems Power Pool           | OS                  | 336,716           | 10,472,217               | 31.10                   |
| <b>Total</b>                         |                     | <b>22,445,335</b> | <b>517,468,957</b>       |                         |
| <b>Weighted Average Cost per MWH</b> |                     |                   |                          | <b>23.05</b>            |

Sources: Entergy Power, Inc.'s 1996 FERC Form 1; Entergy Gulf States, Inc.'s 1996 FERC Form 1; Entergy Mississippi, Inc.'s 1996 FERC Form 1; Entergy Louisiana, Inc.'s 1996 FERC Form 1; Entergy Arkansas, Inc.'s 1996 FERC Form 1; Entergy New Orleans, Inc.'s 1996 FERC Form 1.



**Central and South West Corporation (SPP)**  
**1995 Non-Firm and Short-Term Firm Purchases**

| Seller  | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|------------------|-----------------------|-------------------------|
| Associated Electric Cooperative               | OS                            | 4,255            | 81,922                | 19.25                   |
| Caddo Electric Cooperative                    | OS                            | 38               | 3,270                 | 86.05                   |
| Cajun Electric Cooperative                    | OS                            | 5,717            | 115,242               | 20.16                   |
| Central Louisiana Electric Company            | OS                            | 197              | 4,399                 | 22.33                   |
| Central Power & Light                         | OS                            | 4,200            | 122,572               | 29.18                   |
| Choctaw Electric Cooperative                  | OS                            | 49               | 3,874                 | 79.06                   |
| City of Lafayette                             | OS                            | 30               | 2,250                 | 75.00                   |
| City Utilities of Springfield                 | OS                            | 600              | 19,920                | 33.20                   |
| Empire District Electric Company              | OS                            | 61               | 1,538                 | 25.21                   |
| Entergy Services, Inc.                        | OS                            | 8,925            | 201,500               | 22.58                   |
| Grand River Dam Authority                     | OS                            | 8,058            | 133,179               | 16.53                   |
| Kansas City Power & Light                     | OS                            | 300              | 5,280                 | 17.60                   |
| Kansas Gas and Electric - (Western Resources) | OS                            | 11,828           | 187,853               | 15.88                   |
| KOCH Power Marketing                          | OS                            | 990              | 15,560                | 15.72                   |
| Louis Dreyfus Power Marketing                 | OS                            | 960              | 15,360                | 16.00                   |
| Mid-Continent Power Company, Inc.             | OS                            | 356,347          | 11,893,411            | 33.38                   |
| Noram   | OS                            | 300              | 5,880                 | 19.60                   |
| Northeastern Electric Cooperative             | OS                            | 211              | 15,121                | 71.66                   |
| Odgen Martin Systems                          | OS                            | 3,032            | 43,440                | 14.33                   |
| Oklahoma Electric Cooperative                 | OS                            | 19               | 2,221                 | 116.89                  |
| Oklahoma Gas and Electric Company             | OS                            | 6,679            | 165,856               | 24.83                   |
| Oklahoma Municipal Power Authority            | OS                            | 19,723           | 325,888               | 16.52                   |
| Public Service Company of New Mexico          | OS                            | 13,860           | 152,287               | 10.99                   |
| Snider Industries                             | OS                            | 5,332            | 94,408                | 17.71                   |
| Southwestern Public Service Company           | OS                            | 85,628           | 1,455,578             | 17.00                   |
| Union Electric Company                        | OS                            | 18,240           | 294,966               | 16.17                   |
| Verdigris Valley Cooperative                  | OS                            | 8                | 863                   | 107.88                  |
| West Texas Utilities Company                  | OS                            | 47               | 3,744                 | 79.66                   |
| Western Farmers Electric Cooperative          | OS                            | 16,373           | 239,019               | 14.60                   |
| Weyerhaeuser Company                          | OS                            | 11               | 194                   | 17.64                   |
| <b>Total</b>                                  |                               | <b>572,018</b>   | <b>15,606,595</b>     |                         |
| <b>Weighted Average Cost per MWH</b>          |                               |                  |                       | <b>27.28</b>            |

Sources: Public Service Company of Oklahoma's 1995 FERC Form 1.  
Southwestern Electric Power Company's 1995 FERC Form 1.

**Central and South West Corporation (SPP)**  
**1996 Non-Firm and Short-Term Firm Purchases**

| Seller  | Transaction Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|---|------------------|------------------|--------------------------|-------------------------|
| Associated Electric Cooperative                     | OS               | 68,131           | 557,555                  | 8.18                    |
| Associated Electric Cooperative                     | OS (1)           | 4,324            | 63,342                   | 14.65                   |
| Associated Electric Cooperative                     | OS (1)           | 186,951          | 3,220,183                | 17.22                   |
| Associated Electric Cooperative                     | OS               | 195,298          | 3,389,073                | 17.35                   |
| Associated Electric Cooperative                     | OS (3)           | 21,238           | 372,789                  | 17.55                   |
| Cajun Electric Power Cooperative, Inc.              | OS               | 55,133           | 1,153,949                | 20.93                   |
| Cajun Electric Power Cooperative, Inc.              | OS               | 12,612           | 309,208                  | 24.52                   |
| Cajun Electric Power Cooperative, Inc.              | OS               | 309,697          | 12,323,993               | 39.79                   |
| Central Louisiana Electric Co. WSPP                 | OS               | 5,914            | 169,475                  | 28.66                   |
| Central Louisiana Electric Company                  | OS               | 2,750            | 77,025                   | 28.01                   |
| Central Louisiana Electric Company                  | OS               | 150              | 4,838                    | 32.25                   |
| Central Power and Light Company                     | OS (8)           | 16,108           | 464,603                  | 28.84                   |
| Choctaw Electric Cooperative                        | OS (2)           | 121              | 8,294                    | 68.55                   |
| Citizens Lehman Power Sales                         | OS               | 928              | 22,736                   | 24.50                   |
| City of Lafayette                                   | OS               | 39               | 2,878                    | 73.79                   |
| City of Lafayette, Louisiana                        | OS               | 965              | 23,378                   | 24.23                   |
| City Utilities of Springfield                       | OS               | 1,190            | 13,440                   | 11.29                   |
| City Utilities of Springfield                       | OS               | 2,029            | 61,412                   | 30.27                   |
| Coastal Electric Services                           | OS               | 7,976            | 172,728                  | 21.66                   |
| Coral Power, L.L.C.                                 | OS               | 2,000            | 38,000                   | 19.00                   |
| Coral Power, L.L.C.                                 | OS (3)           | 400              | 10,400                   | 26.00                   |
| Delhi Energy Services, Inc.                         | OS (3)           | 5,250            | 161,775                  | 30.81                   |
| Electric Clearing House                             | OS               | 30,450           | 922,171                  | 30.28                   |
| Electric Clearinghouse                              | OS (3)           | 5,600            | 150,800                  | 26.93                   |
| Electric Clearinghouse                              | OS (3)           | 12,704           | 434,758                  | 34.22                   |
| Electric Clearinghouse Inc.                         | OS (3)           | 3,335            | 94,121                   | 28.22                   |
| Empire District Electric                            | OS               | 200              | 3,050                    | 15.25                   |
| Empire District Electric                            | OS (1)           | 183              | 5,179                    | 28.30                   |
| Empire District Electric Company                    | OS (1)           | 2,435            | 56,758                   | 23.31                   |
| Empire District Electric Company                    | OS               | 54               | 1,445                    | 26.76                   |
| ENRON Power Marketing, Inc.                         | OS               | 11,090           | 184,432                  | 16.63                   |
| ENRON Power Marketing, Inc.                         | OS (3)           | 13,507           | 283,887                  | 21.02                   |
| Entergy Services                                    | OS               | 53,984           | 88,663                   | 1.64                    |
| Entergy Services                                    | OS               | 220,119          | 3,173,404                | 14.42                   |
| Entergy Services WSPP                               | OS               | 38,473           | 628,715                  | 16.34                   |
| Federal Energy Sales                                | OS (3)           | 10,274           | 131,945                  | 12.84                   |
| Grand River Dam Authority                           | OS (3)           | 4,238            | 68,675                   | 16.20                   |
| Grand River Dam Authority                           | OS               | 9,913            | 165,905                  | 16.74                   |
| Grand River Dam Authority                           | OS (1)           | 7,143            | 140,516                  | 19.67                   |
| Grand River Dam Authority                           | OS               | 123              | 3,287                    | 26.72                   |
| Grand River Dam Authority                           | OS (1)           | 104              | 2,939                    | 28.26                   |
| Grand River Dam Authority                           | OS               | 400              | 11,600                   | 29.00                   |
| Grand River Dam Authority                           | OS               | 300              | 24,250                   | 80.83                   |
| InterCoast Power Marketing                          | OS (3)           | 17,875           | 288,181                  | 16.12                   |
| Kansas City Power and Light                         | OS (3)           | 1,825            | 27,375                   | 15.00                   |
| Kansas Gas and Electric Company (Western Resources) | OS (3)           | 3,265            | 46,874                   | 14.36                   |
| Kansas Gas and Electric Company (Western Resources) | OS (1)           | 141,284          | 2,279,001                | 16.13                   |
| Kansas Gas and Electric Company (Western Resources) | OS (3)           | 40,314           | 779,947                  | 19.35                   |
| Kansas Gas and Electric Company (Western Resources) | OS (1)           | 3,948            | 104,254                  | 26.41                   |
| Kansas Power and Light (Western Resources)          | OS (1)           | 100              | 2,339                    | 23.39                   |
| KOCH Power Marketing                                | OS (3)           | 2,500            | 62,100                   | 24.84                   |
| LG&E Power Marketing                                | OS (3)           | 188,960          | 3,124,415                | 16.53                   |
| LG&E Power Marketing                                | OS (3)           | 136,800          | 2,346,495                | 17.15                   |
| LG&E Power Marketing                                | OS               | 28,305           | 509,432                  | 18.00                   |
| Louis Dreyfus Power Marketing                       | OS (3)           | 19,136           | 363,584                  | 19.00                   |
| Louis Dreyfus Power Marketing                       | OS (3)           | 1,296            | 41,472                   | 32.00                   |
| Mid-Continent Power Company, Inc.                   | OS (4)           | 343,188          | 10,997,532               | 32.04                   |
| Noram Energy Service                                | OS               | 750              | 25,425                   | 33.90                   |
| Noram Energy Service                                | OS               | 800              | 37,800                   | 47.25                   |

| Seller                                  | Transaction Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|---|------------------|------------------|--------------------------|-------------------------|
| Noram Energy Services, Inc.             | OS (3)           | 1,600            | 77,776                   | 48.61                   |
| Northeastern Electric Cooperative       | OS (2)           | 241              | 21,629                   | 89.75                   |
| Oklahoma Gas and Electric Company       | OS (1)           | 1,725            | 33,941                   | 19.68                   |
| Oklahoma Gas and Electric Company       | OS               | 1,875            | 38,900                   | 20.75                   |
| Oklahoma Gas and Electric Company       | OS (3)           | 12,983           | 308,711                  | 23.78                   |
| Oklahoma Gas and Electric Company       | OS (1)           | 438              | 11,942                   | 27.26                   |
| Oklahoma Gas and Electric Company       | OS (3)           | 250              | 7,000                    | 28.00                   |
| Oklahoma Gas and Electric Company       | OS               | 1,725            | 48,300                   | 28.00                   |
| Oklahoma Gas and Electric Company       | OS               | 299              | 9,228                    | 30.86                   |
| Oklahoma Municipal Power Authority      | OS (6)           | 21,023           | 452,189                  | 21.51                   |
| Pacificorp                              | OS (3)           | 300              | 3,900                    | 13.00                   |
| Pan Energy Trading & Marketing Services | OS (3)           | 975              | 21,488                   | 22.04                   |
| PanEnergy Power Services                | OS               | 50               | 1,150                    | 23.00                   |
| Public Service Company of New Mexico    | OS (3)           | 20,445           | 426,534                  | 20.86                   |
| Snider Industries                       | OS               | 4,021            | 106,637                  | 26.52                   |
| SONAT Power Marketing                   | OS               | 8,993            | 191,733                  | 21.32                   |
| SONAT Power Marketing                   | OS               | 4,000            | 103,000                  | 25.75                   |
| South Western Public Service            | OS               | 60               | 131                      | 2.18                    |
| Southwestern Public Service Company     | OS (3)           | 49,009           | 957,209                  | 19.53                   |
| Southwestern Public Service Company     | OS (1)           | 7,900            | 168,541                  | 21.33                   |
| Southwestern Public Service Company     | OS (1)           | 2,300            | 53,044                   | 23.06                   |
| Southwestern Public Service Company     | OS (3)           | 6,047            | 215,786                  | 35.69                   |
| Union Electric Company                  | OS (1)           | 340,494          | 5,742,996                | 16.87                   |
| Union Electric Company                  | OS (1)           | 4,250            | 81,281                   | 19.13                   |
| Valero Power Service Company            | OS               | 11,425           | 260,340                  | 22.79                   |
| Valero Power Services Company           | OS (3)           | 29,418           | 642,576                  | 21.84                   |
| Vitol Gas & Electric                    | OS               | 1,536            | 33,792                   | 22.00                   |
| Vitol Gas and Electric                  | OS (3)           | 800              | 16,600                   | 20.75                   |
| West Texas Utilities                    | OS (7)           | 81               | 4,860                    | 76.39                   |
| Western Farmers Electric Coop           | OS (1)           | 9,605            | 164,723                  | 17.15                   |
| Western Farmers Electric Coop           | OS (3)           | 33,251           | 601,433                  | 18.09                   |
| Western Farmers Electric Coop           | OS (1)           | 92               | 2,247                    | 24.42                   |
| Western Farmers Electric Coop           | OS (3)           | 350              | 12,600                   | 36.00                   |
| Western Gas Resources                   | OS               | 960              | 20,160                   | 21.00                   |
| Weyerhaeuser Company                    | OS (5)           | 11               | 194                      | 17.64                   |
| <b>Total</b>                            |                  | <b>2,832,702</b> | <b>61,076,191</b>        |                         |
| <b>Weighted Average Cost per MWH</b>    |                  |                  |                          | <b>21.56</b>            |

Notes:

- 1 Replacement Energy and Emergency Energy.
- 2 Service for Company Equipment & Customers purchased from other suppliers & Reimbursement for prior years.
- 3 Transactions through Membership in Western System Power Pool.
- 4 Assured Delivery energy, Operating Reserves Energy and Regulation Energy.
- 5 Dump Power.
- 6 Regulation Energy Purchase and Delivery Point Load Resources Exchange.
- 7 Substation Service.
- 8 Subsidiary of Central and South West Corporation.

Sources: Public Service Company of Oklahoma's 1996 FERC Form 1; Southwestern Electric Power Company's 1996 FERC Form 1.

## Empire District Electric Company 1995 Non-Firm and Short-Term Firm Purchases

| Seller                                | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Associated Electric Cooperative       | OS (b)                        | 2,100            | 48,705                | 23.19                   |
| Associated Electric Cooperative       | OS (m)                        | 255,655          | 7,452,774             | 29.15                   |
| Associated Electric Cooperative       | OS (m)                        | 432,818          | 12,772,991            | 29.51                   |
| Associated Electric Cooperative       | OS (a)                        | 41               | 1,899                 | 46.32                   |
| Central & Southwest (SPP-PSO)         | OS (e)                        | 245              | 4,795                 | 19.57                   |
| Central & Southwest (SPP-SWEPCO)      | OS (e)                        | 3,735            | 76,998                | 20.62                   |
| City of Coffeyville, KS               | OS (j)                        | 3,247            | 16,884                | 5.20                    |
| City of Coffeyville, KS               | OS (i)                        | 2,280            | 65,208                | 28.60                   |
| City of Higginsville, MO              | OS (j)                        | 5,206            | 27,071                | 5.20                    |
| City of Higginsville, MO              | OS (i)                        | 3,600            | 102,960               | 28.60                   |
| City Utilities of Springfield         | OS (b)                        | 11,733           | 411,478               | 35.07                   |
| Coastal                               | OS (e)                        | 50               | 4,313                 | 86.26                   |
| CPEX                                  | OS <sup>2</sup>               | 1,985            | 34,259                | 17.26                   |
| Electric Clearinghouse                | OS (e)                        | 550              | 8,937                 | 16.25                   |
| Enron                                 | OS (e)                        | 49,620           | 760,070               | 15.32                   |
| Entergy                               | OS (b)                        | 9,595            | 265,541               | 27.67                   |
| Entergy                               | OS (a)                        | 362              | 12,265                | 33.88                   |
| Grand River Dam Authority             | OS (b)                        | 47,692           | 804,903               | 16.88                   |
| Grand River Dam Authority             | OS (a)                        | 29               | 793                   | 27.34                   |
| Kansas City Board of Public Utilities | OS (j)                        | 80,129           | 416,671               | 5.20                    |
| Kansas City Board of Public Utilities | OS (i)                        | 46,285           | 1,324,633             | 28.62                   |
| Kansas City Power & Light             | OS (d)                        | 119,241          | 1,617,540             | 13.57                   |
| Kansas City Power & Light             | OS (g)                        | 134,610          | 1,883,885             | 14.00                   |
| Kansas City Power & Light Company     | OS (i)                        | 36               | 2,038                 | 56.61                   |
| KAW Valley Electric Cooperative       | OS (j)                        | 1,928            | 10,026                | 5.20                    |
| KAW Valley Electric Cooperative       | OS (i)                        | 1,190            | 34,286                | 28.81                   |
| KS Municipal Energy Agency (KCP&L)    | OS (j)                        | 2,045            | 10,634                | 5.20                    |
| KS Municipal Energy Agency (KCP&L)    | OS (i)                        | 2,400            | 68,640                | 28.60                   |
| KS Municipal Energy Agency (WR)       | OS (j)                        | 18,109           | 94,167                | 5.20                    |
| KS Municipal Energy Agency (WR)       | OS (i)                        | 11,040           | 315,744               | 28.60                   |
| Louis Dreyfuss                        | OS (e)                        | 22,760           | 395,400               | 17.37                   |
| Louisville G&E Power Marketing        | OS (e)                        | 340              | 11,300                | 33.24                   |
| Public Service Co. of OK (C&SW)       | OS (a)                        | 37               | 851                   | 23.00                   |
| Public Service Co. of OK (C&SW)       | OS (m)                        | 16,055           | 823,036               | 51.26                   |
| Public Service Co. of OK (C&SW)       | OS (m)                        | 6,574            | 715,151               | 108.78                  |
| Southwest Electric Power Co. (C&SW)   | OS (b)                        | 21,306           | 406,665               | 19.09                   |
| Southwest Electric Power Co. (C&SW)   | OS (a)                        | 91               | 1,887                 | 20.74                   |
| Southwest Power Administration        | OS (k)                        | 2,820            | 14,664                | 5.20                    |
| Western Resources (KG&E)              | OS (d)                        | 22,545           | 366,049               | 16.24                   |

| Seller                               | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Western Resources (KG&E)             | OS (e)                        | 60,948           | 1,047,755             | 17.19                   |
| Western Resources (KG&E)             | OS (b)                        | 3,565            | 75,469                | 21.17                   |
| Western Resources (KG&E)             | OS (m)                        | 128,613          | 3,329,323             | 25.89                   |
| Western Resources (KG&E)             | OS (l)                        | 65               | 1,738                 | 26.74                   |
| Western Resources (KG&E)             | OS (d)                        | 7,541            | 307,605               | 40.79                   |
| <b>Total</b>                         |                               | <b>1,540,816</b> | <b>36,148,001</b>     |                         |
| <b>Weighted average cost per MWH</b> |                               |                  |                       | <b>23.46</b>            |

Notes:

<sup>1</sup> Nature of Other Services:

- (a) Emergency Energy
- (b) Replacement Energy
- (c) Capacity & Energy relating to a specific purchase
- (d) System Energy
- (e) Economy Energy
- (f) Exchange Energy
- (g) Term Energy
- (h) Extended Energy
- (i) Peaking Capacity
- (j) Supplemental Energy
- (k) Excess Energy
- (l) Operating Reserve
- (m) System Participation
- (n) General Purpose

<sup>2</sup> CPEX provides a "computerized bulletin board" which the respondent utilizes to schedule power with other members of CPEX, and CPEX charges fees to use their services. Empire District Electric does not actually buy and sell directly to CPEX.

Source: Empire District Electric Company's 1995 FERC Form 1.

## Empire District Electric Company 1996 Non-Firm and Short-Term Firm Purchases

| Seller                                    | Transaction<br>Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|---|---------------------|------------------|--------------------------|-------------------------|
| Associated Electric Cooperative           | OS                  | 5,785            | 143,963                  | 24.89                   |
| Associated Electric Cooperative           | OS                  | 282,388          | 8,743,413                | 30.96                   |
| Associated Electric Cooperative           | OS                  | 64               | 2,121                    | 33.14                   |
| Associated Electric Cooperative           | OS                  | 269,630          | 9,477,384                | 35.15                   |
| City of Coffeyville, KS                   | OS                  | 3,218            | 16,734                   | 5.20                    |
| City of Coffeyville, KS                   | OS                  | 2,280            | 64,752                   | 28.40                   |
| City of Higginsville, MO                  | OS                  | 3,274            | 17,025                   | 5.20                    |
| City of Higginsville, MO                  | OS                  | 3,600            | 102,240                  | 28.40                   |
| City Utilities of Springfield             | OS                  | 500              | 21,520                   | 43.04                   |
| Coastal                                   | OS                  | 800              | 20,000                   | 25.00                   |
| Continental Power Exchange                | OS                  | 25,705           | 463,115                  | 18.02                   |
| DELHI                                     | OS                  | 700              | 17,500                   | 25.00                   |
| EASTEX                                    | OS                  | 800              | 13,400                   | 16.75                   |
| Enron Power Marketing, Inc.               | OS                  | 215,838          | 3,510,377                | 16.26                   |
| Entergy Power, Inc.                       | OS                  | 8,043            | 212,610                  | 26.43                   |
| Entergy Power, Inc.                       | OS                  | 220              | 6,260                    | 28.45                   |
| Entergy Power, Inc.                       | OS                  | 363              | 11,194                   | 30.84                   |
| Entergy Power, Inc.                       | OS                  | 12,383           | 299,886                  | 24.22                   |
| Grand River Dam Authority                 | OS                  | 15,475           | 294,755                  | 19.05                   |
| Grand River Dam Authority                 | OS                  | 40               | 1,192                    | 29.80                   |
| Kansas City Board of Public Utilities     | OS                  | 66,435           | 345,462                  | 5.20                    |
| Kansas City Board of Public Utilities     | OS                  | 46,450           | 1,315,904                | 28.33                   |
| Kansas City Power & Light Company         | OS                  | 21,515           | 332,736                  | 15.47                   |
| Kansas City Power & Light Company         | OS                  | 501,885          | 8,265,917                | 16.47                   |
| Kansas City Power & Light Company         | OS                  | 26               | 913                      | 35.12                   |
| Kansas Municipal Energy Agency (KCP&L)    | OS                  | 1,921            | 9,989                    | 5.20                    |
| Kansas Municipal Energy Agency (KCP&L)    | OS                  | 2,400            | 68,160                   | 28.40                   |
| Kansas Municipal Energy Agency (KG&E)     | OS                  | 16,585           | 86,242                   | 5.20                    |
| Kansas Municipal Energy Agency (KG&E)     | OS                  | 11,040           | 313,536                  | 28.40                   |
| KAW Valley Electric Cooperative           | OS                  | 1,697            | 8,824                    | 5.20                    |
| KAW Valley Electric Cooperative           | OS                  | 1,110            | 33,792                   | 30.44                   |
| KOCH                                      | OS                  | 150              | 3,006                    | 20.04                   |
| Louis Dreyfus Electric Power, Inc.        | OS                  | 59,424           | 1,117,494                | 18.81                   |
| Louisville Gas & Electric                 | OS                  | 2,760            | 38,720                   | 14.03                   |
| Missouri Public Service Company           | OS                  | 71               | 1,206                    | 16.99                   |
| Noram Energy Services, Inc.               | OS                  | 1,045            | 32,917                   | 31.50                   |
| Oklahoma Gas & Electric                   | OS                  | 60               | 1,590                    | 26.50                   |
| PANENERGY                                 | OS                  | 1,215            | 26,505                   | 21.81                   |
| Public Service Company of Oklahoma (C&SW) | OS                  | 4,065            | 100,609                  | 24.75                   |
| Public Service Company of Oklahoma (C&SW) | OS                  | 1,405            | 40,905                   | 29.11                   |
| Public Service Company of Oklahoma (C&SW) | OS                  | 113              | 4,075                    | 36.06                   |

| Seller                                    | Transaction<br>Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|---|---------------------|------------------|--------------------------|-------------------------|
| Public Service Company of Oklahoma (C&SW) | OS                  | 10,390           | 573,428                  | 55.19                   |
| SONAT                                     | OS                  | 800              | 20,800                   | 26.00                   |
| Southwest Electric Power Company (C&SW)   | OS                  | 7,948            | 192,000                  | 24.16                   |
| Southwest Electric Power Company (C&SW)   | OS                  | 7,213            | 230,247                  | 31.92                   |
| Southwest Electric Power Company (C&SW)   | OS                  | 32               | 1,581                    | 49.41                   |
| Southwest Electric Power Company (C&SW)   | OS                  | 9,740            | 520,354                  | 53.42                   |
| Southwestern Public Service Company       | OS                  | 250              | 7,075                    | 28.30                   |
| Southwestern Public Service Company       | OS                  | 38,320           | 2,275,251                | 59.38                   |
| St. Joseph Light & Power                  | OS                  | 100              | 1,500                    | 15.00                   |
| VITOL                                     | OS                  | 100              | 950                      | 9.50                    |
| Western Resources (KG&E)                  | OS                  | 45               | 632                      | 14.04                   |
| Western Resources (KG&E)                  | OS                  | 52,103           | 985,121                  | 18.91                   |
| Western Resources (KG&E)                  | OS                  | 200              | 5,200                    | 26.00                   |
| Western Resources (KG&E)                  | OS                  | 233,445          | 6,319,089                | 27.07                   |
| Western Resources (KG&E)                  | OS                  | 50               | 1,394                    | 27.88                   |
| Western Resources (KG&E)                  | OS                  | 15,684           | 601,642                  | 38.36                   |
| <b>Total</b>                              |                     | <b>1,968,898</b> | <b>47,324,207</b>        |                         |
| <b>Weighted Average Cost per MWH</b>      |                     |                  |                          | <b>24.04</b>            |

Source: Empire District Electric Company's 1996 FERC Form 1.

# **MidAmerican Energy Company** **1995 Non-Firm and Short-Term Firm Purchases**

| Seller                                | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Ag Processing                         | OS                            | 1,942            | 116,552               | 60.02                   |
| Algona Municipal Utilities            | OS                            | 31,807           | 343,350               | 10.79                   |
| Ames Municipal Electric System        | OS                            | 92               | 3,998                 | 43.46                   |
| Associated Electric Coop, Inc.        | OS                            | 69,135           | 1,643,600             | 23.77                   |
| Atlantic                              | OS                            | 9,581            | 117,367               | 12.25                   |
| Basin Electric Power Coop             | OS                            | 38,643           | 860,776               | 22.28                   |
| Bertch Cabinet                        | OS                            | 65               | 3,893                 | 59.89                   |
| Cedar Falls Utilities                 | OS                            | 7,669            | 145,432               | 18.96                   |
| City of Davenport                     | OS                            | 3,013            | 175,704               | 58.32                   |
| Commonwealth Edison                   | OS                            | 134,362          | 2,472,192             | 18.40                   |
| Continental Power Exchange            | OS                            | 5,189            | 82,291                | 15.86                   |
| Cooperative Power Adm.                | OS                            | 118,245          | 1,483,344             | 12.54                   |
| Cooperative Power Association         | OS                            | 83,232           | 873,338               | 10.49                   |
| Corn Belt Power                       | OS                            | 145,532          | 1,725,805             | 11.86                   |
| Dairyland Power Cooperative           | OS                            | 1,547            | 36,760                | 23.76                   |
| Des Moines Metro Solid Waste          | OS                            | 39,500           | 2,376,265             | 60.16                   |
| ENEREX                                | OS                            | 657              | 6,936                 | 10.56                   |
| Harlan                                | OS                            | 11,889           | 151,585               | 12.75                   |
| Hutchinson Util Commission            | OS                            | 30               | 660                   | 22.00                   |
| IES Utilities, Inc.                   | OS                            | 1,323            | 20,811                | 15.73                   |
| Illinois Power Company                | OS                            | 27,192           | 776,184               | 28.54                   |
| Interstate Power Company              | OS                            | 177              | 6,161                 | 34.81                   |
| Iowa-Illinois Gas & Electric Company  | OS                            | 3,889            | 62,244                | 16.01                   |
| John Deere                            | OS                            | 514              | 4,470                 | 8.70                    |
| Kansas City Power & Light Company     | OS                            | 27,890           | 612,961               | 21.98                   |
| Lincoln Electric System               | OS                            | 8,198            | 88,415                | 10.78                   |
| Midwest Power Systems, Inc.           | OS                            | 1,365            | 14,822                | 10.86                   |
| Minnesota Power & Light Company       | OS                            | 40,046           | 709,119               | 17.71                   |
| Minnkota Power Coop, Inc.             | OS                            | 124,721          | 1,684,919             | 13.51                   |
| Missouri Basin Municipal Power Agency | OS                            | 61,186           | 751,995               | 12.29                   |
| Montana-Dakota Utilities Company      | OS                            | 8,424            | 94,562                | 14.72                   |
| Municipal Energy Agency of Nebraska   | OS                            | 515              | 6,725                 | 13.06                   |
| Muscatine Power and Water             | OS                            | 18,526           | 231,806               | 12.51                   |
| Nebraska Public Power District        | OS                            | 25,636           | 649,511               | 25.34                   |
| Northern States Power                 | OS                            | 15,164           | 251,992               | 16.62                   |
| Northwestern Public Services Company  | OS                            | 17,076           | 256,160               | 15.00                   |
| Omaha Public Power District           | OS                            | 15,733           | 278,756               | 17.72                   |
| Otter Tail Power Company              | OS                            | 115,262          | 1,696,131             | 14.72                   |
| Rochester Public Utilities            | OS                            | 13               | 478                   | 36.77                   |
| St. Joseph Light and Power            | OS                            | 1,442            | 28,015                | 19.43                   |
| Southern Minnesota Municipal Power    | OS                            | 16,428           | 233,909               | 14.24                   |
| Union Electric Company                | OS                            | 28,692           | 817,099               | 28.48                   |
| United Power Association              | OS                            | 13,200           | 143,518               | 10.87                   |
| Waverly Light and Power               | OS                            | 1,290            | 45,871                | 35.56                   |
| Western Area Power Association        | OS                            | 273,207          | 3,456,069             | 12.65                   |
| White Hydro                           | OS                            | 1,345            | 14,382                | 10.69                   |
| Wisconsin Public Power, Inc.          | OS                            | 47               | 18,526                | 394.17                  |
| <b>Total</b>                          |                               | <b>1,548,631</b> | <b>25,575,459</b>     |                         |
| <b>Weighted Average Cost per MWH</b>  |                               |                  |                       | <b>16.51</b>            |

Source: MidAmerican Energy Company's 1995 FERC Form 1.



# **MidAmerican Electric Company** **1996 Non-Firm and Short-Term Firm Purchases**

| <b>Seller</b> | <b>Statistical<br/>Classification</b> | <b>Megawatt Hours<br/>Purchased</b> | <b>Total Charge<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|---------------|---------------------------------------|-------------------------------------|------------------------------|----------------------------------|
| Supplier 11   | OS                                    | 23,537                              | 208,099                      | 8.84                             |
| Supplier 12   | SF                                    | 4,055                               | 152,652                      | 37.65                            |
| Supplier 13   | OS                                    | 128,155                             | 3,201,031                    | 24.98                            |
| Supplier 14   | OS                                    | 3,169,695                           | 100,447,064                  | 31.69                            |
| Supplier 15   | OS                                    | 60,965                              | 1,316,921                    | 21.60                            |
| Supplier 17   | OS                                    | 336                                 | 10,548                       | 31.39                            |
| Supplier 18   | OS                                    | 10,055                              | 362,413                      | 36.04                            |
| Supplier 19   | OS                                    | 11,281                              | 196,015                      | 17.38                            |
| Supplier 20   | OS                                    | 4,914                               | 143,998                      | 29.30                            |
| Supplier 21   | OS                                    | 15,942                              | 592,912                      | 37.19                            |
| Supplier 22   | OS                                    | 11,598                              | 386,603                      | 33.33                            |
| Supplier 23   | OS                                    | 6,664                               | 220,435                      | 33.08                            |
| Supplier 25   | OS                                    | 4,347                               | 72,424                       | 16.66                            |
| Supplier 26   | OS                                    | 4                                   | 126                          | 31.50                            |
| Supplier 27   | OS                                    | 800                                 | 18,800                       | 23.50                            |
| Supplier 28   | OS                                    | 430                                 | 7,142                        | 16.61                            |
| Supplier 29   | OS                                    | 59,068                              | 1,277,196                    | 21.62                            |
| Supplier 31   | OS                                    | 95                                  | 2,369                        | 24.94                            |
| Supplier 32   | OS                                    | 737                                 | 13,125                       | 17.81                            |
| Supplier 33   | OS                                    | 7,491                               | 122,718                      | 16.38                            |
| Supplier 34   | OS                                    | 16,046                              | 421,803                      | 26.29                            |
| Supplier 35   | OS                                    | 3,350                               | 54,556                       | 16.29                            |
| Supplier 37   | OS                                    | 23,142                              | 320,963                      | 13.87                            |
| Supplier 38   | OS                                    | 32,707                              | 392,117                      | 11.99                            |
| Supplier 4    | OS                                    | 62,770                              | 1,992,282                    | 31.74                            |
| Supplier 40   | OS                                    | 223,984                             | 2,828,297                    | 12.63                            |
| Supplier 41   | OS                                    | 188,696                             | 2,623,731                    | 13.90                            |
| Supplier 42   | OS                                    | 4,172                               | 69,509                       | 16.66                            |
| Supplier 43   | OS                                    | 7,499                               | 255,130                      | 34.02                            |
| Supplier 45   | OS                                    | 7,062                               | 103,850                      | 14.71                            |
| Supplier 46   | OS                                    | 13,396                              | 191,421                      | 14.29                            |
| Supplier 47   | SF                                    | 10,243                              | 1,252,618                    | 122.29                           |
| Supplier 48   | OS                                    | 15,115                              | 222,212                      | 14.70                            |
| Supplier 49   | OS                                    | 4,623                               | 173,943                      | 37.63                            |
| Supplier 5    | OS                                    | 144                                 | 346                          | 2.40                             |
| Supplier 50   | OS                                    | 3,326                               | 69,780                       | 20.98                            |
| Supplier 51   | OS                                    | 1,789                               | 26,518                       | 14.82                            |
| Supplier 52   | OS                                    | 10,747                              | 317,162                      | 29.51                            |
| Supplier 53   | OS                                    | 15,045                              | 365,617                      | 24.30                            |
| Supplier 54   | OS                                    | 63,987                              | 556,540                      | 8.70                             |
| Supplier 55   | OS                                    | 1,600                               | 43,640                       | 27.28                            |

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>Megawatt Hours<br/>Purchased</b> | <b>Total Charge<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|------------------------------|----------------------------------|
| Supplier 56                          | OS                                    | 189,832                             | 2,783,731                    | 14.66                            |
| Supplier 57                          | OS                                    | 1,217                               | 14,510                       | 11.92                            |
| Supplier 58                          | OS                                    | 271                                 | 4,562                        | 16.83                            |
| Supplier 59                          | OS                                    | 4,005                               | 83,615                       | 20.88                            |
| Supplier 6                           | OS                                    | 33,485                              | 320,772                      | 9.58                             |
| Supplier 60                          | OS                                    | 2,081                               | 32,062                       | 15.41                            |
| Supplier 7                           | OS                                    | 18,568                              | 193,440                      | 10.42                            |
| Supplier 8                           | OS                                    | 200                                 | 4,020                        | 20.10                            |
| <b>Total</b>                         |                                       | <b>4,479,271</b>                    | <b>124,471,338</b>           |                                  |
| <b>Weighted Average Cost per MWH</b> |                                       |                                     |                              | <b>27.79</b>                     |

Source: MidAmerican Energy Company's 1996 FERC Form 1.

**Midwest Energy, Inc.**  
**1995 Non-Firm and Short-Term Firm Purchases**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|
| Parallel Generation                  | OS                                    | 49                       | 1,316                         | 26.86                            |
| Sunflower Elec. Power Corp.          | OS                                    | 124,265                  | 5,101,540                     | 41.05                            |
| WestPlains Energy                    | SF                                    | 106,505                  | 2,079,248                     | 19.52                            |
| <b>Total</b>                         |                                       | <b>230,819</b>           | <b>7,182,104</b>              |                                  |
| <b>Weighted Average Cost per MWH</b> |                                       |                          |                               | <b>31.12</b>                     |

Source: Midwest Energy, Inc.'s 1995 FERC Form 1.

**Midwest Energy, Inc.**  
**1996 Non-Firm and Short-Term Firm Purchases**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>Megawatt Hours<br/>Purchased</b> | <b>Total Charge<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|------------------------------|----------------------------------|
| Parallel Generation                  | OS                                    | 20                                  | 387                          | 19.35                            |
| Sunflower Elec. Power Corp.          | OS                                    | 115,495                             | 5,118,012                    | 44.31                            |
| WestPlains Energy                    | SF                                    | 29,469                              | 613,166                      | 20.81                            |
| <b>Total</b>                         |                                       | <b>144,984</b>                      | <b>5,731,565</b>             |                                  |
| <b>Weighted Average Cost per MWH</b> |                                       |                                     |                              | <b>39.53</b>                     |

Source: Midwest Energy, Inc.'s 1996 FERC Form 1.

## Oklahoma Gas & Electric Company 1995 Non-Firm and Short-Term Firm Purchases

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|
| Arkansas Electric Cooperative Corp   | OS                                    | 3,950                    | 81,950                        | 20.75                            |
| Central and Southwest Services, Inc. | OS                                    | 8,159                    | 177,726                       | 21.78                            |
| Delhi Energy Services                | OS                                    | 400                      | 9,300                         | 23.25                            |
| Enron Power Marketing, Inc.          | OS                                    | 675                      | 14,700                        | 21.78                            |
| Entergy Services Inc.                | OS                                    | 41,240                   | 958,881                       | 23.25                            |
| Grand River Dam Authority            | OS                                    | 849                      | 14,225                        | 16.76                            |
| Koch Power Services, Inc.            | OS                                    | 1,395                    | 25,950                        | 18.60                            |
| LG&E Power Marketing Inc.            | OS                                    | 2,950                    | 71,925                        | 24.38                            |
| Louis Dreyfus Electric Power, Inc.   | OS                                    | 2,200                    | 32,498                        | 14.77                            |
| Noram Energy Services                | OS                                    | 700                      | 12,425                        | 17.75                            |
| Public Service Company of Oklahoma   | OS                                    | 1,078                    | 25,271                        | 23.44                            |
| Small Power Producers                | OS                                    | 2                        | 56                            | 28.00                            |
| Southwestern Electric Power Company  | OS                                    | 9                        | 175                           | 19.44                            |
| Southwestern Public Service Company  | OS                                    | 6,950                    | 148,875                       | 21.42                            |
| Western Farmers Electric Coop        | OS                                    | 150,029                  | 2,255,099                     | 15.03                            |
| Western Resources, Inc.              | OS                                    | 93,112                   | 1,423,543                     | 15.29                            |
| <b>Total</b>                         |                                       | <b>313,698</b>           | <b>5,252,599</b>              |                                  |
| <b>Weighted Average Cost per MWH</b> |                                       |                          |                               | <b>16.74</b>                     |

Source: Oklahoma Gas and Electric Company's 1995 FERC Form 1.

## Oklahoma Gas & Electric Company 1996 Non-Firm and Short-Term Firm Purchases

| Seller                                   | Transaction<br>Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) |
|--|---------------------|------------------|--------------------------|-------------------------|
| Aquila Power Co.                         | OS                  | 1,552            | 27,548                   | 17.75                   |
| Arkansas Electric Cooperative Corp       | OS                  | 27,365           | 555,062                  | 20.28                   |
| Central and Southwest Services, Inc.     | OS                  | 25,078           | 580,600                  | 23.15                   |
| Delhi Energy Services, Inc.              | OS                  | 220              | 4,836                    | 21.98                   |
| Eastex Power Marketing                   | OS                  | 776              | 10,088                   | 13.00                   |
| Electric Clearinghouse, Inc.             | OS                  | 5,175            | 162,300                  | 31.36                   |
| Enron Power Marketing, Inc.              | OS                  | 20,237           | 386,954                  | 19.12                   |
| Entergy Electric System                  | OS                  | 43,045           | 1,250,176                | 29.04                   |
| Entergy Power, Inc.                      | OS                  | 61,226           | 1,393,496                | 22.76                   |
| Grand River Dam Authority                | OS                  | 13,139           | 250,836                  | 19.09                   |
| Koch Power Services, Inc.                | OS                  | 2,625            | 50,550                   | 19.26                   |
| LG&E Power Marketing                     | OS                  | 103,804          | 1,722,243                | 16.59                   |
| Louis Dreyfus Electric Power, Inc.       | OS                  | 10,382           | 196,488                  | 18.93                   |
| NorAm Energy Services                    | OS                  | 150              | 3,585                    | 23.90                   |
| PanEnergy Power Services, Inc.           | OS                  | 7,028            | 192,954                  | 27.46                   |
| Public Service Company of Oklahoma (CSW) | OS                  | 1,055            | 73,849                   | 70.00                   |
| Sonat Power Marketing                    | OS                  | 450              | 7,287                    | 16.19                   |
| Southwestern Electric Power Co. (CSW)    | OS                  | 849              | 44,933                   | 52.92                   |
| Southwestern Public Service Company      | OS                  | 1,250            | 22,450                   | 17.96                   |
| Sparks Regional Medical Center           | OS                  | 5,914            | 171,494                  | 29.00                   |
| Valero Power Services Co.                | OS                  | 2,025            | 35,341                   | 17.45                   |
| Western Farmers Electric Cooperative     | OS                  | 76,053           | 1,335,932                | 17.57                   |
| Western Resources, Inc.                  | OS                  | 167,635          | 2,785,301                | 16.62                   |
| <b>Total</b>                             |                     | <b>577,033</b>   | <b>11,264,303</b>        |                         |
| <b>Weighted Average Cost per MWH</b>     |                     |                  |                          | <b>19.52</b>            |

Source: Oklahoma Gas & Electric's 1996 FERC Form 1.

# **St. Joseph Light & Power Company** **1995 Non-Firm and Short-Term Firm Purchases**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|
| Associated Electric Coop, Inc.       | OS                                    | 9,129                    | 221,356                       | 24.25                            |
| Interstate Power Company             | OS                                    | 105                      | 1,170                         | 11.14                            |
| Kansas City Power & Light Company    | OS                                    | 111,843                  | 1,806,467                     | 16.15                            |
| Koch Power                           | OS                                    | 30                       | 802                           | 26.73                            |
| Lincoln Electric Systems             | OS                                    | 2,240                    | 29,190                        | 13.03                            |
| MidAmerican Energy Company           | OS                                    | 94,961                   | 1,993,252                     | 20.99                            |
| Nebraska Public Power District       | OS                                    | 30,560                   | 448,845                       | 14.69                            |
| Northern States Power Company        | OS                                    | 8,027                    | 97,711                        | 12.17                            |
| Omaha Public Power District          | OS                                    | 330,048                  | 5,239,067                     | 15.87                            |
| Union Electric Company               | OS                                    | 21,541                   | 495,163                       | 22.99                            |
| <b>Total</b>                         |                                       | <b>608,484</b>           | <b>10,333,023</b>             |                                  |
| <b>Weighted Average Cost per MWH</b> |                                       |                          |                               | <b>16.98</b>                     |

Source: St. Joseph Light & Power Company's 1995 FERC Form 1.

## St. Joseph Light & Power Company 1996 Non-Firm and Short-Term Firm Purchases

| Seller                               | Statistical<br>Classification | Megawatt Hours<br>Purchased | Total Charge<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|-----------------------------|----------------------|-------------------------|
| Associated Electric Coop, Inc.       | OS                            | 11,220                      | 336,610              | 30.00                   |
| Delphi Energy Services               | OS                            | 600                         | 23,970               | 39.95                   |
| Enron Power Marketing                | OS                            | 7,095                       | 110,173              | 15.53                   |
| Industrial Energy App., Inc.         | OS                            | 600                         | 11,200               | 18.67                   |
| Intercoastal Energy Company          | OS                            | 7,336                       | 148,164              | 20.20                   |
| Interstate Power Company             | OS                            | 25                          | 455                  | 18.20                   |
| Kansas City Power & Light Company    | OS                            | 24,743                      | 435,165              | 17.59                   |
| Koch Power                           | OS                            | 713                         | 19,467               | 27.30                   |
| Lincoln Electric System              | OS                            | 18,216                      | 237,100              | 13.02                   |
| MidAmerican Energy Company           | OS                            | 360                         | 9,900                | 27.50                   |
| MidAmerican Energy Company           | OS                            | 78,918                      | 1,494,917            | 18.94                   |
| Missouri Public Service              | OS                            | 1,705                       | 63,350               | 37.16                   |
| Nebraska Public Power District       | OS                            | 95,926                      | 2,289,530            | 23.87                   |
| Noram Energy Services                | OS                            | 108                         | 5,223                | 48.36                   |
| Northern States Power Co.            | OS                            | 11,043                      | 190,409              | 17.24                   |
| Omaha Public Power District          | OS                            | 211,339                     | 3,732,561            | 17.66                   |
| Pacific Corporation                  | OS                            | 640                         | 18,048               | 28.20                   |
| Union Electric Co.                   | OS                            | 30,717                      | 718,277              | 23.38                   |
| Western Power Services, Inc.         | OS                            | 1,200                       | 14,550               | 12.13                   |
| <b>Total</b>                         |                               | <b>502,504</b>              | <b>9,859,069</b>     |                         |
| <b>Weighted Average Cost per MWH</b> |                               |                             |                      | <b>19.62</b>            |

Source: St. Joseph Light & Power Company's 1996 FERC Form 1.



## Union Electric Company 1995 Non-Firm and Short-Term Firm Purchases

| Seller                                  | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|------------------|-----------------------|-------------------------|
| Arkansas Power & Light Company          | OS                            | 1,396,320        | 36,568,522            | 26.19                   |
| Associated Electric Coop Inc.           | OS                            | 63,795           | 1,273,669             | 19.97                   |
| Browning-Ferris Gas Service             | OS                            | 99               | 1,627                 | 16.43                   |
| Carolina Power & Light                  | OS                            | 30,275           | 1,560,578             | 51.55                   |
| Central Illinois Public Service Company | OS                            | 156,467          | 4,001,979             | 25.58                   |
| Central Southwest                       | OS                            | 189,456          | 4,249,776             | 22.43                   |
| Electric Energy, Inc.                   | OS                            | 759,952          | 15,971,666            | 21.02                   |
| Energy Service Inc.                     | OS                            | 227,434          | 4,993,852             | 21.96                   |
| IES Utilities, Inc.                     | OS                            | 676,186          | 10,540,909            | 15.59                   |
| Illinois Power Company                  | OS                            | 330,543          | 7,409,959             | 22.42                   |
| Interstate Power Company                | OS                            | 2,810            | 76,975                | 27.39                   |
| Iowa-Illinois Gas & Electric Company    | OS                            | 342,043          | 5,699,650             | 16.66                   |
| Kansas City Power & Light Company       | OS                            | 1,729,771        | 27,531,222            | 15.92                   |
| Kentucky Utilities Company              | OS                            | 124,079          | 2,602,967             | 20.98                   |
| MidAmerican Energy Company              | OS                            | 1,338,848        | 22,101,999            | 16.51                   |
| Missouri Public Service Company         | OS                            | 14,864           | 274,796               | 18.49                   |
| Noram Energy Services                   | OS                            | 750              | 52,500                | 70.00                   |
| Northern States Power                   | OS                            | 525,051          | 9,034,587             | 17.21                   |
| Southwestern Power Administration       | OS                            | 1,900            | 9,880                 | 5.20                    |
| St. Joseph Light & Power Company        | OS                            | 50,386           | 684,331               | 13.58                   |
| Tennessee Valley Authority              | OS                            | 532,002          | 11,269,087            | 21.18                   |
| Waste Management                        | OS                            | 15,772           | 845,754               | 53.62                   |
| Western Resources                       | OS                            | 49,180           | 1,052,409             | 21.40                   |
| <b>Total</b>                            |                               | <b>8,557,983</b> | <b>167,808,694</b>    |                         |
| <b>Weighted Average Cost per MWH</b>    |                               |                  |                       | <b>19.61</b>            |

Source: Union Electric Company's 1995 FERC Form 1.

## Union Electric Company 1996 Non-Firm and Short-Term Firm Purchases

| Seller                                 | Statistical<br>Classification | Megawatt Hours<br>Purchased | Total Charge<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--|-------------------------------|-----------------------------|----------------------|-------------------------|
| Aqualon Incorporated                   | OS                            | 2,102                       | 10,424               | 4.96                    |
| Associated Electric Cooperative        | OS                            | 59,498                      | 2,110,390            | 35.47                   |
| Browning-Ferris Gas Services           | OS                            | 104                         | 1,671                | 16.07                   |
| Carolina Power and Light               | OS                            | 10,950                      | 372,063              | 33.98                   |
| Central and Southwest Services, Inc.   | OS                            | 161,589                     | 4,880,302            | 30.20                   |
| Central Illinois Public Service Co.    | OS                            | 428,342                     | 11,192,693           | 26.13                   |
| City of Sikestown, MO                  | OS                            | 8,047                       | 110,247              | 13.70                   |
| Delhi Energy Services, Inc.            | OS                            | 2,415                       | 61,508               | 25.47                   |
| Duke/Louis Dreyfus Electric Power Inc. | OS                            | 395                         | 14,578               | 36.91                   |
| Electric Clearinghouse Inc.            | OS                            | 19,630                      | 570,831              | 29.08                   |
| Electric Energy Inc.                   | OS                            | 774,243                     | 16,036,179           | 20.71                   |
| Enron Power Marketing, Inc.            | OS                            | 7,933                       | 306,314              | 38.61                   |
| Entergy Arkansas, Inc.                 | OS                            | 1,401,920                   | 34,274,966           | 24.45                   |
| Entergy Power Marketing, Inc.          | OS                            | 1,600                       | 42,400               | 26.50                   |
| Entergy Services, Inc.                 | OS                            | 82,501                      | 2,960,661            | 35.89                   |
| Federal Energy Sales, Inc.             | OS                            | 1,600                       | 36,288               | 22.68                   |
| Heartland Energy Services              | OS                            | 6,055                       | 173,455              | 28.65                   |
| IES Utilities, Inc.                    | OS                            | 774,061                     | 10,804,490           | 13.96                   |
| Illinois Power Company                 | OS                            | 513,566                     | 11,737,009           | 22.85                   |
| Interstate Power Company               | OS                            | 36,647                      | 535,236              | 14.61                   |
| Kansas City Power & Light Company      | OS                            | 1,256,448                   | 20,661,257           | 16.44                   |
| Kentucky Utilities Company             | OS                            | 189,395                     | 3,789,264            | 20.01                   |
| Koch Power Services, Inc.              | OS                            | 44,290                      | 1,223,889            | 27.63                   |
| LG&E Power Marketing                   | OS                            | 41,550                      | 1,394,478            | 33.56                   |
| Louisville Gas & Electric              | OS                            | 375                         | 7,688                | 20.50                   |
| MidAmerican Energy Company             | OS                            | 1,552,870                   | 24,661,212           | 15.88                   |
| Missouri Public Service Company        | OS                            | 14,186                      | 551,993              | 38.91                   |
| Noram Power Services, Inc.             | OS                            | 5,803                       | 157,006              | 27.06                   |
| Northern States Power Company          | OS                            | 815,350                     | 11,108,032           | 13.62                   |
| Peco Energy Company                    | OS                            | 25,716                      | 889,014              | 34.57                   |
| Rainbow Energy Marketing Corp.         | OS                            | 1,525                       | 58,900               | 38.62                   |
| Sonat Power Marketing                  | OS                            | 10,146                      | 242,931              | 23.94                   |
| St. Joseph Light & Power Company       | OS                            | 39,563                      | 678,095              | 17.14                   |
| Tennessee Valley Authority             | OS                            | 521,545                     | 11,763,876           | 22.56                   |
| Virginia Power Company                 | OS                            | 3,200                       | 54,400               | 17.00                   |
| Vitol Gas & Electric L.L.E.            | OS                            | 4,208                       | 66,539               | 15.81                   |
| Waste Management                       | OS                            | 18,778                      | 960,285              | 51.14                   |
| Western Resources                      | OS                            | 67,616                      | 1,591,859            | 23.54                   |
| <b>Total</b>                           |                               | <b>8,905,762</b>            | <b>176,092,423</b>   |                         |
| <b>Weighted Average Cost per MWH</b>   |                               |                             |                      | <b>19.77</b>            |

Source: Union Electric Company's 1996 FERC Form 1.

# **Utilicorp United, Inc.** **1995 Non-Firm and Short-Term Firm Purchases**

| Seller                                   | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per     |
|--|-------------------------------|------------------|-----------------------|--------------|
|  |                               |                  |                       | MWH<br>(\$)  |
| Associated Electric (a)                  | OS                            | 3,225            | 111,450               | 34.56        |
| Associated Electric (d)                  | OS                            | 147              | 3,671                 | 24.97        |
| Associated Electric (e)                  | OS                            | 130,900          | 1,832,600             | 14.00        |
| Electric Clearinghouse, Inc. (a)         | OS                            | 100              | 3,900                 | 39.00        |
| Empire District & Electric (d)           | OS                            | 1,918            | 35,569                | 18.54        |
| ENRON Capital and Trade Resources (a)    | OS                            | 25,530           | 498,078               | 19.51        |
| ENRON Corporation                        | SF                            | 5,186            | 255,521               | 49.27        |
| Entergy (a)                              | OS                            | 175              | 9,875                 | 56.43        |
| Independence Power & Light (a)           | OS                            | 13,659           | 226,220               | 16.56        |
| Independence Power & Light (d)           | OS                            | 10               | 210                   | 21.00        |
| Kansas City Power & Light (a)            | OS                            | 1,088            | 15,014                | 13.80        |
| Kansas City Power & Light (a)            | OS                            | 95,094           | 1,361,519             | 14.32        |
| Kansas City Power & Light (b)            | OS                            | 61,830           | 896,845               | 14.51        |
| Kansas City Power & Light (d)            | OS                            | 105              | 2,351                 | 22.39        |
| Kansas Electric Power Cooperative (f)    | OS                            | 3,641            | 31,862                | 8.75         |
| Koch Oil                                 | SF                            | 29,637           | 347,761               | 11.73        |
| Koch Power (a)                           | OS                            | 200              | 5,100                 | 25.50        |
| Midwest Energy, Inc. (f)                 | OS                            | 370              | 6,536                 | 17.66        |
| Southwestern Public Service (f)          | OS                            | 63,917           | 866,015               | 13.55        |
| St. Joseph Light & Power (a)             | OS                            | 20               | 1,180                 | 59.00        |
| Sunflower Electric Power Cooperative (a) | OS                            | 850              | 26,095                | 30.70        |
| Sunflower Electric Power Cooperative (f) | OS                            | 555,282          | 8,977,713             | 16.17        |
| Union Electric (a)                       | OS                            | 10,740           | 193,534               | 18.02        |
| Union Electric (b)                       | OS                            | 8,958            | 139,959               | 15.62        |
| Western Resources (a)                    | OS                            | 41,170           | 771,092               | 18.73        |
| Western Resources (a)                    | OS                            | 36,343           | 681,346               | 18.75        |
| Western Resources (b)                    | OS                            | 171              | 3,763                 | 22.01        |
| Western Resources (d)                    | OS                            | 40,760           | 721,736               | 17.71        |
| Western Resources (KGE)                  | OS                            | 291              | 7,773                 | 26.71        |
| Western Resources (KPL)                  | OS                            | 23,208           | 366,224               | 15.78        |
| <b>Total</b>                             |                               | <b>1,154,525</b> | <b>18,400,512</b>     |              |
| <b>Weighted average cost per MWH</b>     |                               |                  |                       | <b>15.94</b> |

(a) System/Excess Energy - shall mean energy which one purchases for reasons including, but limited to, deferring use of fuel or water, transmission system operations, outages of generating units, environmental conditions or similar reasons.

(b) Term Energy - energy purchased for the purpose of obtaining a supply of energy to replace higher cost energy sources enabling purchaser and seller to share cost savings through more efficient use of resources.

(d) Emergency Energy - energy furnished by one party to the other for use in such other party's system, or in a neighboring system with which such other party has contractual obligations during periods of emergency due to the loss of generation or transmission facilities, which loss impairs or jeopardizes the ability of the system having the emergency to serve its load.

(e) Replacement Energy - energy which one party (buyer) desires to purchase from another party (seller) for reason including, but not limited to, deferring use of fuel or water, transmission system operations, scheduled short outages or generating units, environmental conditions, selling replacement energy to another party, or other reasons of a similar nature.

(f) Hour by hour economy power interchanges.

Source: Utilicorp United, Inc.'s 1995 FERC Form 1.

# **Utilicorp United, Inc.** **1996 Non-Firm and Short-Term Firm Purchases**

| <b>Seller</b>                               | <b>Transaction<br/>Type</b> | <b>MWH<br/>Purchased</b> | <b>Total<br/>Charges<br/>(\$)</b> | <b>Cost per<br/>MWH<br/>(\$)</b> |
|---|-----------------------------|--------------------------|-----------------------------------|----------------------------------|
| Associated Electric                         | OS                          | 12,076                   | 275,952                           | 22.85                            |
| Associated Electric                         | OS                          | 4,905                    | 119,409                           | 24.34                            |
| Associated Electric                         | OS                          | 349                      | 9,587                             | 27.47                            |
| Big Rivers Electric Coop Agreement          | OS                          | 200                      | 3,500                             | 17.50                            |
| Central Illinois Public Service             | OS                          | 1,600                    | 56,000                            | 35.00                            |
| Coastal Electric Service                    | SF                          | 2,400                    | 28,464                            | 11.86                            |
| Dairyland Power Coop                        | OS                          | 35                       | 440                               | 12.57                            |
| Delhi Energy                                | OS                          | 1,210                    | 29,103                            | 24.05                            |
| Electric Clearinghouse                      | OS                          | 1,600                    | 26,400                            | 16.50                            |
| Empire District & Electric                  | OS                          | 2,807                    | 69,552                            | 24.78                            |
| Enron Capital and Trade Resource            | OS                          | 36,285                   | 820,708                           | 22.62                            |
| Enron Capital and Trade Resource            | OS                          | 27,260                   | 666,472                           | 24.45                            |
| Enron Corporation                           | SF                          | 78,672                   | 1,152,264                         | 14.65                            |
| Heartland                                   | OS                          | 12,350                   | 239,727                           | 19.41                            |
| Illinova                                    | SF                          | 3,600                    | 47,700                            | 13.25                            |
| Independence Power & Light                  | OS                          | 19,142                   | 319,471                           | 16.69                            |
| Independence Power & Light                  | OS                          | 33                       | 1,147                             | 34.76                            |
| Industrial Applications                     | OS                          | 19,000                   | 278,200                           | 14.64                            |
| Kansas City Power & Light                   | OS                          | 19,935                   | 316,466                           | 15.87                            |
| Kansas City Power & Light                   | OS                          | 39,408                   | 636,103                           | 16.14                            |
| Kansas City Power & Light                   | OS                          | 10,792                   | 186,167                           | 17.25                            |
| Kansas City Power & Light                   | OS                          | 295                      | 9,084                             | 30.79                            |
| Kansas City Power & Light                   | OS                          | 2,880                    | 91,186                            | 31.66                            |
| Kansas Electric Power Cooperative           | OS                          | 1,118                    | 9,529                             | 8.52                             |
| Kansas Gas and Electric (Western Resources) | OS                          | 50                       | 1,775                             | 35.50                            |
| Kansas Power & Light (Western Resources)    | OS                          | 41,586                   | 957,842                           | 23.03                            |
| Kansas City Board of Public Utilities       | OS                          | 2,890                    | 58,865                            | 20.37                            |
| Koch Oil                                    | SF                          | 12,524                   | 132,230                           | 10.56                            |
| Koch Power Services, Inc.                   | OS                          | 6,620                    | 169,635                           | 25.62                            |
| Louisville Power Marketing                  | OS                          | 49,130                   | 943,817                           | 19.21                            |
| MidAmerican Energy                          | OS                          | 8,790                    | 143,395                           | 16.31                            |
| Missouri Public Service                     | OS                          | 20,292                   | 390,360                           | 19.24                            |
| Muscatine Power & Water                     | OS                          | 240                      | 3,895                             | 16.23                            |
| Nebraska Public Power District              | OS                          | 202,936                  | 2,623,313                         | 12.93                            |
| Nebraska Public Power District              | OS                          | 3,705                    | 67,198                            | 18.14                            |
| Noram Energy Services, Inc.                 | OS                          | 840                      | 18,129                            | 21.58                            |
| Noram Power Marketing                       | OS                          | 450                      | 14,550                            | 32.33                            |
| Northern States Power                       | OS                          | 1,520                    | 17,108                            | 11.26                            |
| Oklahoma Gas & Electric                     | OS                          | 1,225                    | 41,225                            | 33.65                            |
| Oklahoma Gas & Electric                     | OS                          | 1,240                    | 48,600                            | 39.19                            |
| OPPD  | OS                          | 1,200                    | 14,039                            | 11.70                            |

| Seller                               | Transaction Type | MWH Purchased    | Total Charges (\$) | Cost per MWH (\$) |
|--------------------------------------|------------------|------------------|--------------------|-------------------|
| Public Service of Oklahoma (CSW)     | OS               | 1,600            | 52,800             | 33.00             |
| Public Service of Oklahoma (CSW)     | OS               | 4,360            | 154,920            | 35.53             |
| Rainbow Energy Marketing             | OS               | 1,056            | 29,015             | 27.48             |
| Sikeston Board of Municipal          | OS               | 1,600            | 30,400             | 19.00             |
| Sonat Power Marketing                | OS               | 17,725           | 130,350            | 7.35              |
| Southwestern Public Service Company  | OS               | 2,100            | 67,537             | 32.16             |
| Southwestern Public Service Company  | OS               | 638,898          | 10,407,963         | 16.29             |
| St. Joseph Power & Light             | OS               | 8,340            | 154,009            | 18.47             |
| Sunflower Electric Power Corporation | OS               | 15,264           | 660,551            | 43.28             |
| Union Electric                       | OS               | 7,910            | 160,412            | 20.28             |
| Union Electric                       | OS               | 13,370           | 281,799            | 21.08             |
| United Power Association             | OS               | 20               | 440                | 22.00             |
| Valero                               | OS               | 11,250           | 289,913            | 25.77             |
| Western Farmers                      | OS               | 225              | 6,750              | 30.00             |
| Western Farmer's Coop                | OS               | 520              | 16,640             | 32.00             |
| Western Resources                    | OS               | 1,215            | 21,937             | 18.06             |
| Western Resources                    | OS               | 63,216           | 1,361,821          | 21.54             |
| Western Resources                    | OS               | 491              | 13,675             | 27.85             |
| Western Resources                    | OS               | 4,870            | 136,981            | 28.13             |
| Wisconsin Power & Light              | OS               | 580              | 10,281             | 17.73             |
| <b>Total</b>                         |                  | <b>1,447,800</b> | <b>25,026,801</b>  |                   |
| <b>Weighted Average Cost per MWH</b> |                  |                  |                    | <b>17.29</b>      |

Source: UtiliCorp United, Inc.'s 1996 FERC Form 1.

**Net MWH Exports / Imports for 1995 and 1996<sup>1</sup>  
By Sending and Receiving Control Area  
Through Scheduled Interchanges**

| <b>Control Area</b>             | <b>1995 Net<br/>MWH<br/>Exports</b> | <b>1996 Net<br/>MWH<br/>Exports</b> |
|---------------------------------|-------------------------------------|-------------------------------------|
| Nebraska Public Power District  | 3,674,888                           |                                     |
| Kansas City Power & Light Co.   | 3,220,204                           | 4,630,634                           |
| Western Resources               | 2,919,053                           | 2,515,998                           |
| Grand River Dam Authority       | 1,933,535                           | 1,455,452                           |
| Omaha Public Power District     | 872,768                             |                                     |
| Southwestern Public Service Co. | 754,629                             |                                     |
| City of Kansas City, MO         | 140,133                             |                                     |
| Oklahoma Gas & Electric Company | 114,191                             |                                     |

| <b>Control Area</b>                 | <b>1995 Net<br/>MWH<br/>Imports</b> | <b>1996 Net<br/>MWH<br/>Imports</b> |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Entergy Services, Inc.              | 6,302,676                           | 13,891,082                          |
| Interstate Power Company            | 4,594,422                           |                                     |
| Utilicorp                           | 3,493,434                           |                                     |
| Lincoln Electric System             | 2,595,777                           | 2,663,137                           |
| Union Electric                      | 2,567,649                           |                                     |
| Empire District Electric Co.        | 1,939,941                           | 2,397,258                           |
| St. Joseph Light & Power Company    | 1,428,655                           |                                     |
| Central and South West <sup>2</sup> | 1,400,234                           | 2,965,338                           |
| MidAmerican Energy Company          | 977,659                             |                                     |
| City of Independence, MO            | 819,688                             | 827,251                             |
| Associated Electric Cooperative     | 58,035                              | 5,414,348                           |
| Western Farmers Electric Coop, Inc. | 43,862                              |                                     |

Note: <sup>1</sup> When available.

<sup>2</sup> Central and South West's entry includes net receipts from itself, which are transfers from its ERCOT North and East HVDCs.

Source: 1995 FERC Form 714, Part II, Schedule 5.

## Western Resources Scheduled Interchanges, 1995

| Control Area                   | MWH<br>Received  | MWH<br>Delivered | Net Received<br>Interchange |
|--------------------------------|------------------|------------------|-----------------------------|
| Associated Electric            | 31,640           | 49,334           | (17,694)                    |
| Empire District Electric       | 368,339          | 247,114          | 121,225                     |
| Kansas City Power & Light      | 3,855,338        | 4,800,970        | (945,632)                   |
| City of Kansas City, KS        | 150,823          | 20,480           | 130,343                     |
| Missouri Public Service        | 83,099           | 1,159,979        | (1,076,880)                 |
| Oklahoma Gas & Electric        | 48,574           | 475,426          | (426,852)                   |
| Omaha Public Power District    | 286,109          | 46,472           | 239,637                     |
| Public Service Oklahoma        | 100,193          | 23,271           | 76,922                      |
| Sunflower Electric Power Coop. | 78,886           | -                | 78,886                      |
| Union Electric                 | 21,565           | 49,180           | (27,615)                    |
| West Plains Energy             | 174,946          | 1,246,339        | (1,071,393)                 |
| <b>Total</b>                   | <b>5,199,512</b> | <b>8,118,565</b> | <b>(2,919,053)</b>          |

**Sources:**

Kansas Power and Light's 1995 FERC Form 714, Part II, Schedule 5.

Kansas Gas & Electric's 1995 FERC Form 714, Part II, Schedule 5.

# **Kansas City Power & Light Co. Scheduled Interchanges, 1995**

| Control Area                   | MWH<br>Received  | MWH<br>Delivered | Net Received<br>Interchange |
|--------------------------------|------------------|------------------|-----------------------------|
| Associated Electric Coop.      | 398,321          | 275,749          | 122,572                     |
| Western Resources              | 4,803,546        | 3,857,914        | 945,632                     |
| Missouri Public Service Co.    | 4,027            | 178,712          | (174,685)                   |
| St. Joseph Power & Light Co.   | 3,860            | 993,629          | (989,769)                   |
| Empire District Electric Co.   | 165,608          | 1,322,461        | (1,156,853)                 |
| Union Electric Co.             | 48,161           | 1,885,206        | (1,837,045)                 |
| City of Independence, MO       | 287              | 832,210          | (831,923)                   |
| City of Kansas City, KS        | 253,525          | 243,735          | 9,790                       |
| Interstate Power Co.           | 1,018            | 603              | 415                         |
| Northern States Power          | 81,361           | 107,428          | (26,067)                    |
| Omaha Public Power District    | 74,597           | 3,163            | 71,434                      |
| MidAmerican Energy             | 594,335          | 27,890           | 566,445                     |
| Lincoln Electric Service       | 8,126            | 175              | 7,951                       |
| Nebraska Public Power District | 97,559           | 25,660           | 71,899                      |
| <b>Total</b>                   | <b>6,534,331</b> | <b>9,754,535</b> | <b>(3,220,204)</b>          |

Source: Kansas City Power & Light Co.'s 1995 FERC Form 714, Part II, Schedule 5.



**Entergy Services, Inc.**  
**Scheduled Interchanges, 1995**

| <b>Control Area</b>                        | <b>MWH<br/>Received</b> | <b>MWH<br/>Delivered</b> | <b>Net Received<br/>Interchange</b> |
|--|-------------------------|--------------------------|-------------------------------------|
| Associated Electric Cooperatives, Inc.     | 3,538,074               | 839,858                  | 2,698,216                           |
| Central Louisiana Electric Company         | 58,134                  | 414,434                  | (356,300)                           |
| Empire District Electric                   | 427,209                 | 25,395                   | 401,814                             |
| Oklahoma Gas & Electric                    | 1,497,796               | 48,500                   | 1,449,296                           |
| Southern Company                           | 203,686                 | 2,116,415                | (1,912,729)                         |
| Southwest Power Administration             | 661,024                 | 745,144                  | (84,120)                            |
| Central & South West                       | 453,705                 | 151,773                  | 301,932                             |
| Tennessee Valley Authority                 | 2,630,945               | 1,564,240                | 1,066,705                           |
| Union Electric Company                     | 2,174,942               | 1,623,754                | 551,188                             |
| South Mississippi Electric Power Authority | 1,133,365               | 321,708                  | 811,657                             |
| Cajun Electric Power Cooperative           | 2,911,285               | 85,961                   | 2,825,324                           |
| Louisiana Energy & Power Authority         | 22,350                  | 425,222                  | (402,872)                           |
| City of Lafayette                          | 237                     | 259,709                  | (259,472)                           |
| Alabama Electric Cooperative, Inc.         | -                       | 787,963                  | (787,963)                           |
| <b>Total</b>                               | <b>15,712,752</b>       | <b>9,410,076</b>         | <b>6,302,676</b>                    |

Source: Entergy Services, Inc.'s 1995 FERC Form 714, Part II, Schedule 5.

## Associated Electric Cooperative Scheduled Interchanges, 1995

| Control Area                      | MWH<br>Received  | MWH<br>Delivered | Net Received<br>MWH<br>Interchange |
|-----------------------------------|------------------|------------------|------------------------------------|
| City of Columbia                  | 985              | 493,316          | (492,331)                          |
| Kansas City Power & Light         | 275,749          | 398,321          | (122,572)                          |
| City of Independence              | 22               | 320              | (298)                              |
| Missouri Public Service           | 127,968          | 317,677          | (189,709)                          |
| Southwestern Power Administration | 2,265,662        | 1,335,366        | 930,296                            |
| Nebraska Public Power District    | 1,909,988        | 19,978           | 1,890,010                          |
| Omaha Public Power                | 352,367          | 35,495           | 316,872                            |
| Lincoln Electric                  | 427,137          | 83,810           | 343,327                            |
| Tennessee Valley Authority        | 63,046           | 510,874          | (447,828)                          |
| Union Electric                    | 11,023           | 63,741           | (52,718)                           |
| Empire District                   | 14,038           | 700,491          | (686,453)                          |
| Grand River Dam Authority         | 1,077,667        | 144,405          | 933,262                            |
| Western Resources (KPL)           | 49,334           | 31,640           | 17,694                             |
| Southwestern Electric Company     | 28,737           | 4,255            | 24,482                             |
| Entergy Services                  | 839,859          | 3,538,074        | (2,698,215)                        |
| IES Utilities                     | 179,636          | 234,245          | (54,609)                           |
| MidAmerica Energy Company         | 529,305          | 67,260           | 462,045                            |
| St. Joseph Light & Power          | 11,039           | 9,129            | 1,910                              |
| East Kentucky                     | 42,900           | -                | 42,900                             |
| Oglethorpe                        | 14,415           | 42,395           | (27,980)                           |
| Alabama Cooperative               | -                | 132,050          | (132,050)                          |
| <b>Total</b>                      | <b>8,220,877</b> | <b>8,162,842</b> | <b>58,035</b>                      |

Source: Associated Electric Cooperative's 1995 FERC Form 714, Part II, Schedule 5.

# **Union Electric Company** **Scheduled Interchanges, 1995**

| Control Area                        | MWH<br>Received  | MWH<br>Delivered | Net Received<br>Interchange |
|-------------------------------------|------------------|------------------|-----------------------------|
| Associated Electric Coop, Inc.      | 63,741           | 11,023           | 52,718                      |
| Central Illinois Public Service Co. | 157,767          | 126,527          | 31,240                      |
| City of Columbia, MO                | -                | 452,565          | (452,565)                   |
| Central Southwest                   | 189,456          | 18,240           | 171,216                     |
| Electric Energy Inc.                | 759,952          | 2,292,823        | (1,532,871)                 |
| Entergy Service Inc.                | 1,623,754        | 2,140,564        | (516,810)                   |
| IES Utilities, Inc.                 | 884,357          | 335,579          | 548,778                     |
| Illinois Power Company              | 335,356          | 96,520           | 238,836                     |
| Interstate Power Company            | 2,810            | 10,653           | (7,843)                     |
| Kansas City Power & Light Co.       | 1,885,206        | 48,161           | 1,837,045                   |
| Kentucky Utilities Co.              | 124,079          | -                | 124,079                     |
| MidAmerican Energy Co.              | 1,706,759        | 28,692           | 1,678,067                   |
| Missouri Public Service Co.         | 85,589           | 309,255          | (223,666)                   |
| Northern States Power Corp.         | 525,051          | 106,483          | 418,568                     |
| St. Joseph Power & Light Co.        | 52,286           | 21,541           | 30,745                      |
| Southwestern Power Adm.             | 93,717           | 10,925           | 82,792                      |
| Tennessee Valley Authority          | 565,199          | 505,494          | 59,705                      |
| Western Resources                   | 49,180           | 21,565           | 27,615                      |
| <b>Total</b>                        | <b>9,104,259</b> | <b>6,536,610</b> | <b>2,567,649</b>            |

Source: Union Electric Company's 1995 FERC Form 714, Part II, Schedule 5.

## Central and South West Scheduled Interchanges, 1995

| Control Area                            | MWH<br>Received  | MWH<br>Delivered | Net Received<br>Interchange |
|---|------------------|------------------|-----------------------------|
| Associated Electric Coop.               | 4,255            | 28,737           | (24,482)                    |
| Cajun Electric Power Coop.              | 329,966          | 238,392          | 91,574                      |
| Central Louisiana Electric Co.          | 733,979          | 1,117,594        | (383,615)                   |
| City of Lafayette                       | 4                | 9,923            | (9,919)                     |
| Entergy Services, Inc.                  | 151,773          | 453,705          | (301,932)                   |
| Empire District Electric Co.            | 24,261           | 53,653           | (29,392)                    |
| Grand River Dam Authority               | 183,841          | 96,622           | 87,219                      |
| Oklahoma Gas & Electric                 | 340,239          | 403,220          | (62,981)                    |
| Southwestern Power Administration       | 1,263,842        | 43,945           | 1,219,897                   |
| Western Resources (KG&E)                | 23,271           | 100,193          | (76,922)                    |
| Southwestern Public Service             | 320,435          | 11,443           | 308,992                     |
| Union Electric                          | 18,240           | 189,456          | (171,216)                   |
| Western Farmers Electric Coop           | 19,204           | 3,055            | 16,149                      |
| Central and South West ERCOT North HVDC | 796,769          | 187,911          | 608,858                     |
| Central and South West ERCOT East HVDC  | 150,050          | 22,046           | 128,004                     |
| <b>Total</b>                            | <b>4,360,129</b> | <b>2,959,895</b> | <b>1,400,234</b>            |

Source: Central and South West's 1995 FERC Form 714, Part II, Schedule 5.

**Oklahoma Gas & Electric Company  
Scheduled Interchanges, 1995**

| <b>Control Area</b>                  | <b>MWH<br/>Received</b> | <b>MWH<br/>Delivered</b> | <b>Net Received<br/>Interchange</b> |
|--------------------------------------|-------------------------|--------------------------|-------------------------------------|
| Central Southwest Services (PSO)     | 191,372                 | 7,015                    | 184,357                             |
| Grand River Dam Authority            | 35,824                  | 18,019                   | 17,805                              |
| Southwestern Power Administration    | 301,768                 | 751                      | 301,017                             |
| Western Farmers Electric Cooperative | 531,825                 | 5,375                    | 526,450                             |
| Western Resources                    | 475,426                 | 48,574                   | 426,852                             |
| Entergy Services Inc.                | 48,500                  | 1,497,796                | (1,449,296)                         |
| Southwest Electric Inc.              | 211,848                 | 333,224                  | (121,376)                           |
| <b>Total</b>                         | <b>1,796,563</b>        | <b>1,910,754</b>         | <b>(114,191)</b>                    |

Source: Oklahoma Gas & Electric Company's 1995 FERC Form 714, Part II, Schedule 5.

**Western Resources  
Scheduled Interchanges, 1996**

| <b>Control Area</b>                   | <b>MWH<br/>Received</b> | <b>MWH<br/>Delivered</b> | <b>Net Received<br/>Interchange</b> |
|---------------------------------------|-------------------------|--------------------------|-------------------------------------|
| Associated Electric Cooperative       | 46,982                  | 61,768                   | (14,786)                            |
| Central and Southwest                 | 107,042                 | 737,061                  | (630,019)                           |
| Empire District Electric              | 333,727                 | 418,139                  | (84,412)                            |
| Kansas City Board of Public Utilities | 173,688                 | 65,478                   | 108,210                             |
| Kansas City Power & Light Company     | 4,596,083               | 3,934,893                | 661,190                             |
| Missouri Public Service               | 174,512                 | 1,200,872                | (1,026,360)                         |
| Oklahoma Gas and Electric             | 164,377                 | 1,158,945                | (994,568)                           |
| Omaha Public Power District           | 793,475                 | 131,879                  | 661,596                             |
| Sunflower Electric Cooperative        | 64,624                  | -                        | 64,624                              |
| Union Electric                        | 64,011                  | 67,616                   | (3,605)                             |
| WestPlains Energy - Kansas            | 76,532                  | 1,334,400                | (1,257,868)                         |
| <b>Total</b>                          | <b>6,595,053</b>        | <b>9,111,051</b>         | <b>(2,515,998)</b>                  |

**Sources:**

Kansas Power and Light's 1996 FERC Form 714, Part II, Schedule 5.

Kansas Gas &amp; Electric's 1996 FERC Form 714, Part II, Schedule 5.

# **Kansas City Power & Light Co. Scheduled Interchanges, 1996**

| <b>Control Area</b>                   | <b>MWH<br/>Received</b> | <b>MWH<br/>Delivered</b> | <b>Net Received<br/>Interchange</b> |
|---------------------------------------|-------------------------|--------------------------|-------------------------------------|
| Associated Electric Cooperative       | 300,612                 | 369,684                  | (69,072)                            |
| City of Independence                  | 92                      | 824,431                  | (824,339)                           |
| Empire District Electric              | 163,936                 | 1,803,445                | (1,639,509)                         |
| Interstate Power Company              | 65,570                  | 5,575                    | 59,995                              |
| Kansas City Board of Public Utilities | 240,274                 | 319,463                  | (79,189)                            |
| Lincoln Electric Service              | 4,355                   | -                        | 4,355                               |
| MidAmerican Energy                    | 738,244                 | 19,227                   | 719,017                             |
| Missouri Public Service               | 97,142                  | 200,283                  | (103,141)                           |
| Nebraska Public Power District        | 168,430                 | 6,771                    | 161,659                             |
| Northern States Power                 | 81,455                  | 56,586                   | 24,869                              |
| Omaha Public Power District           | 79,093                  | 19,715                   | 59,378                              |
| St. Joseph Power and Light            | 19,332                  | 982,576                  | (963,244)                           |
| Union Electric                        | 118,963                 | 1,439,186                | (1,320,223)                         |
| Western Resources (KGE)               | 3,927,943               | 4,545,882                | (617,939)                           |
| Western Resources (KPL)               | 26,120                  | 69,371                   | (43,251)                            |
| <b>Total</b>                          | <b>6,031,561</b>        | <b>10,662,195</b>        | <b>(4,630,634)</b>                  |

Source: Kansas City Power & Light Co.'s 1996 FERC Form 714, Part II, Schedule 5.

**Entergy Services, Inc.**  
**Scheduled Interchanges, 1996**

| <b>Control Area</b>                        | <b>MWH<br/>Received</b> | <b>MWH<br/>Delivered</b> | <b>Net Received<br/>Interchange</b> |
|--|-------------------------|--------------------------|-------------------------------------|
| Alabama Electric Cooperative               | 3,102                   | 579,667                  | (576,565)                           |
| Associated Electric Cooperative            | 4,821,642               | 1,186,786                | 3,634,856                           |
| Cajun Electric Power Cooperative           | 2,566,538               | 558,776                  | 2,007,762                           |
| Central and Southwest                      | 478,650                 | 824,016                  | (345,366)                           |
| Central Louisiana Electric Company         | 242,007                 | 2,005,368                | (1,763,361)                         |
| City of Lafayette                          | 7,157                   | 141,887                  | (134,730)                           |
| Empire District Electric                   | 483,968                 | 61,574                   | 422,394                             |
| Louisiana Energy & Power Authority         | 8,243                   | 359,173                  | (350,930)                           |
| Oklahoma Gas and Electric                  | 1,164,641               | 228,827                  | 935,814                             |
| South Mississippi Electric Power Authority | 1,095,077               | 156,764                  | 938,313                             |
| Southern Company                           | 547,626                 | 1,382,033                | (834,407)                           |
| Southwestern Power Administration          | 829,807                 | 1,230,091                | (400,284)                           |
| Tennessee Valley Authority                 | 9,383,334               | 335,789                  | 9,047,545                           |
| Union Electric                             | 2,794,462               | 1,484,421                | 1,310,041                           |
| <b>Total</b>                               | <b>24,426,254</b>       | <b>10,535,172</b>        | <b>13,891,082</b>                   |

Source: Entergy Services, Inc.'s 1996 FERC Form 714, Part II, Schedule 5.



## Associated Electric Cooperative Scheduled Interchanges, 1996

| Control Area                      | MWH<br>Received<br>(1) | MWH<br>Delivered<br>(2) | Net Received<br>MWH<br>Interchange<br>(3) = (1) - (2) |
|-----------------------------------|------------------------|-------------------------|---|
| Alabama Electric Cooperative      | -                      | 32,445                  | (32,445)  |
| Central and Southwest             | 66,049                 | 443,701                 | (377,652)   |
| City of Columbia                  | 2,111                  | 536,087                 | (533,976)   |
| City of Independence              | 1,202                  | 5,195                   | (3,993)   |
| East Kentucky                     | 123,353                | -                       | 123,353   |
| Empire District Electric          | 21,133                 | 645,460                 | (624,327)   |
| Entergy Services                  | 1,186,786              | 4,821,642               | (3,634,856)   |
| Grand River Dam Authority         | 7,154,178              | 458,634                 | 6,695,544   |
| IES Utilities                     | 218,314                | 369,594                 | (151,280)   |
| Kansas City Power & Light Company | 369,684                | 300,612                 | 69,072  |
| Lincoln Electric Service          | 523,003                | 23,765                  | 499,238   |
| MEC                               | 1,120,043              | 67,943                  | 1,052,100   |
| Missouri Public Service           | 226,023                | 218,372                 | 7,651   |
| Nebraska Public Power District    | 762,302                | 37,165                  | 725,137   |
| Oglethorpe                        | 6,180                  | -                       | 6,180   |
| Omaha Public Power District       | 470,068                | 12,973                  | 457,095   |
| Southwestern Power Administration | 2,206,112              | 1,272,285               | 933,827   |
| St. Joseph Power and Light        | 70,396                 | 11,278                  | 59,118  |
| Tennessee Valley Authority        | 248,873                | 153,509                 | 95,364  |
| Union Electric                    | 88,638                 | 54,226                  | 34,412  |
| Western Resources                 | 61,768                 | 46,982                  | 14,786  |
| <b>Total</b>                      | <b>14,926,216</b>      | <b>9,511,868</b>        | <b>5,414,348</b>                                      |

Source: Associated Electric Cooperative's 1996 FERC Form 714, Part II, Schedule 5.

## Central and South West Scheduled Interchanges, 1996

| Control Area                         | MWH<br>Received  | MWH<br>Delivered | Net Received<br>Interchange |
|--------------------------------------|------------------|------------------|-----------------------------|
| Associated Electric Cooperative      | 443,701          | 66,049           | 377,652                     |
| Cajun Electric Power Cooperative     | 436,884          | 150,576          | 286,308                     |
| Central and Southwest - ERCOT East   | 459,985          | 1,173,946        | (713,961)                   |
| Central and Southwest - ERCOT North  | 300,689          | 883,218          | (582,529)                   |
| Central Louisiana Electric Company   | 1,988,351        | 625,735          | 1,362,616                   |
| City of Lafayette                    | 5                | 4,005            | (4,000)                     |
| Empire District Electric             | 94,068           | 106,408          | (12,340)                    |
| Entergy Services                     | 824,016          | 478,250          | 345,766                     |
| Grand River Dam Authority            | 160,885          | 115,283          | 45,602                      |
| Oklahoma Gas and Electric            | 286,493          | 273,156          | 13,337                      |
| Southwestern Power Administration    | 866,460          | 48,573           | 817,887                     |
| Southwestern Power Service           | 208,961          | 55,603           | 153,358                     |
| Union Electric                       | 344,744          | 161,589          | 183,155                     |
| Western Farmers Electric Cooperative | 85,714           | 23,246           | 62,468                      |
| Western Resources                    | 737,061          | 107,042          | 630,019                     |
| <b>Total</b>                         | <b>7,238,017</b> | <b>4,272,679</b> | <b>2,965,338</b>            |

Source: Central and South West's 1996 FERC Form 714, Part II, Schedule 5.

### Cost and Capacity of State Utility Plants by Fuel Type

|  | Nebraska/Iowa | Kansas/Missouri | Oklahoma/Arkansas/<br>Louisiana |
|--|---------------|-----------------|---------------------------------|
| <b>Total Capacity</b>  | 14,630        | 27,550          | 41,997                          |
| <b>Total Coal Capacity</b>   | 9,466         | 17,012          | 12,203                          |
| <b>Total Gas Capacity</b>  | 1,669         | 4,385           | 23,134                          |
| <b>Total Nuclear Capacity</b>  | 1,935         | 2,472           | 4,081                           |
| <b>Total Coal Capacity as a<br/>Percentage of Total Capacity</b>                 | 64.70%        | 61.75%          | 29.06%                          |
| <b>Total Gas Capacity as a<br/>Percentage of Total Capacity</b>                  | 11.41%        | 15.92%          | 55.08%                          |
| <b>Average Delivered Cost of Coal <sup>1</sup><br/>(Dollars per million BTU)</b> | 0.87          | 0.97            | 1.28                            |
| <b>Average Delivered Cost of Gas <sup>1</sup><br/>(Dollars per million BTU)</b>  | 2.73          | 2.40            | 2.80                            |

Note: <sup>1</sup> Weighted by individual state's capacity of fuel.

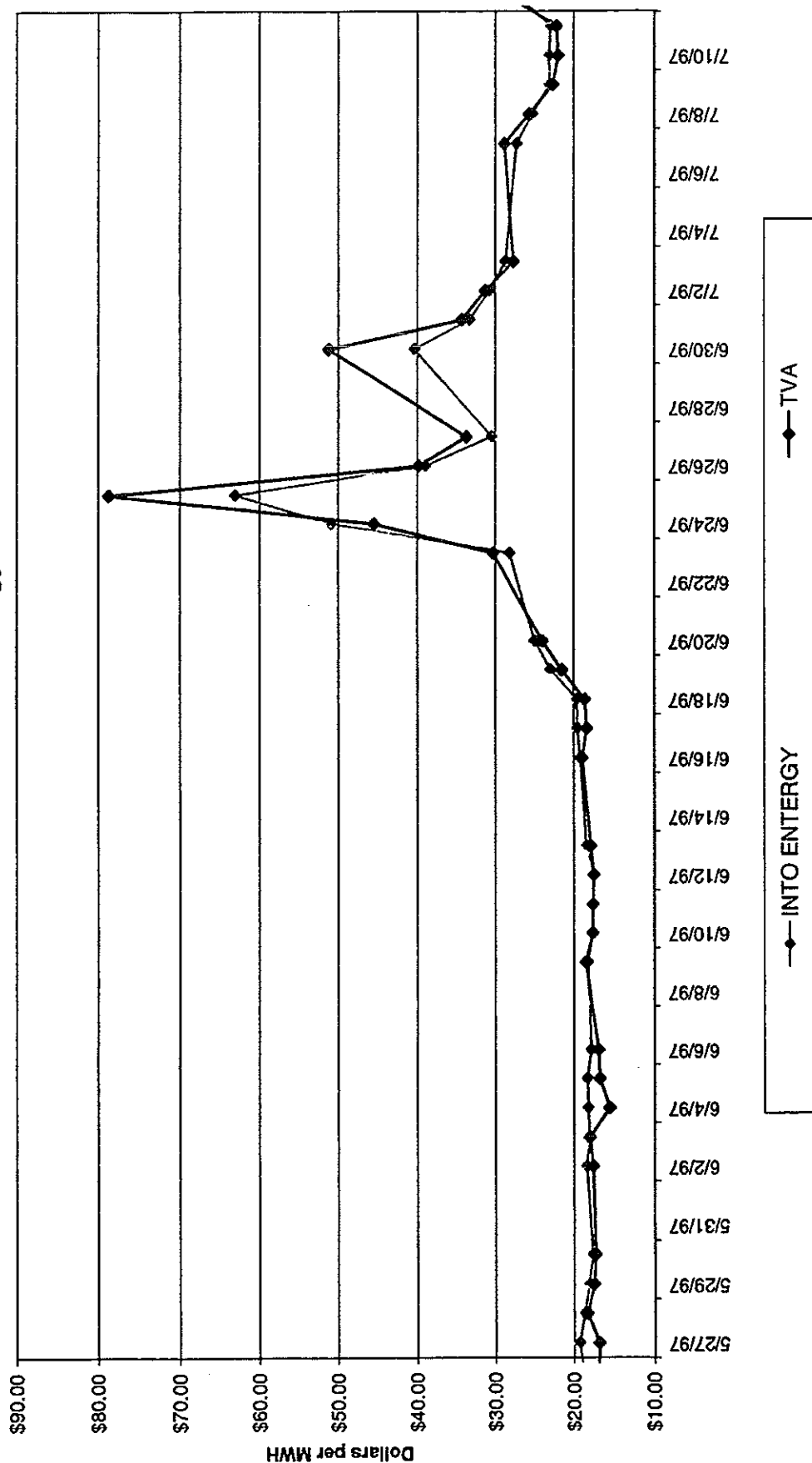
Sources: EIA 1995 Form 860 (*Inventory of Power Plants*).  
EIA 1996 Form 423 (*Cost and Quality of Fuels*).

**Spot Prices**  
**Number of Observations**  
**07/19/96 - 07/18/97**

|                        | <i>Number of<br/>Observations</i> | <i>Beginning Date</i> |
|------------------------|-----------------------------------|-----------------------|
| MAPP                   | 255                               | 07/19/96              |
| SPP                    | 255                               | 07/19/96              |
| SERC (without Florida) | 255                               | 07/19/96              |
| TVA                    | 53                                | 05/05/97              |
| INTO ENTERGY           | 118                               | 02/03/97              |
| MAIN                   | 255                               | 07/19/96              |

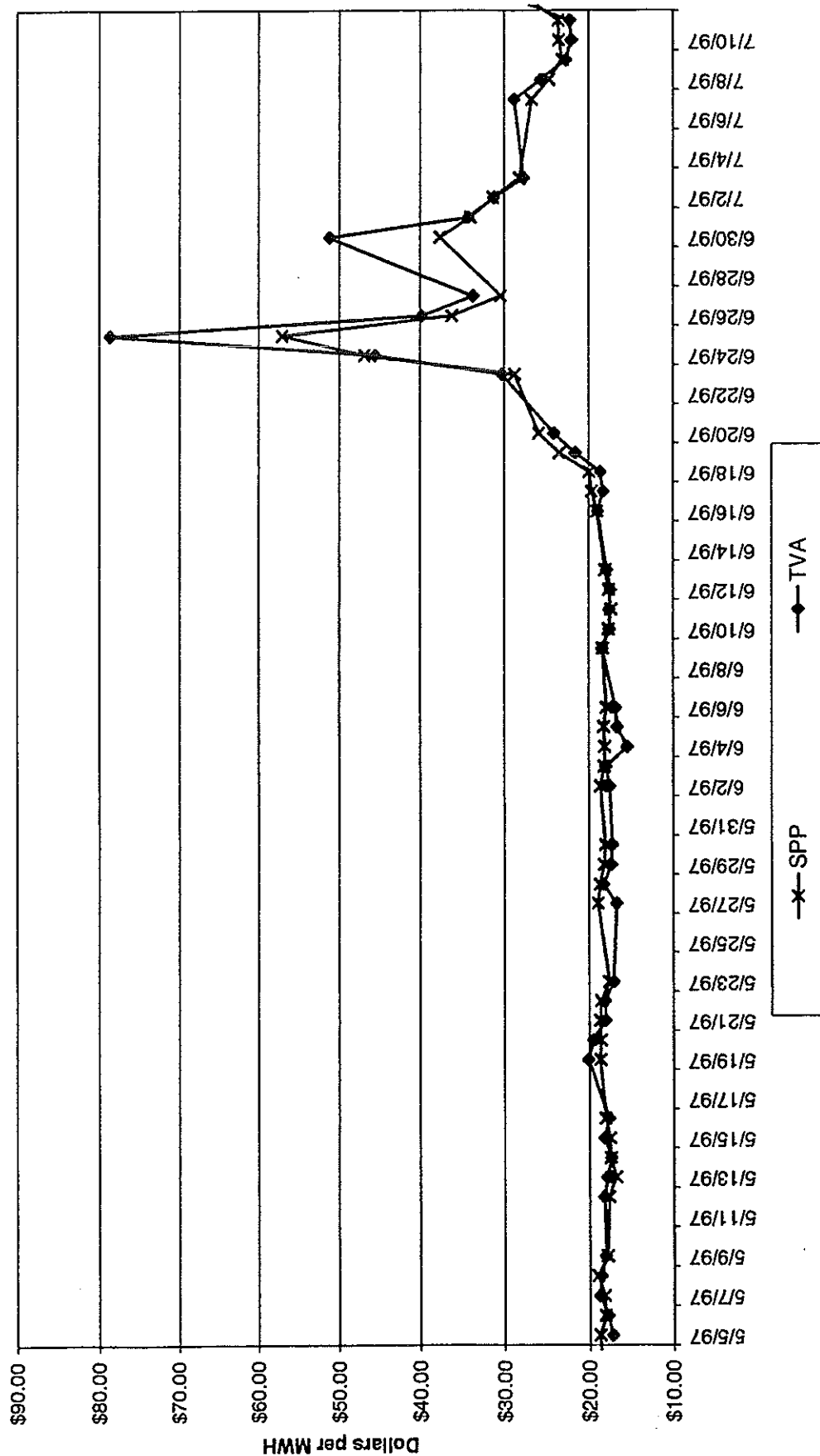
Source: Power Markets Week.

# Spot Prices May 27, 1997 through July 11, 1997 TVA and Into Entergy



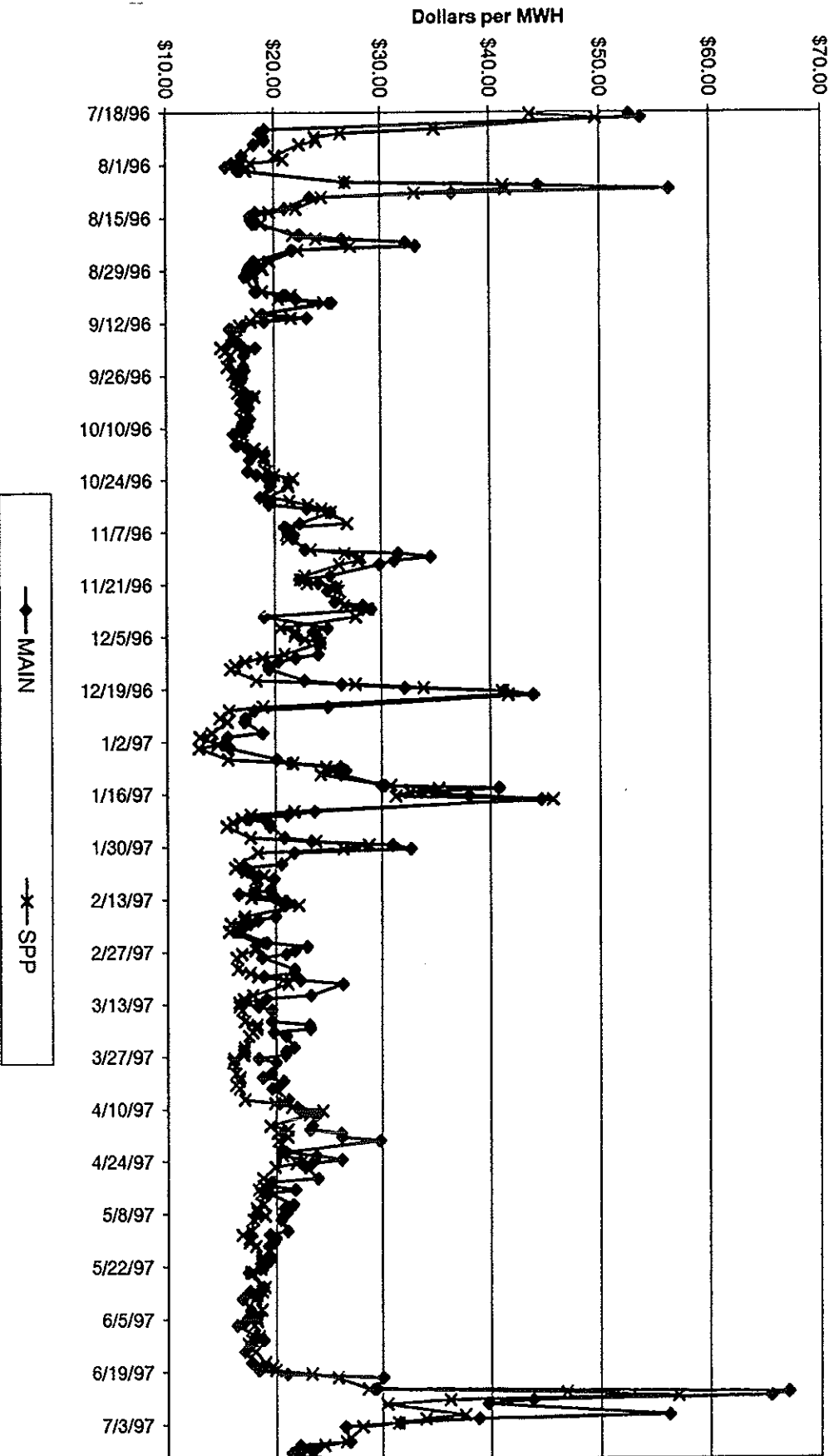
Source: Power Markets Week.

# Spot Prices May 5, 1997 through July 11, 1997 SPP and TVA



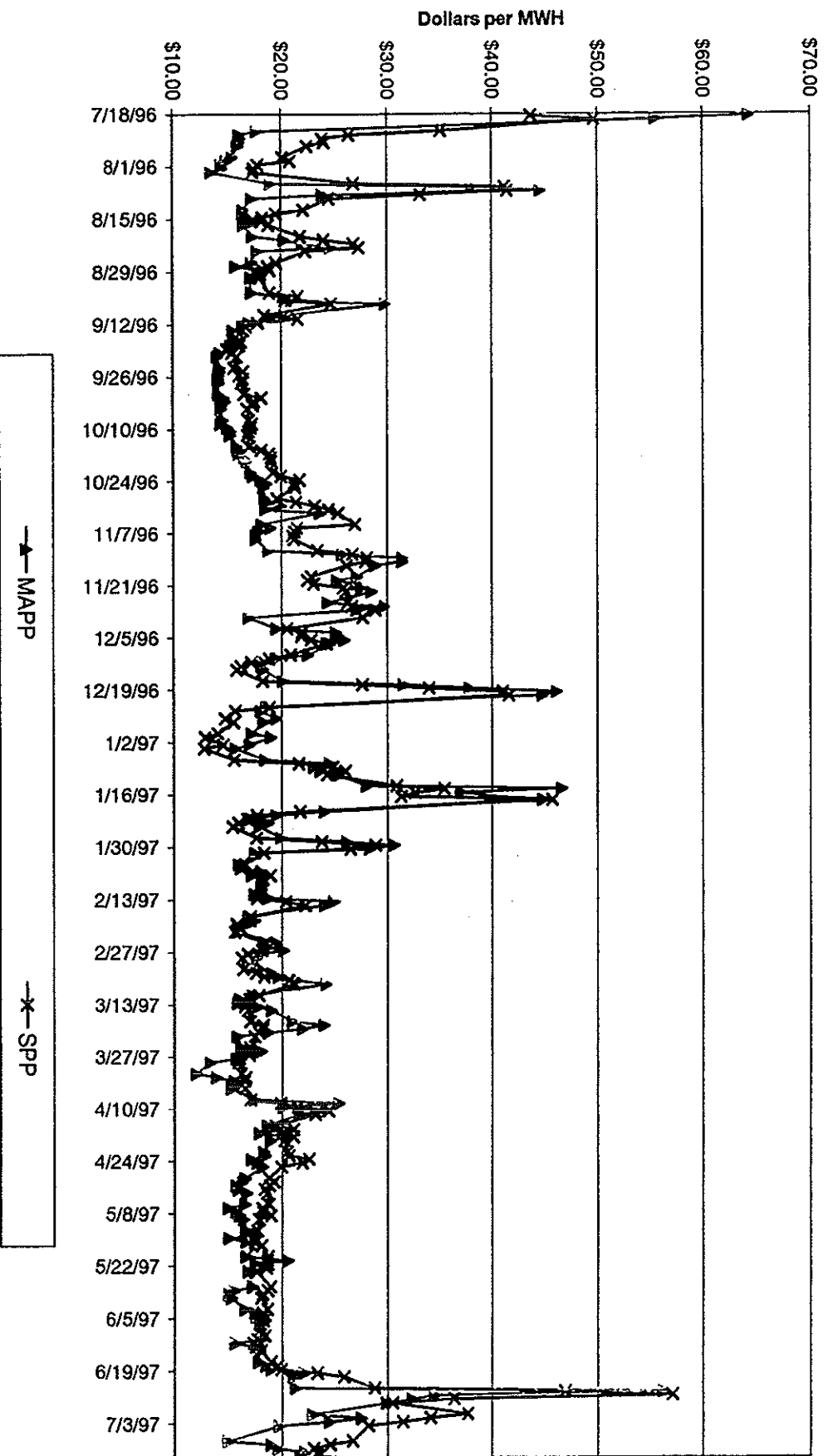
Source: Power Markets Week.

Spot Prices  
July 18, 1996 through July 11, 1997  
MAIN and SPP



Source: Power Markets Week.

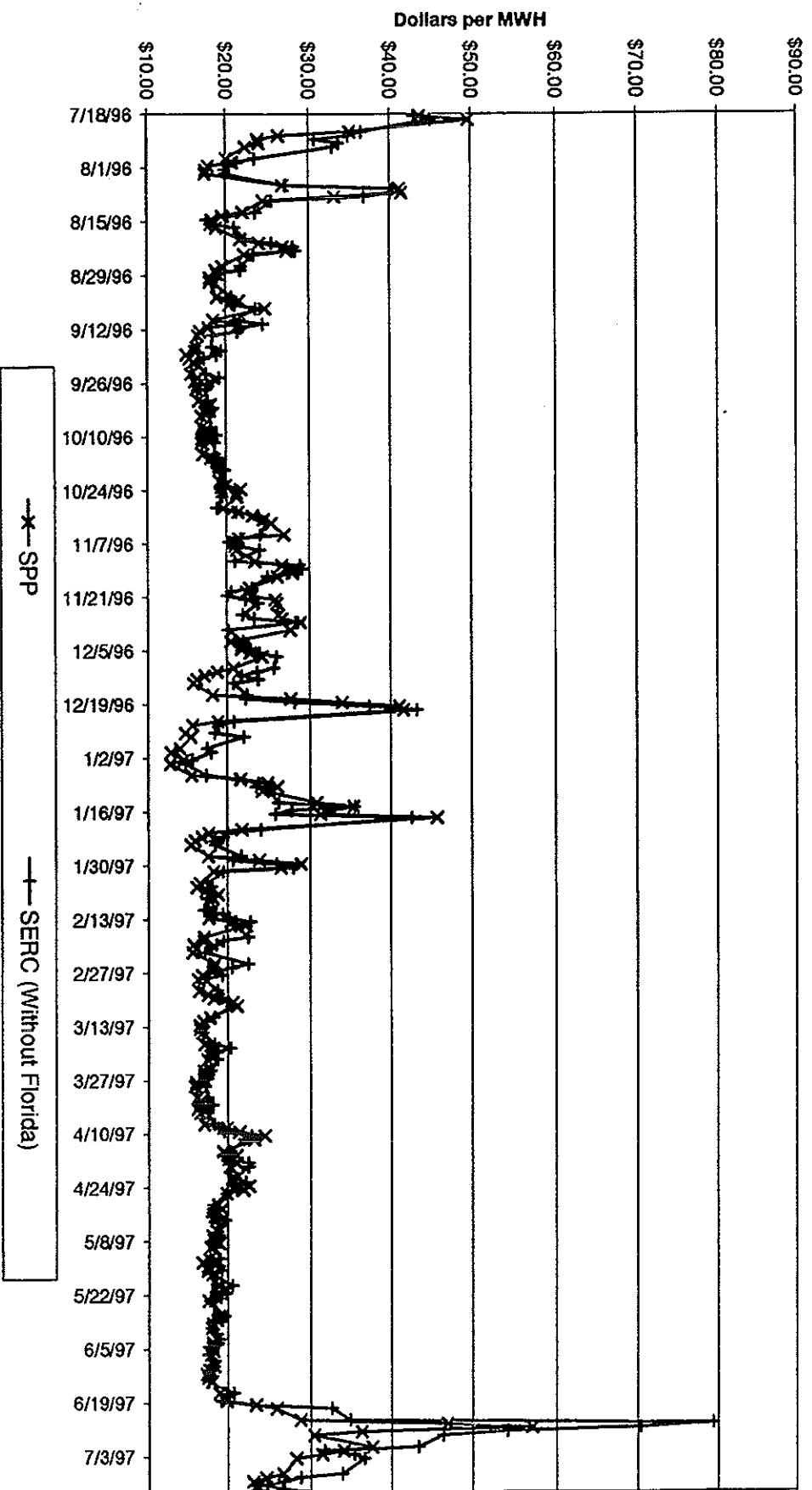
**Spot Prices**  
**July 18, 1996 through July 11, 1997**  
**MAPP and SPP**



Source: Power Markets Week.

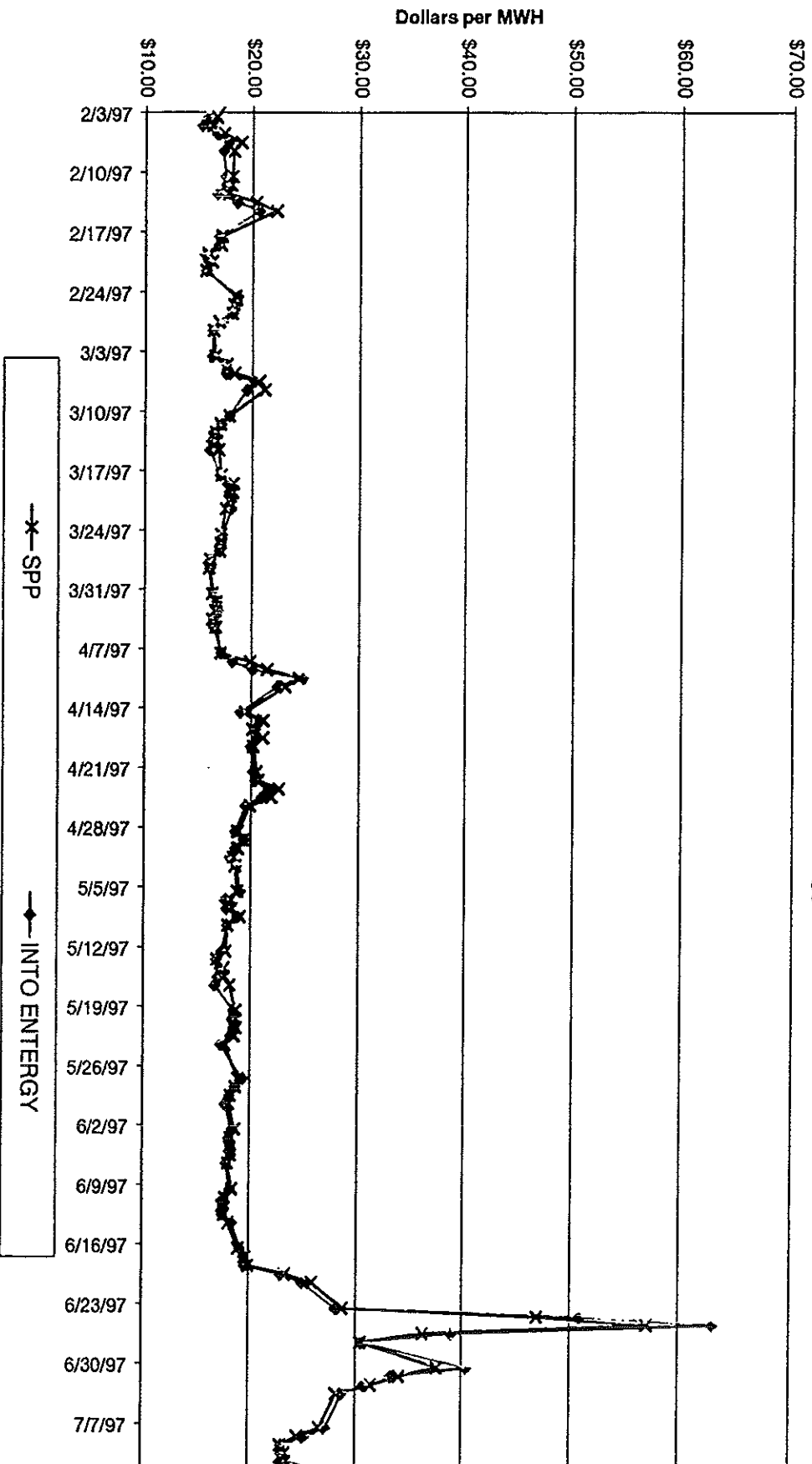


**Spot Prices**  
**July 18, 1996 through July 11, 1997**  
**SPP and SERC (Without Florida)**



Source: Power Markets Week.

### Spot Prices February 3, 1997 through July 11, 1997 SPP and Into Entergy



Source: Power Markets Week.

### Correlation Matrix of Price Series

|                        | <i>MAPP</i> | <i>SPP</i> | <i>SERC (without<br/>Florida)</i> | <i>TVA</i> | <i>INTO ENTERGY</i> | <i>MAIN</i> |
|------------------------|-------------|------------|-----------------------------------|------------|---------------------|-------------|
| MAPP                   | 1.000000    |            |                                   |            |                     |             |
| SPP                    | 0.892420    | 1.000000   |                                   |            |                     |             |
| SERC (without Florida) | 0.823607    | 0.960405   | 1.000000                          |            |                     |             |
| TVA                    | 0.924314    | 0.986402   | 0.968699                          | 1.000000   |                     |             |
| INTO ENTERGY           | 0.946684    | 0.997845   | 0.973656                          | 0.993769   | 1.000000            |             |
| MAIN                   | 0.894964    | 0.978882   | 0.959425                          | 0.983508   | 0.990255            | 1.000000    |

Source: Power Markets Week.

### Correlation Matrix of First Differences

|                        | <i>MAPP</i> | <i>SPP</i> | <i>SERC (without<br/>Florida)</i> | <i>TVA</i> | <i>INTO ENTERGY</i> | <i>MAIN</i> |
|------------------------|-------------|------------|-----------------------------------|------------|---------------------|-------------|
| MAPP                   | 1.000000    |            |                                   |            |                     |             |
| SPP                    | 0.688317    | 1.000000   |                                   |            |                     |             |
| SERC (without Florida) | 0.562614    | 0.801220   | 1.000000                          |            |                     |             |
| TVA                    | 0.453506    | 0.933256   | 0.775365                          | 1.000000   |                     |             |
| INTO ENTERGY           | 0.615994    | 0.984703   | 0.815546                          | 0.970761   | 1.000000            |             |
| MAIN                   | 0.747331    | 0.896775   | 0.796031                          | 0.894156   | 0.937122            | 1.000000    |

Source: Power Markets Week.

# **Comparison of Price Series** **Percent of Days on which Prices Differ by Less Than 2 Mills/KWH**

Note: The difference is between column and row

|                        | MAPP   | SPP    | SERC (without<br>Florida) | TVA    | INTO ENTERGY | MAIN |
|------------------------|--------|--------|---------------------------|--------|--------------|------|
| MAPP                   |        |        |                           |        |              |      |
| SPP                    | 45.10% |        |                           |        |              |      |
| SERC (without Florida) | 34.12% | 63.92% |                           |        |              |      |
| TVA                    | 50.94% | 77.36% | 58.49%                    |        |              |      |
| INTO ENTERGY           | 57.63% | 94.07% | 70.34%                    | 77.36% |              |      |
| MAIN                   | 46.67% | 56.47% | 51.37%                    | 64.15% | 40.68%       |      |

Source: Power Markets Week.

# **Comparison of Price Series** **Percent of Days on which Prices Differ by Less Than 4 Mills/KWH**

**Note: The difference is between column and row**

|                        | <i>MAPP</i> | <i>SPP</i> | <i>SERC (without<br/>Florida)</i> | <i>TVA</i> | <i>INTO ENTERGY</i> | <i>MAIN</i> |
|------------------------|-------------|------------|-----------------------------------|------------|---------------------|-------------|
| MAPP                   |             |            |                                   |            |                     |             |
| SPP                    | 81.18%      |            |                                   |            |                     |             |
| SERC (without Florida) | 72.16%      | 84.31%     |                                   |            |                     |             |
| TVA                    | 71.70%      | 86.79%     | 69.81%                            |            |                     |             |
| INTO ENTERGY           | 80.51%      | 95.76%     | 86.44%                            | 84.91%     |                     |             |
| MAIN                   | 71.76%      | 79.22%     | 79.61%                            | 81.13%     | 77.12%              |             |

Source: Power Markets Week.

**Capacity, Market Share, and HHI**  
**Total Capacity**  
**Regional Market: Southwest Power Pool + Union + MAPP<sup>1</sup>**

| Purchaser                                  | Total Generating Capacity (MW) | Market Share   | HHI          |
|--|--------------------------------|----------------|--------------|
| Kansas City Power and Light                | 3,134                          | 4.11%          | 17           |
| Western Resources                          | 5,333                          | 6.99%          | 49           |
| Entergy Electric System                    | 22,242                         | 29.16%         | 850          |
| Union Electric Company / CIPSCO            | 10,741                         | 14.08%         | 198          |
| Central & South West Services <sup>2</sup> | 8,221                          | 10.78%         | 116          |
| Oklahoma Gas & Electric                    | 5,638                          | 7.39%          | 55           |
| Central Louisiana Electric Company         | 2,633                          | 3.45%          | 12           |
| Associated Electric Cooperative, Inc.      | 2,547                          | 3.34%          | 11           |
| Southwestern Power Administration          | 2,079                          | 2.72%          | 7            |
| Arkansas Rural Electric Coop               | 1,788                          | 2.34%          | 5            |
| Utilicorp                                  | 1,625                          | 2.13%          | 5            |
| Cajun Electric Power Cooperative           | 1,613                          | 2.11%          | 4            |
| Grand River Dam Authority                  | 1,280                          | 1.68%          | 3            |
| MAPP <sup>1</sup>                          | 1,200                          | 1.57%          | 2            |
| Western Farmers Electric Cooperative       | 1,093                          | 1.43%          | 2            |
| Empire District Electric Company           | 723                            | 0.95%          | 1            |
| Board of Public Utilities - KCK            | 676                            | 0.89%          | 1            |
| City Utilities, Springfield, MO            | 663                            | 0.87%          | 1            |
| City of Lafayette, LA                      | 580                            | 0.76%          | 1            |
| Sunflower Electric Power Corporation       | 522                            | 0.68%          | 0            |
| St. Joseph Light & Power Co.               | 382                            | 0.50%          | 0            |
| Louisiana Energy & Power Authority         | 350                            | 0.46%          | 0            |
| Southwestern Public Service <sup>3</sup>   | 300                            | 0.39%          | 0            |
| City of Independence, MO                   | 288                            | 0.38%          | 0            |
| KAMO Electric Cooperative                  | 200                            | 0.26%          | 0            |
| Oklahoma Municipal Power Authority         | 158                            | 0.21%          | 0            |
| Northeast Texas Electric Cooperative       | 117                            | 0.15%          | 0            |
| City of Clarksdale, MS                     | 60                             | 0.08%          | 0            |
| MidWest Energy                             | 32                             | 0.04%          | 0            |
| City of Alexandria, LA                     | 8                              | 0.01%          | 0            |
| Sam Rayburn G & T, Inc. <sup>4</sup>       | 55                             | 0.07%          | 0            |
| City of Sikeston, MO <sup>5</sup>          |                                | 0.00%          | -            |
| <b>Total</b>                               | <b>76,278</b>                  | <b>100.00%</b> | <b>1,342</b> |
| <b>Change in HHI Due to Merger</b>         |                                |                | <b>57</b>    |
| <b>Post-Merger HHI</b>                     |                                |                | <b>1,399</b> |

Notes: <sup>1</sup> Constrained to 1200 MW due to transmission constraints.

<sup>2</sup> Includes 800 MW of CSW - ERCOT Capacity

<sup>3</sup> Constrained to 300 MW due to transmission constraints.

<sup>4</sup> From SPP 1997 OE-411.

<sup>5</sup> Included in Associated Electric Cooperative's control area.

Sources: 1995 EIA Form 860.  
1997 SPP OE-411.

**Capacity, Market Share, and HHI**  
**Coal and Nuclear Capacity**  
**Regional Market: Southwest Power Pool + Union Electric + MAPP<sup>1</sup>**

| Utility  | Coal<br>(MW)  | Nuclear      | Total         | Market Share   | HHI          |
|--|---------------|--------------|---------------|----------------|--------------|
| Kansas City Power & Light Company                | 2,083         | 548          | 2,631         | 6.50%          | 42           |
| Western Resources                                | 3,241         | 548          | 3,790         | 9.36%          | 88           |
| Arkansas Electric Cooperative Corporation        | 1,408         | -            | 1,408         | 3.48%          | 12           |
| Associated Electric Cooperative, Inc.            | 2,502         | -            | 2,502         | 6.18%          | 38           |
| Cajun Electric Power Cooperative                 | 1,393         | -            | 1,393         | 3.44%          | 12           |
| CSW-SPP <sup>2</sup>                             | 3,537         | -            | 4,337         | 10.71%         | 115          |
| Central Louisiana Electric Company               | 482           | -            | 482           | 1.19%          | 1            |
| City of Alexandria, LA                           | -             | -            | -             | 0.00%          | -            |
| City of Clarksdale, MS                           | -             | -            | -             | 0.00%          | -            |
| City of Lafayette, LA                            | 262           | -            | 262           | 0.65%          | 0            |
| City Power & Light, Independence, MO             | 131           | -            | 131           | 0.32%          | 0            |
| City Utilities, Springfield MO                   | 413           | -            | 413           | 1.02%          | 1            |
| Empire District Electric Company                 | 383           | -            | 383           | 0.95%          | 1            |
| Entergy  | 2,506         | 3,424        | 5,931         | 14.65%         | 215          |
| Grand River Dam Authority                        | 810           | -            | 810           | 2.00%          | 4            |
| KAMO Electric Cooperative                        | 200           | -            | 200           | 0.49%          | 0            |
| Kansas City Board of Public Utilities            | 572           | -            | 572           | 1.41%          | 2            |
| Louisiana Energy & Power Authority               | 105           | -            | 105           | 0.26%          | 0            |
| Midwest Energy                                   | -             | -            | -             | 0.00%          | -            |
| Northeast Texas Electric Cooperative             | 117           | -            | 117           | 0.29%          | 0            |
| Oklahoma Gas & Electric Company                  | 2,530         | -            | 2,530         | 6.25%          | 39           |
| Oklahoma Municipal Power Authority               | 92            | -            | 92            | 0.23%          | 0            |
| Southwestern Public Service Company <sup>3</sup> | 2,146         | -            | 300           | 0.74%          | 1            |
| St. Joseph Light & Power Company                 | 218           | -            | 218           | 0.54%          | 0            |
| Sunflower Electric Power Corporation             | 325           | -            | 325           | 0.80%          | 1            |
| Union/CIPSCO <sup>4</sup>                        | 7,948         | 1,125        | 9,073         | 22.41%         | 502          |
| Utilicorp  | 880           | -            | 880           | 2.17%          | 5            |
| Western Farmers Electric Cooperative             | 408           | -            | 408           | 1.01%          | 1            |
| MAPP <sup>1</sup>                                |               |              | 1,200         | 2.96%          | 9            |
| <b>Total</b>                                     | <b>34,692</b> | <b>5,646</b> | <b>40,493</b> | <b>100.00%</b> | <b>1,089</b> |
| <b>Change in HHI due to Merger</b>               |               |              |               |                | <b>122</b>   |
| <b>Post-Merger HHI</b>                           |               |              |               |                | <b>1,210</b> |

Notes: <sup>1</sup> Total capacity is 1200 MW to account for transmission constraints.

<sup>2</sup> Total capacity has been increased by 800 MW to account for CSW-ERCOT.

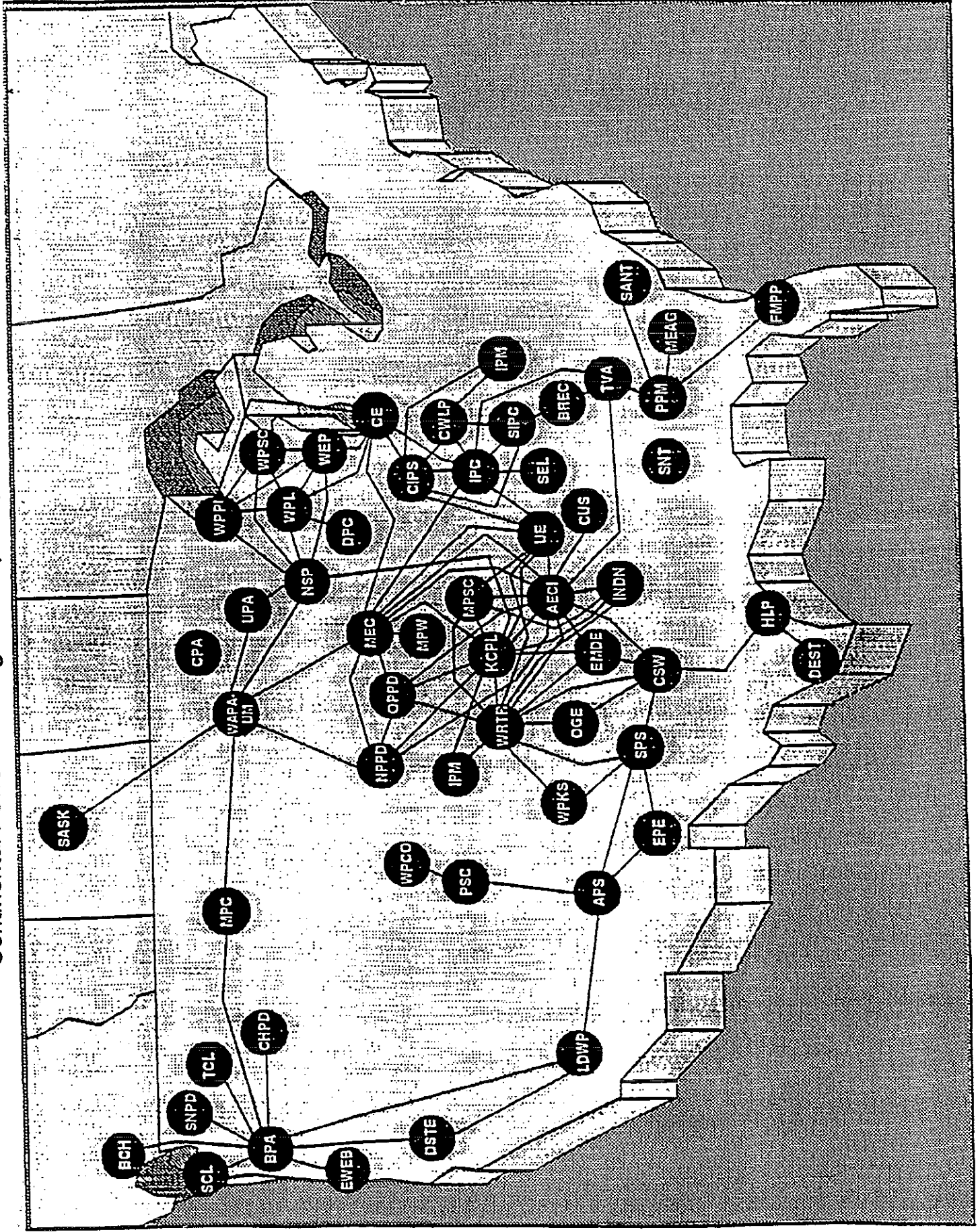
<sup>3</sup> Total capacity has been changed to 300 MW to account for transmission constraints.

<sup>4</sup> Capacities account for the merger between Union and CIPSCO.

Source: 1995 EIA Form 860.



# Continental Power Exchange . participants, February 1997



**Cumulative Frequency Distribution  
Average, Maximum, and Minimum Daily CPEX Prices  
July 19, 1996 - July 18, 1997**

| Average              |                              | Maximum              |                              | Minimum              |                              |
|----------------------|------------------------------|----------------------|------------------------------|----------------------|------------------------------|
| Price<br>(Mills/KWH) | Percent at or<br>Below Price | Price<br>(Mills/KWH) | Percent at or<br>Below Price | Price<br>(Mills/KWH) | Percent at or<br>Below Price |
| 9                    | 0.34%                        | 10                   | 0.34%                        | 5                    | 0.34%                        |
| 10                   | 0.68%                        | 15                   | 3.39%                        | 6                    | 0.34%                        |
| 11                   | 2.03%                        | 16                   | 5.42%                        | 7                    | 1.36%                        |
| 12                   | 2.37%                        | 17                   | 11.53%                       | 8                    | 4.07%                        |
| 13                   | 5.08%                        | 18                   | 15.93%                       | 9                    | 9.15%                        |
| 14                   | 8.14%                        | 19                   | 18.64%                       | 10                   | 15.25%                       |
| 15                   | 14.92%                       | 20                   | 26.78%                       | 12                   | 32.54%                       |
| 16                   | 24.41%                       | 21                   | 31.19%                       | 13                   | 43.73%                       |
| 17                   | 33.90%                       | 22                   | 35.59%                       | 14                   | 56.95%                       |
| 18                   | 41.69%                       | 23                   | 38.31%                       | 15                   | 68.81%                       |
| 19                   | 46.78%                       | 24                   | 41.36%                       | 16                   | 77.97%                       |
| 20                   | 56.27%                       | 25                   | 47.12%                       | 17                   | 83.39%                       |
| 25                   | 81.02%                       | 26                   | 50.85%                       | 18                   | 89.83%                       |
| 30                   | 90.17%                       | 27                   | 54.24%                       | 20                   | 97.29%                       |
| 35                   | 93.22%                       | 28                   | 57.97%                       | 22                   | 98.98%                       |
| 40                   | 96.27%                       | 29                   | 60.34%                       | 24                   | 99.66%                       |
| 45                   | 97.97%                       | 30                   | 63.73%                       | 26                   | 100.00%                      |
| 50                   | 98.64%                       | 40                   | 83.39%                       |                      |                              |
| 60                   | 99.32%                       | 50                   | 90.85%                       |                      |                              |
| 70                   | 99.32%                       | 60                   | 94.58%                       |                      |                              |
| 80                   | 100.00%                      | 80                   | 98.64%                       |                      |                              |
|                      |                              | 100                  | 98.98%                       |                      |                              |
|                      |                              | 120                  | 99.32%                       |                      |                              |
|                      |                              | 140                  | 99.66%                       |                      |                              |
|                      |                              | 160                  | 100.00%                      |                      |                              |

Source: Continental Power Exchange *CPEX Price Index*.

**Cumulative Frequency Distribution  
SPP Average Daily Spot Prices for Electricity  
7/19/96-7/18/97**

| Price<br>\$/MWH | Percent At or<br>Below Price |
|-----------------|------------------------------|
| 13              | 0.78%                        |
| 14              | 0.78%                        |
| 15              | 2.35%                        |
| 16              | 7.45%                        |
| 17              | 20.78%                       |
| 18              | 34.90%                       |
| 19              | 52.94%                       |
| 20              | 57.65%                       |
| 21              | 61.96%                       |
| 22              | 69.80%                       |
| 23              | 73.33%                       |
| 24              | 77.25%                       |
| 25              | 80.78%                       |
| 30              | 90.20%                       |
| 35              | 94.12%                       |
| 40              | 95.29%                       |
| 50              | 98.04%                       |
| 60              | 98.82%                       |
| 80              | 98.82%                       |
| 100             | 98.82%                       |
| 120             | 99.22%                       |
| 140             | 99.61%                       |
| 160             | 100.00%                      |

Source: The McGraw-Hill Companies' *Power Markets Week*, Pg. 2, July 22,  
1996 through July 21, 1997.

**Entergy Services**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| Seller                                | Transaction Type | MWH Purchased | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|---------------------------------------|------------------|---------------|--------------------|-------------------|-----------------------------------|
| American Petrofina                    | OS               | 264           | 3,695              | 14.00             | 0.00%                             |
| So. Cotton Oil                        | OS               | 871           | 12,617             | 14.49             | 0.01%                             |
| Union Electric Company                | OS               | 1,519,596     | 22,900,555         | 15.07             | 11.86%                            |
| Air Products Company                  | OS               | 370           | 5,686              | 15.37             | 11.86%                            |
| NISCO                                 | OS               | 1,301         | 20,482             | 15.74             | 11.88%                            |
| Texaco (Star Enterprises)             | OS               | 38,389        | 610,948            | 15.91             | 12.17%                            |
| Cogen Power, Inc.                     | OS               | 1,874         | 30,051             | 16.04             | 12.19%                            |
| Texaco Chemical Company               | OS               | 52,185        | 840,768            | 16.11             | 12.60%                            |
| BASF-Wyandotte Corporation            | OS               | 2,522         | 40,832             | 16.19             | 12.62%                            |
| Air Liquied                           | OS               | 17,578        | 285,076            | 16.22             | 12.75%                            |
| B.P. Oil, Inc.                        | OS               | 27,111        | 442,058            | 16.31             | 12.96%                            |
| Toledo Bend                           | OS               | 90,786        | 1,484,661          | 16.35             | 13.67%                            |
| Phillips / Huber                      | OS               | 5,455         | 89,290             | 16.37             | 13.72%                            |
| E.I. DuPont DeNemours Company         | OS               | 1,626         | 26,763             | 16.46             | 13.73%                            |
| Empire District Electric Co.          | OS               | 115,340       | 1,919,417          | 16.64             | 14.63%                            |
| Formosa                               | OS               | 1,865         | 31,272             | 16.77             | 14.64%                            |
| Noram Energy Services, Inc.           | OS               | 471           | 7,933              | 16.84             | 14.65%                            |
| MUN                                   | OS               | 17,277        | 291,298            | 16.86             | 14.78%                            |
| Associated Electric Cooperative, Inc. | OS               | 1,477,914     | 24,925,322         | 16.87             | 26.31%                            |
| Vulcan Chemical Company               | OS               | 31,540        | 531,977            | 16.87             | 26.55%                            |
| Municipal MEAM                        | OS               | 13,839        | 233,697            | 16.89             | 26.66%                            |
| Chevron                               | OS               | 1,204         | 20,464             | 17.00             | 26.67%                            |
| Exxon USA                             | OS               | 9,910         | 168,774            | 17.03             | 26.75%                            |
| Freeport - McMoran                    | OS               | 5,700         | 97,752             | 17.15             | 26.79%                            |
| Southwest Power Administration        | OS               | 3,556         | 61,931             | 17.42             | 26.82%                            |
| Monochem, Inc.                        | OS               | 4,747         | 82,735             | 17.43             | 26.86%                            |
| Tennessee Valley Authority            | OS               | 1,501,927     | 26,521,854         | 17.66             | 38.57%                            |
| System Purchases From Others          | OS               | 2,317,217     | 41,624,547         | 17.96             | 56.65%                            |
| Dow Chemical Company                  | OS               | 114,680       | 2,071,202          | 18.06             | 57.54%                            |
| Sam Rayburn G & T, Inc.               | OS               | 7,677         | 138,851            | 18.09             | 57.60%                            |
| Cajun Electric Power Cooperative      | OS               | 204,660       | 3,723,544          | 18.19             | 59.20%                            |
| ENG Carbons                           | OS               | 2,827         | 51,718             | 18.29             | 59.22%                            |
| Calciner Industries                   | OS               | 107,636       | 1,977,106          | 18.37             | 60.06%                            |
| James River Corporation               | OS               | 2,797         | 51,546             | 18.43             | 60.08%                            |
| Potlatch Forest                       | OS               | 48,720        | 902,272            | 18.52             | 60.46%                            |
| International Paper Co.               | OS               | 1,973         | 36,572             | 18.54             | 60.48%                            |
| Kitchen Brothers Mfg., Co.            | OS               | 644           | 11,999             | 18.63             | 60.48%                            |
| Mississippi Chemical Co.              | OS               | 14,193        | 265,849            | 18.73             | 60.59%                            |
| Ergon Refining                        | OS               | 2,010         | 37,758             | 18.79             | 60.61%                            |
| Arkansas Electric Cooperative Corp.   | OS               | 2,691,292     | 52,194,058         | 19.39             | 81.60%                            |
| Clark Refining                        | OS               | 2,825         | 54,907             | 19.44             | 81.62%                            |
| Southwestern Electric Power Co.       | OS               | 446           | 8,768              | 19.66             | 81.63%                            |
| Little Rock Wastewater                | OS               | 258           | 5,190              | 20.12             | 81.63%                            |
| Harding University                    | OS               | 26            | 542                | 20.85             | 81.63%                            |
| Oklahoma Gas & Electric Company       | OS               | 594,253       | 12,788,031         | 21.52             | 86.27%                            |

| Seller                               | Transaction Type | MWH Purchased     | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|--------------------------------------|------------------|-------------------|--------------------|-------------------|-----------------------------------|
| Sam Rayburn Municipal Power Agency   | OS               | 492,131           | 10,612,879         | 21.57             | 90.10%                            |
| Western Systems Power Pool           | OS               | 143,536           | 3,651,782          | 25.44             | 91.22%                            |
| Lafayette                            | OS               | 167               | 4,817              | 28.84             | 91.23%                            |
| Southern Company Services, Inc.      | OS               | 141,486           | 4,806,827          | 33.97             | 92.33%                            |
| Agrielectric Power Partners, LTD     | OS               | 77,366            | 2,740,289          | 35.42             | 92.93%                            |
| Central Louisiana Electric Co.       | OS               | 36,241            | 1,442,792          | 39.81             | 93.22%                            |
| City of Ruston                       | OS               | 42                | 1,680              | 40.00             | 93.22%                            |
| Louisiana Energy Power Assoc.        | OS               | 111               | 4,816              | 43.39             | 93.22%                            |
| Murray Hydro                         | OS               | 869,529           | 55,701,995         | 64.06             | 100.00%                           |
| Sam Houston Electric Co-op.          | OS               | 127               | 10,796             | 85.01             | 100.00%                           |
| <b>Total</b>                         |                  | <b>12,820,088</b> | <b>276,611,041</b> |                   |                                   |
| <b>Weighted average cost per MWH</b> |                  |                   |                    | <b>21.58</b>      |                                   |

**Note:**

<sup>1</sup> This entry represents Louisiana Power & Light's system purchases from others. It is reported as an aggregate figure on Louisiana Power & Light's 1995 FERC Form 1.

**Sources:**

Arkansas Power & Light Company's 1995 FERC Form 1.  
Entergy Power, Inc.'s 1995 FERC Form 1.  
Gulf States Utilities Company's 1995 FERC Form 1.  
Louisiana Power & Light Company's 1995 FERC Form 1.  
Mississippi Power & Light Company's 1995 FERC Form 1.  
New Orleans Public Service Inc.'s 1995 FERC Form 1.

**Entergy Services**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| Seller                                 | Transaction Type | MWH Purchased | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|--|------------------|---------------|--------------------|-------------------|-----------------------------------|
| Sam Rayburn G & T, Inc.                | OS               | 14,352        | 163,331            | 11.38             | 0.06%                             |
| Western Resources                      | OS               | 34,675        | 436,495            | 12.59             | 0.22%                             |
| PanEnergy Gas Services                 | OS               | 2             | 26                 | 13.00             | 0.22%                             |
| Central Louisiana Electric Company     | OS               | 234,594       | 3,405,387          | 14.52             | 1.26%                             |
| Koppers Industries, Inc.               | OS               | 1             | 15                 | 15.00             | 1.26%                             |
| Union Electric Company                 | OS               | 2,760,883     | 46,514,300         | 16.85             | 13.56%                            |
| Associated Electric Cooperative, Inc.  | OS               | 3,465,029     | 60,837,461         | 17.56             | 29.00%                            |
| Huntsman                               | OS               | 10,822        | 190,067            | 17.56             | 29.05%                            |
| City of Jonesboro                      | OS               | 15,135        | 266,925            | 17.64             | 29.12%                            |
| Formosa                                | OS               | 10,772        | 190,038            | 17.64             | 29.17%                            |
| Empire District Electric Company       | OS               | 238,763       | 4,213,319          | 17.65             | 30.23%                            |
| Pottlatch Forest                       | OS               | 39,961        | 724,900            | 18.14             | 30.41%                            |
| Cargill                                | OS               | 3,812         | 69,425             | 18.21             | 30.42%                            |
| ENG Carbons                            | OS               | 11,439        | 209,510            | 18.32             | 30.48%                            |
| International Paper Company            | OS               | 5,797         | 107,131            | 18.48             | 30.50%                            |
| IMC/Agrico                             | OS               | 11,425        | 211,186            | 18.48             | 30.55%                            |
| Mississippi Chemical Company           | OS               | 4,834         | 89,587             | 18.53             | 30.57%                            |
| Crown Paper                            | OS               | 1,842         | 34,367             | 18.66             | 30.58%                            |
| Ergon Refining Inc.                    | OS               | 1,196         | 22,404             | 18.73             | 30.59%                            |
| MUN                                    | OS               | 347,554       | 6,514,304          | 18.74             | 32.14%                            |
| Western Power Services                 | OS               | 800           | 15,200             | 19.00             | 32.14%                            |
| Calciner Industries                    | OS               | 117,066       | 2,224,726          | 19.00             | 32.66%                            |
| Vulcan Chemical Company                | OS               | 23,418        | 446,527            | 19.07             | 32.76%                            |
| Cajun Electric Power Cooperative       | OS               | 454,929       | 8,747,545          | 19.23             | 34.79%                            |
| Texaco Chemical Company                | OS               | 19,743        | 383,467            | 19.42             | 34.88%                            |
| Cogen Power, Inc.                      | OS               | 1,859         | 36,226             | 19.49             | 34.89%                            |
| Kitchen Brothers Manufacturing Company | OS               | 8             | 156                | 19.50             | 34.89%                            |
| American Petrofina                     | OS               | 202           | 3,957              | 19.59             | 34.89%                            |
| Little Rock Wastewater                 | OS               | 137           | 2,694              | 19.66             | 34.89%                            |
| Southwest Power Administration         | OS               | 126,706       | 2,513,628          | 19.84             | 35.45%                            |
| Arkansas Electric Cooperative Corp.    | OS               | 1,911,313     | 38,110,121         | 19.94             | 43.97%                            |
| B.P. Oil, Inc.                         | OS               | 36,134        | 722,461            | 19.99             | 44.13%                            |
| Clark Refining                         | OS               | 4,959         | 99,850             | 20.14             | 44.15%                            |
| Harding University                     | OS               | 3             | 61                 | 20.33             | 44.15%                            |
| Tennessee Valley Authority             | OS               | 8,104,243     | 166,417,336        | 20.53             | 80.26%                            |
| Air Liquied                            | OS               | 12,673        | 263,737            | 20.81             | 80.32%                            |
| Oklahoma Gas & Electric Company        | OS               | 595,640       | 12,408,843         | 20.83             | 82.97%                            |
| Dow Chemical Company                   | OS               | 88,877        | 1,931,636          | 21.73             | 83.37%                            |
| James River Corporation                | OS               | 2,951         | 64,352             | 21.81             | 83.38%                            |
| Exxon USA                              | OS               | 1,583         | 34,564             | 21.83             | 83.39%                            |
| Texaco (Star Enterprises)              | OS               | 19,484        | 427,639            | 21.95             | 83.47%                            |
| Monochem                               | OS               | 7,986         | 175,804            | 22.01             | 83.51%                            |
| Southern Mississippi Electric Power    | OS               | 11,220        | 252,263            | 22.48             | 83.56%                            |
| Valero Power Services Company          | OS               | 4,800         | 108,225            | 22.55             | 83.58%                            |
| Air Products Company                   | OS               | 1,143         | 25,915             | 22.67             | 83.58%                            |
| Southwestern Electric Power Company    | OS               | 31,297        | 722,257            | 23.08             | 83.72%                            |
| Sam Rayburn Municipal Power Agency     | OS               | 304,154       | 7,144,208          | 23.49             | 85.08%                            |

| Seller                               | Transaction Type | MWH Purchased     | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|--------------------------------------|------------------|-------------------|--------------------|-------------------|-----------------------------------|
| Coastal Electric Service Company     | OS               | 1,200             | 28,200             | 23.50             | 85.08%                            |
| Electric Clearinghouse, Inc.         | OS               | 8,373             | 209,134            | 24.98             | 85.12%                            |
| BASF-Wyandotte Corporation           | OS               | 3,579             | 94,857             | 26.50             | 85.14%                            |
| LG&E Power Marketing                 | OS               | 18,526            | 494,929            | 26.72             | 85.22%                            |
| Lafayette                            | OS               | 7,505             | 201,903            | 26.90             | 85.25%                            |
| Southern Company Services, Inc.      | OS               | 477,810           | 13,895,648         | 29.08             | 87.38%                            |
| Central and South West Services      | OS               | 7,685             | 225,627            | 29.36             | 87.42%                            |
| Intercoastal                         | OS               | 2,600             | 79,040             | 30.40             | 87.43%                            |
| Western Systems Power Pool           | OS               | 336,716           | 10,472,217         | 31.10             | 88.93%                            |
| Agrielectric Power Partners, LTD     | OS               | 53,727            | 1,903,006          | 35.42             | 89.17%                            |
| Louisiana Energy Power Association   | OS               | 317               | 11,419             | 36.02             | 89.17%                            |
| Nelson Industrial Steam Company      | OS               | 1,467,799         | 61,969,603         | 42.22             | 95.71%                            |
| Louis Dreyfus Electric Power, Inc.   | OS               | 76,617            | 3,244,043          | 42.34             | 96.05%                            |
| E.I. DuPont DeNemours Company        | OS               | 236               | 10,923             | 46.28             | 96.05%                            |
| Murray Hydro                         | OS               | 882,003           | 56,277,910         | 63.81             | 99.98%                            |
| Toledo Blend                         | OS               | 3,665             | 693,309            | 189.17            | 100.00%                           |
| NISCO                                | OS               | 759               | 144,627            | 190.55            | 100.00%                           |
| CNG Power Marketing                  | OS               | 1                 | 13,536             | 13536.00          | 100.00%                           |
| Koch Power Services, Inc.            | OS               | 1                 | 15,450             | 15450.00          | 100.00%                           |
| <b>Total</b>                         |                  | <b>22,445,335</b> | <b>517,468,957</b> |                   |                                   |
| <b>Weighted Average Cost per MWH</b> |                  |                   |                    | <b>23.05</b>      |                                   |

Sources: Entergy Power, Inc.'s 1996 FERC Form 1; Entergy Gulf States, Inc.'s 1996 FERC Form 1; Entergy Mississippi, Inc.'s 1996 FERC Form 1; Entergy Louisiana, Inc.'s 1996 FERC Form 1; Entergy Arkansas, Inc.'s 1996 FERC Form 1; Entergy New Orleans, Inc.'s 1996 FERC Form 1.

**Central and South West Corporation (SPP)**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| Seller  | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative<br>Share of MWH<br>Purchased |
|---|-------------------------------|------------------|-----------------------|-------------------------|---|
| Associated Electric Cooperative               | OS                            | 4,255            | 81,922                | 19.25                   | 0.74%                                   |
| Caddo Electric Cooperative                    | OS                            | 38               | 3,270                 | 86.05                   | 0.75%                                   |
| Cajun Electric Cooperative                    | OS                            | 5,717            | 115,242               | 20.16                   | 1.75%                                   |
| Central Louisiana Electric Company            | OS                            | 197              | 4,399                 | 22.33                   | 1.78%                                   |
| Central Power & Light                         | OS                            | 4,200            | 122,572               | 29.18                   | 2.52%                                   |
| Choctaw Electric Cooperative                  | OS                            | 49               | 3,874                 | 79.06                   | 2.53%                                   |
| City of Lafayette                             | OS                            | 30               | 2,250                 | 75.00                   | 2.53%                                   |
| City Utilities of Springfield                 | OS                            | 600              | 19,920                | 33.20                   | 2.64%                                   |
| Empire District Electric Company              | OS                            | 81               | 1,538                 | 25.21                   | 2.65%                                   |
| Entergy Services, Inc.                        | OS                            | 8,925            | 201,500               | 22.58                   | 4.21%                                   |
| Grand River Dam Authority                     | OS                            | 8,058            | 133,179               | 16.53                   | 5.62%                                   |
| Kansas City Power & Light                     | OS                            | 300              | 5,280                 | 17.60                   | 5.67%                                   |
| Kansas Gas and Electric - (Western Resources) | OS                            | 11,828           | 187,853               | 15.88                   | 7.74%                                   |
| KOCH Power Marketing                          | OS                            | 990              | 15,560                | 15.72                   | 7.91%                                   |
| Louis Dreyfus Power Marketing                 | OS                            | 960              | 15,360                | 16.00                   | 8.08%                                   |
| Mid-Continent Power Company, Inc.             | OS                            | 356,347          | 11,893,411            | 33.38                   | 70.37%                                  |
| Noram   | OS                            | 300              | 5,880                 | 19.60                   | 70.43%                                  |
| Northeastern Electric Cooperative             | OS                            | 211              | 15,121                | 71.66                   | 70.46%                                  |
| Odgen Martin Systems                          | OS                            | 3,032            | 43,440                | 14.33                   | 70.99%                                  |
| Oklahoma Electric Cooperative                 | OS                            | 19               | 2,221                 | 116.89                  | 71.00%                                  |
| Oklahoma Gas and Electric Company             | OS                            | 6,679            | 165,856               | 24.83                   | 72.16%                                  |
| Oklahoma Municipal Power Authority            | OS                            | 19,723           | 325,888               | 16.52                   | 75.61%                                  |
| Public Service Company of New Mexico          | OS                            | 13,860           | 152,287               | 10.99                   | 78.04%                                  |
| Snider Industries                             | OS                            | 5,332            | 94,408                | 17.71                   | 78.97%                                  |
| Southwestern Public Service Company           | OS                            | 85,628           | 1,455,578             | 17.00                   | 93.94%                                  |
| Union Electric Company                        | OS                            | 18,240           | 294,966               | 16.17                   | 97.13%                                  |
| Verdigris Valley Cooperative                  | OS                            | 8                | 863                   | 107.88                  | 97.13%                                  |
| West Texas Utilities Company                  | OS                            | 47               | 3,744                 | 79.66                   | 97.14%                                  |
| Western Farmers Electric Cooperative          | OS                            | 16,373           | 239,019               | 14.60                   | 100.00%                                 |
| Weyerhaeuser Company                          | OS                            | 11               | 184                   | 17.64                   | 100.00%                                 |
| <b>Total</b>                                  |                               | <b>572,018</b>   | <b>15,606,596</b>     |                         |   |
| <b>Weighted Average Cost per MWH</b>          |                               |                  |                       | <b>27.28</b>            |   |

Sources: Public Service Company of Oklahoma 1995 FERC Form 1.  
Southwestern Electric Power Company 1995 FERC Form 1.



**Central and Southwest Services  
1996 Non-Firm and Short-Term Firm Purchases  
(In Order of Cost Per MWH)**

| Seller  | Transaction Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) | Cumulative<br>Share of MWH<br>Purchased |
|---|------------------|------------------|--------------------------|-------------------------|---|
| Entergy Services                                    | OS               | 53,984           | 88,663                   | 1.64                    | 1.91%                                   |
| South Western Public Service                        | OS               | 60               | 131                      | 2.18                    | 1.91%                                   |
| Associated Electric Cooperative                     | OS               | 68,131           | 557,555                  | 8.18                    | 4.31%                                   |
| City Utilities of Springfield                       | OS               | 1,190            | 13,440                   | 11.29                   | 4.36%                                   |
| Federal Energy Sales                                | OS (3)           | 10,274           | 131,945                  | 12.84                   | 4.72%                                   |
| Pacificorp  | OS (3)           | 300              | 3,900                    | 13.00                   | 4.73%                                   |
| Kansas Gas and Electric Company (Western Resources) | OS (3)           | 3,265            | 46,874                   | 14.36                   | 4.84%                                   |
| Entergy Services                                    | OS               | 220,118          | 3,173,404                | 14.42                   | 12.61%                                  |
| Associated Electric Cooperative                     | OS (1)           | 4,324            | 63,342                   | 14.65                   | 12.77%                                  |
| Kansas City Power and Light                         | OS (3)           | 1,825            | 27,375                   | 15.00                   | 12.83%                                  |
| Empire District Electric                            | OS               | 200              | 3,050                    | 15.25                   | 12.84%                                  |
| InterCoast Power Marketing                          | OS (3)           | 17,875           | 288,181                  | 16.12                   | 13.47%                                  |
| Kansas Gas and Electric Company (Western Resources) | OS (1)           | 141,284          | 2,279,001                | 16.13                   | 18.46%                                  |
| Grand River Dam Authority                           | OS (3)           | 4,238            | 68,675                   | 16.20                   | 18.61%                                  |
| Entergy Services WSPP                               | OS               | 38,473           | 628,715                  | 16.34                   | 19.96%                                  |
| LG&E Power Marketing                                | OS (3)           | 188,960          | 3,124,415                | 16.53                   | 26.64%                                  |
| ENRON Power Marketing, Inc.                         | OS               | 11,090           | 184,432                  | 16.63                   | 27.03%                                  |
| Grand River Dam Authority                           | OS               | 9,913            | 165,905                  | 16.74                   | 27.38%                                  |
| Union Electric Company                              | OS (1)           | 340,494          | 5,742,996                | 16.87                   | 39.40%                                  |
| Western Farmers Electric Coop                       | OS (1)           | 9,605            | 164,723                  | 17.15                   | 39.74%                                  |
| LG&E Power Marketing                                | OS (3)           | 136,800          | 2,346,495                | 17.15                   | 44.57%                                  |
| Associated Electric Cooperative                     | OS (1)           | 186,951          | 3,220,183                | 17.22                   | 51.17%                                  |
| Associated Electric Cooperative                     | OS               | 185,288          | 3,389,073                | 17.35                   | 58.06%                                  |
| Associated Electric Cooperative                     | OS (3)           | 21,238           | 372,789                  | 17.55                   | 58.81%                                  |
| Weyerhaeuser Company                                | OS (5)           | 11               | 184                      | 17.64                   | 58.81%                                  |
| LG&E Power Marketing                                | OS               | 28,305           | 509,432                  | 18.00                   | 59.81%                                  |
| Western Farmers Electric Coop                       | OS (3)           | 33,251           | 601,433                  | 18.09                   | 60.88%                                  |
| Coral Power, L.L.C.                                 | OS               | 2,000            | 38,000                   | 19.00                   | 61.05%                                  |
| Louis Dreyfus Power Marketing                       | OS (3)           | 19,136           | 363,584                  | 19.00                   | 61.73%                                  |
| Union Electric Company                              | OS (1)           | 4,250            | 81,291                   | 19.13                   | 61.88%                                  |
| Kansas Gas and Electric Company (Western Resources) | OS (3)           | 40,314           | 779,947                  | 19.35                   | 63.30%                                  |
| Southwestern Public Service Company                 | OS (3)           | 49,009           | 957,209                  | 19.53                   | 65.03%                                  |
| Grand River Dam Authority                           | OS (1)           | 7,143            | 140,516                  | 19.67                   | 65.28%                                  |
| Oklahoma Gas and Electric Company                   | OS (1)           | 1,725            | 33,941                   | 19.68                   | 65.35%                                  |
| Oklahoma Gas and Electric Company                   | OS               | 1,875            | 38,900                   | 20.75                   | 65.41%                                  |
| Vitol Gas and Electric                              | OS (3)           | 800              | 16,600                   | 20.75                   | 65.44%                                  |
| Public Service Company of New Mexico                | OS (3)           | 20,445           | 426,534                  | 20.86                   | 66.16%                                  |
| Cajun Electric Power Cooperative, Inc.              | OS               | 55,133           | 1,153,949                | 20.93                   | 68.11%                                  |
| Western Gas Resources                               | OS               | 960              | 20,160                   | 21.00                   | 68.14%                                  |
| ENRON Power Marketing, Inc.                         | OS (3)           | 13,507           | 283,887                  | 21.02                   | 68.62%                                  |
| SONAT Power Marketing                               | OS               | 8,993            | 191,733                  | 21.32                   | 68.84%                                  |
| Southwestern Public Service Company                 | OS (1)           | 7,900            | 168,541                  | 21.33                   | 69.21%                                  |
| Oklahoma Municipal Power Authority                  | OS (6)           | 21,023           | 452,189                  | 21.51                   | 69.96%                                  |
| Coastal Electric Services                           | OS               | 7,976            | 172,728                  | 21.66                   | 70.24%                                  |
| Valero Power Services Company                       | OS (3)           | 29,419           | 642,576                  | 21.84                   | 71.28%                                  |
| Vitol Gas & Electric                                | OS               | 1,536            | 33,792                   | 22.00                   | 71.33%                                  |
| Pan Energy Trading & Marketing Services             | OS (3)           | 975              | 21,488                   | 22.04                   | 71.37%                                  |
| Valero Power Service Company                        | OS               | 11,425           | 260,340                  | 22.79                   | 71.77%                                  |
| PanEnergy Power Services                            | OS               | 50               | 1,150                    | 23.00                   | 71.77%                                  |
| Southwestern Public Service Company                 | OS (1)           | 2,300            | 53,044                   | 23.06                   | 71.85%                                  |
| Empire District Electric Company                    | OS (1)           | 2,435            | 56,758                   | 23.31                   | 71.94%                                  |
| Kansas Power and Light (Western Resources)          | OS (1)           | 100              | 2,339                    | 23.39                   | 71.94%                                  |
| Oklahoma Gas and Electric Company                   | OS (3)           | 12,983           | 308,711                  | 23.78                   | 72.40%                                  |
| City of Lafayette, Louisiana                        | OS               | 965              | 23,378                   | 24.23                   | 72.43%                                  |
| Western Farmers Electric Coop                       | OS (1)           | 92               | 2,247                    | 24.42                   | 72.44%                                  |
| Citizens Lehman Power Sales                         | OS               | 928              | 22,736                   | 24.50                   | 72.47%                                  |
| Cajun Electric Power Cooperative, Inc.              | OS               | 12,612           | 309,208                  | 24.52                   | 72.92%                                  |
| KOCH Power Marketing                                | OS (3)           | 2,500            | 62,100                   | 24.84                   | 73.00%                                  |
| SONAT Power Marketing                               | OS               | 4,000            | 103,000                  | 25.75                   | 73.14%                                  |
| Coral Power, L.L.C.                                 | OS (3)           | 400              | 10,400                   | 26.00                   | 73.16%                                  |
| Kansas Gas and Electric Company (Western Resources) | OS (1)           | 3,948            | 104,254                  | 26.41                   | 73.30%                                  |
| Snider Industries                                   | OS               | 4,021            | 106,637                  | 26.52                   | 73.44%                                  |

| Seller                                 | Transaction Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) | Cumulative<br>Share of MWH<br>Purchased |
|--|------------------|------------------|--------------------------|-------------------------|---|
| Grand River Dam Authority              | OS               | 123              | 3,287                    | 26.72                   | 73.44%                                  |
| Empire District Electric Company       | OS               | 54               | 1,445                    | 26.76                   | 73.45%                                  |
| Electric Clearinghouse                 | OS (3)           | 5,600            | 150,800                  | 26.83                   | 73.64%                                  |
| Oklahoma Gas and Electric Company      | OS (1)           | 438              | 11,842                   | 27.26                   | 73.66%                                  |
| Oklahoma Gas and Electric Company      | OS (3)           | 250              | 7,000                    | 28.00                   | 73.67%                                  |
| Oklahoma Gas and Electric Company      | OS               | 1,725            | 48,300                   | 28.00                   | 73.73%                                  |
| Central Louisiana Electric Company     | OS               | 2,750            | 77,025                   | 28.01                   | 73.83%                                  |
| Electric Clearinghouse Inc.            | OS (3)           | 3,335            | 94,121                   | 28.22                   | 73.94%                                  |
| Grand River Dam Authority              | OS (1)           | 104              | 2,839                    | 28.26                   | 73.95%                                  |
| Empire District Electric               | OS (1)           | 183              | 5,179                    | 28.30                   | 73.95%                                  |
| Central Louisiana Electric Co. WSPP    | OS               | 5,914            | 169,475                  | 28.66                   | 74.16%                                  |
| Central Power and Light Company        | OS (8)           | 16,108           | 464,603                  | 28.84                   | 74.73%                                  |
| Grand River Dam Authority              | OS               | 400              | 11,600                   | 29.00                   | 74.75%                                  |
| City Utilities of Springfield          | OS               | 2,028            | 61,412                   | 30.27                   | 74.82%                                  |
| Electric Clearing House                | OS               | 30,450           | 922,171                  | 30.28                   | 75.89%                                  |
| Delhi Energy Services, Inc.            | OS (3)           | 5,250            | 161,775                  | 30.81                   | 76.08%                                  |
| Oklahoma Gas and Electric Company      | OS               | 299              | 9,228                    | 30.86                   | 76.09%                                  |
| Louis Dreyfus Power Marketing          | OS (3)           | 1,296            | 41,472                   | 32.00                   | 76.13%                                  |
| Mid-Continent Power Company, Inc.      | OS (4)           | 343,198          | 10,997,532               | 32.04                   | 88.25%                                  |
| Central Louisiana Electric Company     | OS               | 150              | 4,838                    | 32.25                   | 88.25%                                  |
| Noram Energy Service                   | OS               | 750              | 25,425                   | 33.90                   | 88.28%                                  |
| Electric Clearinghouse                 | OS (3)           | 12,704           | 434,758                  | 34.22                   | 88.73%                                  |
| Southwestern Public Service Company    | OS (3)           | 6,047            | 215,796                  | 35.69                   | 88.84%                                  |
| Western Farmers Electric Coop          | OS (3)           | 350              | 12,600                   | 36.00                   | 88.86%                                  |
| Cajun Electric Power Cooperative, Inc. | OS               | 309,697          | 12,323,993               | 39.79                   | 99.89%                                  |
| Noram Energy Service                   | OS               | 800              | 37,800                   | 47.25                   | 99.92%                                  |
| Noram Energy Services, Inc.            | OS (3)           | 1,600            | 77,776                   | 48.61                   | 99.97%                                  |
| Choctaw Electric Cooperative           | OS (2)           | 121              | 8,294                    | 68.55                   | 99.98%                                  |
| City of Lafayette                      | OS               | 39               | 2,678                    | 73.79                   | 99.98%                                  |
| West Texas Utilities                   | OS (7)           | 61               | 4,660                    | 76.39                   | 99.98%                                  |
| Grand River Dam Authority              | OS               | 300              | 24,250                   | 80.83                   | 99.99%                                  |
| Northeastern Electric Cooperative      | OS (2)           | 241              | 21,628                   | 89.75                   | 100.00%                                 |
| Total                                  |                  | 2,832,702        | 61,076,191               |                         |   |
| Weighted Average Cost per MWH          |                  |                  |                          | 21.56                   |   |

## Notes:

- 1 Replacement Energy and Emergency Energy.
- 2 Service for Company Equipment & Customers purchased from other suppliers & Reimbursement for prior years.
- 3 Transactions through Membership in Western System Power Pool.
- 4 Assured Delivery energy, Operating Reserves Energy and Regulation Energy.
- 5 Dump Power.
- 6 Regulation Energy Purchase and Delivery Point Load Resources Exchange.
- 7 Substation Service.
- 8 Subsidiary of Central and South West Corporation.

Sources: Public Service Company of Oklahoma's 1996 FERC Form 1; Southwestern Electric Power Company's 1996 FERC Form 1.

**Empire District Electric Company  
1995 Non-Firm and Short-Term Firm Purchases  
(In Order of Cost Per MWH)**

| Seller                                | Statistical Classification | MWH Purchased    | Total Charges (\$) | Cost Per MWH (\$) | Cumulative Share of MWH Purchased |
|---------------------------------------|----------------------------|------------------|--------------------|-------------------|-----------------------------------|
| City of Coffeyville, KS               | OS (j)                     | 3,247            | 16,884             | 5.20              | 0.21%                             |
| City of Higginsville, MO              | OS (j)                     | 5,206            | 27,071             | 5.20              | 0.55%                             |
| KS Municipal Energy Agency (KCP&L)    | OS (j)                     | 2,045            | 10,634             | 5.20              | 0.68%                             |
| Southwest Power Administration        | OS (k)                     | 2,820            | 14,664             | 5.20              | 0.86%                             |
| Kansas City Board of Public Utilities | OS (j)                     | 80,129           | 416,671            | 5.20              | 6.06%                             |
| KS Municipal Energy Agency (WR)       | OS (j)                     | 18,109           | 94,167             | 5.20              | 7.24%                             |
| KAW Valley Electric Cooperative       | OS (j)                     | 1,928            | 10,026             | 5.20              | 7.37%                             |
| Kansas City Power & Light             | OS (d)                     | 119,241          | 1,617,540          | 13.57             | 15.10%                            |
| Kansas City Power & Light             | OS (g)                     | 134,610          | 1,883,885          | 14.00             | 23.84%                            |
| Enron                                 | OS (e)                     | 49,620           | 760,070            | 15.32             | 27.06%                            |
| Western Resources (KG&E)              | OS (d)                     | 22,545           | 366,049            | 16.24             | 28.52%                            |
| Electric Clearinghouse                | OS (e)                     | 550              | 8,937              | 16.25             | 28.56%                            |
| Grand River Dam Authority             | OS (b)                     | 47,692           | 804,903            | 16.88             | 31.65%                            |
| Western Resources (KG&E)              | OS (e)                     | 60,948           | 1,047,755          | 17.19             | 35.61%                            |
| CPEX                                  | OS <sup>2</sup>            | 1,985            | 34,259             | 17.26             | 35.74%                            |
| Louis Dreyfuss                        | OS (e)                     | 22,760           | 395,400            | 17.37             | 37.22%                            |
| Southwest Electric Power Co. (C&SW)   | OS (b)                     | 21,306           | 406,665            | 19.09             | 38.60%                            |
| Central & Southwest (SPP-PSO)         | OS (e)                     | 245              | 4,795              | 19.57             | 38.61%                            |
| Central & Southwest (SPP-SWEPCO)      | OS (e)                     | 3,735            | 76,998             | 20.62             | 38.86%                            |
| Southwest Electric Power Co. (C&SW)   | OS (a)                     | 91               | 1,887              | 20.74             | 38.86%                            |
| Western Resources (KG&E)              | OS (b)                     | 3,565            | 75,469             | 21.17             | 39.09%                            |
| Public Service Co. of OK (C&SW)       | OS (a)                     | 37               | 851                | 23.00             | 39.10%                            |
| Associated Electric Cooperative       | OS (b)                     | 2,100            | 48,705             | 23.19             | 39.23%                            |
| Western Resources (KG&E)              | OS (m)                     | 128,613          | 3,329,323          | 25.89             | 47.58%                            |
| Western Resources (KG&E)              | OS (l)                     | 65               | 1,738              | 26.74             | 47.58%                            |
| Grand River Dam Authority             | OS (a)                     | 29               | 793                | 27.34             | 47.59%                            |
| Entergy                               | OS (b)                     | 9,595            | 265,541            | 27.67             | 48.21%                            |
| City of Coffeyville, KS               | OS (j)                     | 2,280            | 65,208             | 28.60             | 48.36%                            |
| City of Higginsville, MO              | OS (j)                     | 3,600            | 102,960            | 28.60             | 48.59%                            |
| KS Municipal Energy Agency (KCP&L)    | OS (j)                     | 2,400            | 68,640             | 28.60             | 48.75%                            |
| KS Municipal Energy Agency (WR)       | OS (j)                     | 11,040           | 315,744            | 28.60             | 49.46%                            |
| Kansas City Board of Public Utilities | OS (j)                     | 46,285           | 1,324,633          | 28.62             | 52.47%                            |
| KAW Valley Electric Cooperative       | OS (j)                     | 1,190            | 34,286             | 28.81             | 52.54%                            |
| Associated Electric Cooperative       | OS (m)                     | 255,655          | 7,452,774          | 29.15             | 69.14%                            |
| Associated Electric Cooperative       | OS (m)                     | 432,818          | 12,772,991         | 29.51             | 97.23%                            |
| Louisville G&E Power Marketing        | OS (e)                     | 340              | 11,300             | 33.24             | 97.25%                            |
| Entergy                               | OS (a)                     | 362              | 12,265             | 33.88             | 97.27%                            |
| City Utilities of Springfield         | OS (b)                     | 11,733           | 411,478            | 35.07             | 98.03%                            |
| Western Resources (KG&E)              | OS (d)                     | 7,541            | 307,605            | 40.79             | 98.52%                            |
| Associated Electric Cooperative       | OS (a)                     | 41               | 1,899              | 46.32             | 98.53%                            |
| Public Service Co. of OK (C&SW)       | OS (m)                     | 16,055           | 823,036            | 51.26             | 99.57%                            |
| Kansas City Power & Light Company     | OS (l)                     | 36               | 2,038              | 56.61             | 99.57%                            |
| Coastal                               | OS (e)                     | 50               | 4,313              | 86.26             | 99.57%                            |
| Public Service Co. of OK (C&SW)       | OS (m)                     | 6,574            | 715,151            | 108.78            | 100.00%                           |
| <b>Total</b>                          |                            | <b>1,640,816</b> | <b>36,148,001</b>  |                   |                                   |
| <b>Weighted average cost per MWH</b>  |                            |                  |                    | <b>23.46</b>      |                                   |

Notes:

<sup>1</sup> Nature of Other Services:

- (a) Emergency Energy
- (b) Replacement Energy
- (c) Capacity & Energy relating to a specific purchase.
- (d) System Energy
- (e) Economy Energy
- (f) Exchange Energy
- (g) Term Energy
- (h) Extended Energy
- (i) Peaking Capacity
- (j) Supplemental Energy
- (k) Excess Energy
- (l) Operating Reserve
- (m) System Participation
- (n) General Purpose

<sup>2</sup> CPEX provides a "computerized bulletin board" which the respondent utilizes to schedule power with other members of CPEX, and CPEX charges fees to use their services. Empire District Electric does not actually buy and sell directly to CPEX.

Source: Empire District Electric Company's 1995 FERC Form 1.

**The Empire District Electric Company**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost per MWH)**

| Seller                                    | Transaction Type | MWH Purchased | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|---|------------------|---------------|--------------------|-------------------|-----------------------------------|
| KAW Valley Electric Cooperative           | OS               | 1,697         | 8,824              | 5.20              | 0.09%                             |
| Kansas Municipal Energy Agency (KCP&L)    | OS               | 1,921         | 9,989              | 5.20              | 0.18%                             |
| Kansas City Board of Public Utilities     | OS               | 66,435        | 345,462            | 5.20              | 3.56%                             |
| Kansas Municipal Energy Agency (KG&E)     | OS               | 16,585        | 86,242             | 5.20              | 4.40%                             |
| City of Higginsville, MO                  | OS               | 3,274         | 17,025             | 5.20              | 4.57%                             |
| City of Coffeyville, KS                   | OS               | 3,218         | 16,734             | 5.20              | 4.73%                             |
| VITOL                                     | OS               | 100           | 950                | 9.50              | 4.74%                             |
| Louisville Gas & Electric                 | OS               | 2,760         | 38,720             | 14.03             | 4.88%                             |
| Western Resources (KG&E)                  | OS               | 45            | 632                | 14.04             | 4.88%                             |
| St. Joseph Light & Power                  | OS               | 100           | 1,500              | 15.00             | 4.88%                             |
| Kansas City Power & Light Company         | OS               | 21,515        | 332,736            | 15.47             | 5.98%                             |
| Enron Power Marketing, Inc.               | OS               | 215,838       | 3,510,377          | 16.26             | 16.94%                            |
| Kansas City Power & Light Company         | OS               | 501,885       | 8,265,917          | 16.47             | 42.43%                            |
| EASTEX                                    | OS               | 800           | 13,400             | 16.75             | 42.47%                            |
| Missouri Public Service Company           | OS               | 71            | 1,206              | 16.99             | 42.47%                            |
| Continental Power Exchange                | OS               | 25,705        | 463,115            | 18.02             | 43.78%                            |
| Louis Dreyfus Electric Power, Inc.        | OS               | 59,424        | 1,117,494          | 18.81             | 46.80%                            |
| Western Resources (KG&E)                  | OS               | 52,103        | 985,121            | 18.91             | 49.44%                            |
| Grand River Dam Authority                 | OS               | 15,475        | 294,755            | 19.05             | 50.23%                            |
| KOCH                                      | OS               | 150           | 3,006              | 20.04             | 50.24%                            |
| PANENERGY                                 | OS               | 1,215         | 26,505             | 21.81             | 50.30%                            |
| Southwest Electric Power Company (C&SW)   | OS               | 7,948         | 192,000            | 24.16             | 50.70%                            |
| Entergy Power, Inc.                       | OS               | 12,383        | 299,886            | 24.22             | 51.33%                            |
| Public Service Company of Oklahoma (C&SW) | OS               | 4,065         | 100,609            | 24.75             | 51.54%                            |
| Associated Electric Cooperative           | OS               | 5,785         | 143,963            | 24.89             | 51.83%                            |
| Coastal                                   | OS               | 800           | 20,000             | 25.00             | 51.87%                            |
| DELHI                                     | OS               | 700           | 17,500             | 25.00             | 51.91%                            |
| SONAT                                     | OS               | 800           | 20,800             | 26.00             | 51.95%                            |
| Western Resources (KG&E)                  | OS               | 200           | 5,200              | 26.00             | 51.96%                            |
| Entergy Power, Inc.                       | OS               | 8,043         | 212,610            | 26.43             | 52.37%                            |
| Oklahoma Gas & Electric                   | OS               | 60            | 1,590              | 26.50             | 52.37%                            |
| Western Resources (KG&E)                  | OS               | 233,445       | 6,319,089          | 27.07             | 64.23%                            |
| Western Resources (KG&E)                  | OS               | 50            | 1,394              | 27.88             | 64.23%                            |
| Southwestern Public Service Company       | OS               | 250           | 7,075              | 28.30             | 64.24%                            |
| Kansas City Board of Public Utilities     | OS               | 46,450        | 1,315,904          | 28.33             | 66.60%                            |
| City of Coffeyville, KS                   | OS               | 2,280         | 64,752             | 28.40             | 66.72%                            |
| City of Higginsville, MO                  | OS               | 3,600         | 102,240            | 28.40             | 66.90%                            |
| Kansas Municipal Energy Agency (KCP&L)    | OS               | 2,400         | 68,160             | 28.40             | 67.02%                            |
| Kansas Municipal Energy Agency (KG&E)     | OS               | 11,040        | 313,536            | 28.40             | 67.58%                            |
| Entergy Power, Inc.                       | OS               | 220           | 6,260              | 28.45             | 67.59%                            |
| Public Service Company of Oklahoma (C&SW) | OS               | 1,405         | 40,905             | 29.11             | 67.66%                            |
| Grand River Dam Authority                 | OS               | 40            | 1,192              | 29.80             | 67.67%                            |
| KAW Valley Electric Cooperative           | OS               | 1,110         | 33,792             | 30.44             | 67.72%                            |
| Entergy Power, Inc.                       | OS               | 363           | 11,194             | 30.84             | 67.74%                            |
| Associated Electric Cooperative           | OS               | 282,388       | 8,743,413          | 30.96             | 82.08%                            |
| Noram Energy Services, Inc.               | OS               | 1,045         | 32,917             | 31.50             | 82.14%                            |
| Southwest Electric Power Company (C&SW)   | OS               | 7,213         | 230,247            | 31.92             | 82.50%                            |
| Associated Electric Cooperative           | OS               | 64            | 2,121              | 33.14             | 82.51%                            |
| Kansas City Power & Light Company         | OS               | 26            | 913                | 35.12             | 82.51%                            |
| Associated Electric Cooperative           | OS               | 269,630       | 9,477,384          | 35.15             | 96.20%                            |
| Public Service Company of Oklahoma (C&SW) | OS               | 113           | 4,075              | 36.06             | 96.21%                            |
| Western Resources (KG&E)                  | OS               | 15,684        | 601,642            | 38.36             | 97.00%                            |

| Seller                                    | Transaction Type | MWH Purchased    | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|---|------------------|------------------|--------------------|-------------------|-----------------------------------|
| City Utilities of Springfield             | OS               | 500              | 21,520             | 43.04             | 97.03%                            |
| Southwest Electric Power Company (C&SW)   | OS               | 32               | 1,581              | 49.41             | 97.03%                            |
| Southwest Electric Power Company (C&SW)   | OS               | 9,740            | 520,354            | 53.42             | 97.53%                            |
| Public Service Company of Oklahoma (C&SW) | OS               | 10,390           | 573,428            | 55.19             | 98.05%                            |
| Southwestern Public Service Company       | OS               | 38,320           | 2,275,251          | 59.38             | 100.00%                           |
| <b>Total</b>                              |                  | <b>1,968,898</b> | <b>47,324,207</b>  |                   |                                   |
| <b>Weighted Average Cost per MWH</b>      |                  |                  |                    | <b>24.04</b>      |                                   |

Source: Empire District Electric Company 1996 FERC Form 1.

**MidAmerican Energy Company**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| Seller                                | Statistical<br>Classification | MWH<br>Purchased | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative<br>Share of MWH<br>Purchased |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|---|
| John Deere                            | OS                            | 514              | 4,470                 | 8.70                    | 0.03%                                   |
| Cooperative Power Association         | OS                            | 83,232           | 873,338               | 10.49                   | 5.39%                                   |
| ENEREX                                | OS                            | 657              | 6,936                 | 10.56                   | 5.43%                                   |
| White Hydro                           | OS                            | 1,345            | 14,382                | 10.69                   | 5.52%                                   |
| Lincoln Electric System               | OS                            | 8,198            | 88,415                | 10.78                   | 6.05%                                   |
| Algona Municipal Utilities            | OS                            | 31,807           | 343,350               | 10.79                   | 8.09%                                   |
| Midwest Power Systems, Inc.           | OS                            | 1,365            | 14,822                | 10.86                   | 8.18%                                   |
| United Power Association              | OS                            | 13,200           | 143,518               | 10.87                   | 9.03%                                   |
| Corn Belt Power                       | OS                            | 145,532          | 1,725,805             | 11.86                   | 18.39%                                  |
| Atlantic                              | OS                            | 9,581            | 117,367               | 12.25                   | 19.01%                                  |
| Missouri Basin Municipal Power Agency | OS                            | 61,186           | 751,995               | 12.29                   | 22.95%                                  |
| Muscatine Power and Water             | OS                            | 18,526           | 231,806               | 12.51                   | 24.14%                                  |
| Cooperative Power Adm.                | OS                            | 118,245          | 1,483,344             | 12.54                   | 31.75%                                  |
| Western Area Power Association        | OS                            | 273,207          | 3,456,069             | 12.65                   | 49.33%                                  |
| Harlan                                | OS                            | 11,889           | 151,585               | 12.75                   | 50.09%                                  |
| Municipal Energy Agency of Nebraska   | OS                            | 515              | 6,725                 | 13.06                   | 50.13%                                  |
| Minnkota Power Coop, Inc.             | OS                            | 124,721          | 1,684,919             | 13.51                   | 58.15%                                  |
| Southern Minnesota Municipal Power    | OS                            | 16,428           | 233,909               | 14.24                   | 59.21%                                  |
| Otter Tail Power Company              | OS                            | 115,262          | 1,696,131             | 14.72                   | 66.62%                                  |
| Montana-Dakota Utilities Company      | OS                            | 6,424            | 94,562                | 14.72                   | 67.04%                                  |
| Northwestern Public Services Company  | OS                            | 17,076           | 256,160               | 15.00                   | 68.14%                                  |
| IES Utilities, Inc.                   | OS                            | 1,323            | 20,811                | 15.73                   | 68.22%                                  |
| Continental Power Exchange            | OS                            | 5,189            | 82,291                | 15.86                   | 68.56%                                  |
| Iowa-Illinois Gas & Electric Company  | OS                            | 3,889            | 62,244                | 16.01                   | 68.81%                                  |
| Northern States Power                 | OS                            | 15,164           | 251,992               | 16.62                   | 69.78%                                  |
| Minnesota Power & Light Company       | OS                            | 40,046           | 709,119               | 17.71                   | 72.36%                                  |
| Omaha Public Power District           | OS                            | 15,733           | 278,756               | 17.72                   | 73.37%                                  |
| Commonwealth Edison                   | OS                            | 134,362          | 2,472,192             | 18.40                   | 82.02%                                  |
| Cedar Falls Utilities                 | OS                            | 7,669            | 145,432               | 18.96                   | 82.51%                                  |
| St. Joseph Light and Power            | OS                            | 1,442            | 28,015                | 19.43                   | 82.60%                                  |
| Kansas City Power & Light Company     | OS                            | 27,890           | 612,961               | 21.98                   | 84.40%                                  |
| Hutchinson Util Commission            | OS                            | 30               | 660                   | 22.00                   | 84.40%                                  |
| Basin Electric Power Coop             | OS                            | 38,643           | 860,776               | 22.28                   | 86.89%                                  |
| Dairyland Power Cooperative           | OS                            | 1,547            | 36,760                | 23.76                   | 86.99%                                  |
| Associated Electric Coop, Inc.        | OS                            | 69,135           | 1,643,600             | 23.77                   | 91.43%                                  |
| Nebraska Public Power District        | OS                            | 25,636           | 649,511               | 25.34                   | 93.08%                                  |
| Union Electric Company                | OS                            | 28,692           | 817,099               | 28.48                   | 94.93%                                  |
| Illinois Power Company                | OS                            | 27,192           | 776,184               | 28.54                   | 96.68%                                  |
| Interstate Power Company              | OS                            | 177              | 6,161                 | 34.81                   | 96.69%                                  |
| Waverly Light and Power               | OS                            | 1,290            | 45,871                | 35.56                   | 96.77%                                  |
| Rochester Public Utilities            | OS                            | 13               | 478                   | 36.77                   | 96.77%                                  |
| Ames Municipal Electric System        | OS                            | 92               | 3,998                 | 43.46                   | 96.78%                                  |
| City of Davenport                     | OS                            | 3,013            | 175,704               | 58.32                   | 96.97%                                  |
| Berth Cabinet                         | OS                            | 65               | 3,893                 | 59.89                   | 96.98%                                  |
| Ag Processing                         | OS                            | 1,942            | 116,552               | 60.02                   | 97.10%                                  |
| Des Moines Metro Solid Waste          | OS                            | 39,500           | 2,376,265             | 60.16                   | 99.65%                                  |
| Wisconsin Public Power, Inc.          | OS                            | 47               | 18,526                | 394.17                  | 99.65%                                  |
| Basin Electric                        | OS                            | 5,422            | 377,096               | 69.55                   | 100.00%                                 |
| Wisconsin Public Power Inc.           | OS                            | 47               | 18,526                | 394.17                  | 100.00%                                 |
| <b>Total</b>                          |                               | <b>1,554,100</b> | <b>25,971,081</b>     |                         |   |
| <b>Weighted average cost per MWH</b>  |                               |                  |                       | <b>16.71</b>            |   |

Source: Mid-American Energy 1995 FERC Form 1.

**MidAmerican Electric Company**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost per MWH)**

| Seller                        | Statistical<br>Classification | Megawatt Hours<br>Purchased | Total Charge<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative Share<br>of MWH<br>Purchased |
|-------------------------------|-------------------------------|-----------------------------|----------------------|-------------------------|---|
| Supplier 5                    | OS                            | 144                         | 346                  | 2.40                    | 0.00%                                   |
| Supplier 54                   | OS                            | 63,987                      | 556,540              | 8.70                    | 1.43%                                   |
| Supplier 11                   | OS                            | 23,537                      | 208,099              | 8.84                    | 1.96%                                   |
| Supplier 6                    | OS                            | 33,485                      | 320,772              | 9.58                    | 2.70%                                   |
| Supplier 7                    | OS                            | 18,568                      | 193,440              | 10.42                   | 3.12%                                   |
| Supplier 57                   | OS                            | 1,217                       | 14,510               | 11.92                   | 3.15%                                   |
| Supplier 38                   | OS                            | 32,707                      | 392,117              | 11.99                   | 3.88%                                   |
| Supplier 40                   | OS                            | 223,984                     | 2,828,297            | 12.63                   | 8.88%                                   |
| Supplier 37                   | OS                            | 23,142                      | 320,963              | 13.87                   | 9.39%                                   |
| Supplier 41                   | OS                            | 188,696                     | 2,623,731            | 13.90                   | 13.61%                                  |
| Supplier 46                   | OS                            | 13,396                      | 191,421              | 14.29                   | 13.91%                                  |
| Supplier 56                   | OS                            | 189,832                     | 2,783,731            | 14.66                   | 18.14%                                  |
| Supplier 48                   | OS                            | 15,115                      | 222,212              | 14.70                   | 18.48%                                  |
| Supplier 45                   | OS                            | 7,062                       | 103,850              | 14.71                   | 18.64%                                  |
| Supplier 51                   | OS                            | 1,789                       | 26,518               | 14.82                   | 18.68%                                  |
| Supplier 60                   | OS                            | 2,081                       | 32,062               | 15.41                   | 18.72%                                  |
| Supplier 35                   | OS                            | 3,350                       | 54,556               | 16.29                   | 18.80%                                  |
| Supplier 33                   | OS                            | 7,491                       | 122,718              | 16.38                   | 18.97%                                  |
| Supplier 28                   | OS                            | 430                         | 7,142                | 16.61                   | 18.98%                                  |
| Supplier 25                   | OS                            | 4,347                       | 72,424               | 16.66                   | 19.07%                                  |
| Supplier 42                   | OS                            | 4,172                       | 69,509               | 16.66                   | 19.17%                                  |
| Supplier 58                   | OS                            | 271                         | 4,562                | 16.83                   | 19.17%                                  |
| Supplier 19                   | OS                            | 11,281                      | 196,015              | 17.38                   | 19.42%                                  |
| Supplier 32                   | OS                            | 737                         | 13,125               | 17.81                   | 19.44%                                  |
| Supplier 8                    | OS                            | 200                         | 4,020                | 20.10                   | 19.45%                                  |
| Supplier 59                   | OS                            | 4,005                       | 83,615               | 20.88                   | 19.54%                                  |
| Supplier 50                   | OS                            | 3,326                       | 69,780               | 20.98                   | 19.61%                                  |
| Supplier 15                   | OS                            | 60,965                      | 1,316,921            | 21.60                   | 20.97%                                  |
| Supplier 29                   | OS                            | 59,068                      | 1,277,196            | 21.62                   | 22.29%                                  |
| Supplier 27                   | OS                            | 800                         | 18,800               | 23.50                   | 22.31%                                  |
| Supplier 53                   | OS                            | 15,045                      | 365,617              | 24.30                   | 22.64%                                  |
| Supplier 31                   | OS                            | 95                          | 2,369                | 24.94                   | 22.64%                                  |
| Supplier 13                   | OS                            | 128,155                     | 3,201,031            | 24.98                   | 25.51%                                  |
| Supplier 34                   | OS                            | 16,046                      | 421,803              | 26.29                   | 25.86%                                  |
| Supplier 55                   | OS                            | 1,600                       | 43,640               | 27.28                   | 25.90%                                  |
| Supplier 20                   | OS                            | 4,914                       | 143,998              | 29.30                   | 26.01%                                  |
| Supplier 52                   | OS                            | 10,747                      | 317,162              | 29.51                   | 26.25%                                  |
| Supplier 17                   | OS                            | 336                         | 10,548               | 31.39                   | 26.26%                                  |
| Supplier 26                   | OS                            | 4                           | 126                  | 31.50                   | 26.26%                                  |
| Supplier 14                   | OS                            | 3,169,695                   | 100,447,064          | 31.69                   | 97.02%                                  |
| Supplier 4                    | OS                            | 62,770                      | 1,992,282            | 31.74                   | 98.42%                                  |
| Supplier 23                   | OS                            | 6,664                       | 220,435              | 33.08                   | 98.57%                                  |
| Supplier 22                   | OS                            | 11,598                      | 386,603              | 33.33                   | 98.83%                                  |
| Supplier 43                   | OS                            | 7,499                       | 255,130              | 34.02                   | 99.00%                                  |
| Supplier 18                   | OS                            | 10,055                      | 362,413              | 36.04                   | 99.22%                                  |
| Supplier 21                   | OS                            | 15,942                      | 592,912              | 37.19                   | 99.58%                                  |
| Supplier 49                   | OS                            | 4,623                       | 173,943              | 37.63                   | 99.68%                                  |
| Supplier 12                   | SF                            | 4,055                       | 152,652              | 37.65                   | 99.77%                                  |
| Supplier 47                   | SF                            | 10,243                      | 1,252,618            | 122.29                  | 100.00%                                 |
| Total                         |                               | 4,479,271                   | 124,471,338          |                         |   |
| Weighted Average Cost per MWH |                               |                             |                      | 27.79                   |   |

Source: MidAmerican Energy Company 1996 FERC Form 1.

**Midwest Energy, Inc.**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> | <b>Cumulative<br/>Share of MWH<br/>Purchased</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|--|
| WestPlains Energy                    | SF                                    | 106,505                  | 2,079,248                     | 19.52                            | 46.14%   |
| Parallel Generation                  | OS                                    | 49                       | 1,316                         | 26.86                            | 46.16%   |
| Sunflower Elec. Power Corp.          | OS                                    | 124,265                  | 5,101,540                     | 41.05                            | 100.00%  |
| <b>Total</b>                         |                                       | <b>230,819</b>           | <b>7,182,104</b>              |                                  |  |
| <b>Weighted average cost per MWH</b> |                                       |                          |                               | <b>31.12</b>                     |  |

Source: Midwest Energy 1995 FERC Form 1.



**Midwest Energy, Inc.**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost per MWH)**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>Megawatt Hours<br/>Purchased</b> | <b>Total Charge<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> | <b>Cumulative Share<br/>of MWH<br/>Purchased</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|------------------------------|----------------------------------|--|
| Parallel Generation                  | OS                                    | 20                                  | 387                          | 19.35                            | 0.01%  |
| WestPlains Energy                    | SF                                    | 29,469                              | 613,166                      | 20.81                            | 20.34%   |
| Sunflower Elec. Power Corp.          | OS                                    | 115,495                             | 5,118,012                    | 44.31                            | 100.00%  |
| <b>Total</b>                         |                                       | <b>144,984</b>                      | <b>5,731,565</b>             |                                  |  |
| <b>Weighted Average Cost per MWH</b> |                                       |                                     |                              | <b>39.53</b>                     |  |

Source: Midwest Energy, Inc. 1996 FERC Form 1.

**Oklahoma Gas & Electric Company  
1995 Non-Firm and Short-Term Firm Purchases  
(In Order of Cost Per MWH)**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> | <b>Cumulative<br/>Share of MWH<br/>Purchased</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|--|
| Louis Dreyfus Electric Power, Inc.   | OS                                    | 2,200                    | 32,498                        | 14.77                            | 0.70%  |
| Western Farmers Electric Coop        | OS                                    | 150,029                  | 2,255,099                     | 15.03                            | 48.53%   |
| Western Resources, Inc.              | OS                                    | 93,112                   | 1,423,543                     | 15.29                            | 78.21%   |
| Grand River Dam Authority            | OS                                    | 849                      | 14,225                        | 16.76                            | 78.48%   |
| Noram Energy Services                | OS                                    | 700                      | 12,425                        | 17.75                            | 78.70%   |
| Koch Power Services, Inc.            | OS                                    | 1,395                    | 25,950                        | 18.60                            | 79.15%   |
| Southwestern Electric Power Company  | OS                                    | 9                        | 175                           | 19.44                            | 79.15%   |
| Arkansas Electric Cooperative Corp   | OS                                    | 3,950                    | 81,950                        | 20.75                            | 80.41%   |
| Southwestern Public Service Company  | OS                                    | 6,950                    | 148,875                       | 21.42                            | 82.63%   |
| Enron Power Marketing, Inc.          | OS                                    | 675                      | 14,700                        | 21.78                            | 82.84%   |
| Central and Southwest Services, Inc. | OS                                    | 8,159                    | 177,726                       | 21.78                            | 85.44%   |
| Delhi Energy Services                | OS                                    | 400                      | 9,300                         | 23.25                            | 85.57%   |
| Entergy Services Inc.                | OS                                    | 41,240                   | 958,881                       | 23.25                            | 98.72%   |
| Public Service Company of Oklahoma   | OS                                    | 1,078                    | 25,271                        | 23.44                            | 99.06%   |
| LG&E Power Marketing Inc.            | OS                                    | 2,950                    | 71,925                        | 24.38                            | 100.00%  |
| Small Power Producers                | OS                                    | 2                        | 56                            | 28.00                            | 100.00%  |
| <b>Total</b>                         |                                       | <b>313,698</b>           | <b>5,252,599</b>              |                                  |  |
| <b>Weighted average cost per MWH</b> |                                       |                          |                               | <b>16.74</b>                     |  |

Source: Oklahoma Gas and Electric Company 1995 FERC Form 1.

**Oklahoma Gas & Electric Company  
1996 Non-Firm and Short-Term Firm Purchases  
(In Order of Cost Per MWH)**

| <b>Seller</b>                         | <b>Transaction<br/>Type</b> | <b>MWH<br/>Purchased</b> | <b>Total<br/>Charges<br/>(\$)</b> | <b>Cost per<br/>MWH<br/>(\$)</b> | <b>Cumulative<br/>Share of MWH<br/>Purchased</b> |
|---------------------------------------|-----------------------------|--------------------------|-----------------------------------|----------------------------------|--|
| Eastex Power Marketing                | OS                          | 776                      | 10,088                            | 13.00                            | 0.13%  |
| Sonat Power Marketing                 | OS                          | 450                      | 7,287                             | 16.19                            | 0.21%  |
| LG&E Power Marketing                  | OS                          | 103,804                  | 1,722,243                         | 16.59                            | 18.20%   |
| Western Resources, Inc.               | OS                          | 167,635                  | 2,785,301                         | 16.62                            | 47.25%   |
| Valero Power Services Co.             | OS                          | 2,025                    | 35,341                            | 17.45                            | 47.60%   |
| Western Farmers Electric Cooperative  | OS                          | 76,053                   | 1,335,932                         | 17.57                            | 60.78%   |
| Aquila Power Co.                      | OS                          | 1,552                    | 27,548                            | 17.75                            | 61.05%   |
| Southwestern Public Service Company   | OS                          | 1,250                    | 22,450                            | 17.96                            | 61.27%   |
| Louis Dreyfus Electric Power, Inc.    | OS                          | 10,382                   | 196,488                           | 18.93                            | 63.07%   |
| Grand River Dam Authority             | OS                          | 13,139                   | 250,836                           | 19.09                            | 65.35%   |
| Enron Power Marketing, Inc.           | OS                          | 20,237                   | 386,954                           | 19.12                            | 68.85%   |
| Koch Power Services, Inc.             | OS                          | 2,625                    | 50,550                            | 19.26                            | 69.31%   |
| Arkansas Electric Cooperative Corp    | OS                          | 27,365                   | 555,062                           | 20.28                            | 74.05%   |
| Delhi Energy Services, Inc.           | OS                          | 220                      | 4,836                             | 21.98                            | 74.09%   |
| Entergy Power, Inc.                   | OS                          | 61,226                   | 1,393,496                         | 22.76                            | 84.70%   |
| Central and Southwest Services, Inc.  | OS                          | 25,078                   | 580,600                           | 23.15                            | 89.04%   |
| NorAm Energy Services                 | OS                          | 150                      | 3,585                             | 23.90                            | 89.07%   |
| PanEnergy Power Services, Inc.        | OS                          | 7,028                    | 192,954                           | 27.46                            | 90.29%   |
| Sparks Regional Medical Center        | OS                          | 5,914                    | 171,494                           | 29.00                            | 91.31%   |
| Entergy Electric System               | OS                          | 43,045                   | 1,250,176                         | 29.04                            | 98.77%   |
| Electric Clearinghouse, Inc.          | OS                          | 5,175                    | 162,300                           | 31.36                            | 99.67%   |
| Southwestern Electric Power Co. (CSW) | OS                          | 849                      | 44,933                            | 52.92                            | 99.82%   |
| Public Service Company of Oklahoma (C | OS                          | 1,055                    | 73,849                            | 70.00                            | 100.00%  |
| <b>Total</b>                          |                             | <b>577,033</b>           | <b>11,264,303</b>                 |                                  |  |
| <b>Weighted Average Cost per MWH</b>  |                             |                          |                                   | <b>19.52</b>                     |  |

Source: Oklahoma Gas & Electric's 1996 FERC Form 1.

**St. Joseph Light & Power Company  
1995 Non-Firm and Short-Term Firm Purchases  
(In Order of Cost Per MWH)**

| <b>Seller</b>                        | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> | <b>Cumulative<br/>Share of MWH<br/>Purchased</b> |
|--------------------------------------|---------------------------------------|--------------------------|-------------------------------|----------------------------------|--|
| Interstate Power Company             | OS                                    | 105                      | 1,170                         | 11.14                            | 0.02%  |
| Northern States Power Company        | OS                                    | 8,027                    | 97,711                        | 12.17                            | 1.34%  |
| Lincoln Electric Systems             | OS                                    | 2,240                    | 29,190                        | 13.03                            | 1.70%  |
| Nebraska Public Power District       | OS                                    | 30,560                   | 448,845                       | 14.69                            | 6.73%  |
| Omaha Public Power District          | OS                                    | 330,048                  | 5,239,067                     | 15.87                            | 60.97%   |
| Kansas City Power & Light Company    | OS                                    | 111,843                  | 1,806,467                     | 16.15                            | 79.35%   |
| MidAmerican Energy Company           | OS                                    | 94,961                   | 1,993,252                     | 20.99                            | 94.95%   |
| Union Electric Company               | OS                                    | 21,541                   | 495,163                       | 22.99                            | 98.49%   |
| Associated Electric Coop, Inc.       | OS                                    | 9,129                    | 221,356                       | 24.25                            | 100.00%  |
| Koch Power                           | OS                                    | 30                       | 802                           | 26.73                            | 100.00%  |
| <b>Total</b>                         |                                       | <b>608,484</b>           | <b>10,333,023</b>             |                                  |  |
| <b>Weighted average cost per MWH</b> |                                       |                          |                               | <b>16.98</b>                     |  |

Source: St. Joseph Light & Power Company 1995 FERC Form 1.

**St. Joseph Light & Power Company**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost per MWH)**

| Seller                               | Statistical<br>Classification | Megawatt Hours<br>Purchased | Total Charge<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative Share<br>of MWH<br>Purchased |
|--------------------------------------|-------------------------------|-----------------------------|----------------------|-------------------------|---|
| Western Power Services, Inc.         | OS                            | 1,200                       | 14,550               | 12.13                   | 0.24%                                   |
| Lincoln Electric System              | OS                            | 18,216                      | 237,100              | 13.02                   | 3.86%                                   |
| Enron Power Marketing                | OS                            | 7,095                       | 110,173              | 15.53                   | 5.28%                                   |
| Northern States Power Co.            | OS                            | 11,043                      | 190,409              | 17.24                   | 7.47%                                   |
| Kansas City Power & Light Company    | OS                            | 24,743                      | 435,165              | 17.59                   | 12.40%                                  |
| Omaha Public Power District          | OS                            | 211,339                     | 3,732,561            | 17.66                   | 54.45%                                  |
| Interstate Power Company             | OS                            | 25                          | 455                  | 18.20                   | 54.46%                                  |
| Industrial Energy App., Inc.         | OS                            | 600                         | 11,200               | 18.67                   | 54.58%                                  |
| MidAmerican Energy Company           | OS                            | 78,918                      | 1,494,917            | 18.94                   | 70.28%                                  |
| Intercoastal Energy Company          | OS                            | 7,336                       | 148,164              | 20.20                   | 71.74%                                  |
| Union Electric Co.                   | OS                            | 30,717                      | 718,277              | 23.38                   | 77.86%                                  |
| Nebraska Public Power District       | OS                            | 95,926                      | 2,289,530            | 23.87                   | 96.95%                                  |
| Koch Power                           | OS                            | 713                         | 19,467               | 27.30                   | 97.09%                                  |
| MidAmerican Energy Company           | OS                            | 360                         | 9,900                | 27.50                   | 97.16%                                  |
| Pacific Corporation                  | OS                            | 640                         | 18,048               | 28.20                   | 97.29%                                  |
| Associated Electric Coop, Inc.       | OS                            | 11,220                      | 336,610              | 30.00                   | 99.52%                                  |
| Missouri Public Service              | OS                            | 1,705                       | 63,350               | 37.16                   | 99.86%                                  |
| Delphi Energy Services               | OS                            | 600                         | 23,970               | 39.95                   | 99.98%                                  |
| Noram Energy Services                | OS                            | 108                         | 5,223                | 48.36                   | 100.00%                                 |
| <b>Total</b>                         |                               | <b>502,504</b>              | <b>9,859,069</b>     |                         |   |
| <b>Weighted Average Cost per MWH</b> |                               |                             |                      | <b>19.62</b>            |   |

Source: St. Joseph Light & Power Company's 1996 FERC Form 1.

**Union Electric Company**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| <b>Seller</b>                           | <b>Statistical<br/>Classification</b> | <b>MWH<br/>Purchased</b> | <b>Total Charges<br/>(\$)</b> | <b>Cost Per<br/>MWH<br/>(\$)</b> | <b>Cumulative<br/>Share of MWH<br/>Purchased</b> |
|---|---------------------------------------|--------------------------|-------------------------------|----------------------------------|--|
| Southwestern Power Administration       | OS                                    | 1,900                    | 9,880                         | 5.20                             | 0.02%  |
| St. Joseph Light & Power Company        | OS                                    | 50,386                   | 684,331                       | 13.58                            | 0.61%  |
| IES Utilities, Inc.                     | OS                                    | 676,186                  | 10,540,909                    | 15.59                            | 8.51%  |
| Kansas City Power & Light Company       | OS                                    | 1,729,771                | 27,531,222                    | 15.92                            | 28.72%   |
| Browning-Ferris Gas Service             | OS                                    | 99                       | 1,627                         | 16.43                            | 28.73%   |
| MidAmerican Energy Company              | OS                                    | 1,338,848                | 22,101,999                    | 16.51                            | 44.37%   |
| Iowa-Illinois Gas & Electric Company    | OS                                    | 342,043                  | 5,699,650                     | 16.66                            | 48.37%   |
| Northern States Power                   | OS                                    | 525,051                  | 9,034,587                     | 17.21                            | 54.50%   |
| Missouri Public Service Company         | OS                                    | 14,864                   | 274,796                       | 18.49                            | 54.68%   |
| Associated Electric Coop Inc.           | OS                                    | 63,795                   | 1,273,669                     | 19.97                            | 55.42%   |
| Kentucky Utilities Company              | OS                                    | 124,079                  | 2,602,967                     | 20.98                            | 56.87%   |
| Electric Energy, Inc.                   | OS                                    | 759,952                  | 15,971,666                    | 21.02                            | 65.75%   |
| Tennessee Valley Authority              | OS                                    | 532,002                  | 11,269,087                    | 21.18                            | 71.97%   |
| Western Resources                       | OS                                    | 49,180                   | 1,052,409                     | 21.40                            | 72.54%   |
| Energy Service Inc.                     | OS                                    | 227,434                  | 4,993,852                     | 21.96                            | 75.20%   |
| Illinois Power Company                  | OS                                    | 330,543                  | 7,409,959                     | 22.42                            | 79.06%   |
| Central Southwest                       | OS                                    | 189,456                  | 4,249,776                     | 22.43                            | 81.28%   |
| Central Illinois Public Service Company | OS                                    | 156,467                  | 4,001,979                     | 25.58                            | 83.10%   |
| Arkansas Power & Light Company          | OS                                    | 1,396,320                | 36,568,522                    | 26.19                            | 99.42%   |
| Interstate Power Company                | OS                                    | 2,810                    | 76,975                        | 27.39                            | 99.45%   |
| Carolina Power & Light                  | OS                                    | 30,275                   | 1,560,578                     | 51.55                            | 99.81%   |
| Waste Management                        | OS                                    | 15,772                   | 845,754                       | 53.62                            | 99.99%   |
| Noram Energy Services                   | OS                                    | 750                      | 52,500                        | 70.00                            | 100.00%  |
| <b>Total</b>                            |                                       | <b>8,557,983</b>         | <b>167,808,694</b>            |                                  |  |
| <b>Weighted average cost per MWH</b>    |                                       |                          |                               | <b>19.61</b>                     |  |

Source: Union Electric Company 1995 FERC Form 1.

**Union Electric Company**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost per MWH)**

| Seller                                 | Statistical<br>Classification | Megawatt Hours<br>Purchased | Total Charge<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative Share<br>of MWH<br>Purchased |
|--|-------------------------------|-----------------------------|----------------------|-------------------------|---|
| Aqualon Incorporated                   | OS                            | 2,102                       | 10,424               | 4.96                    | 0.02%                                   |
| Northern States Power Company          | OS                            | 815,350                     | 11,108,032           | 13.62                   | 9.18%                                   |
| City of Sikestown, MO                  | OS                            | 8,047                       | 110,247              | 13.70                   | 9.27%                                   |
| IES Utilities, Inc.                    | OS                            | 774,061                     | 10,804,490           | 13.96                   | 17.96%                                  |
| Interstate Power Company               | OS                            | 36,647                      | 535,236              | 14.61                   | 18.37%                                  |
| Vitol Gas & Electric L.L.E             | OS                            | 4,208                       | 66,539               | 15.81                   | 18.42%                                  |
| Mid-American Energy Company            | OS                            | 1,552,870                   | 24,661,212           | 15.88                   | 35.86%                                  |
| Browning-Ferris Gas Services           | OS                            | 104                         | 1,671                | 16.07                   | 35.86%                                  |
| Kansas City Power & Light Company      | OS                            | 1,256,448                   | 20,661,257           | 16.44                   | 49.97%                                  |
| Virginia Power Company                 | OS                            | 3,200                       | 54,400               | 17.00                   | 50.00%                                  |
| St. Joseph Light & Power Company       | OS                            | 39,563                      | 678,095              | 17.14                   | 50.45%                                  |
| Kentucky Utilities Company             | OS                            | 189,395                     | 3,789,264            | 20.01                   | 52.57%                                  |
| Louisville Gas & Electric              | OS                            | 375                         | 7,688                | 20.50                   | 52.58%                                  |
| Electric Energy Inc.                   | OS                            | 774,243                     | 16,036,179           | 20.71                   | 61.27%                                  |
| Tennessee Valley Authority             | OS                            | 521,545                     | 11,763,876           | 22.56                   | 67.13%                                  |
| Federal Energy Sales, Inc.             | OS                            | 1,600                       | 36,288               | 22.68                   | 67.14%                                  |
| Illinois Power Company                 | OS                            | 513,566                     | 11,737,009           | 22.85                   | 72.91%                                  |
| Western Resources                      | OS                            | 67,616                      | 1,591,859            | 23.54                   | 73.67%                                  |
| Sonat Power Marketing                  | OS                            | 10,146                      | 242,931              | 23.94                   | 73.78%                                  |
| Entergy Arkansas, Inc.                 | OS                            | 1,401,920                   | 34,274,966           | 24.45                   | 89.53%                                  |
| Delhi Energy Services, Inc.            | OS                            | 2,415                       | 61,508               | 25.47                   | 89.55%                                  |
| Central Illinois Public Service Co.    | OS                            | 428,342                     | 11,192,693           | 26.13                   | 94.36%                                  |
| Entergy Power Marketing, Inc.          | OS                            | 1,600                       | 42,400               | 26.50                   | 94.38%                                  |
| Noram Power Services, Inc.             | OS                            | 5,803                       | 157,006              | 27.06                   | 94.45%                                  |
| Koch Power Services, Inc.              | OS                            | 44,290                      | 1,223,889            | 27.63                   | 94.94%                                  |
| Heartland Energy Services              | OS                            | 6,055                       | 173,455              | 28.65                   | 95.01%                                  |
| Electric Clearinghouse Inc.            | OS                            | 19,630                      | 570,831              | 29.08                   | 95.23%                                  |
| Central and Southwest Services, Inc.   | OS                            | 161,589                     | 4,880,302            | 30.20                   | 97.05%                                  |
| L.G.E. Power Marketing                 | OS                            | 41,550                      | 1,394,478            | 33.56                   | 97.51%                                  |
| Carolina Power and Light               | OS                            | 10,950                      | 372,063              | 33.98                   | 97.64%                                  |
| Peco Energy Company                    | OS                            | 25,716                      | 889,014              | 34.57                   | 97.92%                                  |
| Associated Electric Cooperative        | OS                            | 59,498                      | 2,110,390            | 35.47                   | 98.59%                                  |
| Entergy Services, Inc.                 | OS                            | 82,501                      | 2,960,661            | 35.89                   | 99.52%                                  |
| Duke/Louis Dreyfus Electric Power Inc. | OS                            | 395                         | 14,578               | 36.91                   | 99.52%                                  |
| Enron Power Marketing, Inc.            | OS                            | 7,933                       | 306,314              | 38.61                   | 99.61%                                  |
| Rainbow Energy Marketing Corp.         | OS                            | 1,525                       | 58,900               | 38.62                   | 99.63%                                  |
| Missouri Public Service Company        | OS                            | 14,186                      | 551,993              | 38.91                   | 99.79%                                  |
| Waste Management                       | OS                            | 18,778                      | 960,285              | 51.14                   | 100.00%                                 |
| <b>Total</b>                           |                               | <b>8,905,762</b>            | <b>176,092,423</b>   |                         |   |
| <b>Weighted Average Cost per MWH</b>   |                               |                             |                      | <b>19.77</b>            |   |

Source: Union Electric Company's 1996 FERC Form 1.

**Utilicorp United, Inc.**  
**1995 Non-Firm and Short-Term Firm Purchases**  
**(In Order of Cost Per MWH)**

| Seller                                   | Statistical Classification | MWH Purchased    | Total Charges (\$) | Cost Per MWH (\$) | Cumulative Share of MWH Purchased |
|--|----------------------------|------------------|--------------------|-------------------|-----------------------------------|
| Kansas Electric Power Cooperative (f)    | OS                         | 3,641            | 31,862             | 8.75              | 0.32%                             |
| Koch Oil                                 | SF                         | 29,637           | 347,761            | 11.73             | 2.88%                             |
| Southwestern Public Service (f)          | OS                         | 63,917           | 866,015            | 13.55             | 8.42%                             |
| Kansas City Power & Light (a)            | OS                         | 1,088            | 15,014             | 13.80             | 8.51%                             |
| Associated Electric (e)                  | OS                         | 130,900          | 1,832,600          | 14.00             | 19.85%                            |
| Kansas City Power & Light (a)            | OS                         | 95,094           | 1,361,519          | 14.32             | 28.09%                            |
| Kansas City Power & Light (b)            | OS                         | 61,830           | 896,845            | 14.51             | 33.44%                            |
| Union Electric (b)                       | OS                         | 8,958            | 139,959            | 15.62             | 34.22%                            |
| Western Resources (KPL)                  | OS                         | 23,208           | 366,224            | 15.78             | 36.23%                            |
| Sunflower Electric Power Cooperative (f) | OS                         | 555,282          | 8,977,713          | 16.17             | 84.33%                            |
| Independence Power & Light (a)           | OS                         | 13,659           | 226,220            | 16.56             | 85.51%                            |
| Midwest Energy, Inc. (f)                 | OS                         | 370              | 6,536              | 17.66             | 85.54%                            |
| Western Resources (d)                    | OS                         | 40,760           | 721,736            | 17.71             | 89.07%                            |
| Union Electric (a)                       | OS                         | 10,740           | 193,534            | 18.02             | 90.00%                            |
| Empire District & Electric (d)           | OS                         | 1,918            | 35,569             | 18.54             | 90.17%                            |
| Western Resources (a)                    | OS                         | 41,170           | 771,092            | 18.73             | 93.73%                            |
| Western Resources (a)                    | OS                         | 36,343           | 681,346            | 18.75             | 96.88%                            |
| ENRON Capital and Trade Resources (a)    | OS                         | 25,530           | 498,078            | 19.51             | 99.09%                            |
| Independence Power & Light (d)           | OS                         | 10               | 210                | 21.00             | 99.09%                            |
| Western Resources (b)                    | OS                         | 171              | 3,763              | 22.01             | 99.11%                            |
| Kansas City Power & Light (d)            | OS                         | 105              | 2,351              | 22.39             | 99.12%                            |
| Associated Electric (d)                  | OS                         | 147              | 3,671              | 24.97             | 99.13%                            |
| Koch Power (a)                           | OS                         | 200              | 5,100              | 25.50             | 99.15%                            |
| Western Resources (KGE)                  | OS                         | 291              | 7,773              | 26.71             | 99.17%                            |
| Sunflower Electric Power Cooperative (a) | OS                         | 850              | 26,095             | 30.70             | 99.25%                            |
| Associated Electric (a)                  | OS                         | 3,225            | 111,450            | 34.56             | 99.53%                            |
| Electric Clearinghouse, Inc. (a)         | OS                         | 100              | 3,900              | 39.00             | 99.53%                            |
| ENRON Corporation                        | SF                         | 5,186            | 255,521            | 49.27             | 99.98%                            |
| Entergy (a)                              | OS                         | 175              | 9,875              | 56.43             | 100.00%                           |
| St. Joseph Light & Power (a)             | OS                         | 20               | 1,180              | 59.00             | 100.00%                           |
| <b>Total</b>                             |                            | <b>1,154,525</b> | <b>18,400,512</b>  |                   |                                   |
| <b>Weighted average cost per MWH</b>     |                            |                  |                    | <b>15.94</b>      |                                   |

**Notes:**

\* Sold by Kansas Power & Light, a subsidiary of Western Resources, Inc.  
\*\* Sold by Kansas Gas & Electric, a subsidiary of Western Resources, Inc.

(a) System/Excess Energy - shall mean energy which one purchases for reasons including, but limited to, deferring use of fuel or water, transmission system operations, outages of generating units, environmental conditions or similar reasons.

(b) Term Energy - is energy purchased for the purpose of obtaining a supply of energy to replace higher cost energy sources enabling purchaser and seller to share cost savings through more efficient use of resources.

(d) Emergency Energy - energy furnished by one party to the other for use in such other party's system, or in a neighboring system with which such other party has contractual obligations during periods of emergency due to the loss of generation or transmission facilities; which loss impairs or jeopardizes the ability of the system having the emergency to serve its load.

(e) Replacement Energy - energy which one party (buyer) desires to purchase from another party (seller) for reason including, but not limited to, deferring use of fuel or water, transmission system operations, scheduled short outages or generating units, environmental conditions, selling replacement energy to another party, or other reasons of a similar nature.

(f) Hour by hour economy power interchanges.



**Utilicorp United Inc.**  
**1996 Non-Firm and Short-Term Firm Purchases**  
**(In order of Cost per MWH)**

| Seller                                   | Transaction Type | MWH Purchased | Total Charges (\$) | Cost per MWH (\$) | Cumulative Share of MWH Purchased |
|--|------------------|---------------|--------------------|-------------------|-----------------------------------|
| Sonat Power Marketing                    | OS               | 17,725        | 130,350            | 7.35              | 1.22%                             |
| Kansas Electric Power Cooperative        | OS               | 1,118         | 9,529              | 8.52              | 1.30%                             |
| Koch Oil                                 | SF               | 12,524        | 132,230            | 10.56             | 2.17%                             |
| Northern States Power                    | OS               | 1,520         | 17,108             | 11.26             | 2.27%                             |
| OPPD                                     | OS               | 1,200         | 14,039             | 11.70             | 2.35%                             |
| Coastal Electric Service                 | SF               | 2,400         | 28,464             | 11.86             | 2.52%                             |
| Dairyland Power Coop                     | OS               | 35            | 440                | 12.57             | 2.52%                             |
| Nebraska Public Power District           | OS               | 202,936       | 2,623,313          | 12.93             | 16.54%                            |
| Illinova                                 | SF               | 3,600         | 47,700             | 13.25             | 16.79%                            |
| Industrial Applications                  | OS               | 19,000        | 278,200            | 14.64             | 18.10%                            |
| Enron Corporation                        | SF               | 78,672        | 1,152,264          | 14.65             | 23.53%                            |
| Kansas City Power & Light                | OS               | 19,935        | 316,466            | 15.87             | 24.91%                            |
| Kansas City Power & Light                | OS               | 39,408        | 636,103            | 16.14             | 27.63%                            |
| Muscatine Power & Water                  | OS               | 240           | 3,895              | 16.23             | 27.65%                            |
| Southwestern Public Service Company      | OS               | 638,898       | 10,407,963         | 16.29             | 71.78%                            |
| MidAmerican Energy                       | OS               | 8,790         | 143,395            | 16.31             | 72.39%                            |
| Electric Clearinghouse                   | OS               | 1,600         | 26,400             | 16.50             | 72.50%                            |
| Independence Power & Light               | OS               | 19,142        | 319,471            | 16.69             | 73.82%                            |
| Kansas City Power & Light                | OS               | 10,792        | 186,167            | 17.25             | 74.56%                            |
| Big Rivers Electric Coop Agreement       | OS               | 200           | 3,500              | 17.50             | 74.58%                            |
| Wisconsin Power & Light                  | OS               | 580           | 10,281             | 17.73             | 74.62%                            |
| Western Resources                        | OS               | 1,215         | 21,937             | 18.06             | 74.70%                            |
| Nebraska Public Power District           | OS               | 3,705         | 67,198             | 18.14             | 74.96%                            |
| St. Joseph Power & Light                 | OS               | 8,340         | 154,009            | 18.47             | 75.53%                            |
| Sikeston Board of Municipal              | OS               | 1,600         | 30,400             | 19.00             | 75.64%                            |
| Louisville Power Marketing               | OS               | 49,130        | 943,817            | 19.21             | 79.04%                            |
| Missouri Public Service                  | OS               | 20,292        | 390,360            | 19.24             | 80.44%                            |
| Heartland                                | OS               | 12,350        | 239,727            | 19.41             | 81.29%                            |
| Union Electric                           | OS               | 7,910         | 160,412            | 20.28             | 81.84%                            |
| Kansas City Board of Public Utilities    | OS               | 2,890         | 58,865             | 20.37             | 82.04%                            |
| Union Electric                           | OS               | 13,370        | 281,799            | 21.08             | 82.96%                            |
| Western Resources                        | OS               | 63,216        | 1,361,821          | 21.54             | 87.33%                            |
| Noram Energy Services, Inc.              | OS               | 840           | 18,129             | 21.58             | 87.39%                            |
| United Power Association                 | OS               | 20            | 440                | 22.00             | 87.39%                            |
| Enron Capital and Trade Resource         | OS               | 36,285        | 820,708            | 22.62             | 89.89%                            |
| Associated Electric                      | OS               | 12,076        | 275,952            | 22.85             | 90.73%                            |
| Kansas Power & Light (Western Resources) | OS               | 41,586        | 957,842            | 23.03             | 93.60%                            |
| Delhi Energy                             | OS               | 1,210         | 29,103             | 24.05             | 93.68%                            |
| Associated Electric                      | OS               | 4,905         | 119,409            | 24.34             | 94.02%                            |
| Enron Capital and Trade Resource         | OS               | 27,260        | 666,472            | 24.45             | 95.91%                            |
| Empire District & Electric               | OS               | 2,807         | 69,552             | 24.78             | 96.10%                            |
| Koch Power Services, Inc.                | OS               | 6,620         | 169,635            | 25.62             | 96.56%                            |
| Valero                                   | OS               | 11,250        | 289,913            | 25.77             | 97.33%                            |
| Associated Electric                      | OS               | 349           | 9,587              | 27.47             | 97.36%                            |
| Rainbow Energy Marketing                 | OS               | 1,056         | 29,015             | 27.48             | 97.43%                            |
| Western Resources                        | OS               | 491           | 13,675             | 27.85             | 97.46%                            |
| Western Resources                        | OS               | 4,870         | 136,981            | 28.13             | 97.80%                            |
| Western Farmers                          | OS               | 225           | 6,750              | 30.00             | 97.82%                            |
| Kansas City Power & Light                | OS               | 295           | 9,084              | 30.79             | 97.84%                            |
| Kansas City Power & Light                | OS               | 2,880         | 91,186             | 31.66             | 98.04%                            |

| Seller                                      | Transaction<br>Type | MWH<br>Purchased | Total<br>Charges<br>(\$) | Cost per<br>MWH<br>(\$) | Cumulative<br>Share of MWH<br>Purchased |
|---|---------------------|------------------|--------------------------|-------------------------|---|
| Western Farmer's Coop                       | OS                  | 520              | 16,640                   | 32.00                   | 98.07%                                  |
| Southwestern Public Service Company         | OS                  | 2,100            | 67,537                   | 32.16                   | 98.22%                                  |
| Noram Power Marketing                       | OS                  | 450              | 14,550                   | 32.33                   | 98.25%                                  |
| Public Service of Oklahoma (CSW)            | OS                  | 1,600            | 52,800                   | 33.00                   | 98.36%                                  |
| Oklahoma Gas & Electric                     | OS                  | 1,225            | 41,225                   | 33.65                   | 98.44%                                  |
| Independence Power & Light                  | OS                  | 33               | 1,147                    | 34.76                   | 98.44%                                  |
| Central Illinois Public Service             | OS                  | 1,600            | 56,000                   | 35.00                   | 98.56%                                  |
| Kansas Gas and Electric (Western Resources) | OS                  | 50               | 1,775                    | 35.50                   | 98.56%                                  |
| Public Service of Oklahoma (CSW)            | OS                  | 4,360            | 154,920                  | 35.53                   | 98.86%                                  |
| Oklahoma Gas & Electric                     | OS                  | 1,240            | 48,600                   | 39.19                   | 98.95%                                  |
| Sunflower Electric Power Corporation        | OS                  | 15,264           | 660,551                  | 43.28                   | 100.00%                                 |
| <b>Total</b>                                |                     | <b>1,447,800</b> | <b>25,026,801</b>        |                         |   |
| <b>Weighted Average Cost per MWH</b>        |                     |                  |                          | <b>17.29</b>            |   |

Source: UtiliCorp United Inc.'s 1996 FERC Form 1.

**Western Resources**  
**Non-Firm Wholesale Sales for Resale**  
**And Short-Term Firm Sales, 1995**  
**(In Order of Cost Per MWH)**

| Buyer                                 | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|----------|-----------------------|-------------------------|
| Arkansas Electric Corporation         | OS                            | 53,100   | 737,853               | 13.90                   |
| Koch Power Services Marketing         | OS                            | 1,263    | 19,248                | 15.24                   |
| Oklahoma Gas & Electric Co.           | OS                            | 93,112   | 1,423,543             | 15.29                   |
| Central and South West                | OS                            | 11,220   | 173,674               | 15.48                   |
| WestPlains Energy (Utilicorp)         | OS                            | 23,204   | 366,224               | 15.78                   |
| Midwest Energy                        | OS                            | 713,038  | 11,722,241            | 16.44                   |
| Enron Power Marketing                 | OS                            | 17,450   | 290,211               | 16.63                   |
| Enron Power Marketing                 | OS                            | 3,450    | 60,210                | 17.45                   |
| Oxford, KS                            | OS <sup>1</sup>               | 2        | 35                    | 17.50                   |
| Entergy Services                      | OS                            | 14,905   | 261,420               | 17.54                   |
| Kansas City Board of Public Utilities | OS                            | 20,480   | 392,384               | 19.16                   |
| Oklahoma Municipal Power Agency       | OS                            | 3,370    | 65,588                | 19.46                   |
| Associated Electric Cooperative       | OS                            | 44,297   | 862,782               | 19.48                   |
| Missouri Public Service (Utilicorp)   | OS                            | 111,354  | 2,174,892             | 19.53                   |
| Coffeyville, KS                       | OS <sup>2</sup>               | 108,499  | 2,142,561             | 19.75                   |
| Girard, KS                            | OS <sup>2</sup>               | 25,259   | 506,094               | 20.04                   |
| Chanute, KS                           | OS <sup>2</sup>               | 154,477  | 3,097,608             | 20.05                   |
| Augusta, KS                           | OS <sup>2</sup>               | 54,577   | 1,096,430             | 20.09                   |
| Winfield, KS                          | OS <sup>2</sup>               | 112,756  | 2,268,064             | 20.11                   |
| Wellington, KS                        | OS <sup>2</sup>               | 66,367   | 1,338,570             | 20.17                   |
| Oklahoma Municipal Power Agency       | OS                            | 317,426  | 6,405,286             | 20.18                   |
| Neodesha, KS                          | OS <sup>2</sup>               | 8,475    | 171,108               | 20.19                   |
| Burlington, KS                        | OS <sup>2</sup>               | 27,111   | 547,822               | 20.21                   |
| Missouri Public Service (Utilicorp)   | OS                            | 150      | 3,036                 | 20.24                   |
| Iola, KS                              | OS <sup>2</sup>               | 87,747   | 1,781,298             | 20.30                   |
| Erie, KS                              | OS <sup>2</sup>               | 9,565    | 194,178               | 20.30                   |
| Oxford, KS                            | OS <sup>2</sup>               | 8,328    | 170,542               | 20.48                   |
| Mulvane, KS                           | OS <sup>2</sup>               | 6,413    | 134,554               | 20.98                   |
| Fredonia, KS                          | OS <sup>2</sup>               | 6,945    | 145,843               | 21.00                   |
| Union Electric Co.                    | OS                            | 49,180   | 1,052,409             | 21.40                   |
| Louisville Gas & Electric Marketing   | OS                            | 8,077    | 177,231               | 21.94                   |

| Buyer                                 | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Erie, KS                              | OS <sup>1</sup>               | 976              | 21,711                | 22.24                   |
| Empire District Electric Co.          | OS                            | 217,836          | 4,903,861             | 22.51                   |
| Augusta, KS                           | OS <sup>1</sup>               | 2,481            | 57,396                | 23.13                   |
| Public Service Co. of Oklahoma        | OS                            | 608              | 14,179                | 23.32                   |
| Omaha Public Power District           | OS                            | 39,112           | 944,476               | 24.15                   |
| Mulvane, KS                           | OS <sup>1</sup>               | 28               | 681                   | 24.32                   |
| Girard, KS                            | OS <sup>1</sup>               | 4,115            | 100,667               | 24.46                   |
| Kansas City Power & Light             | OS                            | 42,416           | 1,081,398             | 25.50                   |
| Iola, KS                              | OS <sup>1</sup>               | 224              | 5,717                 | 25.52                   |
| Fredonia, KS                          | OS <sup>1</sup>               | 64               | 1,653                 | 25.83                   |
| WestPlains Energy (Utilicorp)         | OS                            | 291              | 7,774                 | 26.71                   |
| Kansas City Power & Light             | OS                            | 6,364            | 177,979               | 27.97                   |
| Chanute, KS                           | OS <sup>1</sup>               | 1,897            | 53,142                | 28.01                   |
| Wellington, KS                        | OS <sup>1</sup>               | 33               | 936                   | 28.36                   |
| Winfield, KS                          | OS <sup>1</sup>               | 938              | 26,876                | 28.65                   |
| Omaha Public Power District           | OS                            | 7,360            | 214,563               | 29.15                   |
| Burlington, KS                        | OS <sup>1</sup>               | 25               | 734                   | 29.36                   |
| Neodesha, KS                          | OS <sup>1</sup>               | 85               | 2,706                 | 31.84                   |
| Southwestern Public Service           | OS                            | 200              | 6,400                 | 32.00                   |
| Central Louisiana Electric            | OS                            | 880              | 30,600                | 34.77                   |
| Grand River Dam Authority             | OS                            | 600              | 24,152                | 40.25                   |
| Kansas Electric Power Cooperative     | OS                            | 8,969            | 997,382               | 111.20                  |
| Midwest Energy                        | OS                            | 11,308           | 1,898,451             | 167.89                  |
| <b>Total</b>                          |                               | <b>2,508,407</b> | <b>50,356,373</b>     |                         |
| <b>Weighted Average Price per MWH</b> |                               |                  |                       | <b>20.08</b>            |

## Notes:

<sup>1</sup> Emergency Service<sup>2</sup> Supplemental Energy

## Sources:

Western Resources, Inc.'s 1995 FERC Form 1.

Kansas Gas and Electric Company's 1995 FERC Form 1.

**Western Resources**  
**Non-Firm Wholesale Sales for Resale**  
**And Short-Term Firm Sales, 1996**  
**(In Order of Cost Per MWH)**

| Buyer                                     | Statistical<br>Classification | MWH Sold | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|---|-------------------------------|----------|-----------------------|-------------------------|
| Aquila Power Corporation                  | OS                            | 800      | 20,800                | 26.00                   |
| Arkansas Electric Cooperative Corporation | OS                            | 100      | 1,800                 | 18.00                   |
| Associated Electric Coop., Inc.           | OS                            | 58,455   | 1,059,833             | 18.13                   |
| Augusta, KS                               | OS                            | 56,618   | 1,203,410             | 21.25                   |
| Burlington, KS                            | OS                            | 30,753   | 687,287               | 22.35                   |
| Central & South West Services             | OS                            | 61,886   | 1,058,072             | 17.10                   |
| Chanute, KS                               | OS                            | 164,575  | 3,640,878             | 22.12                   |
| Citizens Lehman Power Sales               | OS                            | 600      | 15,000                | 25.00                   |
| Coffeyville, KS                           | OS                            | 130,855  | 2,745,418             | 20.98                   |
| Coral Power, LLC                          | OS                            | 750      | 10,325                | 13.77                   |
| Delhi Energy Services                     | OS                            | 21,139   | 382,611               | 18.10                   |
| Eastex Power Marketing                    | OS                            | 800      | 13,200                | 16.50                   |
| Electric Clearinghouse Inc.               | OS                            | 70,311   | 906,845               | 12.90                   |
| Empire District Electric Company          | OS                            | 321,607  | 8,242,599             | 25.63                   |
| Enron Power Marketing                     | OS                            | 174,407  | 2,977,557             | 17.07                   |
| Entergy Electric System                   | OS                            | 68,800   | 1,321,392             | 19.21                   |
| Entergy Power                             | OS                            | 34,675   | 436,495               | 12.59                   |
| Erie, KS                                  | OS                            | 10,512   | 232,384               | 22.11                   |
| Federal Energy Services                   | OS                            | 967      | 24,643                | 25.48                   |
| Fredonia, KS                              | OS                            | 6,147    | 151,585               | 24.66                   |
| Girard, KS                                | OS                            | 25,869   | 637,571               | 24.65                   |
| Grand River Dam Authority                 | OS                            | 3,125    | 82,413                | 26.37                   |
| Heartland Energy Services                 | OS                            | 2,483    | 49,810                | 20.06                   |
| Iola, KS                                  | OS                            | 94,217   | 2,049,544             | 21.75                   |
| Kansas City Board of Public Utilities     | OS                            | 62,490   | 1,553,701             | 24.86                   |
| Kansas City Power & Light                 | OS                            | 63,668   | 1,538,683             | 24.17                   |
| Kansas Electric Power Cooperative         | OS                            | 44,991   | 1,523,811             | 33.87                   |
| Koch Power Services, Inc.                 | OS                            | 47,851   | 1,124,031             | 23.49                   |
| Louis Dreyfus Electric Power              | OS                            | 122,499  | 1,791,550             | 14.63                   |
| Louisville Gas & Electric Marketing       | OS                            | 526,700  | 8,688,934             | 16.50                   |
| Midwest Energy, Inc.                      | OS                            | 801,160  | 23,056,460            | 28.78                   |
| Missouri Public Service                   | OS                            | 69,792   | 1,534,414             | 21.99                   |
| Mulvane, KS                               | OS                            | 7,872    | 191,781               | 24.36                   |
| Neodesha, KS                              | OS                            | 8,570    | 191,130               | 22.30                   |
| Noram Energy Services                     | OS                            | 7,709    | 138,632               | 17.98                   |
| Oklahoma Gas & Electric Co.               | OS                            | 167,635  | 2,934,873             | 17.51                   |

| Buyer                                | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) |
|--------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|
| Oklahoma Municipal Power Agency      | OS                            | 355              | 7,100                 | 20.00                   |
| Omaha Public Power District          | OS                            | 50,729           | 1,363,383             | 26.88                   |
| Oxford, KS                           | OS                            | 8,704            | 192,070               | 22.07                   |
| Panenergy Power Services             | OS                            | 52,995           | 827,188               | 15.61                   |
| Public Service Company of Oklahoma   | OS                            | 122,982          | 2,081,956             | 16.93                   |
| Rainbow Energy Marketing             | OS                            | 381              | 10,289                | 27.01                   |
| Sonat Power Marketing                | OS                            | 52               | 1,326                 | 25.50                   |
| Southwestern Public Service          | OS                            | 15,985           | 276,083               | 17.27                   |
| Sunflower Electric Power Corporation | OS                            | 21,305           | 795,236               | 37.33                   |
| Union Electric Co.                   | OS                            | 67,616           | 1,591,859             | 23.54                   |
| Valero Power Services                | OS                            | 72,869           | 1,410,799             | 19.36                   |
| Vitol Gas and Electric               | OS                            | 3,632            | 69,580                | 19.16                   |
| Wellington, KS                       | OS                            | 73,343           | 1,556,237             | 21.22                   |
| WestPlains Energy                    | OS                            | 48,338           | 1,009,886             | 20.89                   |
| Winfield, KS                         | OS                            | 35,710           | 834,570               | 23.37                   |
| <b>Total</b>                         |                               | <b>3,846,384</b> | <b>84,247,034</b>     |                         |
| <b>Weighted Average Cost per MWH</b> |                               |                  |                       | <b>21.90</b>            |

Sources:

Western Resources, Inc.'s 1996 FERC Form 1.

Kansas Gas and Electric Company's 1996 FERC Form 1.

**Kansas City Power & Light Company**  
**Non-Firm Wholesale Sales for Resale**  
**And Short-Term Firm Sales, 1995**  
**(In Order of Cost Per MWH)**

| Buyer                                 | Statistical Classification | MWH Sold         | Total Charges (\$) | Cost Per MWH (\$) | Cumulative Share of MWH Sold |
|---------------------------------------|----------------------------|------------------|--------------------|-------------------|------------------------------|
| Arkansas Rural Electric Co-op         | OS <sup>2</sup>            | 285,210          | 3,227,403          | 11.32             | 7.78%                        |
| Associated Electric Cooperative, Inc. | OS <sup>1</sup>            | 253,132          | 3,521,646          | 13.91             | 14.69%                       |
| Baldwin, Kansas                       | OS <sup>1</sup>            | 3,853            | 76,369             | 19.82             | 14.80%                       |
| Carrollton, Missouri                  | OS <sup>1</sup>            | 41,956           | 822,642            | 19.61             | 15.94%                       |
| Central & South West Services, Inc.   | OS <sup>2</sup>            | 300              | 5,280              | 17.60             | 15.95%                       |
| Empire District Electric Company      | OS <sup>1</sup>            | 253,887          | 3,503,463          | 13.80             | 22.88%                       |
| Enron Power Marketing, Inc.           | OS <sup>2</sup>            | 48,380           | 740,228            | 15.30             | 24.20%                       |
| Entergy Electric System               | OS <sup>2</sup>            | 57,280           | 839,497            | 14.66             | 25.77%                       |
| Gardner, Kansas                       | OS <sup>1</sup>            | 41,280           | 802,979            | 19.45             | 26.89%                       |
| Garnett, Kansas                       | OS <sup>1</sup>            | 17,834           | 348,378            | 19.53             | 27.38%                       |
| Higginsville, Missouri                | OS <sup>1</sup>            | 39,803           | 785,862            | 19.74             | 28.47%                       |
| Independence, Missouri                | OS <sup>1</sup>            | 13,765           | 296,816            | 21.56             | 28.84%                       |
| Independence, Missouri                | OS <sup>1</sup>            | 478              | 199,110            | 416.55            | 28.85%                       |
| Interstate Power Company              | OS <sup>1</sup>            | 603              | 7,859              | 13.03             | 28.87%                       |
| Kansas City Board of Public Utilities | OS <sup>1</sup>            | 117,321          | 2,124,399          | 18.11             | 32.07%                       |
| Koch Power Services, Inc.             | OS <sup>2</sup>            | 25               | 300                | 12.00             | 32.07%                       |
| Lincoln Electric Company              | OS <sup>1</sup>            | 175              | 184,966            | 1056.95           | 32.08%                       |
| Louisville Gas & Electric             | OS <sup>2</sup>            | 64,000           | 927,464            | 14.49             | 33.83%                       |
| Marshall, Missouri                    | OS <sup>1</sup>            | 105,046          | 1,803,436          | 17.17             | 36.69%                       |
| MidAmerican Energy                    | OS <sup>1</sup>            | 27,890           | 612,961            | 21.98             | 37.45%                       |
| Missouri Public Service Company       | OS <sup>1</sup>            | 158,092          | 2,275,054          | 14.39             | 41.77%                       |
| Nebraska Public Power District        | OS <sup>1</sup>            | 25,660           | 486,226            | 18.95             | 42.47%                       |
| NorAm Energy Services, Inc.           | OS <sup>2</sup>            | 34,675           | 497,593            | 14.35             | 43.42%                       |
| Northern States Power Company         | OS <sup>1</sup>            | 107,428          | 2,215,038          | 20.62             | 46.35%                       |
| Omaha Public Power District           | OS <sup>1</sup>            | 3,163            | 323,393            | 102.24            | 46.43%                       |
| Osawatomie, Kansas                    | OS <sup>1</sup>            | 8,598            | 211,127            | 24.56             | 46.67%                       |
| Ottawa, Kansas                        | OS <sup>1</sup>            | 31,851           | 662,365            | 20.80             | 47.54%                       |
| Salisbury, Missouri                   | OS <sup>1</sup>            | 19,983           | 404,698            | 20.25             | 48.08%                       |
| St. Joseph Light & Power Company      | OS <sup>1</sup>            | 111,843          | 1,806,467          | 16.15             | 51.14%                       |
| Union Electric Company                | OS <sup>1</sup>            | 1,729,771        | 27,531,222         | 15.92             | 98.35%                       |
| Western Resources                     | OS <sup>1</sup>            | 60,439           | 734,070            | 12.15             | 100.00%                      |
| <b>Total</b>                          |                            | <b>3,663,721</b> | <b>57,978,311</b>  |                   |                              |
| <b>Weighted Average Cost per MWH</b>  |                            |                  |                    | <b>15.82</b>      |                              |

## Notes:

<sup>1</sup> The service to these customers is long-term service subject to availability.<sup>2</sup> FERC Rate is Supplement #13 to WSPP Rate Schedule FERC #1.

**Kansas City Power & Light Company**  
**Non-Firm Wholesale Sales for Resale**  
**And Short-Term Firm Sales, 1996**  
**(In Order of Cost Per MWH)**

| Buyer                                 | Statistical Classification | MWH Sold | Total Charges (\$) | Cost Per MWH (\$) | Cumulative Share of MWH Sold |
|---------------------------------------|----------------------------|----------|--------------------|-------------------|------------------------------|
| Aquila Power Corporation              | OS <sup>2</sup>            | 1,600    | 27,200             | 17.00             | 0.04%                        |
| Arkansas Rural Electric Coop          | OS <sup>2</sup>            | 286,800  | 3,421,715          | 11.93             | 7.87%                        |
| Associated Electric Cooperative, Inc. | OS <sup>2</sup>            | 142,855  | 2,010,913          | 14.08             | 11.76%                       |
| Associated Electric Cooperative, Inc. | OS <sup>1</sup>            | 146,884  | 2,179,743          | 14.84             | 15.77%                       |
| Baldwin, KS                           | OS <sup>1</sup>            | 8,169    | 143,674            | 17.59             | 15.99%                       |
| Carrollton, MO                        | OS                         | 42,837   | 826,632            | 19.30             | 17.16%                       |
| Central and South West                | OS <sup>2</sup>            | 1,825    | 27,375             | 15.00             | 17.21%                       |
| CNG Power Services                    | OS <sup>2</sup>            | 82       | 1,463              | 17.84             | 17.21%                       |
| Delhi                                 | OS <sup>2</sup>            | 10,925   | 162,545            | 14.88             | 17.51%                       |
| Electric Clearinghouse, Inc.          | OS <sup>2</sup>            | 8,555    | 142,217            | 16.62             | 17.74%                       |
| Empire District Electric Company      | OS <sup>2</sup>            | 865      | 13,267             | 15.34             | 17.77%                       |
| Empire District Electric Company      | OS <sup>1</sup>            | 523,426  | 8,599,566          | 16.43             | 32.04%                       |
| Enron Power Marketing Inc.            | OS <sup>2</sup>            | 180,353  | 2,708,395          | 15.02             | 36.96%                       |
| Entergy Electric System               | OS <sup>2</sup>            | 161,070  | 2,865,679          | 17.79             | 41.35%                       |
| Federal Energy Sales, Inc.            | OS <sup>2</sup>            | 3,270    | 68,258             | 20.87             | 41.44%                       |
| Gardner, KS                           | OS                         | 18,320   | 353,054            | 19.27             | 41.94%                       |
| Gardner, KS                           | OS                         | 47,291   | 927,729            | 19.62             | 43.23%                       |
| Grand River Dam Authority             | OS <sup>2</sup>            | 825      | 13,200             | 16.00             | 43.25%                       |
| Higginsville, MO                      | OS <sup>1</sup>            | 21,680   | 417,287            | 19.25             | 43.84%                       |
| Independence, MO                      | OS <sup>1</sup>            | 16,630   | 304,085            | 18.29             | 44.30%                       |
| Independence, MO                      | OS <sup>2</sup>            | 20       | 530                | 26.50             | 44.30%                       |
| Independence, MO                      | OS <sup>1</sup>            | 315      | 203,120            | 644.83            | 44.31%                       |
| Interstate Power                      | OS <sup>1</sup>            | 5,575    | 93,131             | 16.71             | 44.46%                       |
| Kansas City Board of Public Utilities | OS <sup>1</sup>            | 161,790  | 3,658,163          | 22.61             | 48.87%                       |
| Kansas Gas & Electric                 | OS <sup>2</sup>            | 28,243   | 503,435            | 17.83             | 49.64%                       |
| Kansas Gas & Electric                 | OS                         | 22       | 440                | 20.00             | 49.64%                       |
| Kansas Power & Light                  | OS <sup>2</sup>            | 9,525    | 148,649            | 15.61             | 49.90%                       |
| Kansas Power & Light                  | OS <sup>1</sup>            | 5,928    | 111,873            | 18.87             | 50.06%                       |
| Koch Power Services, Inc.             | OS <sup>2</sup>            | 18,716   | 306,193            | 16.36             | 50.57%                       |
| Louis Dreyfus Electric Power          | OS <sup>2</sup>            | 31,356   | 584,132            | 18.63             | 51.43%                       |
| Louisville Gas & Electric             | OS <sup>2</sup>            | 105,545  | 1,625,830          | 15.40             | 54.31%                       |
| Marshall, MO                          | OS <sup>1</sup>            | 109,610  | 1,866,558          | 17.03             | 57.30%                       |
| MidAmerican Energy                    | OS                         | 12,386   | 235,239            | 18.99             | 57.63%                       |
| Missouri Public Company               | OS                         | 99,638   | 1,561,654          | 15.67             | 60.35%                       |
| Missouri Public Service Co.           | OS <sup>2</sup>            | 10,792   | 186,166            | 17.25             | 60.65%                       |
| Nebraska Public Power District        | OS <sup>1</sup>            | 5,523    | 134,350            | 24.33             | 60.80%                       |
| NorAm Energy Services, Inc.           | OS <sup>2</sup>            | 1,400    | 91,122             | 65.09             | 60.84%                       |



| Buyer                                 | Statistical<br>Classification | MWH Sold         | Total Charges<br>(\$) | Cost Per<br>MWH<br>(\$) | Cumulative Share<br>of MWH Sold |
|---------------------------------------|-------------------------------|------------------|-----------------------|-------------------------|---------------------------------|
| Northern States Power Company         | OS                            | 56,586           | 1,392,983             | 24.62                   | 62.38%                          |
| Omaha Public Power District           | OS <sup>2</sup>               | 1,525            | 23,500                | 15.41                   | 62.42%                          |
| Omaha Public Power District           | OS                            | 7,990            | 146,180               | 18.30                   | 62.64%                          |
| Osawatomie, KS                        | OS <sup>1</sup>               | 9,325            | 175,880               | 18.86                   | 62.89%                          |
| Ottawa, KS                            | OS <sup>1</sup>               | 48,675           | 870,905               | 17.89                   | 64.22%                          |
| Rainbow Energy Marketing Corp.        | OS <sup>2</sup>               | 125              | 2,000                 | 16.00                   | 64.22%                          |
| Salisbury, MO                         | OS <sup>1</sup>               | 20,825           | 411,552               | 19.76                   | 64.79%                          |
| Sonat Power Marketing                 | OS <sup>2</sup>               | 200              | 3,260                 | 16.30                   | 64.80%                          |
| St. Joseph Light & Power Co.          | OS                            | 24,743           | 435,165               | 17.59                   | 65.47%                          |
| Union Electric Company                | OS                            | 1,256,371        | 20,661,257            | 16.45                   | 99.74%                          |
| Valero Power Services                 | OS <sup>2</sup>               | 2,100            | 35,830                | 17.06                   | 99.79%                          |
| Vitol Gas & Electric                  | OS <sup>2</sup>               | 4,700            | 57,895                | 12.32                   | 99.92%                          |
| West Plains Energy                    | OS <sup>2</sup>               | 2,880            | 91,186                | 31.66                   | 100.00%                         |
| <b>Total</b>                          |                               | <b>3,666,691</b> | <b>60,832,175</b>     |                         |                                 |
| <b>Weighted Average Price Per MWH</b> |                               |                  |                       | <b>16.59</b>            |                                 |

## Notes:

These sales are long-term, subject to availability.

These sales were made under Supplement #13 to WSPP Rate Schedule FERC #1.

Source: Kansas City Power & Light's 1996 FERC Form 1, pp. 310-311.4.

## Analysis of Concentration: Economic Capacity

### Case 1: Delivered Prices Measured at Utility's Border or SPP Border

| Economic Capacity         |                 |               |                                 |               |                                 |               |
|---------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price                     | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14                        | 2,003           | 73            | 1,672                           | 49            | 1,413                           | 193           |
| 20                        | 1,424           | 78            | 1,250                           | 63            | 928                             | 167           |
| 25                        | 1,530           | 34            | 1,384                           | 22            | 1,055                           | 74            |
| 35                        | 1,281           | 32            | 1,279                           | 19            | 1,029                           | 60            |

Note: <sup>1</sup> Economic capacity for each utility in SPP based on its own energy cost and transmission tariff or costs delivered to its border.  
Economic Capacity for MAPP, MAIN, and SERC utilities based on costs delivered to the SPP border.

## Analysis of Concentration: Economic Capacity

### Case 2: Delivered Prices at Entergy Border

| Economic Capacity         |                 |               |                                 |               |                                 |               |
|---------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price                     | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14                        | 2,140           | 36            | 1,765                           | 24            | 1,436                           | 101           |
| 20                        | 1,846           | 42            | 1,578                           | 27            | 1,267                           | 104           |
| 25                        | 1,554           | 34            | 1,496                           | 19            | 1,089                           | 74            |
| 35                        | 1,351           | 27            | 1,316                           | 16            | 1,242                           | 50            |

**Analysis of Concentration: Economic Capacity**  
**Case 3: Delivered Prices Measured at Utility's Border or SPP Border,**  
**Assuming Zero Transmission Cost <sup>1</sup>**

| Economic Capacity         |                 |               |                                 |               |                                 |               |
|---------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price                     | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14                        | 1,281           | 129           | 1,140                           | 97            | 1,067                           | 240           |
| 20                        | 1,579           | 35            | 1,389                           | 24            | 1,046                           | 80            |
| 25                        | 1,381           | 30            | 1,361                           | 18            | 961                             | 62            |
| 35                        | 1,323           | 29            | 1,293                           | 18            | 1,216                           | 52            |

Note: <sup>1</sup> Economic capacity for each utility in SPP based on its own energy cost.  
Economic Capacity for MAPP, MAIN, and SERC utilities based on costs delivered to the border of SPP.

## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 1: Regional Market Excluding Southern

MAPP<sup>1</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 1,689                                 | 6.25%           | 39           |
| Western Resources                                   | 1,590                                 | 5.88%           | 35           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.24%           | 0            |
| Associated Electric Cooperative                     | 1,120                                 | 4.14%           | 17           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 6                                     | 0.02%           | 0            |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                    | 96                                    | 0.36%           | 0            |
| Entergy Services                                    | 3,575                                 | 13.22%          | 175          |
| Grand River Dam Authority                           | 470                                   | 1.74%           | 3            |
| KAMO Electric Cooperative                           | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities               | 235                                   | 0.87%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.26%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 9.35%           | 87           |
| Oklahoma Municipal Power Authority                  | 26                                    | 0.10%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 7.68%           | 59           |
| Southwestern Public Service Company                 | 13                                    | 0.05%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.45%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 0                                     | 0.00%           | 0            |
| IES Utilities                                       | 119                                   | 0.44%           | 0            |
| Interstate Power Company                            | 17                                    | 0.06%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 316                                   | 1.17%           | 1            |
| Minnesota Power                                     | 15                                    | 0.06%           | 0            |
| Nebraska Public Power District                      | 310                                   | 1.14%           | 1            |
| Northern States Power                               | 201                                   | 0.74%           | 1            |
| Northwestern Public Service Company                 | 7                                     | 0.03%           | 0            |
| Omaha Public Power District                         | 216                                   | 0.80%           | 1            |
| Otter Tail Power                                    | 1                                     | 0.00%           | 0            |
| Central and South West - ERCOT <sup>3</sup>         |                                       | 0.02%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 0                                     | 0.00%           | 0            |
| Union Electric                                      | 1,812                                 | 6.70%           | 45           |
| Tennessee Valley Authority                          | 10,353                                | 38.27%          | 1,465        |
| <b>MAPP TOTAL</b>                                   |                                       |                 |              |
| <b>Total</b>  | <b>27,050</b>                         | <b>100.00%</b>  | <b>1,930</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>73</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>2,003</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 1: Regional Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 5.22%           | 27           |
| Western Resources                                  | 3,790                                 | 7.52%           | 57           |
| Arkansas Electric Cooperative Corporation          | 1,188                                 | 2.36%           | 6            |
| Associated Electric Cooperative                    | 2,280                                 | 4.52%           | 20           |
| Cajun Electric Power Cooperative                   | 1,393                                 | 2.76%           | 8            |
| Central and South West <sup>3</sup>                | 2,742                                 | 5.44%           | 30           |
| Central Louisiana Electric Company                 | 325                                   | 0.64%           | 0            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.26%           | 0            |
| City Utilities, Springfield, MO                    | 413                                   | 0.82%           | 1            |
| Empire District Electric Company                   | 307                                   | 0.61%           | 0            |
| Entergy Services                                   | 5,232                                 | 10.38%          | 108          |
| Grand River Dam Authority                          | 1,280                                 | 2.54%           | 6            |
| KAMO Electric Cooperative                          | 200                                   | 0.40%           | 0            |
| Kansas City Board of Public Utilities              | 327                                   | 0.65%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.14%           | 0            |
| Louisiana Energy and Power Authority               | 3                                     | 0.00%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.23%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 5.02%           | 25           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.23%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 4.12%           | 17           |
| Southwestern Public Service Company                | 39                                    | 0.08%           | 0            |
| St. Joseph Light & Power Company                   | 218                                   | 0.43%           | 0            |
| Sunflower Electric Power Corporation               | 325                                   | 0.64%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 980                                   | 1.94%           | 4            |
| Western Farmers Electric Cooperative               | 0                                     | 0.00%           | 0            |
| Cooperative Power                                  | 39                                    | 0.08%           | 0            |
| IES Utilities                                      | 107                                   | 0.21%           | 0            |
| Interstate Power Company                           | 33                                    | 0.07%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 239                                   | 0.47%           | 0            |
| Minnesota Power                                    | 85                                    | 0.17%           | 0            |
| Nebraska Public Power District                     | 182                                   | 0.36%           | 0            |
| Northern States Power                              | 346                                   | 0.69%           | 0            |
| Northwestern Public Service Company                | 15                                    | 0.03%           | 0            |
| Omaha Public Power District                        | 126                                   | 0.25%           | 0            |
| Otter Tail Power                                   | 28                                    | 0.06%           | 0            |
| Central Illinois Power Cooperative                 | 0                                     | 0.00%           | 0            |
| Illinois Power Company                             | 2,847                                 | 5.65%           | 32           |
| Union Electric                                     | 1,812                                 | 3.59%           | 13           |
| Tennessee Valley Authority                         | 15,839                                | 31.42%          | 987          |
| <b>Total</b>                                       | <b>50,415</b>                         | <b>100.00%</b>  | <b>1,345</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>78</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,424</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 1: Regional Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 3.40%           | 12           |
| Western Resources                                   | 3,857                                 | 4.99%           | 25           |
| Arkansas Electric Cooperative Corporation           | 1,729                                 | 2.23%           | 5            |
| Associated Electric Cooperative                     | 2,502                                 | 3.23%           | 10           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 1.80%           | 3            |
| Central and South West <sup>3</sup>                 | 4,349                                 | 5.62%           | 32           |
| Central Louisiana Electric Company                  | 922                                   | 1.19%           | 1            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.34%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.17%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.53%           | 0            |
| Empire District Electric Company                    | 399                                   | 0.52%           | 0            |
| Entergy Services                                    | 11,638                                | 15.04%          | 226          |
| Grand River Dam Authority                           | 1,280                                 | 1.65%           | 3            |
| KAMO Electric Cooperative                           | 200                                   | 0.26%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.74%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.09%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.15%           | 0            |
| Midwest Energy                                      | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.15%           | 0            |
| Okahoma Gas & Electric Company                      | 2,530                                 | 3.27%           | 11           |
| Okahoma Municipal Power Authority                   | 118                                   | 0.15%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.69%           | 7            |
| Southwestern Public Service Company                 | 300                                   | 0.39%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.28%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.53%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.32%           | 2            |
| Western Farmers Electric Cooperative                | 690                                   | 0.89%           | 1            |
| Cooperative Power                                   | 37                                    | 0.05%           | 0            |
| IES Utilities                                       | 109                                   | 0.14%           | 0            |
| Interstate Power Company                            | 36                                    | 0.05%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 232                                   | 0.30%           | 0            |
| Minnesota Power                                     | 89                                    | 0.11%           | 0            |
| Nebraska Public Power District                      | 176                                   | 0.23%           | 0            |
| Northern States Power                               | 346                                   | 0.45%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.16%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 339                                   | 0.44%           | 0            |
| Illinois Power Company                              | 3,743                                 | 4.84%           | 23           |
| Union Electric                                      | 7,087                                 | 9.16%           | 84           |
| Tennessee Valley Authority                          | 25,038                                | 32.36%          | 1,047        |
| <b>Total</b>  | <b>77,361</b>                         | <b>100.00%</b>  | <b>1,496</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>34</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,530</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 1: Regional Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,705                                 | 2.93%           | 9            |
| Western Resources                                   | 5,002                                 | 5.41%           | 29           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 1.93%           | 4            |
| Associated Electric Cooperative                     | 2,502                                 | 2.71%           | 7            |
| Cajun Electric Power Cooperative                    | 1,613                                 | 1.75%           | 3            |
| Central and South West <sup>3</sup>                 | 8,521                                 | 9.22%           | 85           |
| Central Louisiana Electric Company                  | 2,292                                 | 2.48%           | 6            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                             | 56                                    | 0.06%           | 0            |
| City of Lafayette, LA                               | 530                                   | 0.57%           | 0            |
| City of McPherson, KS                               | 182                                   | 0.20%           | 0            |
| City of Winfield, KS                                | 52                                    | 0.06%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.14%           | 0            |
| City Utilities, Springfield, MO                     | 651                                   | 0.70%           | 0            |
| Empire District Electric Company                    | 677                                   | 0.73%           | 1            |
| Entergy Services                                    | 15,105                                | 16.34%          | 267          |
| Grand River Dam Authority                           | 1,280                                 | 1.39%           | 2            |
| KAMO Electric Cooperative                           | 200                                   | 0.22%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.62%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.08%           | 0            |
| Louisiana Energy and Power Authority                | 338                                   | 0.37%           | 0            |
| Midwest Energy                                      | 15                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.13%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 2.74%           | 7            |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.13%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.25%           | 5            |
| Southwestern Public Service Company                 | 300                                   | 0.32%           | 0            |
| St. Joseph Light & Power Company                    | 260                                   | 0.28%           | 0            |
| Sunflower Electric Power Corporation                | 522                                   | 0.56%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,355                                 | 1.47%           | 2            |
| Western Farmers Electric Cooperative                | 1,093                                 | 1.18%           | 1            |
| Cooperative Power                                   | 35                                    | 0.04%           | 0            |
| IES Utilities                                       | 102                                   | 0.11%           | 0            |
| Interstate Power Company                            | 58                                    | 0.06%           | 0            |
| Lincoln Electric System                             | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                  | 249                                   | 0.27%           | 0            |
| Minnesota Power                                     | 82                                    | 0.09%           | 0            |
| Nebraska Public Power District                      | 168                                   | 0.18%           | 0            |
| Northern States Power                               | 337                                   | 0.37%           | 0            |
| Northwestern Public Service Company                 | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 114                                   | 0.12%           | 0            |
| Otter Tail Power                                    | 36                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                  | 2,673                                 | 2.89%           | 8            |
| Illinois Power Company                              | 3,743                                 | 4.05%           | 16           |
| Union Electric                                      | 7,087                                 | 7.67%           | 59           |
| Tennessee Valley Authority                          | 25,038                                | 27.09%          | 734          |
| <b>Total</b>  | <b>92,419</b>                         | <b>100.00%</b>  | <b>1,249</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>32</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,281</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.



## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 1: Regional Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 1,689                                 | 5.11%           | 26           |
| Western Resources                                   | 1,590                                 | 4.81%           | 23           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.20%           | 0            |
| Associated Electric Cooperative                     | 1,120                                 | 3.39%           | 11           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 6                                     | 0.02%           | 0            |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                    | 96                                    | 0.29%           | 0            |
| Entergy Services                                    | 3,575                                 | 10.82%          | 117          |
| Grand River Dam Authority                           | 470                                   | 1.42%           | 2            |
| KAMO Electric Cooperative                           | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities               | 235                                   | 0.71%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.21%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 7.65%           | 59           |
| Oklahoma Municipal Power Authority                  | 26                                    | 0.08%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 6.29%           | 40           |
| Southwestern Public Service Company                 | 13                                    | 0.04%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.36%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 0                                     | 0.00%           | 0            |
| IES Utilities                                       | 119                                   | 0.36%           | 0            |
| Interstate Power Company                            | 17                                    | 0.05%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 316                                   | 0.95%           | 1            |
| Minnesota Power                                     | 15                                    | 0.05%           | 0            |
| Nebraska Public Power District                      | 310                                   | 0.94%           | 1            |
| Northern States Power                               | 201                                   | 0.61%           | 0            |
| Northwestern Public Service Company                 | 7                                     | 0.02%           | 0            |
| Omaha Public Power District                         | 216                                   | 0.65%           | 0            |
| Otter Tail Power                                    | 1                                     | 0.00%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 0                                     | 0.00%           | 0            |
| Southern Companies                                  | 6,001                                 | 18.16%          | 330          |
| Union Electric                                      | 1,812                                 | 5.48%           | 30           |
| Tennessee Valley Authority                          | 10,353                                | 31.32%          | 981          |
| <b>Total</b>  | <b>33,052</b>                         | <b>100.00%</b>  | <b>1,622</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>49</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,672</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 1: Regional Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 4.66%           | 22           |
| Western Resources                                   | 3,790                                 | 6.72%           | 45           |
| Arkansas Electric Cooperative Corporation           | 1,188                                 | 2.10%           | 4            |
| Associated Electric Cooperative                     | 2,280                                 | 4.04%           | 16           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 2.47%           | 6            |
| Central and South West <sup>3</sup>                 | 2,742                                 | 4.86%           | 24           |
| Central Louisiana Electric Company                  | 325                                   | 0.58%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.23%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.73%           | 1            |
| Empire District Electric Company                    | 307                                   | 0.54%           | 0            |
| Entergy Services                                    | 5,232                                 | 9.27%           | 86           |
| Grand River Dam Authority                           | 1,280                                 | 2.27%           | 5            |
| KAMO Electric Cooperative                           | 200                                   | 0.35%           | 0            |
| Kansas City Board of Public Utilities               | 327                                   | 0.58%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.12%           | 0            |
| Louisiana Energy and Power Authority                | 3                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.21%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 4.48%           | 20           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.21%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 3.68%           | 14           |
| Southwestern Public Service Company                 | 39                                    | 0.07%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.39%           | 0            |
| Sunflower Electric Power Corporation                | 325                                   | 0.58%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 980                                   | 1.74%           | 3            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 39                                    | 0.07%           | 0            |
| IES Utilities                                       | 107                                   | 0.19%           | 0            |
| Interstate Power Company                            | 33                                    | 0.06%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 239                                   | 0.42%           | 0            |
| Minnesota Power                                     | 85                                    | 0.15%           | 0            |
| Nebraska Public Power District                      | 182                                   | 0.32%           | 0            |
| Northern States Power                               | 346                                   | 0.61%           | 0            |
| Northwestern Public Service Company                 | 15                                    | 0.03%           | 0            |
| Omaha Public Power District                         | 126                                   | 0.22%           | 0            |
| Otter Tail Power                                    | 28                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 2,847                                 | 5.05%           | 25           |
| Southern Companies                                  | 6,001                                 | 10.64%          | 113          |
| Union Electric                                      | 1,812                                 | 3.21%           | 10           |
| Tennessee Valley Authority                          | 15,839                                | 28.07%          | 788          |
| <b>Total</b>  | <b>56,417</b>                         | <b>100.00%</b>  | <b>1,187</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>63</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,250</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 1: Regional Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 2.71%           | 7            |
| Western Resources                                   | 3,857                                 | 3.97%           | 16           |
| Arkansas Electric Cooperative Corporation           | 1,729                                 | 1.78%           | 3            |
| Associated Electric Cooperative                     | 2,502                                 | 2.58%           | 7            |
| Cajun Electric Power Cooperative                    | 1,393                                 | 1.44%           | 2            |
| Central and South West <sup>3</sup>                 | 4,349                                 | 4.48%           | 20           |
| Central Louisiana Electric Company                  | 922                                   | 0.95%           | 1            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.27%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.13%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.43%           | 0            |
| Empire District Electric Company                    | 399                                   | 0.41%           | 0            |
| Entergy Services                                    | 11,638                                | 11.99%          | 144          |
| Grand River Dam Authority                           | 1,280                                 | 1.32%           | 2            |
| KAMO Electric Cooperative                           | 200                                   | 0.21%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.59%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.07%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.12%           | 0            |
| Midwest Energy                                      | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.12%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 2.61%           | 7            |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.12%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.14%           | 5            |
| Southwestern Public Service Company                 | 300                                   | 0.31%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.22%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.42%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.05%           | 1            |
| Western Farmers Electric Cooperative                | 690                                   | 0.71%           | 1            |
| Cooperative Power                                   | 37                                    | 0.04%           | 0            |
| IES Utilities                                       | 109                                   | 0.11%           | 0            |
| Interstate Power Company                            | 36                                    | 0.04%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 232                                   | 0.24%           | 0            |
| Minnesota Power                                     | 89                                    | 0.09%           | 0            |
| Nebraska Public Power District                      | 176                                   | 0.18%           | 0            |
| Northern States Power                               | 346                                   | 0.36%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.13%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                  | 339                                   | 0.35%           | 0            |
| Illinois Power Company                              | 3,743                                 | 3.86%           | 15           |
| Southern Companies                                  | 19,700                                | 20.30%          | 412          |
| Union Electric                                      | 7,087                                 | 7.30%           | 53           |
| Tennessee Valley Authority                          | 25,038                                | 25.80%          | 665          |
| <b>Total</b>  | <b>97,061</b>                         | <b>100.00%</b>  | <b>1,362</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>22</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,384</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 1: Regional Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,705                                 | 2.26%           | 5            |
| Western Resources                                  | 5,002                                 | 4.19%           | 18           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 1.50%           | 2            |
| Associated Electric Cooperative                    | 2,502                                 | 2.09%           | 4            |
| Cajun Electric Power Cooperative                   | 1,613                                 | 1.35%           | 2            |
| Central and South West <sup>3</sup>                | 8,521                                 | 7.13%           | 51           |
| Central Louisiana Electric Company                 | 2,292                                 | 1.92%           | 4            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                            | 56                                    | 0.05%           | 0            |
| City of Lafayette, LA                              | 530                                   | 0.44%           | 0            |
| City of McPherson, KS                              | 182                                   | 0.15%           | 0            |
| City of Winfield, KS                               | 52                                    | 0.04%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.11%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.55%           | 0            |
| Empire District Electric Company                   | 677                                   | 0.57%           | 0            |
| Entergy Services                                   | 15,105                                | 12.65%          | 160          |
| Grand River Dam Authority                          | 1,280                                 | 1.07%           | 1            |
| KAMO Electric Cooperative                          | 200                                   | 0.17%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.48%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.06%           | 0            |
| Louisiana Energy and Power Authority               | 338                                   | 0.28%           | 0            |
| Midwest Energy                                     | 15                                    | 0.01%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.10%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 2.12%           | 4            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.10%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 1.74%           | 3            |
| Southwestern Public Service Company                | 300                                   | 0.25%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.22%           | 0            |
| Sunflower Electric Power Corporation               | 522                                   | 0.44%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,355                                 | 1.13%           | 1            |
| Western Farmers Electric Cooperative               | 1,093                                 | 0.92%           | 1            |
| Cooperative Power                                  | 35                                    | 0.03%           | 0            |
| IES Utilities                                      | 102                                   | 0.09%           | 0            |
| Interstate Power Company                           | 58                                    | 0.05%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 249                                   | 0.21%           | 0            |
| Minnesota Power                                    | 82                                    | 0.07%           | 0            |
| Nebraska Public Power District                     | 168                                   | 0.14%           | 0            |
| Northern States Power                              | 337                                   | 0.28%           | 0            |
| Northwestern Public Service Company                | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                        | 114                                   | 0.10%           | 0            |
| Otter Tail Power                                   | 36                                    | 0.03%           | 0            |
| Central Illinois Power Cooperative                 | 2,673                                 | 2.24%           | 5            |
| Illinois Power Company                             | 3,743                                 | 3.13%           | 10           |
| Southern Companies                                 | 27,029                                | 22.63%          | 512          |
| Union Electric                                     | 7,087                                 | 5.93%           | 35           |
| Tennessee Valley Authority                         | 25,038                                | 20.96%          | 439          |
| <b>Total</b>                                       | <b>119,448</b>                        | <b>100.00%</b>  | <b>1,260</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>19</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,279</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 1: Regional Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 1,689                                 | 10.12%          | 102          |
| Western Resources                                   | 1,590                                 | 9.53%           | 91           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.39%           | 0            |
| Associated Electric Cooperative                     | 1,120                                 | 6.71%           | 45           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 6                                     | 0.04%           | 0            |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                    | 96                                    | 0.58%           | 0            |
| Entergy Services                                    | 3,575                                 | 21.41%          | 458          |
| Grand River Dam Authority                           | 470                                   | 2.82%           | 8            |
| KAMO Electric Cooperative                           | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities               | 235                                   | 1.41%           | 2            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.42%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 15.15%          | 230          |
| Oklahoma Municipal Power Authority                  | 26                                    | 0.16%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 12.45%          | 155          |
| Southwestern Public Service Company                 | 13                                    | 0.08%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.72%           | 1            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 0                                     | 0.00%           | 0            |
| IES Utilities                                       | 119                                   | 0.71%           | 1            |
| Interstate Power Company                            | 17                                    | 0.10%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 316                                   | 1.89%           | 4            |
| Minnesota Power                                     | 15                                    | 0.09%           | 0            |
| Nebraska Public Power District                      | 310                                   | 1.85%           | 3            |
| Northern States Power                               | 201                                   | 1.20%           | 1            |
| Northwestern Public Service Company                 | 7                                     | 0.04%           | 0            |
| Omaha Public Power District                         | 216                                   | 1.29%           | 2            |
| Otter Tail Power                                    | 1                                     | 0.00%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 0                                     | 0.00%           | 0            |
| Union Electric                                      | 1,812                                 | 10.85%          | 118          |
| <b>Total</b>  | <b>16,698</b>                         | <b>100.00%</b>  | <b>1,221</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>193</b>   |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,413</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 1: Regional Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI        |
|--|---------------------------------------|-----------------|------------|
| Kansas City Power & Light                          | 2,631                                 | 7.61%           | 58         |
| Western Resources                                  | 3,790                                 | 10.96%          | 120        |
| Arkansas Electric Cooperative Corporation          | 1,188                                 | 3.43%           | 12         |
| Associated Electric Cooperative                    | 2,280                                 | 6.59%           | 43         |
| Cajun Electric Power Cooperative                   | 1,393                                 | 4.03%           | 16         |
| Central and South West <sup>3</sup>                | 2,742                                 | 7.93%           | 63         |
| Central Louisiana Electric Company                 | 325                                   | 0.94%           | 1          |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0          |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0          |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0          |
| City of Lafayette, LA                              | 0                                     | 0.00%           | 0          |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0          |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0          |
| City Power & Light, Independence, MO               | 131                                   | 0.38%           | 0          |
| City Utilities, Springfield, MO                    | 413                                   | 1.19%           | 1          |
| Empire District Electric Company                   | 307                                   | 0.89%           | 1          |
| Entergy Services                                   | 5,232                                 | 15.13%          | 229        |
| Grand River Dam Authority                          | 1,280                                 | 3.70%           | 14         |
| KAMO Electric Cooperative                          | 200                                   | 0.58%           | 0          |
| Kansas City Board of Public Utilities              | 327                                   | 0.95%           | 1          |
| Kansas Electric Power Cooperative                  | 70                                    | 0.20%           | 0          |
| Louisiana Energy and Power Authority               | 3                                     | 0.01%           | 0          |
| Midwest Energy                                     | 0                                     | 0.00%           | 0          |
| Northeast Texas Electric Cooperative               | 117                                   | 0.34%           | 0          |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 7.32%           | 54         |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.34%           | 0          |
| Southwestern Power Administration                  | 2,079                                 | 6.01%           | 36         |
| Southwestern Public Service Company                | 39                                    | 0.11%           | 0          |
| St. Joseph Light & Power Company                   | 218                                   | 0.63%           | 0          |
| Sunflower Electric Power Corporation               | 325                                   | 0.94%           | 1          |
| Utilicorp (WestPlains and Missouri Public Service) | 980                                   | 2.83%           | 8          |
| Western Farmers Electric Cooperative               | 0                                     | 0.00%           | 0          |
| Cooperative Power                                  | 39                                    | 0.11%           | 0          |
| IES Utilities                                      | 107                                   | 0.31%           | 0          |
| Interstate Power Company                           | 33                                    | 0.10%           | 0          |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0          |
| MidAmerican Energy                                 | 239                                   | 0.69%           | 0          |
| Minnesota Power                                    | 85                                    | 0.25%           | 0          |
| Nebraska Public Power District                     | 182                                   | 0.52%           | 0          |
| Northern States Power                              | 346                                   | 1.00%           | 1          |
| Northwestern Public Service Company                | 15                                    | 0.04%           | 0          |
| Omaha Public Power District                        | 126                                   | 0.37%           | 0          |
| Otter Tail Power                                   | 28                                    | 0.08%           | 0          |
| Central Illinois Power Cooperative                 | 0                                     | 0.00%           | 0          |
| Illinois Power Company                             | 2,847                                 | 8.23%           | 68         |
| Union Electric                                     | 1,812                                 | 5.24%           | 27         |
| <b>Total</b>                                       | <b>34,577</b>                         | <b>100.00%</b>  | <b>762</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>167</b> |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>928</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 1: Regional Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 5.03%           | 25           |
| Western Resources                                   | 3,857                                 | 7.37%           | 54           |
| Arkansas Electric Cooperative Corporation           | 1,729                                 | 3.30%           | 11           |
| Associated Electric Cooperative                     | 2,502                                 | 4.78%           | 23           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 2.66%           | 7            |
| Central and South West <sup>3</sup>                 | 4,349                                 | 8.31%           | 69           |
| Central Louisiana Electric Company                  | 922                                   | 1.76%           | 3            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.50%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.25%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.79%           | 1            |
| Empire District Electric Company                    | 399                                   | 0.76%           | 1            |
| Entergy Services                                    | 11,638                                | 22.24%          | 495          |
| Grand River Dam Authority                           | 1,280                                 | 2.45%           | 6            |
| KAMO Electric Cooperative                           | 200                                   | 0.38%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 1.09%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.13%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.22%           | 0            |
| Midwest Energy                                      | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.22%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 4.84%           | 23           |
| Oklahoma Municipal Power Authority                  | 116                                   | 0.23%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 3.97%           | 16           |
| Southwestern Public Service Company                 | 300                                   | 0.57%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.42%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.78%           | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.96%           | 4            |
| Western Farmers Electric Cooperative                | 690                                   | 1.32%           | 2            |
| Cooperative Power                                   | 37                                    | 0.07%           | 0            |
| IES Utilities                                       | 109                                   | 0.21%           | 0            |
| Interstate Power Company                            | 36                                    | 0.07%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 232                                   | 0.44%           | 0            |
| Minnesota Power                                     | 89                                    | 0.17%           | 0            |
| Nebraska Public Power District                      | 176                                   | 0.34%           | 0            |
| Northern States Power                               | 346                                   | 0.66%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.03%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.23%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.07%           | 0            |
| Central Illinois Power Cooperative                  | 339                                   | 0.65%           | 0            |
| Illinois Power Company                              | 3,743                                 | 7.15%           | 51           |
| Union Electric                                      | 7,087                                 | 13.54%          | 183          |
| <b>Total</b>  | <b>52,323</b>                         | <b>100.00%</b>  | <b>981</b>   |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>74</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,055</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 1: Regional Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,705                                 | 4.02%           | 16           |
| Western Resources                                  | 5,002                                 | 7.42%           | 55           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 2.65%           | 7            |
| Associated Electric Cooperative                    | 2,502                                 | 3.71%           | 14           |
| Cajun Electric Power Cooperative                   | 1,613                                 | 2.39%           | 6            |
| Central and South West <sup>3</sup>                | 8,521                                 | 12.65%          | 160          |
| Central Louisiana Electric Company                 | 2,292                                 | 3.40%           | 12           |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 23                                    | 0.03%           | 0            |
| City of Coffeyville, KS                            | 56                                    | 0.08%           | 0            |
| City of Lafayette, LA                              | 530                                   | 0.79%           | 1            |
| City of McPherson, KS                              | 182                                   | 0.27%           | 0            |
| City of Winfield, KS                               | 52                                    | 0.08%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.19%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.97%           | 1            |
| Empire District Electric Company                   | 677                                   | 1.01%           | 1            |
| Entergy Services                                   | 15,105                                | 22.42%          | 503          |
| Grand River Dam Authority                          | 1,280                                 | 1.90%           | 4            |
| KAMO Electric Cooperative                          | 200                                   | 0.30%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.85%           | 1            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.10%           | 0            |
| Louisiana Energy and Power Authority               | 338                                   | 0.50%           | 0            |
| Midwest Energy                                     | 15                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.17%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 3.75%           | 14           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.18%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 3.08%           | 10           |
| Southwestern Public Service Company                | 300                                   | 0.45%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.39%           | 0            |
| Sunflower Electric Power Corporation               | 522                                   | 0.77%           | 1            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,355                                 | 2.01%           | 4            |
| Western Farmers Electric Cooperative               | 1,093                                 | 1.62%           | 3            |
| Cooperative Power                                  | 35                                    | 0.05%           | 0            |
| IES Utilities                                      | 102                                   | 0.15%           | 0            |
| Interstate Power Company                           | 58                                    | 0.09%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                 | 249                                   | 0.37%           | 0            |
| Minnesota Power                                    | 82                                    | 0.12%           | 0            |
| Nebraska Public Power District                     | 168                                   | 0.25%           | 0            |
| Northern States Power                              | 337                                   | 0.50%           | 0            |
| Northwestern Public Service Company                | 13                                    | 0.02%           | 0            |
| Omaha Public Power District                        | 114                                   | 0.17%           | 0            |
| Otter Tail Power                                   | 36                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                 | 2,673                                 | 3.97%           | 16           |
| Illinois Power Company                             | 3,743                                 | 5.56%           | 31           |
| Union Electric                                     | 7,087                                 | 10.52%          | 111          |
| <b>Total</b>                                       | <b>67,381</b>                         | <b>100.00%</b>  | <b>970</b>   |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>60</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,029</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.



## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 2: Entergy Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 1,348                                 | 5.26%           | 28           |
| Western Resources                                   | 879                                   | 3.43%           | 12           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.25%           | 0            |
| Associated Electric Cooperative                     | 1,120                                 | 4.37%           | 19           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 6                                     | 0.02%           | 0            |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                    | 96                                    | 0.38%           | 0            |
| Entergy Services                                    | 3,575                                 | 13.94%          | 194          |
| Grand River Dam Authority                           | 470                                   | 1.83%           | 3            |
| KAMO Electric Cooperative                           | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities               | 0                                     | 0.00%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.27%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 9.87%           | 97           |
| Oklahoma Municipal Power Authority                  | 26                                    | 0.10%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 8.11%           | 66           |
| Southwestern Public Service Company                 | 13                                    | 0.05%           | 0            |
| St. Joseph Light & Power Company                    | 0                                     | 0.00%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 0                                     | 0.00%           | 0            |
| IES Utilities                                       | 76                                    | 0.30%           | 0            |
| Interstate Power Company                            | 0                                     | 0.00%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 191                                   | 0.74%           | 1            |
| Minnesota Power                                     | 25                                    | 0.10%           | 0            |
| Nebraska Public Power District                      | 320                                   | 1.25%           | 2            |
| Northern States Power                               | 326                                   | 1.27%           | 2            |
| Northwestern Public Service Company                 | 0                                     | 0.00%           | 0            |
| Omaha Public Power District                         | 262                                   | 1.02%           | 1            |
| Otter Tail Power                                    | 1                                     | 0.00%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 0                                     | 0.00%           | 0            |
| Union Electric                                      | 1,812                                 | 7.07%           | 50           |
| Tennessee Valley Authority                          | 10,353                                | 40.37%          | 1,630        |
| <b>Total</b>  | <b>25,643</b>                         | <b>100.00%</b>  | <b>2,104</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>36</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>2,140</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 2: Entergy Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 3.84%           | 15           |
| Western Resources                                   | 3,734                                 | 5.45%           | 30           |
| Arkansas Electric Cooperative Corporation           | 1,473                                 | 2.15%           | 5            |
| Associated Electric Cooperative                     | 2,280                                 | 3.33%           | 11           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 2.03%           | 4            |
| Central and South West <sup>3</sup>                 | 2,742                                 | 4.00%           | 16           |
| Central Louisiana Electric Company                  | 325                                   | 0.47%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 178                                   | 0.26%           | 0            |
| Empire District Electric Company                    | 307                                   | 0.45%           | 0            |
| Entergy Services                                    | 11,478                                | 16.76%          | 281          |
| Grand River Dam Authority                           | 1,280                                 | 1.87%           | 3            |
| KAMO Electric Cooperative                           | 200                                   | 0.29%           | 0            |
| Kansas City Board of Public Utilities               | 235                                   | 0.34%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.10%           | 0            |
| Louisiana Energy and Power Authority                | 3                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.17%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 3.69%           | 14           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.17%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 3.03%           | 9            |
| Southwestern Public Service Company                 | 13                                    | 0.02%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.18%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 837                                   | 1.22%           | 1            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 52                                    | 0.08%           | 0            |
| IES Utilities                                       | 134                                   | 0.20%           | 0            |
| Interstate Power Company                            | 16                                    | 0.02%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 319                                   | 0.47%           | 0            |
| Minnesota Power                                     | 12                                    | 0.02%           | 0            |
| Nebraska Public Power District                      | 242                                   | 0.35%           | 0            |
| Northern States Power                               | 208                                   | 0.30%           | 0            |
| Northwestern Public Service Company                 | 10                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 169                                   | 0.25%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.06%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 2,847                                 | 4.16%           | 17           |
| Union Electric                                      | 5,274                                 | 7.70%           | 59           |
| Tennessee Valley Authority                          | 25,038                                | 36.55%          | 1,336        |
| <b>Total</b>  | <b>68,502</b>                         | <b>100.00%</b>  | <b>1,804</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>42</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,846</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 600 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 2: Entergy Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 3.42%           | 12           |
| Western Resources                                   | 3,790                                 | 4.92%           | 24           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 2.32%           | 5            |
| Associated Electric Cooperative                     | 2,502                                 | 3.25%           | 11           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 1.81%           | 3            |
| Central and South West <sup>3</sup>                 | 4,349                                 | 5.65%           | 32           |
| Central Louisiana Electric Company                  | 922                                   | 1.20%           | 1            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.34%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.17%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.54%           | 0            |
| Empire District Electric Company                    | 399                                   | 0.52%           | 0            |
| Entergy Services                                    | 11,902                                | 15.46%          | 239          |
| Grand River Dam Authority                           | 1,280                                 | 1.66%           | 3            |
| KAMO Electric Cooperative                           | 200                                   | 0.26%           | 0            |
| Kansas City Board of Public Utilities               | 290                                   | 0.38%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.09%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.15%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.15%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 3.29%           | 11           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.15%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.70%           | 7            |
| Southwestern Public Service Company                 | 39                                    | 0.05%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.28%           | 0            |
| Sunflower Electric Power Corporation                | 325                                   | 0.42%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.33%           | 2            |
| Western Farmers Electric Cooperative                | 690                                   | 0.90%           | 1            |
| Cooperative Power                                   | 38                                    | 0.05%           | 0            |
| IES Utilities                                       | 105                                   | 0.14%           | 0            |
| Interstate Power Company                            | 34                                    | 0.04%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 233                                   | 0.30%           | 0            |
| Minnesota Power                                     | 89                                    | 0.12%           | 0            |
| Nebraska Public Power District                      | 177                                   | 0.23%           | 0            |
| Northern States Power                               | 348                                   | 0.45%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.16%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 339                                   | 0.44%           | 0            |
| Illinois Power Company                              | 3,743                                 | 4.86%           | 24           |
| Union Electric                                      | 7,087                                 | 9.21%           | 85           |
| Tennessee Valley Authority                          | 25,038                                | 32.52%          | 1,058        |
| <b>Total</b>  | <b>76,983</b>                         | <b>100.00%</b>  | <b>1,520</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>34</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,554</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 2: Entergy Market Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,705                                 | 2.79%           | 8            |
| Western Resources                                   | 4,731                                 | 4.88%           | 24           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 1.85%           | 3            |
| Associated Electric Cooperative                     | 2,502                                 | 2.58%           | 7            |
| Cajun Electric Power Cooperative                    | 1,613                                 | 1.67%           | 3            |
| Central and South West <sup>3</sup>                 | 8,521                                 | 8.79%           | 77           |
| Central Louisiana Electric Company                  | 2,292                                 | 2.37%           | 6            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 530                                   | 0.55%           | 0            |
| City of McPherson, KS                               | 132                                   | 0.14%           | 0            |
| City of Winfield, KS                                | 40                                    | 0.04%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.14%           | 0            |
| City Utilities, Springfield, MO                     | 651                                   | 0.67%           | 0            |
| Empire District Electric Company                    | 677                                   | 0.70%           | 0            |
| Entergy Services                                    | 20,156                                | 20.81%          | 433          |
| Grand River Dam Authority                           | 1,280                                 | 1.32%           | 2            |
| KAMO Electric Cooperative                           | 200                                   | 0.21%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.59%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.07%           | 0            |
| Louisiana Energy and Power Authority                | 338                                   | 0.35%           | 0            |
| Midwest Energy                                      | 15                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.12%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 2.61%           | 7            |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.12%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.15%           | 5            |
| Southwestern Public Service Company                 | 300                                   | 0.31%           | 0            |
| St. Joseph Light & Power Company                    | 260                                   | 0.27%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.42%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,266                                 | 1.31%           | 2            |
| Western Farmers Electric Cooperative                | 1,093                                 | 1.13%           | 1            |
| Cooperative Power                                   | 35                                    | 0.04%           | 0            |
| IES Utilities                                       | 103                                   | 0.11%           | 0            |
| Interstate Power Company                            | 57                                    | 0.06%           | 0            |
| Lincoln Electric System                             | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                  | 243                                   | 0.25%           | 0            |
| Minnesota Power                                     | 83                                    | 0.09%           | 0            |
| Nebraska Public Power District                      | 169                                   | 0.17%           | 0            |
| Northern States Power                               | 340                                   | 0.35%           | 0            |
| Northwestern Public Service Company                 | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 115                                   | 0.12%           | 0            |
| Otter Tail Power                                    | 36                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                  | 2,673                                 | 2.76%           | 8            |
| Illinois Power Company                              | 3,743                                 | 3.86%           | 15           |
| Union Electric                                      | 7,087                                 | 7.32%           | 54           |
| Tennessee Valley Authority                          | 25,038                                | 25.84%          | 668          |
| <b>Total</b>  | <b>96,880</b>                         | <b>100.00%</b>  | <b>1,324</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>27</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,351</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 2: Entergy Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 1,348                                 | 4.26%           | 18           |
| Western Resources                                  | 879                                   | 2.78%           | 8            |
| Arkansas Electric Cooperative Corporation          | 65                                    | 0.20%           | 0            |
| Associated Electric Cooperative                    | 1,120                                 | 3.54%           | 13           |
| Cajun Electric Power Cooperative                   | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                | 6                                     | 0.02%           | 0            |
| Central Louisiana Electric Company                 | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                    | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                   | 96                                    | 0.30%           | 0            |
| Entergy Services                                   | 3,575                                 | 11.30%          | 128          |
| Grand River Dam Authority                          | 470                                   | 1.49%           | 2            |
| KAMO Electric Cooperative                          | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities              | 0                                     | 0.00%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.22%           | 0            |
| Louisiana Energy and Power Authority               | 0                                     | 0.00%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 8.00%           | 64           |
| Oklahoma Municipal Power Authority                 | 26                                    | 0.08%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 6.57%           | 43           |
| Southwestern Public Service Company                | 13                                    | 0.04%           | 0            |
| St. Joseph Light & Power Company                   | 0                                     | 0.00%           | 0            |
| Sunflower Electric Power Corporation               | 0                                     | 0.00%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative               | 0                                     | 0.00%           | 0            |
| Cooperative Power                                  | 0                                     | 0.00%           | 0            |
| IES Utilities                                      | 76                                    | 0.24%           | 0            |
| Interstate Power Company                           | 0                                     | 0.00%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 191                                   | 0.60%           | 0            |
| Minnesota Power                                    | 25                                    | 0.08%           | 0            |
| Nebraska Public Power District                     | 320                                   | 1.01%           | 1            |
| Northern States Power                              | 326                                   | 1.03%           | 1            |
| Northwestern Public Service Company                | 0                                     | 0.00%           | 0            |
| Omaha Public Power District                        | 262                                   | 0.83%           | 1            |
| Otter Tail Power                                   | 1                                     | 0.00%           | 0            |
| Central Illinois Power Cooperative                 | 0                                     | 0.00%           | 0            |
| Illinois Power Company                             | 0                                     | 0.00%           | 0            |
| Southern Companies                                 | 6,001                                 | 18.97%          | 360          |
| Union Electric                                     | 1,812                                 | 5.73%           | 33           |
| Tennessee Valley Authority                         | 10,353                                | 32.72%          | 1,070        |
| <b>Total</b>                                       | <b>31,644</b>                         | <b>100.00%</b>  | <b>1,741</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>24</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,765</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 2: Entergy Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 3.09%           | 10           |
| Western Resources                                  | 3,734                                 | 4.38%           | 19           |
| Arkansas Electric Cooperative Corporation          | 1,473                                 | 1.73%           | 3            |
| Associated Electric Cooperative                    | 2,280                                 | 2.67%           | 7            |
| Cajun Electric Power Cooperative                   | 1,393                                 | 1.63%           | 3            |
| Central and South West <sup>3</sup>                | 2,742                                 | 3.22%           | 10           |
| Central Louisiana Electric Company                 | 325                                   | 0.38%           | 0            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                    | 178                                   | 0.21%           | 0            |
| Empire District Electric Company                   | 307                                   | 0.36%           | 0            |
| Entergy Services                                   | 11,478                                | 13.46%          | 181          |
| Grand River Dam Authority                          | 1,280                                 | 1.50%           | 2            |
| KAMO Electric Cooperative                          | 200                                   | 0.23%           | 0            |
| Kansas City Board of Public Utilities              | 235                                   | 0.28%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.08%           | 0            |
| Louisiana Energy and Power Authority               | 3                                     | 0.00%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.14%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 2.97%           | 9            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.14%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 2.44%           | 6            |
| Southwestern Public Service Company                | 13                                    | 0.02%           | 0            |
| St. Joseph Light & Power Company                   | 121                                   | 0.14%           | 0            |
| Sunflower Electric Power Corporation               | 0                                     | 0.00%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 837                                   | 0.98%           | 1            |
| Western Farmers Electric Cooperative               | 0                                     | 0.00%           | 0            |
| Cooperative Power                                  | 52                                    | 0.06%           | 0            |
| IES Utilities                                      | 134                                   | 0.16%           | 0            |
| Interstate Power Company                           | 16                                    | 0.02%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 319                                   | 0.37%           | 0            |
| Minnesota Power                                    | 12                                    | 0.01%           | 0            |
| Nebraska Public Power District                     | 242                                   | 0.28%           | 0            |
| Northern States Power                              | 208                                   | 0.24%           | 0            |
| Northwestern Public Service Company                | 10                                    | 0.01%           | 0            |
| Omaha Public Power District                        | 169                                   | 0.20%           | 0            |
| Otter Tail Power                                   | 38                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                 | 0                                     | 0.00%           | 0            |
| Illinois Power Company                             | 2,847                                 | 3.34%           | 11           |
| Southern Companies                                 | 16,780                                | 19.68%          | 387          |
| Union Electric                                     | 5,274                                 | 6.18%           | 38           |
| Tennessee Valley Authority                         | 25,038                                | 29.36%          | 862          |
| <b>Total</b>                                       | <b>85,282</b>                         | <b>100.00%</b>  | <b>1,551</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>27</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,578</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 2: Entergy Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 2.57%           | 7            |
| Western Resources                                  | 3,790                                 | 3.70%           | 14           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 1.74%           | 3            |
| Associated Electric Cooperative                    | 2,502                                 | 2.44%           | 6            |
| Cajun Electric Power Cooperative                   | 1,393                                 | 1.36%           | 2            |
| Central and South West <sup>3</sup>                | 4,349                                 | 4.24%           | 18           |
| Central Louisiana Electric Company                 | 922                                   | 0.90%           | 1            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                                   | 0.26%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.13%           | 0            |
| City Utilities, Springfield, MO                    | 413                                   | 0.40%           | 0            |
| Empire District Electric Company                   | 399                                   | 0.39%           | 0            |
| Entergy Services                                   | 11,902                                | 11.61%          | 135          |
| Grand River Dam Authority                          | 1,280                                 | 1.25%           | 2            |
| KAMO Electric Cooperative                          | 200                                   | 0.20%           | 0            |
| Kansas City Board of Public Utilities              | 290                                   | 0.28%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.07%           | 0            |
| Louisiana Energy and Power Authority               | 116                                   | 0.11%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.11%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 2.47%           | 6            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.12%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 2.03%           | 4            |
| Southwestern Public Service Company                | 39                                    | 0.04%           | 0            |
| St. Joseph Light & Power Company                   | 218                                   | 0.21%           | 0            |
| Sunflower Electric Power Corporation               | 325                                   | 0.32%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                                 | 1.00%           | 1            |
| Western Farmers Electric Cooperative               | 690                                   | 0.67%           | 0            |
| Cooperative Power                                  | 38                                    | 0.04%           | 0            |
| IES Utilities                                      | 105                                   | 0.10%           | 0            |
| Interstate Power Company                           | 34                                    | 0.03%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 233                                   | 0.23%           | 0            |
| Minnesota Power                                    | 89                                    | 0.09%           | 0            |
| Nebraska Public Power District                     | 177                                   | 0.17%           | 0            |
| Northern States Power                              | 348                                   | 0.34%           | 0            |
| Northwestern Public Service Company                | 14                                    | 0.01%           | 0            |
| Omaha Public Power District                        | 123                                   | 0.12%           | 0            |
| Otter Tail Power                                   | 38                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                 | 339                                   | 0.33%           | 0            |
| Illinois Power Company                             | 3,743                                 | 3.65%           | 13           |
| Southern Companies                                 | 25,499                                | 24.88%          | 619          |
| Union Electric                                     | 7,087                                 | 6.92%           | 48           |
| Tennessee Valley Authority                         | 25,038                                | 24.43%          | 597          |
| <b>Total</b>                                       | <b>102,482</b>                        | <b>100.00%</b>  | <b>1,477</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>19</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,496</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 2: Entergy Market Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,705                                 | 2.17%           | 5            |
| Western Resources                                   | 4,731                                 | 3.79%           | 14           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 1.43%           | 2            |
| Associated Electric Cooperative                     | 2,502                                 | 2.00%           | 4            |
| Cajun Electric Power Cooperative                    | 1,613                                 | 1.29%           | 2            |
| Central and South West <sup>3</sup>                 | 8,521                                 | 6.82%           | 47           |
| Central Louisiana Electric Company                  | 2,292                                 | 1.83%           | 3            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 530                                   | 0.42%           | 0            |
| City of McPherson, KS                               | 132                                   | 0.11%           | 0            |
| City of Winfield, KS                                | 40                                    | 0.03%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.10%           | 0            |
| City Utilities, Springfield, MO                     | 651                                   | 0.52%           | 0            |
| Empire District Electric Company                    | 677                                   | 0.54%           | 0            |
| Entergy Services                                    | 20,156                                | 16.14%          | 260          |
| Grand River Dam Authority                           | 1,280                                 | 1.02%           | 1            |
| KAMO Electric Cooperative                           | 200                                   | 0.16%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.46%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.06%           | 0            |
| Louisiana Energy and Power Authority                | 338                                   | 0.27%           | 0            |
| Midwest Energy                                      | 15                                    | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.09%           | 0            |
| Okahoma Gas & Electric Company                      | 2,530                                 | 2.03%           | 4            |
| Okahoma Municipal Power Authority                   | 118                                   | 0.09%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 1.66%           | 3            |
| Southwestern Public Service Company                 | 300                                   | 0.24%           | 0            |
| St. Joseph Light & Power Company                    | 260                                   | 0.21%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.33%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,266                                 | 1.01%           | 1            |
| Western Farmers Electric Cooperative                | 1,093                                 | 0.87%           | 1            |
| Cooperative Power                                   | 35                                    | 0.03%           | 0            |
| IES Utilities                                       | 103                                   | 0.08%           | 0            |
| Interstate Power Company                            | 57                                    | 0.05%           | 0            |
| Lincoln Electric System                             | 5                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 243                                   | 0.19%           | 0            |
| Minnesota Power                                     | 83                                    | 0.07%           | 0            |
| Nebraska Public Power District                      | 169                                   | 0.14%           | 0            |
| Northern States Power                               | 340                                   | 0.27%           | 0            |
| Northwestern Public Service Company                 | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 115                                   | 0.09%           | 0            |
| Otter Tail Power                                    | 36                                    | 0.03%           | 0            |
| Central Illinois Power Cooperative                  | 2,673                                 | 2.14%           | 5            |
| Illinois Power Company                              | 3,743                                 | 3.00%           | 9            |
| Southern Companies                                  | 28,035                                | 22.44%          | 504          |
| Union Electric                                      | 7,087                                 | 5.67%           | 32           |
| Tennessee Valley Authority                          | 25,038                                | 20.04%          | 402          |
| <b>Total</b>  | <b>124,915</b>                        | <b>100.00%</b>  | <b>1,300</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>16</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,316</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.



## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 2: Entergy Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 1,348                                 | 8.82%           | 78           |
| Western Resources                                   | 879                                   | 5.75%           | 33           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.42%           | 0            |
| Associated Electric Cooperative                     | 1,120                                 | 7.32%           | 54           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 6                                     | 0.04%           | 0            |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 0                                     | 0.00%           | 0            |
| Empire District Electric Company                    | 96                                    | 0.63%           | 0            |
| Entergy Services                                    | 3,575                                 | 23.38%          | 547          |
| Grand River Dam Authority                           | 470                                   | 3.08%           | 9            |
| KAMO Electric Cooperative                           | 0                                     | 0.00%           | 0            |
| Kansas City Board of Public Utilities               | 0                                     | 0.00%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.46%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 16.55%          | 274          |
| Oklahoma Municipal Power Authority                  | 26                                    | 0.17%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 13.59%          | 185          |
| Southwestern Public Service Company                 | 13                                    | 0.09%           | 0            |
| St. Joseph Light & Power Company                    | 0                                     | 0.00%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 0                                     | 0.00%           | 0            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 0                                     | 0.00%           | 0            |
| IES Utilities                                       | 76                                    | 0.50%           | 0            |
| Interstate Power Company                            | 0                                     | 0.00%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 191                                   | 1.25%           | 2            |
| Minnesota Power                                     | 25                                    | 0.16%           | 0            |
| Nebraska Public Power District                      | 320                                   | 2.09%           | 4            |
| Northern States Power                               | 326                                   | 2.13%           | 5            |
| Northwestern Public Service Company                 | 0                                     | 0.00%           | 0            |
| Omaha Public Power District                         | 262                                   | 1.71%           | 3            |
| Otter Tail Power                                    | 1                                     | 0.01%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 0                                     | 0.00%           | 0            |
| Union Electric                                      | 1,812                                 | 11.85%          | 140          |
| <b>Total</b>  | <b>15,290</b>                         | <b>100.00%</b>  | <b>1,334</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>101</b>   |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,436</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 2: Entergy Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 6.05%           | 37           |
| Western Resources                                   | 3,734                                 | 8.59%           | 74           |
| Arkansas Electric Cooperative Corporation           | 1,473                                 | 3.39%           | 11           |
| Associated Electric Cooperative                     | 2,280                                 | 5.25%           | 28           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 3.21%           | 10           |
| Central and South West <sup>3</sup>                 | 2,742                                 | 6.31%           | 40           |
| Central Louisiana Electric Company                  | 325                                   | 0.75%           | 1            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 0                                     | 0.00%           | 0            |
| City Utilities, Springfield, MO                     | 178                                   | 0.41%           | 0            |
| Empire District Electric Company                    | 307                                   | 0.71%           | 1            |
| Entergy Services                                    | 11,478                                | 26.41%          | 697          |
| Grand River Dam Authority                           | 1,280                                 | 2.95%           | 9            |
| KAMO Electric Cooperative                           | 200                                   | 0.46%           | 0            |
| Kansas City Board of Public Utilities               | 235                                   | 0.54%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.16%           | 0            |
| Louisiana Energy and Power Authority                | 3                                     | 0.01%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.27%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 5.82%           | 34           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.27%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 4.78%           | 23           |
| Southwestern Public Service Company                 | 13                                    | 0.03%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.28%           | 0            |
| Sunflower Electric Power Corporation                | 0                                     | 0.00%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 837                                   | 1.93%           | 4            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 52                                    | 0.12%           | 0            |
| IES Utilities                                       | 134                                   | 0.31%           | 0            |
| Interstate Power Company                            | 16                                    | 0.04%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 319                                   | 0.73%           | 1            |
| Minnesota Power                                     | 12                                    | 0.03%           | 0            |
| Nebraska Public Power District                      | 242                                   | 0.56%           | 0            |
| Northern States Power                               | 208                                   | 0.48%           | 0            |
| Northwestern Public Service Company                 | 10                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 169                                   | 0.39%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.09%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 2,847                                 | 6.55%           | 43           |
| Union Electric                                      | 5,274                                 | 12.13%          | 147          |
| <b>Total</b>  | <b>43,464</b>                         | <b>100.00%</b>  | <b>1,163</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>104</b>   |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,267</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 2: Entergy Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 5.07%           | 26           |
| Western Resources                                  | 3,790                                 | 7.30%           | 53           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 3.44%           | 12           |
| Associated Electric Cooperative                    | 2,502                                 | 4.82%           | 23           |
| Cajun Electric Power Cooperative                   | 1,393                                 | 2.68%           | 7            |
| Central and South West <sup>3</sup>                | 4,349                                 | 8.37%           | 70           |
| Central Louisiana Electric Company                 | 922                                   | 1.77%           | 3            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                                   | 0.50%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.25%           | 0            |
| City Utilities, Springfield, MO                    | 413                                   | 0.80%           | 1            |
| Empire District Electric Company                   | 399                                   | 0.77%           | 1            |
| Entergy Services                                   | 11,902                                | 22.91%          | 525          |
| Grand River Dam Authority                          | 1,280                                 | 2.46%           | 6            |
| KAMO Electric Cooperative                          | 200                                   | 0.39%           | 0            |
| Kansas City Board of Public Utilities              | 290                                   | 0.56%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.13%           | 0            |
| Louisiana Energy and Power Authority               | 116                                   | 0.22%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.23%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 4.87%           | 24           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.23%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 4.00%           | 16           |
| Southwestern Public Service Company                | 39                                    | 0.08%           | 0            |
| St. Joseph Light & Power Company                   | 218                                   | 0.42%           | 0            |
| Sunflower Electric Power Corporation               | 325                                   | 0.63%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                                 | 1.97%           | 4            |
| Western Farmers Electric Cooperative               | 690                                   | 1.33%           | 2            |
| Cooperative Power                                  | 38                                    | 0.07%           | 0            |
| IES Utilities                                      | 105                                   | 0.20%           | 0            |
| Interstate Power Company                           | 34                                    | 0.07%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 233                                   | 0.45%           | 0            |
| Minnesota Power                                    | 89                                    | 0.17%           | 0            |
| Nebraska Public Power District                     | 177                                   | 0.34%           | 0            |
| Northern States Power                              | 348                                   | 0.67%           | 0            |
| Northwestern Public Service Company                | 14                                    | 0.03%           | 0            |
| Omaha Public Power District                        | 123                                   | 0.24%           | 0            |
| Otter Tail Power                                   | 38                                    | 0.07%           | 0            |
| Central Illinois Power Cooperative                 | 339                                   | 0.65%           | 0            |
| Illinois Power Company                             | 3,743                                 | 7.21%           | 52           |
| Union Electric                                     | 7,087                                 | 13.64%          | 186          |
| <b>Total</b>                                       | <b>51,945</b>                         | <b>100.00%</b>  | <b>1,015</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>74</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,089</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 2: Entergy Market Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,705                                 | 3.77%           | 14           |
| Western Resources                                  | 4,731                                 | 6.58%           | 43           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 2.49%           | 6            |
| Associated Electric Cooperative                    | 2,502                                 | 3.48%           | 12           |
| Cajun Electric Power Cooperative                   | 1,613                                 | 2.25%           | 5            |
| Central and South West <sup>3</sup>                | 8,521                                 | 11.86%          | 141          |
| Central Louisiana Electric Company                 | 2,292                                 | 3.19%           | 10           |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 23                                    | 0.03%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 530                                   | 0.74%           | 1            |
| City of McPherson, KS                              | 132                                   | 0.18%           | 0            |
| City of Winfield, KS                               | 40                                    | 0.06%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.18%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.91%           | 1            |
| Empire District Electric Company                   | 677                                   | 0.94%           | 1            |
| Entergy Services                                   | 20,156                                | 28.06%          | 787          |
| Grand River Dam Authority                          | 1,280                                 | 1.78%           | 3            |
| KAMO Electric Cooperative                          | 200                                   | 0.28%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.80%           | 1            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.10%           | 0            |
| Louisiana Energy and Power Authority               | 338                                   | 0.47%           | 0            |
| Midwest Energy                                     | 15                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.16%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 3.52%           | 12           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.16%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 2.89%           | 8            |
| Southwestern Public Service Company                | 300                                   | 0.42%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.36%           | 0            |
| Sunflower Electric Power Corporation               | 410                                   | 0.57%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,266                                 | 1.76%           | 3            |
| Western Farmers Electric Cooperative               | 1,093                                 | 1.52%           | 2            |
| Cooperative Power                                  | 35                                    | 0.05%           | 0            |
| IES Utilities                                      | 103                                   | 0.14%           | 0            |
| Interstate Power Company                           | 57                                    | 0.08%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                 | 243                                   | 0.34%           | 0            |
| Minnesota Power                                    | 83                                    | 0.12%           | 0            |
| Nebraska Public Power District                     | 169                                   | 0.23%           | 0            |
| Northern States Power                              | 340                                   | 0.47%           | 0            |
| Northwestern Public Service Company                | 13                                    | 0.02%           | 0            |
| Omaha Public Power District                        | 115                                   | 0.16%           | 0            |
| Otter Tail Power                                   | 36                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                 | 2,673                                 | 3.72%           | 14           |
| Illinois Power Company                             | 3,743                                 | 5.21%           | 27           |
| Union Electric                                     | 7,087                                 | 9.86%           | 97           |
| <b>Total</b>                                       | <b>71,843</b>                         | <b>100.00%</b>  | <b>1,192</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>50</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,242</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 6.75%           | 46           |
| Western Resources                                   | 3,734                                 | 9.58%           | 92           |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.17%           | 0            |
| Associated Electric Cooperative                     | 2,280                                 | 5.85%           | 34           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 2,502                                 | 6.42%           | 41           |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 93                                    | 0.24%           | 0            |
| City Utilities, Springfield, MO                     | 178                                   | 0.46%           | 0            |
| Empire District Electric Company                    | 307                                   | 0.79%           | 1            |
| Entergy Services                                    | 3,575                                 | 9.17%           | 84           |
| Grand River Dam Authority                           | 1,280                                 | 3.29%           | 11           |
| KAMO Electric Cooperative                           | 200                                   | 0.51%           | 0            |
| Kansas City Board of Public Utilities               | 290                                   | 0.74%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.18%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 78                                    | 0.20%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 6.49%           | 42           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.30%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 5.33%           | 28           |
| Southwestern Public Service Company                 | 39                                    | 0.10%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.31%           | 0            |
| Sunflower Electric Power Corporation                | 325                                   | 0.83%           | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 909                                   | 2.33%           | 5            |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 53                                    | 0.14%           | 0            |
| IES Utilities                                       | 137                                   | 0.35%           | 0            |
| Interstate Power Company                            | 16                                    | 0.04%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 326                                   | 0.84%           | 1            |
| Minnesota Power                                     | 12                                    | 0.03%           | 0            |
| Nebraska Public Power District                      | 247                                   | 0.63%           | 0            |
| Northern States Power                               | 212                                   | 0.55%           | 0            |
| Northwestern Public Service Company                 | 10                                    | 0.03%           | 0            |
| Omaha Public Power District                         | 172                                   | 0.44%           | 0            |
| Otter Tail Power                                    | 15                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 2,198                                 | 5.64%           | 32           |
| Union Electric                                      | 1,812                                 | 4.65%           | 22           |
| Tennessee Valley Authority                          | 10,353                                | 26.57%          | 706          |
| <b>Total</b>  | <b>38,967</b>                         | <b>100.00%</b>  | <b>1,152</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>129</b>   |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,281</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 3.51%           | 12           |
| Western Resources                                   | 3,790                                 | 5.05%           | 26           |
| Arkansas Electric Cooperative Corporation           | 1,473                                 | 1.96%           | 4            |
| Associated Electric Cooperative                     | 2,502                                 | 3.34%           | 11           |
| Cajun Electric Power Cooperative                    | 1,393                                 | 1.86%           | 3            |
| Central and South West <sup>3</sup>                 | 4,345                                 | 5.79%           | 34           |
| Central Louisiana Electric Company                  | 922                                   | 1.23%           | 2            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.35%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.17%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.55%           | 0            |
| Empire District Electric Company                    | 399                                   | 0.53%           | 0            |
| Entergy Services                                    | 11,478                                | 15.31%          | 234          |
| Grand River Dam Authority                           | 1,280                                 | 1.71%           | 3            |
| KAMO Electric Cooperative                           | 200                                   | 0.27%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.76%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.09%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.15%           | 0            |
| Midwest Energy                                      | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.16%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 3.37%           | 11           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.16%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.77%           | 8            |
| Southwestern Public Service Company                 | 300                                   | 0.40%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.29%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.55%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.36%           | 2            |
| Western Farmers Electric Cooperative                | 690                                   | 0.92%           | 1            |
| Cooperative Power                                   | 38                                    | 0.05%           | 0            |
| IES Utilities                                       | 107                                   | 0.14%           | 0            |
| Interstate Power Company                            | 36                                    | 0.05%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 232                                   | 0.31%           | 0            |
| Minnesota Power                                     | 89                                    | 0.12%           | 0            |
| Nebraska Public Power District                      | 176                                   | 0.24%           | 0            |
| Northern States Power                               | 347                                   | 0.46%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.16%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 257                                   | 0.34%           | 0            |
| Illinois Power Company                              | 3,743                                 | 4.99%           | 25           |
| Union Electric                                      | 5,274                                 | 7.03%           | 49           |
| Tennessee Valley Authority                          | 25,038                                | 33.39%          | 1,115        |
| <b>Total</b>  | <b>74,979</b>                         | <b>100.00%</b>  | <b>1,544</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>35</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,579</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 3.17%           | 10           |
| Western Resources                                  | 3,923                                 | 4.73%           | 22           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 2.16%           | 5            |
| Associated Electric Cooperative                    | 2,502                                 | 3.02%           | 9            |
| Cajun Electric Power Cooperative                   | 1,393                                 | 1.68%           | 3            |
| Central and South West <sup>3</sup>                | 6,036                                 | 7.28%           | 53           |
| Central Louisiana Electric Company                 | 922                                   | 1.11%           | 1            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                                   | 0.32%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 40                                    | 0.05%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.16%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.79%           | 1            |
| Empire District Electric Company                   | 677                                   | 0.82%           | 1            |
| Entergy Services                                   | 11,902                                | 14.36%          | 206          |
| Grand River Dam Authority                          | 1,280                                 | 1.54%           | 2            |
| KAMO Electric Cooperative                          | 200                                   | 0.24%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.69%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.08%           | 0            |
| Louisiana Energy and Power Authority               | 235                                   | 0.28%           | 0            |
| Midwest Energy                                     | 15                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.14%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 3.05%           | 9            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.14%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 2.51%           | 6            |
| Southwestern Public Service Company                | 300                                   | 0.36%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.31%           | 0            |
| Sunflower Electric Power Corporation               | 410                                   | 0.49%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,252                                 | 1.51%           | 2            |
| Western Farmers Electric Cooperative               | 969                                   | 1.17%           | 1            |
| Cooperative Power                                  | 36                                    | 0.04%           | 0            |
| IES Utilities                                      | 106                                   | 0.13%           | 0            |
| Interstate Power Company                           | 41                                    | 0.05%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                 | 233                                   | 0.28%           | 0            |
| Minnesota Power                                    | 86                                    | 0.10%           | 0            |
| Nebraska Public Power District                     | 174                                   | 0.21%           | 0            |
| Northern States Power                              | 351                                   | 0.42%           | 0            |
| Northwestern Public Service Company                | 14                                    | 0.02%           | 0            |
| Omaha Public Power District                        | 118                                   | 0.14%           | 0            |
| Otter Tail Power                                   | 37                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                 | 2,549                                 | 3.08%           | 9            |
| Illinois Power Company                             | 3,743                                 | 4.52%           | 20           |
| Union Electric                                     | 7,087                                 | 8.55%           | 73           |
| Tennessee Valley Authority                         | 25,038                                | 30.21%          | 913          |
| <b>Total</b>                                       | <b>82,882</b>                         | <b>100.00%</b>  | <b>1,351</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>30</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,381</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHIs         |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,705                                 | 2.75%           | 8            |
| Western Resources                                  | 5,202                                 | 5.28%           | 28           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 1.82%           | 3            |
| Associated Electric Cooperative                    | 2,502                                 | 2.54%           | 6            |
| Cajun Electric Power Cooperative                   | 1,613                                 | 1.64%           | 3            |
| Central and South West <sup>3</sup>                | 8,824                                 | 8.96%           | 80           |
| Central Louisiana Electric Company                 | 2,633                                 | 2.67%           | 7            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                            | 56                                    | 0.06%           | 0            |
| City of Lafayette, LA                              | 580                                   | 0.59%           | 0            |
| City of McPherson, KS                              | 182                                   | 0.19%           | 0            |
| City of Winfield, KS                               | 52                                    | 0.05%           | 0            |
| City Power & Light, Independence, MO               | 170                                   | 0.17%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.66%           | 0            |
| Empire District Electric Company                   | 710                                   | 0.72%           | 1            |
| Entergy Services                                   | 20,156                                | 20.47%          | 419          |
| Grand River Dam Authority                          | 1,280                                 | 1.30%           | 2            |
| KAMO Electric Cooperative                          | 200                                   | 0.20%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.58%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.07%           | 0            |
| Louisiana Energy and Power Authority               | 350                                   | 0.36%           | 0            |
| Midwest Energy                                     | 28                                    | 0.03%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.12%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 2.57%           | 7            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.12%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 2.11%           | 4            |
| Southwestern Public Service Company                | 300                                   | 0.30%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.26%           | 0            |
| Sunflower Electric Power Corporation               | 522                                   | 0.53%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,355                                 | 1.38%           | 2            |
| Western Farmers Electric Cooperative               | 1,093                                 | 1.11%           | 1            |
| Cooperative Power                                  | 35                                    | 0.04%           | 0            |
| IES Utilities                                      | 101                                   | 0.10%           | 0            |
| Interstate Power Company                           | 59                                    | 0.06%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                 | 247                                   | 0.25%           | 0            |
| Minnesota Power                                    | 82                                    | 0.08%           | 0            |
| Nebraska Public Power District                     | 166                                   | 0.17%           | 0            |
| Northern States Power                              | 338                                   | 0.34%           | 0            |
| Northwestern Public Service Company                | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                        | 120                                   | 0.12%           | 0            |
| Otter Tail Power                                   | 36                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                 | 2,673                                 | 2.71%           | 7            |
| Illinois Power Company                             | 3,743                                 | 3.80%           | 14           |
| Union Electric                                     | 7,087                                 | 7.20%           | 52           |
| Tennessee Valley Authority                         | 25,038                                | 25.43%          | 647          |
| <b>Total</b>                                       | <b>98,460</b>                         | <b>100.00%</b>  | <b>1,294</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>29</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,323</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.



## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Including Southern

MAPP<sup>1</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 5.85%           | 34           |
| Western Resources                                  | 3,734                                 | 8.30%           | 69           |
| Arkansas Electric Cooperative Corporation          | 65                                    | 0.14%           | 0            |
| Associated Electric Cooperative                    | 2,280                                 | 5.07%           | 26           |
| Cajun Electric Power Cooperative                   | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                | 2,502                                 | 5.56%           | 31           |
| Central Louisiana Electric Company                 | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 93                                    | 0.21%           | 0            |
| City Utilities, Springfield, MO                    | 178                                   | 0.40%           | 0            |
| Empire District Electric Company                   | 307                                   | 0.68%           | 0            |
| Entergy Services                                   | 3,575                                 | 7.95%           | 63           |
| Grand River Dam Authority                          | 1,280                                 | 2.85%           | 8            |
| KAMO Electric Cooperative                          | 200                                   | 0.45%           | 0            |
| Kansas City Board of Public Utilities              | 290                                   | 0.64%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.16%           | 0            |
| Louisiana Energy and Power Authority               | 0                                     | 0.00%           | 0            |
| Midwest Energy                                     | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative               | 78                                    | 0.17%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 5.63%           | 32           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.26%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 4.62%           | 21           |
| Southwestern Public Service Company                | 39                                    | 0.09%           | 0            |
| St. Joseph Light & Power Company                   | 121                                   | 0.27%           | 0            |
| Sunflower Electric Power Corporation               | 325                                   | 0.72%           | 1            |
| Utilicorp (WestPlains and Missouri Public Service) | 909                                   | 2.02%           | 4            |
| Western Farmers Electric Cooperative               | 0                                     | 0.00%           | 0            |
| Cooperative Power                                  | 53                                    | 0.12%           | 0            |
| IES Utilities                                      | 137                                   | 0.30%           | 0            |
| Interstate Power Company                           | 16                                    | 0.04%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 326                                   | 0.72%           | 1            |
| Minnesota Power                                    | 12                                    | 0.03%           | 0            |
| Nebraska Public Power District                     | 247                                   | 0.55%           | 0            |
| Northern States Power                              | 212                                   | 0.47%           | 0            |
| Northwestern Public Service Company                | 10                                    | 0.02%           | 0            |
| Omaha Public Power District                        | 172                                   | 0.38%           | 0            |
| Otter Tail Power                                   | 15                                    | 0.03%           | 0            |
| Central Illinois Power Cooperative                 | 0                                     | 0.00%           | 0            |
| Illinois Power Company                             | 2,198                                 | 4.89%           | 24           |
| Southern Companies                                 | 6,001                                 | 13.35%          | 178          |
| Union Electric                                     | 1,812                                 | 4.03%           | 16           |
| Tennessee Valley Authority                         | 10,353                                | 23.02%          | 530          |
| <b>Total</b>                                       | <b>44,968</b>                         | <b>100.00%</b>  | <b>1,043</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>97</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,140</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 2.87%           | 8            |
| Western Resources                                   | 3,790                                 | 4.13%           | 17           |
| Arkansas Electric Cooperative Corporation           | 1,473                                 | 1.61%           | 3            |
| Associated Electric Cooperative                     | 2,502                                 | 2.73%           | 7            |
| Cajun Electric Power Cooperative                    | 1,393                                 | 1.52%           | 2            |
| Central and South West <sup>3</sup>                 | 4,345                                 | 4.73%           | 22           |
| Central Louisiana Electric Company                  | 922                                   | 1.00%           | 1            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 262                                   | 0.28%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 131                                   | 0.14%           | 0            |
| City Utilities, Springfield, MO                     | 413                                   | 0.45%           | 0            |
| Empire District Electric Company                    | 399                                   | 0.44%           | 0            |
| Entergy Services                                    | 11,478                                | 12.51%          | 156          |
| Grand River Dam Authority                           | 1,280                                 | 1.40%           | 2            |
| KAMO Electric Cooperative                           | 200                                   | 0.22%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.62%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.08%           | 0            |
| Louisiana Energy and Power Authority                | 116                                   | 0.13%           | 0            |
| Midwest Energy                                      | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.13%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 2.76%           | 8            |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.13%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.27%           | 5            |
| Southwestern Public Service Company                 | 300                                   | 0.33%           | 0            |
| St. Joseph Light & Power Company                    | 218                                   | 0.24%           | 0            |
| Sunflower Electric Power Corporation                | 410                                   | 0.45%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                                 | 1.11%           | 1            |
| Western Farmers Electric Cooperative                | 690                                   | 0.75%           | 1            |
| Cooperative Power                                   | 38                                    | 0.04%           | 0            |
| IES Utilities                                       | 107                                   | 0.12%           | 0            |
| Interstate Power Company                            | 36                                    | 0.04%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 232                                   | 0.25%           | 0            |
| Minnesota Power                                     | 89                                    | 0.10%           | 0            |
| Nebraska Public Power District                      | 176                                   | 0.19%           | 0            |
| Northern States Power                               | 347                                   | 0.38%           | 0            |
| Northwestern Public Service Company                 | 14                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 123                                   | 0.13%           | 0            |
| Otter Tail Power                                    | 38                                    | 0.04%           | 0            |
| Central Illinois Power Cooperative                  | 257                                   | 0.28%           | 0            |
| Illinois Power Company                              | 3,743                                 | 4.08%           | 17           |
| Southern Companies                                  | 16,780                                | 18.29%          | 334          |
| Union Electric                                      | 5,274                                 | 5.75%           | 33           |
| Tennessee Valley Authority                          | 25,038                                | 27.29%          | 745          |
| <b>Total</b>  | <b>91,759</b>                         | <b>100.00%</b>  | <b>1,365</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>24</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,389</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Including Southern

MAPP<sup>1</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 2.43%           | 6            |
| Western Resources                                  | 3,923                                 | 3.62%           | 13           |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 1.65%           | 3            |
| Associated Electric Cooperative                    | 2,502                                 | 2.31%           | 5            |
| Cajun Electric Power Cooperative                   | 1,393                                 | 1.29%           | 2            |
| Central and South West <sup>2</sup>                | 6,036                                 | 5.57%           | 31           |
| Central Louisiana Electric Company                 | 922                                   | 0.85%           | 1            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                                   | 0.24%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 40                                    | 0.04%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.12%           | 0            |
| City Utilities, Springfield, MO                    | 651                                   | 0.60%           | 0            |
| Empire District Electric Company                   | 677                                   | 0.63%           | 0            |
| Entergy Services                                   | 11,902                                | 10.88%          | 121          |
| Grand River Dam Authority                          | 1,280                                 | 1.18%           | 1            |
| KAMO Electric Cooperative                          | 200                                   | 0.18%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 0.53%           | 0            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.06%           | 0            |
| Louisiana Energy and Power Authority               | 235                                   | 0.22%           | 0            |
| Midwest Energy                                     | 15                                    | 0.01%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.11%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 2.33%           | 5            |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.11%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 1.92%           | 4            |
| Southwestern Public Service Company                | 300                                   | 0.28%           | 0            |
| St. Joseph Light & Power Company                   | 260                                   | 0.24%           | 0            |
| Sunflower Electric Power Corporation               | 410                                   | 0.38%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,252                                 | 1.16%           | 1            |
| Western Farmers Electric Cooperative               | 969                                   | 0.89%           | 1            |
| Cooperative Power                                  | 36                                    | 0.03%           | 0            |
| IES Utilities                                      | 106                                   | 0.10%           | 0            |
| Interstate Power Company                           | 41                                    | 0.04%           | 0            |
| Lincoln Electric System                            | 5                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 233                                   | 0.21%           | 0            |
| Minnesota Power                                    | 86                                    | 0.08%           | 0            |
| Nebraska Public Power District                     | 174                                   | 0.16%           | 0            |
| Northern States Power                              | 351                                   | 0.32%           | 0            |
| Northwestern Public Service Company                | 14                                    | 0.01%           | 0            |
| Omaha Public Power District                        | 118                                   | 0.11%           | 0            |
| Otter Tail Power                                   | 37                                    | 0.03%           | 0            |
| Central Illinois Power Cooperative                 | 2,549                                 | 2.35%           | 6            |
| Illinois Power Company                             | 3,743                                 | 3.45%           | 12           |
| Southern Companies                                 | 25,499                                | 23.53%          | 554          |
| Union Electric                                     | 7,087                                 | 6.54%           | 43           |
| Tennessee Valley Authority                         | 25,038                                | 23.10%          | 534          |
| <b>Total</b>                                       | <b>108,381</b>                        | <b>100.00%</b>  | <b>1,343</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>18</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,361</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Including Southern

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,705                                 | 2.14%           | 5            |
| Western Resources                                   | 5,202                                 | 4.11%           | 17           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 1.41%           | 2            |
| Associated Electric Cooperative                     | 2,502                                 | 1.98%           | 4            |
| Cajun Electric Power Cooperative                    | 1,613                                 | 1.28%           | 2            |
| Central and South West <sup>3</sup>                 | 8,824                                 | 6.98%           | 49           |
| Central Louisiana Electric Company                  | 2,633                                 | 2.08%           | 4            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 23                                    | 0.02%           | 0            |
| City of Coffeyville, KS                             | 56                                    | 0.04%           | 0            |
| City of Lafayette, LA                               | 580                                   | 0.46%           | 0            |
| City of McPherson, KS                               | 182                                   | 0.14%           | 0            |
| City of Winfield, KS                                | 52                                    | 0.04%           | 0            |
| City Power & Light, Independence, MO                | 170                                   | 0.13%           | 0            |
| City Utilities, Springfield, MO                     | 651                                   | 0.51%           | 0            |
| Empire District Electric Company                    | 710                                   | 0.56%           | 0            |
| Entergy Services                                    | 20,156                                | 15.93%          | 254          |
| Grand River Dam Authority                           | 1,280                                 | 1.01%           | 1            |
| KAMO Electric Cooperative                           | 200                                   | 0.16%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.45%           | 0            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.06%           | 0            |
| Louisiana Energy and Power Authority                | 350                                   | 0.28%           | 0            |
| Midwest Energy                                      | 28                                    | 0.02%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.09%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 2.00%           | 4            |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.09%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 1.64%           | 3            |
| Southwestern Public Service Company                 | 300                                   | 0.24%           | 0            |
| St. Joseph Light & Power Company                    | 260                                   | 0.21%           | 0            |
| Sunflower Electric Power Corporation                | 522                                   | 0.41%           | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 1,355                                 | 1.07%           | 1            |
| Western Farmers Electric Cooperative                | 1,093                                 | 0.86%           | 1            |
| Cooperative Power                                   | 35                                    | 0.03%           | 0            |
| IES Utilities                                       | 101                                   | 0.08%           | 0            |
| Interstate Power Company                            | 59                                    | 0.05%           | 0            |
| Lincoln Electric System                             | 5                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 247                                   | 0.19%           | 0            |
| Minnesota Power                                     | 82                                    | 0.06%           | 0            |
| Nebraska Public Power District                      | 166                                   | 0.13%           | 0            |
| Northern States Power                               | 338                                   | 0.27%           | 0            |
| Northwestern Public Service Company                 | 13                                    | 0.01%           | 0            |
| Omaha Public Power District                         | 120                                   | 0.09%           | 0            |
| Otter Tail Power                                    | 36                                    | 0.03%           | 0            |
| Central Illinois Power Cooperative                  | 2,673                                 | 2.11%           | 4            |
| Illinois Power Company                              | 3,743                                 | 2.96%           | 9            |
| Southern Companies                                  | 28,035                                | 22.16%          | 491          |
| Union Electric                                      | 7,087                                 | 5.60%           | 31           |
| Tennessee Valley Authority                          | 25,038                                | 19.79%          | 392          |
| <b>Total</b>  | <b>126,495</b>                        | <b>100.00%</b>  | <b>1,275</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>18</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,293</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 14 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,631                                 | 9.20%           | 85           |
| Western Resources                                   | 3,734                                 | 13.05%          | 170          |
| Arkansas Electric Cooperative Corporation           | 65                                    | 0.23%           | 0            |
| Associated Electric Cooperative                     | 2,280                                 | 7.97%           | 63           |
| Cajun Electric Power Cooperative                    | 0                                     | 0.00%           | 0            |
| Central and South West <sup>3</sup>                 | 2,502                                 | 8.74%           | 76           |
| Central Louisiana Electric Company                  | 0                                     | 0.00%           | 0            |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                             | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                               | 0                                     | 0.00%           | 0            |
| City of McPherson, KS                               | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                                | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO                | 93                                    | 0.33%           | 0            |
| City Utilities, Springfield, MO                     | 178                                   | 0.62%           | 0            |
| Empire District Electric Company                    | 307                                   | 1.07%           | 1            |
| Entergy Services                                    | 3,575                                 | 12.49%          | 156          |
| Grand River Dam Authority                           | 1,280                                 | 4.47%           | 20           |
| KAMO Electric Cooperative                           | 200                                   | 0.70%           | 0            |
| Kansas City Board of Public Utilities               | 290                                   | 1.01%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.24%           | 0            |
| Louisiana Energy and Power Authority                | 0                                     | 0.00%           | 0            |
| Midwest Energy                                      | 0                                     | 0.00%           | 0            |
| Northeast Texas Electric Cooperative                | 78                                    | 0.27%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 8.84%           | 78           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.41%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 7.26%           | 53           |
| Southwestern Public Service Company                 | 39                                    | 0.14%           | 0            |
| St. Joseph Light & Power Company                    | 121                                   | 0.42%           | 0            |
| Sunflower Electric Power Corporation                | 325                                   | 1.14%           | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 909                                   | 3.18%           | 10           |
| Western Farmers Electric Cooperative                | 0                                     | 0.00%           | 0            |
| Cooperative Power                                   | 53                                    | 0.18%           | 0            |
| IES Utilities                                       | 137                                   | 0.48%           | 0            |
| Interstate Power Company                            | 16                                    | 0.06%           | 0            |
| Lincoln Electric System                             | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                  | 326                                   | 1.14%           | 1            |
| Minnesota Power                                     | 12                                    | 0.04%           | 0            |
| Nebraska Public Power District                      | 247                                   | 0.86%           | 1            |
| Northern States Power                               | 212                                   | 0.74%           | 1            |
| Northwestern Public Service Company                 | 10                                    | 0.03%           | 0            |
| Omaha Public Power District                         | 172                                   | 0.60%           | 0            |
| Otter Tail Power                                    | 15                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 0                                     | 0.00%           | 0            |
| Illinois Power Company                              | 2,198                                 | 7.68%           | 59           |
| Union Electric                                      | 1,812                                 | 6.33%           | 40           |
| <b>Total</b>  | <b>28,615</b>                         | <b>100.00%</b>  | <b>827</b>   |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>240</b>   |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,067</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 20 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(including hydro)<br>(MW) | Market<br>Share | HHI          |
|--|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 2,631                                 | 5.27%           | 28           |
| Western Resources                                  | 3,790                                 | 7.59%           | 58           |
| Arkansas Electric Cooperative Corporation          | 1,473                                 | 2.95%           | 9            |
| Associated Electric Cooperative                    | 2,502                                 | 5.01%           | 25           |
| Cajun Electric Power Cooperative                   | 1,393                                 | 2.79%           | 8            |
| Central and South West <sup>3</sup>                | 4,345                                 | 8.70%           | 76           |
| Central Louisiana Electric Company                 | 922                                   | 1.85%           | 3            |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                                   | 0.52%           | 0            |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0            |
| City of Winfield, KS                               | 0                                     | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 131                                   | 0.26%           | 0            |
| City Utilities, Springfield, MO                    | 413                                   | 0.83%           | 1            |
| Empire District Electric Company                   | 399                                   | 0.80%           | 1            |
| Entergy Services                                   | 11,478                                | 22.98%          | 528          |
| Grand River Dam Authority                          | 1,280                                 | 2.56%           | 7            |
| KAMO Electric Cooperative                          | 200                                   | 0.40%           | 0            |
| Kansas City Board of Public Utilities              | 572                                   | 1.15%           | 1            |
| Kansas Electric Power Cooperative                  | 70                                    | 0.14%           | 0            |
| Louisiana Energy and Power Authority               | 116                                   | 0.23%           | 0            |
| Midwest Energy                                     | 6                                     | 0.01%           | 0            |
| Northeast Texas Electric Cooperative               | 117                                   | 0.23%           | 0            |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 5.07%           | 26           |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.24%           | 0            |
| Southwestern Power Administration                  | 2,079                                 | 4.16%           | 17           |
| Southwestern Public Service Company                | 300                                   | 0.60%           | 0            |
| St. Joseph Light & Power Company                   | 218                                   | 0.44%           | 0            |
| Sunflower Electric Power Corporation               | 410                                   | 0.82%           | 1            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                                 | 2.05%           | 4            |
| Western Farmers Electric Cooperative               | 690                                   | 1.38%           | 2            |
| Cooperative Power                                  | 38                                    | 0.08%           | 0            |
| IES Utilities                                      | 107                                   | 0.21%           | 0            |
| Interstate Power Company                           | 36                                    | 0.07%           | 0            |
| Lincoln Electric System                            | 0                                     | 0.00%           | 0            |
| MidAmerican Energy                                 | 232                                   | 0.47%           | 0            |
| Minnesota Power                                    | 89                                    | 0.18%           | 0            |
| Nebraska Public Power District                     | 176                                   | 0.35%           | 0            |
| Northern States Power                              | 347                                   | 0.69%           | 0            |
| Northwestern Public Service Company                | 14                                    | 0.03%           | 0            |
| Omaha Public Power District                        | 123                                   | 0.25%           | 0            |
| Otter Tail Power                                   | 38                                    | 0.08%           | 0            |
| Central Illinois Power Cooperative                 | 257                                   | 0.51%           | 0            |
| Illinois Power Company                             | 3,743                                 | 7.50%           | 56           |
| Union Electric                                     | 5,274                                 | 10.56%          | 112          |
| <b>Total</b>                                       | <b>49,941</b>                         | <b>100.00%</b>  | <b>966</b>   |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>80</b>    |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>1,046</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 25 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility  | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI        |
|--|---------------------------------------|-----------------|------------|
| Kansas City Power & Light                          | 2,631                                 | 4.55%           | 21         |
| Western Resources                                  | 3,923                                 | 6.78%           | 46         |
| Arkansas Electric Cooperative Corporation          | 1,788                                 | 3.09%           | 10         |
| Associated Electric Cooperative                    | 2,502                                 | 4.33%           | 19         |
| Cajun Electric Power Cooperative                   | 1,393                                 | 2.41%           | 6          |
| Central and South West <sup>3</sup>                | 6,036                                 | 10.43%          | 109        |
| Central Louisiana Electric Company                 | 922                                   | 1.59%           | 3          |
| City of Alexandria, LA                             | 0                                     | 0.00%           | 0          |
| City of Clarksdale, MS                             | 0                                     | 0.00%           | 0          |
| City of Coffeyville, KS                            | 0                                     | 0.00%           | 0          |
| City of Lafayette, LA                              | 262                                   | 0.45%           | 0          |
| City of McPherson, KS                              | 0                                     | 0.00%           | 0          |
| City of Winfield, KS                               | 40                                    | 0.07%           | 0          |
| City Power & Light, Independence, MO               | 131                                   | 0.23%           | 0          |
| City Utilities, Springfield, MO                    | 651                                   | 1.13%           | 1          |
| Empire District Electric Company                   | 677                                   | 1.17%           | 1          |
| Entergy Services                                   | 11,902                                | 20.58%          | 423        |
| Grand River Dam Authority                          | 1,280                                 | 2.21%           | 5          |
| KAMO Electric Cooperative                          | 200                                   | 0.35%           | 0          |
| Kansas City Board of Public Utilities              | 572                                   | 0.99%           | 1          |
| Kansas Electric Power Cooperative                  | 70                                    | 0.12%           | 0          |
| Louisiana Energy and Power Authority               | 235                                   | 0.41%           | 0          |
| Midwest Energy                                     | 15                                    | 0.03%           | 0          |
| Northeast Texas Electric Cooperative               | 117                                   | 0.20%           | 0          |
| Oklahoma Gas & Electric Company                    | 2,530                                 | 4.37%           | 19         |
| Oklahoma Municipal Power Authority                 | 118                                   | 0.20%           | 0          |
| Southwestern Power Administration                  | 2,079                                 | 3.59%           | 13         |
| Southwestern Public Service Company                | 300                                   | 0.52%           | 0          |
| St. Joseph Light & Power Company                   | 260                                   | 0.45%           | 0          |
| Sunflower Electric Power Corporation               | 410                                   | 0.71%           | 1          |
| Utilicorp (WestPlains and Missouri Public Service) | 1,252                                 | 2.16%           | 5          |
| Western Farmers Electric Cooperative               | 969                                   | 1.68%           | 3          |
| Cooperative Power                                  | 36                                    | 0.06%           | 0          |
| IES Utilities                                      | 106                                   | 0.18%           | 0          |
| Interstate Power Company                           | 41                                    | 0.07%           | 0          |
| Lincoln Electric System                            | 5                                     | 0.01%           | 0          |
| MidAmerican Energy                                 | 233                                   | 0.40%           | 0          |
| Minnesota Power                                    | 86                                    | 0.15%           | 0          |
| Nebraska Public Power District                     | 174                                   | 0.30%           | 0          |
| Northern States Power                              | 351                                   | 0.61%           | 0          |
| Northwestern Public Service Company                | 14                                    | 0.02%           | 0          |
| Omaha Public Power District                        | 118                                   | 0.20%           | 0          |
| Otter Tail Power                                   | 37                                    | 0.06%           | 0          |
| Central Illinois Power Cooperative                 | 2,549                                 | 4.41%           | 19         |
| Illinois Power Company                             | 3,743                                 | 6.47%           | 42         |
| Union Electric                                     | 7,087                                 | 12.25%          | 150        |
| <b>Total</b>                                       | <b>57,844</b>                         | <b>100.00%</b>  | <b>899</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                       |                 | <b>62</b>  |
| <b>Post-Merger HHI</b>                             |                                       |                 | <b>961</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.

## Economic Capacity: Delivered Fuel Costs Less Than 35 Mills

### Case 3: Regional Market Assuming Zero Transmission Cost Excluding Southern and TVA

MAPP<sup>2</sup> Exports Constrained to 1200 MW and Southwestern Public Service Constrained to 300 MW

| Utility   | Capacity<br>(Including hydro)<br>(MW) | Market<br>Share | HHI          |
|---|---------------------------------------|-----------------|--------------|
| Kansas City Power & Light                           | 2,705                                 | 3.68%           | 14           |
| Western Resources                                   | 5,202                                 | 7.08%           | 50           |
| Arkansas Electric Cooperative Corporation           | 1,788                                 | 2.43%           | 6            |
| Associated Electric Cooperative                     | 2,502                                 | 3.41%           | 12           |
| Cajun Electric Power Cooperative                    | 1,613                                 | 2.20%           | 5            |
| Central and South West <sup>3</sup>                 | 8,824                                 | 12.02%          | 144          |
| Central Louisiana Electric Company                  | 2,633                                 | 3.59%           | 13           |
| City of Alexandria, LA                              | 0                                     | 0.00%           | 0            |
| City of Clarksdale, MS                              | 23                                    | 0.03%           | 0            |
| City of Coffeyville, KS                             | 56                                    | 0.08%           | 0            |
| City of Lafayette, LA                               | 580                                   | 0.79%           | 1            |
| City of McPherson, KS                               | 182                                   | 0.25%           | 0            |
| City of Winfield, KS                                | 52                                    | 0.07%           | 0            |
| City Power & Light, Independence, MO                | 170                                   | 0.23%           | 0            |
| City Utilities, Springfield, MO                     | 651                                   | 0.89%           | 1            |
| Empire District Electric Company                    | 710                                   | 0.97%           | 1            |
| Entergy Services                                    | 20,156                                | 27.45%          | 754          |
| Grand River Dam Authority                           | 1,280                                 | 1.74%           | 3            |
| KAMO Electric Cooperative                           | 200                                   | 0.27%           | 0            |
| Kansas City Board of Public Utilities               | 572                                   | 0.78%           | 1            |
| Kansas Electric Power Cooperative                   | 70                                    | 0.10%           | 0            |
| Louisiana Energy and Power Authority                | 350                                   | 0.48%           | 0            |
| Midwest Energy                                      | 28                                    | 0.04%           | 0            |
| Northeast Texas Electric Cooperative                | 117                                   | 0.16%           | 0            |
| Oklahoma Gas & Electric Company                     | 2,530                                 | 3.45%           | 12           |
| Oklahoma Municipal Power Authority                  | 118                                   | 0.16%           | 0            |
| Southwestern Power Administration                   | 2,079                                 | 2.83%           | 8            |
| Southwestern Public Service Company                 | 300                                   | 0.41%           | 0            |
| St. Joseph Light & Power Company                    | 260                                   | 0.35%           | 0            |
| Sunflower Electric Power Corporation                | 522                                   | 0.71%           | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 1,355                                 | 1.85%           | 3            |
| Western Farmers Electric Cooperative                | 1,093                                 | 1.49%           | 2            |
| Cooperative Power                                   | 35                                    | 0.05%           | 0            |
| IES Utilities                                       | 101                                   | 0.14%           | 0            |
| Interstate Power Company                            | 59                                    | 0.08%           | 0            |
| Lincoln Electric System                             | 5                                     | 0.01%           | 0            |
| MidAmerican Energy                                  | 247                                   | 0.34%           | 0            |
| Minnesota Power                                     | 82                                    | 0.11%           | 0            |
| Nebraska Public Power District                      | 166                                   | 0.23%           | 0            |
| Northern States Power                               | 338                                   | 0.46%           | 0            |
| Northwestern Public Service Company                 | 13                                    | 0.02%           | 0            |
| Omaha Public Power District                         | 120                                   | 0.16%           | 0            |
| Otter Tail Power                                    | 36                                    | 0.05%           | 0            |
| Central Illinois Power Cooperative                  | 2,673                                 | 3.64%           | 13           |
| Illinois Power Company                              | 3,743                                 | 5.10%           | 26           |
| Union Electric                                      | 7,087                                 | 9.65%           | 93           |
| <b>Total</b>  | <b>73,423</b>                         | <b>100.00%</b>  | <b>1,164</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                                       |                 | <b>52</b>    |
| <b>Post-Merger HHI</b>                              |                                       |                 | <b>1,216</b> |

Notes: <sup>1</sup> Includes transportation costs.

<sup>2</sup> MAPP Utilities are Interstate, Lincoln Electric, MidAmerican, NPPD, Northern States, OPPD, Cooperative Power, Minnesota Power, Northwestern Public Service Company, IES Utilities, and Otter Tail Power.

<sup>3</sup> Includes 800 MW from ERCOT.

Sources: 1995 EIA Form 860.  
1996 EIA Form 423.



## Analysis of Concentration: Marginal Economic Capacity

### Case 1: Delivered Prices Measured at Utility's Border or SPP Border

| Marginal Economic Capacity |                 |               |                                 |               |                                 |               |
|----------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern  |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price Range                | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14-25                      | 1,322           | 16            | 1,315                           | 10            | 1,167                           | 43            |
| 25-35                      | 792             | 6             | 1,708                           | 3             | 1,521                           | 6             |
| 14-20                      | 962             | 69            | 1,093                           | 69            | 881                             | 114           |
| 20-25                      | 2,101           | 0             | 2,044                           | 0             | 2,749                           | 0             |

Note: <sup>1</sup> Economic capacity for each utility in SPP based on its own energy cost and transmission tariff. Economic Capacity for MAPP, MAIN, and SERC utilities based on least cost destination with the SPP.

## Analysis of Concentration: Marginal Economic Capacity

### Case 2: Delivered Prices at Entergy Border

| Marginal Economic Capacity |                 |               |                                 |               |                                 |               |
|----------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern  |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price Range                | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14-25                      | 1,355           | 27            | 1,454                           | 14            | 1,231                           | 70            |
| 25-35                      | 2,137           | 3             | 1,818                           | 2             | 2,137                           | 3             |
| 14-20                      | 1,700           | 38            | 1,484                           | 24            | 1,525                           | 109           |
| 20-25                      | 949             | 0             | 2,508                           | 0             | 905                             | 0             |

# **Analysis of Concentration: Marginal Economic Capacity** **Case 3: Delivered Prices Measured at Utility's Border or SPP Border,** **Assuming Zero Transmission Cost <sup>1</sup>**

| Marginal Economic Capacity |                 |               |                                 |               |                                 |               |
|----------------------------|-----------------|---------------|---------------------------------|---------------|---------------------------------|---------------|
| Market Excluding Southern  |                 |               | Market Including Southern & TVA |               | Market Excluding Southern & TVA |               |
| Price Range                | Post-Merger HHI | Change in HHI | Post-Merger HHI                 | Change in HHI | Post-Merger HHI                 | Change in HHI |
| 14-25                      | 1,643           | 0             | 1,756                           | 0             | 1,520                           | 0             |
| 25-35                      | 2,647           | 7             | 2,472                           | 5             | 3,044                           | 7             |
| 14-20                      | 2,174           | 0             | 1,836                           | 0             | 1,977                           | 0             |
| 20-25                      | 1,307           | 0             | 3,000                           | 0             | 1,970                           | 0             |

Note: <sup>1</sup> Economic capacity for each utility in SPP based on its own energy cost, assuming zero transmission cost.  
Economic Capacity for MAPP, MAIN, and SERC utilities based on costs delivered to the border of SPP.

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern**  
**14-25 mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI          |
|---|-----------------------------|----------------|--------------|
| Kansas City Power & Light                           | 942                         | 1.83%          | 3            |
| Western Resources                                   | 2,266                       | 4.40%          | 19           |
| Arkansas Electric Cooperative Corporation           | 1,664                       | 3.23%          | 10           |
| Associated Electric Cooperative                     | 1,382                       | 2.68%          | 7            |
| Cajun Electric Power Cooperative                    | 1,393                       | 2.70%          | 12           |
| Central and South West                              | 4,343                       | 8.43%          | 12           |
| Central Louisiana Electric Company                  | 922                         | 1.79%          | 13           |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                               | 262                         | 0.51%          | 0            |
| City of McPherson, KS                               | 0                           | 0.00%          | 0            |
| City of Winfield, KS                                | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO                | 131                         | 0.25%          | 0            |
| City Utilities, Springfield, MO                     | 413                         | 0.80%          | 1            |
| Empire District Electric Company                    | 303                         | 0.59%          | 0            |
| Entergy Services                                    | 8,062                       | 15.65%         | 245          |
| Grand River Dam Authority                           | 810                         | 1.57%          | 2            |
| KAMO Electric Cooperative                           | 200                         | 0.39%          | 0            |
| Kansas City Board of Public Utilities               | 337                         | 0.65%          | 0            |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority                | 116                         | 0.22%          | 0            |
| Midwest Energy                                      | 6                           | 0.01%          | 0            |
| Northeast Texas Electric Cooperative                | 117                         | 0.23%          | 0            |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                  | 92                          | 0.18%          | 0            |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                 | 287                         | 0.56%          | 0            |
| St. Joseph Light & Power Company                    | 97                          | 0.19%          | 0            |
| Sunflower Electric Power Corporation                | 410                         | 0.80%          | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                       | 1.99%          | 4            |
| Western Farmers Electric Cooperative                | 690                         | 1.34%          | 2            |
| Cooperative Power                                   | 87                          | 0.17%          | 0            |
| IES Utilities                                       | 96                          | 0.19%          | 0            |
| Interstate Power Company                            | 61                          | 0.12%          | 0            |
| Lincoln Electric System                             | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                  | 121                         | 0.24%          | 0            |
| Minnesota Power                                     | 185                         | 0.36%          | 0            |
| Nebraska Public Power District                      | 0                           | 0.00%          | 0            |
| Northern States Power                               | 537                         | 1.04%          | 1            |
| Northwestern Public Service Company                 | 24                          | 0.05%          | 0            |
| Omaha Public Power District                         | 0                           | 0.00%          | 0            |
| Otter Tail Power                                    | 88                          | 0.17%          | 0            |
| Central Illinois Public Service Co.                 | 339                         | 0.66%          | 0            |
| Illinois Power Company                              | 3,743                       | 7.27%          | 53           |
| Union Electric                                      | 5,275                       | 10.24%         | 105          |
| Tennessee Valley Authority                          | 14,685                      | 28.51%         | 813          |
| <b>Total</b>  | <b>51,510</b>               | <b>100.00%</b> | <b>1,306</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>16</b>    |
| <b>Post-Merger HHI</b>                              |                             |                | <b>1,322</b> |

**Marginal Economic Capacity Analysis  
Case 1: Regional Market Excluding Southern  
25-35 Mills**

| Utility  | Change in Economic<br>Capacity | Market<br>Share | HHI        |
|--|--------------------------------|-----------------|------------|
| Kansas City Power & Light                          | 74                             | 0.46%           | 0          |
| Western Resources                                  | 1,145                          | 7.04%           | 50         |
| Arkansas Electric Cooperative Corporation          | 59                             | 0.36%           | 0          |
| Associated Electric Cooperative                    | 0                              | 0.00%           | 0          |
| Cajun Electric Power Cooperative                   | 220                            | 1.35%           | 12         |
| Central and South West                             | 4,172                          | 25.66%          | 12         |
| Central Louisiana Electric Company                 | 1,370                          | 8.43%           | 13         |
| City of Alexandria, LA                             | 0                              | 0.00%           | 0          |
| City of Clarksdale, MS                             | 23                             | 0.14%           | 0          |
| City of Coffeyville, KS                            | 56                             | 0.34%           | 0          |
| City of Lafayette, LA                              | 268                            | 1.65%           | 3          |
| City of McPherson, KS                              | 182                            | 1.12%           | 1          |
| City of Winfield, KS                               | 52                             | 0.32%           | 0          |
| City Power & Light, Independence, MO               | 0                              | 0.00%           | 0          |
| City Utilities, Springfield, MO                    | 238                            | 1.46%           | 2          |
| Empire District Electric Company                   | 278                            | 1.71%           | 3          |
| Entergy Services                                   | 3,467                          | 21.33%          | 455        |
| Grand River Dam Authority                          | 0                              | 0.00%           | 0          |
| KAMO Electric Cooperative                          | 0                              | 0.00%           | 0          |
| Kansas City Board of Public Utilities              | 0                              | 0.00%           | 0          |
| Kansas Electric Power Cooperative                  | 0                              | 0.00%           | 0          |
| Louisiana Energy and Power Authority               | 222                            | 1.37%           | 2          |
| Midwest Energy                                     | 9                              | 0.06%           | 0          |
| Northeast Texas Electric Cooperative               | 0                              | 0.00%           | 0          |
| Oklahoma Gas & Electric                            | 0                              | 0.00%           | 0          |
| Oklahoma Municipal Power Authority                 | 0                              | 0.00%           | 0          |
| Southwestern Power Administration                  | 0                              | 0.00%           | 0          |
| Southwestern Public Service Company                | 0                              | 0.00%           | 0          |
| St. Joseph Light & Power Company                   | 42                             | 0.26%           | 0          |
| Sunflower Electric Power Corporation               | 112                            | 0.69%           | 0          |
| Utilicorp (WestPlains and Missouri Public Service) | 332                            | 2.04%           | 4          |
| Western Farmers Electric Cooperative               | 403                            | 2.48%           | 6          |
| Cooperative Power                                  | 0                              | 0.00%           | 0          |
| IES Utilities                                      | 11                             | 0.07%           | 0          |
| Interstate Power Company                           | 355                            | 2.18%           | 5          |
| Lincoln Electric System                            | 72                             | 0.44%           | 0          |
| MidAmerican Energy                                 | 479                            | 2.94%           | 9          |
| Minnesota Power                                    | 0                              | 0.00%           | 0          |
| Nebraska Public Power District                     | 53                             | 0.33%           | 0          |
| Northern States Power                              | 224                            | 1.38%           | 2          |
| Northwestern Public Service Company                | 0                              | 0.00%           | 0          |
| Omaha Public Power District                        | 0                              | 0.00%           | 0          |
| Otter Tail Power                                   | 7                              | 0.04%           | 0          |
| Central Illinois Public Service Co.                | 2,334                          | 14.36%          | 206        |
| Illinois Power Company                             | 0                              | 0.00%           | 0          |
| Union Electric                                     | 0                              | 0.00%           | 0          |
| Tennessee Valley Authority                         | 0                              | 0.00%           | 0          |
| <b>Total</b>                                       | <b>16,258</b>                  | <b>100.00%</b>  | <b>786</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                |                 | <b>6</b>   |
| <b>Post-Merger HHI</b>                             |                                |                 | <b>792</b> |

**Marginal Economic Capacity Analysis  
Case 1: Regional Market Excluding Southern  
14-20 Mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI        |
|---|-----------------------------|----------------|------------|
| Kansas City Power & Light                           | 942                         | 3.83%          | 15         |
| Western Resources                                   | 2,199                       | 8.95%          | 80         |
| Arkansas Electric Cooperative Corporation           | 1,123                       | 4.57%          | 21         |
| Associated Electric Cooperative                     | 1,160                       | 4.72%          | 22         |
| Cajun Electric Power Cooperative                    | 1,393                       | 5.67%          | 12         |
| Central and South West                              | 2,736                       | 11.14%         | 12         |
| Central Louisiana Electric Company                  | 325                         | 1.32%          | 13         |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0          |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0          |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0          |
| City of Lafayette, LA                               | 0                           | 0.00%          | 0          |
| City of McPherson, KS                               | 0                           | 0.00%          | 0          |
| City of Winfield, KS                                | 0                           | 0.00%          | 0          |
| City Power & Light, Independence, MO                | 131                         | 0.53%          | 0          |
| City Utilities, Springfield, MO                     | 413                         | 1.68%          | 3          |
| Empire District Electric Company                    | 211                         | 0.86%          | 1          |
| Entergy Services                                    | 1,657                       | 6.74%          | 45         |
| Grand River Dam Authority                           | 810                         | 3.30%          | 11         |
| KAMO Electric Cooperative                           | 200                         | 0.81%          | 1          |
| Kansas City Board of Public Utilities               | 92                          | 0.37%          | 0          |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0          |
| Louisiana Energy and Power Authority                | 3                           | 0.01%          | 0          |
| Midwest Energy                                      | 0                           | 0.00%          | 0          |
| Northeast Texas Electric Cooperative                | 117                         | 0.48%          | 0          |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0          |
| Oklahoma Municipal Power Authority                  | 92                          | 0.38%          | 0          |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0          |
| Southwestern Public Service Company                 | 26                          | 0.11%          | 0          |
| St. Joseph Light & Power Company                    | 97                          | 0.39%          | 0          |
| Sunflower Electric Power Corporation                | 325                         | 1.32%          | 2          |
| Utilicorp (West Plains and Missouri Public Service) | 980                         | 3.99%          | 16         |
| Western Farmers Electric Cooperative                | 0                           | 0.00%          | 0          |
| Cooperative Power                                   | 93                          | 0.38%          | 0          |
| IES Utilities                                       | 92                          | 0.37%          | 0          |
| Interstate Power Company                            | 55                          | 0.23%          | 0          |
| Lincoln Electric System                             | 0                           | 0.00%          | 0          |
| MidAmerican Energy                                  | 131                         | 0.53%          | 0          |
| Minnesota Power                                     | 183                         | 0.75%          | 1          |
| Nebraska Public Power District                      | 0                           | 0.00%          | 0          |
| Northern States Power                               | 552                         | 2.25%          | 5          |
| Northwestern Public Service Company                 | 26                          | 0.11%          | 0          |
| Omaha Public Power District                         | 0                           | 0.00%          | 0          |
| Otter Tail Power                                    | 68                          | 0.28%          | 0          |
| Central Illinois Public Service Co.                 | 0                           | 0.00%          | 0          |
| Illinois Power Company                              | 2,847                       | 11.59%         | 134        |
| Union Electric                                      | 0                           | 0.00%          | 0          |
| Tennessee Valley Authority                          | 5,486                       | 22.33%         | 499        |
| <b>Total</b>  | <b>24,565</b>               | <b>100.00%</b> | <b>894</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>69</b>  |
| <b>Post-Merger HHI</b>                              |                             |                | <b>962</b> |

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern**  
**20-25 Mills**

| Utility  | Change in Economic<br>Capacity | Market<br>Share | HHI          |
|--|--------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 0                              | 0.00%           | 0            |
| Western Resources                                  | 67                             | 0.24%           | 0            |
| Arkansas Electric Cooperative Corporation          | 541                            | 1.97%           | 4            |
| Associated Electric Cooperative                    | 222                            | 0.81%           | 1            |
| Cajun Electric Power Cooperative                   | 0                              | 0.00%           | 12           |
| Central and South West                             | 1,607                          | 5.85%           | 12           |
| Central Louisiana Electric Company                 | 597                            | 2.18%           | 13           |
| City of Alexandria, LA                             | 0                              | 0.00%           | 0            |
| City of Clarksdale, MS                             | 0                              | 0.00%           | 0            |
| City of Coffeyville, KS                            | 0                              | 0.00%           | 0            |
| City of Lafayette, LA                              | 262                            | 0.95%           | 1            |
| City of McPherson, KS                              | 0                              | 0.00%           | 0            |
| City of Winfield, KS                               | 0                              | 0.00%           | 0            |
| City Power & Light, Independence, MO               | 0                              | 0.00%           | 0            |
| City Utilities, Springfield, MO                    | 0                              | 0.00%           | 0            |
| Empire District Electric Company                   | 92                             | 0.34%           | 0            |
| Entergy Services                                   | 6,406                          | 23.34%          | 545          |
| Grand River Dam Authority                          | 0                              | 0.00%           | 0            |
| KAMO Electric Cooperative                          | 0                              | 0.00%           | 0            |
| Kansas City Board of Public Utilities              | 245                            | 0.89%           | 1            |
| Kansas Electric Power Cooperative                  | 0                              | 0.00%           | 0            |
| Louisiana Energy and Power Authority               | 113                            | 0.41%           | 0            |
| Midwest Energy                                     | 6                              | 0.02%           | 0            |
| Northeast Texas Electric Cooperative               | 0                              | 0.00%           | 0            |
| Oklahoma Gas & Electric                            | 0                              | 0.00%           | 0            |
| Oklahoma Municipal Power Authority                 | 0                              | 0.00%           | 0            |
| Southwestern Power Administration                  | 0                              | 0.00%           | 0            |
| Southwestern Public Service Company                | 261                            | 0.95%           | 1            |
| St. Joseph Light & Power Company                   | 0                              | 0.00%           | 0            |
| Sunflower Electric Power Corporation               | 85                             | 0.31%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 43                             | 0.16%           | 0            |
| Western Farmers Electric Cooperative               | 690                            | 2.51%           | 6            |
| Cooperative Power                                  | 0                              | 0.00%           | 0            |
| IES Utilities                                      | 66                             | 0.24%           | 0            |
| Interstate Power Company                           | 60                             | 0.22%           | 0            |
| Lincoln Electric System                            | 0                              | 0.00%           | 0            |
| MidAmerican Energy                                 | 0                              | 0.00%           | 0            |
| Minnesota Power                                    | 88                             | 0.32%           | 0            |
| Nebraska Public Power District                     | 0                              | 0.00%           | 0            |
| Northern States Power                              | 140                            | 0.51%           | 0            |
| Northwestern Public Service Company                | 0                              | 0.00%           | 0            |
| Omaha Public Power District                        | 0                              | 0.00%           | 0            |
| Otter Tail Power                                   | 148                            | 0.54%           | 0            |
| Central Illinois Public Service Co.                | 339                            | 1.24%           | 2            |
| Illinois Power Company                             | 896                            | 3.26%           | 11           |
| Union Electric                                     | 5,275                          | 19.22%          | 369          |
| Tennessee Valley Authority                         | 9,199                          | 33.51%          | 1,123        |
| <b>Total</b>                                       | <b>27,448</b>                  | <b>100.00%</b>  | <b>2,101</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                |                 | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                                |                 | <b>2,101</b> |

**Marginal Economic Capacity Analysis  
Case 1: Regional Market Including Southern  
14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 942                         | 1.44%          | 2            |
| Western Resources                                  | 2,266                       | 3.48%          | 12           |
| Arkansas Electric Cooperative Corporation          | 1,664                       | 2.55%          | 12           |
| Associated Electric Cooperative                    | 1,382                       | 2.12%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 2.14%          | 13           |
| Central and South West                             | 4,343                       | 6.66%          | 44           |
| Central Louisiana Electric Company                 | 922                         | 1.41%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.40%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.20%          | 0            |
| City Utilities, Springfield, MO                    | 413                         | 0.63%          | 0            |
| Empire District Electric Company                   | 303                         | 0.46%          | 0            |
| Entergy Services                                   | 8,062                       | 12.36%         | 153          |
| Grand River Dam Authority                          | 810                         | 1.24%          | 2            |
| KAMO Electric Cooperative                          | 200                         | 0.31%          | 0            |
| Kansas City Board of Public Utilities              | 337                         | 0.52%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.18%          | 0            |
| Midwest Energy                                     | 6                           | 0.01%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.18%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.14%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 287                         | 0.44%          | 0            |
| St. Joseph Light & Power Company                   | 97                          | 0.15%          | 0            |
| Sunflower Electric Power Corporation               | 410                         | 0.63%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                       | 1.57%          | 2            |
| Western Farmers Electric Cooperative               | 690                         | 1.06%          | 1            |
| Cooperative Power                                  | 87                          | 0.13%          | 0            |
| IES Utilities                                      | 96                          | 0.15%          | 0            |
| Interstate Power Company                           | 61                          | 0.09%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 121                         | 0.19%          | 0            |
| Minnesota Power                                    | 185                         | 0.28%          | 0            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 537                         | 0.82%          | 1            |
| Northwestern Public Service Company                | 24                          | 0.04%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 88                          | 0.13%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 0.52%          | 0            |
| Illinois Power Company                             | 3,743                       | 5.74%          | 33           |
| Southern Companies                                 | 13,699                      | 21.01%         | 441          |
| Union Electric                                     | 5,275                       | 8.09%          | 65           |
| Tennessee Valley Authority                         | 14,685                      | 22.52%         | 507          |
| <b>Total</b>                                       | <b>65,209</b>               | <b>100.00%</b> | <b>1,305</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>10</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,315</b> |



**Marginal Economic Capacity Analysis  
Case 1: Regional Market Including Southern  
25-35 Mills**

| Utility  | Change in Economic<br>Capacity | Market<br>Share | HHI          |
|--|--------------------------------|-----------------|--------------|
| Kansas City Power & Light                          | 74                             | 0.31%           | 0            |
| Western Resources                                  | 1,145                          | 4.85%           | 24           |
| Arkansas Electric Cooperative Corporation          | 59                             | 0.25%           | 12           |
| Associated Electric Cooperative                    | 0                              | 0.00%           | 12           |
| Cajun Electric Power Cooperative                   | 220                            | 0.93%           | 13           |
| Central and South West                             | 4,172                          | 17.69%          | 313          |
| Central Louisiana Electric Company                 | 1,370                          | 5.81%           | 34           |
| City of Alexandria, LA                             | 0                              | 0.00%           | 0            |
| City of Clarksdale, MS                             | 23                             | 0.10%           | 0            |
| City of Coffeyville, KS                            | 56                             | 0.24%           | 0            |
| City of Lafayette, LA                              | 268                            | 1.14%           | 1            |
| City of McPherson, KS                              | 182                            | 0.77%           | 1            |
| City of Winfield, KS                               | 52                             | 0.22%           | 0            |
| City Power & Light, Independence, MO               | 0                              | 0.00%           | 0            |
| City Utilities, Springfield, MO                    | 238                            | 1.01%           | 1            |
| Empire District Electric Company                   | 278                            | 1.18%           | 1            |
| Entergy Services                                   | 3,467                          | 14.70%          | 216          |
| Grand River Dam Authority                          | 0                              | 0.00%           | 0            |
| KAMO Electric Cooperative                          | 0                              | 0.00%           | 0            |
| Kansas City Board of Public Utilities              | 0                              | 0.00%           | 0            |
| Kansas Electric Power Cooperative                  | 0                              | 0.00%           | 0            |
| Louisiana Energy and Power Authority               | 222                            | 0.94%           | 1            |
| Midwest Energy                                     | 9                              | 0.04%           | 0            |
| Northeast Texas Electric Cooperative               | 0                              | 0.00%           | 0            |
| Oklahoma Gas & Electric                            | 0                              | 0.00%           | 0            |
| Oklahoma Municipal Power Authority                 | 0                              | 0.00%           | 0            |
| Southwestern Power Administration                  | 0                              | 0.00%           | 0            |
| Southwestern Public Service Company                | 0                              | 0.00%           | 0            |
| St. Joseph Light & Power Company                   | 42                             | 0.18%           | 0            |
| Sunflower Electric Power Corporation               | 112                            | 0.47%           | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 332                            | 1.41%           | 2            |
| Western Farmers Electric Cooperative               | 403                            | 1.71%           | 3            |
| Cooperative Power                                  | 0                              | 0.00%           | 0            |
| IES Utilities                                      | 11                             | 0.04%           | 0            |
| Interstate Power Company                           | 355                            | 1.50%           | 2            |
| Lincoln Electric System                            | 72                             | 0.30%           | 0            |
| MidAmerican Energy                                 | 479                            | 2.03%           | 4            |
| Minnesota Power                                    | 0                              | 0.00%           | 0            |
| Nebraska Public Power District                     | 53                             | 0.22%           | 0            |
| Northern States Power                              | 224                            | 0.95%           | 1            |
| Northwestern Public Service Company                | 0                              | 0.00%           | 0            |
| Omaha Public Power District                        | 0                              | 0.00%           | 0            |
| Otter Tail Power                                   | 7                              | 0.03%           | 0            |
| Central Illinois Public Service Co.                | 2,334                          | 9.90%           | 98           |
| Illinois Power Company                             | 0                              | 0.00%           | 0            |
| Southern Companies                                 | 7,329                          | 31.07%          | 966          |
| Union Electric                                     | 0                              | 0.00%           | 0            |
| Tennessee Valley Authority                         | 0                              | 0.00%           | 0            |
| <b>Total</b>                                       | <b>23,587</b>                  | <b>100.00%</b>  | <b>1,705</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                                |                 | <b>3</b>     |
| <b>Post-Merger HHI</b>                             |                                |                 | <b>1,708</b> |

**Marginal Economic Analysis Capacity**  
**Case 1: UtiliCorp - WestPlains Energy Market Including Southern**  
**14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 942                         | 3.85%          | 15           |
| Western Resources                                  | 2,199                       | 9.00%          | 81           |
| Arkansas Electric Cooperative Corporation          | 1,123                       | 4.59%          | 21           |
| Associated Electric Cooperative                    | 1,160                       | 4.74%          | 23           |
| Cajun Electric Power Cooperative                   | 1,393                       | 5.70%          | 32           |
| Central and South West                             | 2,736                       | 11.19%         | 125          |
| Central Louisiana Electric Company                 | 325                         | 1.33%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.54%          | 0            |
| City Utilities, Springfield, MO                    | 413                         | 1.69%          | 3            |
| Empire District Electric Company                   | 211                         | 0.86%          | 1            |
| Entergy Services                                   | 1,657                       | 6.78%          | 46           |
| Grand River Dam Authority                          | 810                         | 3.31%          | 11           |
| KAMO Electric Cooperative                          | 200                         | 0.82%          | 1            |
| Kansas City Board of Public Utilities              | 92                          | 0.38%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 3                           | 0.01%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               |                             |                |              |
| Okdahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Okdahoma Municipal Power Authority                 | 92                          | 0.38%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 26                          | 0.11%          | 0            |
| St. Joseph Light & Power Company                   | 97                          | 0.40%          | 0            |
| Sunflower Electric Power Corporation               | 325                         | 1.33%          | 2            |
| Utilicorp (WestPlains and Missouri Public Service) | 980                         | 4.01%          | 16           |
| Western Farmers Electric Cooperative               | 0                           | 0.00%          | 0            |
| Cooperative Power                                  | 93                          | 0.38%          | 0            |
| IES Utilities                                      | 92                          | 0.37%          | 0            |
| Interstate Power Company                           | 55                          | 0.23%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 131                         | 0.53%          | 0            |
| Minnesota Power                                    | 183                         | 0.75%          | 1            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 552                         | 2.26%          | 5            |
| Northwestern Public Service Company                | 26                          | 0.11%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 68                          | 0.28%          | 0            |
| Central Illinois Public Service Co.                | 0                           | 0.00%          | 0            |
| Illinois Power Company                             | 2,847                       | 11.65%         | 136          |
| Southern Companies                                 | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| Tennessee Valley Authority                         | 5,486                       | 22.44%         | 504          |
| <b>Total</b>                                       | <b>24,448</b>               | <b>100.00%</b> | <b>1,024</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>69</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,093</b> |

**Marginal Economic Analysis Capacity**  
**Case 1: UtiliCorp - WestPlains Energy Market Including Southern**  
**20-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 67                          | 0.16%          | 0            |
| Arkansas Electric Cooperative Corporation          | 541                         | 1.32%          | 2            |
| Associated Electric Cooperative                    | 222                         | 0.54%          | 0            |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Central and South West                             | 1,607                       | 3.90%          | 15           |
| Central Louisiana Electric Company                 | 597                         | 1.45%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.64%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 0                           | 0.00%          | 0            |
| Empire District Electric Company                   | 92                          | 0.22%          | 0            |
| Entergy Services                                   | 6,406                       | 15.57%         | 242          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 245                         | 0.60%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 113                         | 0.28%          | 0            |
| Midwest Energy                                     | 6                           | 0.01%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 0.63%          | 0            |
| St. Joseph Light & Power Company                   | 0                           | 0.00%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.21%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 43                          | 0.10%          | 0            |
| Western Farmers Electric Cooperative               | 690                         | 1.68%          | 3            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 66                          | 0.16%          | 0            |
| Interstate Power Company                           | 60                          | 0.15%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 88                          | 0.21%          | 0            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 140                         | 0.34%          | 0            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 148                         | 0.36%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 0.82%          | 1            |
| Illinois Power Company                             | 896                         | 2.18%          | 5            |
| Southern Companies                                 | 13,699                      | 33.29%         | 1,108        |
| Union Electric                                     | 5,275                       | 12.82%         | 164          |
| Tennessee Valley Authority                         | 9,199                       | 22.36%         | 500          |
| <b>Total</b>                                       | <b>41,146</b>               | <b>100.00%</b> | <b>2,044</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,044</b> |

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern and TVA**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 942                         | 2.99%          | 9            |
| Western Resources                                  | 2,266                       | 7.18%          | 52           |
| Arkansas Electric Cooperative Corporation          | 1,664                       | 5.27%          | 12           |
| Associated Electric Cooperative                    | 1,382                       | 4.38%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 4.42%          | 13           |
| Central and South West                             | 4,343                       | 13.76%         | 189          |
| Central Louisiana Electric Company                 | 922                         | 2.92%          | 9            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.83%          | 1            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.42%          | 0            |
| City Utilities, Springfield, MO                    | 413                         | 1.31%          | 2            |
| Empire District Electric Company                   | 303                         | 0.96%          | 1            |
| Entergy Services                                   | 8,062                       | 25.55%         | 653          |
| Grand River Dam Authority                          | 810                         | 2.57%          | 7            |
| KAMO Electric Cooperative                          | 200                         | 0.63%          | 0            |
| Kansas City Board of Public Utilities              | 337                         | 1.07%          | 1            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.37%          | 0            |
| Midwest Energy                                     | 6                           | 0.02%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.37%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.29%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 287                         | 0.91%          | 1            |
| St. Joseph Light & Power Company                   | 97                          | 0.31%          | 0            |
| Sunflower Electric Power Corporation               | 410                         | 1.30%          | 2            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                       | 3.24%          | 11           |
| Western Farmers Electric Cooperative               | 690                         | 2.19%          | 5            |
| Cooperative Power                                  | 87                          | 0.28%          | 0            |
| IES Utilities                                      | 96                          | 0.30%          | 0            |
| Interstate Power Company                           | 61                          | 0.19%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 121                         | 0.38%          | 0            |
| Minnesota Power                                    | 185                         | 0.59%          | 0            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 537                         | 1.70%          | 3            |
| Northwestern Public Service Company                | 24                          | 0.08%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 88                          | 0.28%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 1.07%          | 1            |
| Illinois Power Company                             | 3,743                       | 11.86%         | 141          |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>31,550</b>               | <b>100.00%</b> | <b>1,124</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>43</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,167</b> |

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern and TVA**  
**14-20 Mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI        |
|---|-----------------------------|----------------|------------|
| Kansas City Power & Light                           | 942                         | 4.94%          | 24         |
| Western Resources                                   | 2,199                       | 11.53%         | 133        |
| Arkansas Electric Cooperative Corporation           | 1,123                       | 5.88%          | 12         |
| Associated Electric Cooperative                     | 1,160                       | 6.08%          | 12         |
| Cajun Electric Power Cooperative                    | 1,393                       | 7.30%          | 13         |
| Central and South West                              | 2,736                       | 14.34%         | 206        |
| Central Louisiana Electric Company                  | 325                         | 1.70%          | 3          |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0          |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0          |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0          |
| City of Lafayette, LA                               | 0                           | 0.00%          | 0          |
| City of McPherson, KS                               | 0                           | 0.00%          | 0          |
| City of Winfield, KS                                | 0                           | 0.00%          | 0          |
| City Power & Light, Independence, MO                | 131                         | 0.69%          | 0          |
| City Utilities, Springfield, MO                     | 413                         | 2.16%          | 5          |
| Empire District Electric Company                    | 211                         | 1.11%          | 1          |
| Entergy Services                                    | 1,657                       | 8.68%          | 75         |
| Grand River Dam Authority                           | 810                         | 4.24%          | 18         |
| KAMO Electric Cooperative                           | 200                         | 1.05%          | 1          |
| Kansas City Board of Public Utilities               | 92                          | 0.48%          | 0          |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0          |
| Louisiana Energy and Power Authority                | 3                           | 0.01%          | 0          |
| Midwest Energy                                      | 0                           | 0.00%          | 0          |
| Northeast Texas Electric Cooperative                | 117                         | 0.61%          | 0          |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0          |
| Oklahoma Municipal Power Authority                  | 92                          | 0.48%          | 0          |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0          |
| Southwestern Public Service Company                 | 26                          | 0.14%          | 0          |
| St. Joseph Light & Power Company                    | 97                          | 0.51%          | 0          |
| Sunflower Electric Power Corporation                | 325                         | 1.70%          | 3          |
| Utilicorp (West Plains and Missouri Public Service) | 980                         | 5.14%          | 26         |
| Western Farmers Electric Cooperative                | 0                           | 0.00%          | 0          |
| Cooperative Power                                   | 93                          | 0.49%          | 0          |
| IES Utilities                                       | 92                          | 0.48%          | 0          |
| Interstate Power Company                            | 55                          | 0.29%          | 0          |
| Lincoln Electric System                             | 0                           | 0.00%          | 0          |
| MidAmerican Energy                                  | 131                         | 0.68%          | 0          |
| Minnesota Power                                     | 183                         | 0.96%          | 1          |
| Nebraska Public Power District                      | 0                           | 0.00%          | 0          |
| Northern States Power                               | 552                         | 2.89%          | 8          |
| Northwestern Public Service Company                 | 26                          | 0.14%          | 0          |
| Omaha Public Power District                         | 0                           | 0.00%          | 0          |
| Otter Tail Power                                    | 68                          | 0.36%          | 0          |
| Central Illinois Public Service Co.                 | 0                           | 0.00%          | 0          |
| Illinois Power Company                              | 2,847                       | 14.92%         | 223        |
| Union Electric                                      | 0                           | 0.00%          | 0          |
| <b>Total</b>  | <b>19,079</b>               | <b>100.00%</b> | <b>767</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>114</b> |
| <b>Post-Merger HHI</b>                              |                             |                | <b>881</b> |

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern and TVA**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 67                          | 0.52%          | 0            |
| Arkansas Electric Cooperative Corporation          | 541                         | 4.17%          | 12           |
| Associated Electric Cooperative                    | 222                         | 1.71%          | 12           |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 13           |
| Central and South West                             | 1,607                       | 12.38%         | 153          |
| Central Louisiana Electric Company                 | 597                         | 4.60%          | 21           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 2.02%          | 4            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 0                           | 0.00%          | 0            |
| Empire District Electric Company                   | 92                          | 0.71%          | 1            |
| Entergy Services                                   | 6,406                       | 49.37%         | 2,438        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 245                         | 1.89%          | 4            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 113                         | 0.87%          | 1            |
| Midwest Energy                                     | 6                           | 0.05%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 2.01%          | 4            |
| St. Joseph Light & Power Company                   | 0                           | 0.00%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.66%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 43                          | 0.33%          | 0            |
| Western Farmers Electric Cooperative               | 690                         | 5.32%          | 28           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 66                          | 0.51%          | 0            |
| Interstate Power Company                           | 60                          | 0.46%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 88                          | 0.68%          | 0            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 140                         | 1.08%          | 1            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 148                         | 1.14%          | 1            |
| Central Illinois Public Service Co.                | 339                         | 2.61%          | 7            |
| Illinois Power Company                             | 896                         | 6.91%          | 48           |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>12,974</b>               | <b>100.00%</b> | <b>2,749</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,749</b> |

**Marginal Economic Capacity Analysis**  
**Case 1: Regional Market Excluding Southern and TVA**  
**25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.46%          | 0            |
| Western Resources                                  | 1,145                       | 7.04%          | 50           |
| Arkansas Electric Cooperative Corporation          | 59                          | 0.36%          | 12           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 12           |
| Cajun Electric Power Cooperative                   | 220                         | 1.35%          | 13           |
| Central and South West                             | 4,172                       | 25.66%         | 658          |
| Central Louisiana Electric Company                 | 1,370                       | 8.43%          | 71           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.14%          | 0            |
| City of Coffeyville, KS                            | 56                          | 0.34%          | 0            |
| City of Lafayette, LA                              | 268                         | 1.65%          | 3            |
| City of McPherson, KS                              | 182                         | 1.12%          | 1            |
| City of Winfield, KS                               | 52                          | 0.32%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 1.46%          | 2            |
| Empire District Electric Company                   | 278                         | 1.71%          | 3            |
| Entergy Services                                   | 3,467                       | 21.33%         | 455          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 222                         | 1.37%          | 2            |
| Midwest Energy                                     | 9                           | 0.06%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 42                          | 0.26%          | 0            |
| Sunflower Electric Power Corporation               | 112                         | 0.69%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 332                         | 2.04%          | 4            |
| Western Farmers Electric Cooperative               | 403                         | 2.48%          | 6            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 11                          | 0.07%          | 0            |
| Interstate Power Company                           | 355                         | 2.18%          | 5            |
| Lincoln Electric System                            | 72                          | 0.44%          | 0            |
| MidAmerican Energy                                 | 479                         | 2.94%          | 9            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 53                          | 0.33%          | 0            |
| Northern States Power                              | 224                         | 1.38%          | 2            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 7                           | 0.04%          | 0            |
| Central Illinois Public Service Co.                | 2,334                       | 14.36%         | 206          |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>16,258</b>               | <b>100.00%</b> | <b>1,515</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>6</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,521</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Excluding Southern  
14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 1,283                       | 2.44%          | 6            |
| Western Resources                                  | 2,910                       | 5.54%          | 31           |
| Arkansas Electric Cooperative Corporation          | 1,723                       | 3.28%          | 11           |
| Associated Electric Cooperative                    | 1,382                       | 2.63%          | 7            |
| Cajun Electric Power Cooperative                   | 1,393                       | 2.65%          | 7            |
| Central and South West                             | 4,343                       | 8.27%          | 68           |
| Central Louisiana Electric Company                 | 922                         | 1.75%          | 3            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.50%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.25%          | 0            |
| City Utilities, Springfield, MO                    | 413                         | 0.79%          | 1            |
| Empire District Electric Company                   | 303                         | 0.58%          | 0            |
| Entergy Services                                   | 8,326                       | 15.85%         | 251          |
| Grand River Dam Authority                          | 810                         | 1.54%          | 2            |
| KAMO Electric Cooperative                          | 200                         | 0.38%          | 0            |
| Kansas City Board of Public Utilities              | 290                         | 0.55%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.22%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.22%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.18%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 26                          | 0.05%          | 0            |
| St. Joseph Light & Power Company                   | 218                         | 0.41%          | 0            |
| Sunflower Electric Power Corporation               | 325                         | 0.62%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                       | 1.95%          | 4            |
| Western Farmers Electric Cooperative               | 690                         | 1.31%          | 2            |
| Cooperative Power                                  | 58                          | 0.11%          | 0            |
| IES Utilities                                      | 120                         | 0.23%          | 0            |
| Interstate Power Company                           | 53                          | 0.10%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 256                         | 0.49%          | 0            |
| Minnesota Power                                    | 124                         | 0.24%          | 0            |
| Nebraska Public Power District                     | 99                          | 0.19%          | 0            |
| Northern States Power                              | 360                         | 0.68%          | 0            |
| Northwestern Public Service Company                | 22                          | 0.04%          | 0            |
| Omaha Public Power District                        | 48                          | 0.09%          | 0            |
| Otter Tail Power                                   | 59                          | 0.11%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 0.65%          | 0            |
| Illinois Power Company                             | 3,743                       | 7.12%          | 51           |
| Union Electric                                     | 5,275                       | 10.04%         | 101          |
| Tennessee Valley Authority                         | 14,685                      | 27.95%         | 781          |
| <b>Total</b>                                       | <b>52,540</b>               | <b>100.00%</b> | <b>1,328</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>27</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,355</b> |



**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern**  
**14-20 Mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI          |
|---|-----------------------------|----------------|--------------|
| Kansas City Power & Light                           | 1,283                       | 2.91%          | 8            |
| Western Resources                                   | 2,854                       | 6.48%          | 42           |
| Arkansas Electric Cooperative Corporation           | 1,408                       | 3.20%          | 10           |
| Associated Electric Cooperative                     | 1,160                       | 2.63%          | 7            |
| Cajun Electric Power Cooperative                    | 1,393                       | 3.16%          | 10           |
| Central and South West                              | 2,736                       | 6.21%          | 39           |
| Central Louisiana Electric Company                  | 325                         | 0.74%          | 1            |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                               | 0                           | 0.00%          | 0            |
| City of McPherson, KS                               | 0                           | 0.00%          | 0            |
| City of Winfield, KS                                | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO                | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                     | 178                         | 0.40%          | 0            |
| Empire District Electric Company                    | 211                         | 0.48%          | 0            |
| Entergy Services                                    | 7,902                       | 17.94%         | 322          |
| Grand River Dam Authority                           | 810                         | 1.84%          | 3            |
| KAMO Electric Cooperative                           | 200                         | 0.45%          | 0            |
| Kansas City Board of Public Utilities               | 235                         | 0.53%          | 0            |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority                | 3                           | 0.01%          | 0            |
| Midwest Energy                                      | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative                | 117                         | 0.27%          | 0            |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                  | 92                          | 0.21%          | 0            |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                 | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                    | 121                         | 0.27%          | 0            |
| Sunflower Electric Power Corporation                | 0                           | 0.00%          | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 837                         | 1.90%          | 4            |
| Western Farmers Electric Cooperative                | 0                           | 0.00%          | 0            |
| Cooperative Power                                   | 100                         | 0.23%          | 0            |
| IES Utilities                                       | 188                         | 0.43%          | 0            |
| Interstate Power Company                            | 31                          | 0.07%          | 0            |
| Lincoln Electric System                             | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                  | 439                         | 1.00%          | 1            |
| Minnesota Power                                     | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                      | 170                         | 0.39%          | 0            |
| Northern States Power                               | 98                          | 0.22%          | 0            |
| Northwestern Public Service Company                 | 19                          | 0.04%          | 0            |
| Omaha Public Power District                         | 82                          | 0.19%          | 0            |
| Otter Tail Power                                    | 72                          | 0.16%          | 0            |
| Central Illinois Public Service Co.                 | 0                           | 0.00%          | 0            |
| Illinois Power Company                              | 2,847                       | 6.46%          | 42           |
| Union Electric                                      | 3,462                       | 7.86%          | 62           |
| Tennessee Valley Authority                          | 14,685                      | 33.33%         | 1,111        |
| <b>Total</b>  | <b>44,059</b>               | <b>100.00%</b> | <b>1,662</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>38</b>    |
| <b>Post-Merger HHI</b>                              |                             |                | <b>1,700</b> |

**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern**  
**20-25 mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI        |
|---|-----------------------------|----------------|------------|
| Kansas City Power & Light                           | 0                           | 0.00%          | 0          |
| Western Resources                                   | 56                          | 0.58%          | 0          |
| Arkansas Electric Cooperative Corporation           | 315                         | 3.25%          | 11         |
| Associated Electric Cooperative                     | 222                         | 2.29%          | 5          |
| Cajun Electric Power Cooperative                    | 0                           | 0.00%          | 0          |
| Central and South West                              | 1,607                       | 16.60%         | 275        |
| Central Louisiana Electric Company                  | 597                         | 6.17%          | 38         |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0          |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0          |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0          |
| City of Lafayette, LA                               | 262                         | 2.70%          | 7          |
| City of McPherson, KS                               | 0                           | 0.00%          | 0          |
| City of Winfield, KS                                | 0                           | 0.00%          | 0          |
| City Power & Light, Independence, MO                | 131                         | 1.35%          | 2          |
| City Utilities, Springfield, MO                     | 235                         | 2.43%          | 6          |
| Empire District Electric Company                    | 92                          | 0.95%          | 1          |
| Entergy Services                                    | 424                         | 4.38%          | 19         |
| Grand River Dam Authority                           | 0                           | 0.00%          | 0          |
| KAMO Electric Cooperative                           | 0                           | 0.00%          | 0          |
| Kansas City Board of Public Utilities               | 55                          | 0.57%          | 0          |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0          |
| Louisiana Energy and Power Authority                | 113                         | 1.17%          | 1          |
| Midwest Energy                                      | 0                           | 0.00%          | 0          |
| Northeast Texas Electric Cooperative                | 0                           | 0.00%          | 0          |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0          |
| Oklahoma Municipal Power Authority                  | 0                           | 0.00%          | 0          |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0          |
| Southwestern Public Service Company                 | 26                          | 0.27%          | 0          |
| St. Joseph Light & Power Company                    | 97                          | 1.00%          | 1          |
| Sunflower Electric Power Corporation                | 325                         | 3.36%          | 11         |
| Utilicorp (West Plains and Missouri Public Service) | 186                         | 1.92%          | 4          |
| Western Farmers Electric Cooperative                | 690                         | 7.13%          | 51         |
| Cooperative Power                                   | 0                           | 0.00%          | 0          |
| IES Utilities                                       | 25                          | 0.26%          | 0          |
| Interstate Power Company                            | 85                          | 0.87%          | 1          |
| Lincoln Electric System                             | 0                           | 0.00%          | 0          |
| MidAmerican Energy                                  | 0                           | 0.00%          | 0          |
| Minnesota Power                                     | 298                         | 3.07%          | 9          |
| Nebraska Public Power District                      | 0                           | 0.00%          | 0          |
| Northern States Power                               | 726                         | 7.50%          | 56         |
| Northwestern Public Service Company                 | 27                          | 0.28%          | 0          |
| Omaha Public Power District                         | 0                           | 0.00%          | 0          |
| Otter Tail Power                                    | 40                          | 0.41%          | 0          |
| Central Illinois Public Service Co.                 | 339                         | 3.50%          | 12         |
| Illinois Power Company                              | 896                         | 9.26%          | 86         |
| Union Electric                                      | 1,813                       | 18.73%         | 351        |
| Tennessee Valley Authority                          | 0                           | 0.00%          | 0          |
| <b>Total</b>  | <b>9,681</b>                | <b>100.00%</b> | <b>949</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>0</b>   |
| <b>Post-Merger HHI</b>                              |                             |                | <b>949</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Excluding Southern  
25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.35%          | 0            |
| Western Resources                                  | 941                         | 4.46%          | 20           |
| Arkansas Electric Cooperative Corporation          | 0                           | 0.00%          | 0            |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 0            |
| Cajun Electric Power Cooperative                   | 220                         | 1.04%          | 1            |
| Central and South West                             | 4,172                       | 19.79%         | 392          |
| Central Louisiana Electric Company                 | 1,370                       | 6.50%          | 42           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.11%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 268                         | 1.27%          | 2            |
| City of McPherson, KS                              | 132                         | 0.62%          | 0            |
| City of Winfield, KS                               | 40                          | 0.19%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 1.13%          | 1            |
| Empire District Electric Company                   | 278                         | 1.32%          | 2            |
| Entergy Services                                   | 8,254                       | 39.16%         | 1,533        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 1.34%          | 2            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 222                         | 1.05%          | 1            |
| Midwest Energy                                     | 15                          | 0.07%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 1.24%          | 2            |
| St. Joseph Light & Power Company                   | 42                          | 0.20%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.40%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 243                         | 1.15%          | 1            |
| Western Farmers Electric Cooperative               | 403                         | 1.91%          | 4            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 77                          | 0.37%          | 0            |
| Interstate Power Company                           | 370                         | 1.76%          | 3            |
| Lincoln Electric System                            | 74                          | 0.35%          | 0            |
| MidAmerican Energy                                 | 371                         | 1.76%          | 3            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 50                          | 0.24%          | 0            |
| Northern States Power                              | 232                         | 1.10%          | 1            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 8                           | 0.04%          | 0            |
| Central Illinois Public Service Co.                | 2,334                       | 11.07%         | 123          |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>21,079</b>               | <b>100.00%</b> | <b>2,133</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>3</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,137</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Including Southern  
14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 1,283                       | 1.78%          | 3            |
| Western Resources                                  | 2,910                       | 4.04%          | 16           |
| Arkansas Electric Cooperative Corporation          | 1,723                       | 2.39%          | 6            |
| Associated Electric Cooperative                    | 1,382                       | 1.92%          | 4            |
| Cajun Electric Power Cooperative                   | 1,393                       | 1.93%          | 4            |
| Central and South West                             | 4,343                       | 6.03%          | 36           |
| Central Louisiana Electric Company                 | 922                         | 1.28%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.36%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.18%          | 0            |
| City Utilities, Springfield, MO                    | 413                         | 0.57%          | 0            |
| Empire District Electric Company                   | 303                         | 0.42%          | 0            |
| Entergy Services                                   | 8,326                       | 11.56%         | 134          |
| Grand River Dam Authority                          | 810                         | 1.12%          | 1            |
| KAMO Electric Cooperative                          | 200                         | 0.28%          | 0            |
| Kansas City Board of Public Utilities              | 290                         | 0.40%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.16%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.16%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.13%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 26                          | 0.04%          | 0            |
| St. Joseph Light & Power Company                   | 218                         | 0.30%          | 0            |
| Sunflower Electric Power Corporation               | 325                         | 0.45%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 1,023                       | 1.42%          | 2            |
| Western Farmers Electric Cooperative               | 690                         | 0.96%          | 1            |
| Cooperative Power                                  | 58                          | 0.08%          | 0            |
| IES Utilities                                      | 120                         | 0.17%          | 0            |
| Interstate Power Company                           | 53                          | 0.07%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 256                         | 0.36%          | 0            |
| Minnesota Power                                    | 124                         | 0.17%          | 0            |
| Nebraska Public Power District                     | 99                          | 0.14%          | 0            |
| Northern States Power                              | 360                         | 0.50%          | 0            |
| Northwestern Public Service Company                | 22                          | 0.03%          | 0            |
| Omaha Public Power District                        | 48                          | 0.07%          | 0            |
| Otter Tail Power                                   | 59                          | 0.08%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 0.47%          | 0            |
| Illinois Power Company                             | 3,743                       | 5.20%          | 27           |
| Southern Companies                                 | 19,498                      | 27.07%         | 733          |
| Union Electric                                     | 5,275                       | 7.32%          | 54           |
| Tennessee Valley Authority                         | 14,685                      | 20.39%         | 416          |
| <b>Total</b>                                       | <b>72,038</b>               | <b>100.00%</b> | <b>1,439</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>14</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,454</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Including Southern  
14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 1,283                       | 2.34%          | 5            |
| Western Resources                                  | 2,854                       | 5.20%          | 27           |
| Arkansas Electric Cooperative Corporation          | 1,408                       | 2.57%          | 7            |
| Associated Electric Cooperative                    | 1,160                       | 2.12%          | 4            |
| Cajun Electric Power Cooperative                   | 1,393                       | 2.54%          | 6            |
| Central and South West                             | 2,736                       | 4.99%          | 25           |
| Central Louisiana Electric Company                 | 325                         | 0.59%          | 0            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 178                         | 0.32%          | 0            |
| Empire District Electric Company                   | 211                         | 0.38%          | 0            |
| Entergy Services                                   | 7,902                       | 14.41%         | 208          |
| Grand River Dam Authority                          | 810                         | 1.48%          | 2            |
| KAMO Electric Cooperative                          | 200                         | 0.37%          | 0            |
| Kansas City Board of Public Utilities              | 235                         | 0.43%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 3                           | 0.00%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.21%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.17%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 121                         | 0.22%          | 0            |
| Sunflower Electric Power Corporation               | 0                           | 0.00%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 837                         | 1.53%          | 2            |
| Western Farmers Electric Cooperative               | 0                           | 0.00%          | 0            |
| Cooperative Power                                  | 100                         | 0.18%          | 0            |
| IES Utilities                                      | 188                         | 0.34%          | 0            |
| Interstate Power Company                           | 31                          | 0.06%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 439                         | 0.80%          | 1            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 170                         | 0.31%          | 0            |
| Northern States Power                              | 98                          | 0.18%          | 0            |
| Northwestern Public Service Company                | 19                          | 0.03%          | 0            |
| Omaha Public Power District                        | 82                          | 0.15%          | 0            |
| Otter Tail Power                                   | 72                          | 0.13%          | 0            |
| Central Illinois Public Service Co.                | 0                           | 0.00%          | 0            |
| Illinois Power Company                             | 2,847                       | 5.19%          | 27           |
| Southern Companies                                 | 10,779                      | 19.66%         | 386          |
| Union Electric                                     | 3,462                       | 6.31%          | 40           |
| Tennessee Valley Authority                         | 14,685                      | 26.78%         | 717          |
| <b>Total</b>                                       | <b>54,838</b>               | <b>100.00%</b> | <b>1,459</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>24</b>    |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,484</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Including Southern  
20-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 56                          | 0.30%          | 0            |
| Arkansas Electric Cooperative Corporation          | 315                         | 1.71%          | 3            |
| Associated Electric Cooperative                    | 222                         | 1.21%          | 1            |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Central and South West                             | 1,607                       | 8.73%          | 76           |
| Central Louisiana Electric Company                 | 597                         | 3.24%          | 11           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 1.42%          | 2            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 131                         | 0.71%          | 1            |
| City Utilities, Springfield, MO                    | 235                         | 1.28%          | 2            |
| Empire District Electric Company                   | 92                          | 0.50%          | 0            |
| Entergy Services                                   | 424                         | 2.30%          | 5            |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 55                          | 0.30%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 113                         | 0.62%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 26                          | 0.14%          | 0            |
| St. Joseph Light & Power Company                   | 97                          | 0.53%          | 0            |
| Sunflower Electric Power Corporation               | 325                         | 1.77%          | 3            |
| Utilicorp (WestPlains and Missouri Public Service) | 186                         | 1.01%          | 1            |
| Western Farmers Electric Cooperative               | 690                         | 3.75%          | 14           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 25                          | 0.14%          | 0            |
| Interstate Power Company                           | 85                          | 0.46%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 298                         | 1.62%          | 3            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 726                         | 3.94%          | 16           |
| Northwestern Public Service Company                | 27                          | 0.15%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 40                          | 0.22%          | 0            |
| Central Illinois Public Service Co.                | 339                         | 1.84%          | 3            |
| Illinois Power Company                             | 896                         | 4.87%          | 24           |
| Southern Companies                                 | 8,719                       | 47.39%         | 2,245        |
| Union Electric                                     | 1,813                       | 9.85%          | 97           |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>18,400</b>               | <b>100.00%</b> | <b>2,508</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,508</b> |

**Marginal Economic Capacity Analysis  
Case 2: Entergy Market Including Southern  
25-35 Mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI          |
|---|-----------------------------|----------------|--------------|
| Kansas City Power & Light                           | 74                          | 0.31%          | 0            |
| Western Resources                                   | 941                         | 3.99%          | 16           |
| Arkansas Electric Cooperative Corporation           | 0                           | 0.00%          | 0            |
| Associated Electric Cooperative                     | 0                           | 0.00%          | 0            |
| Cajun Electric Power Cooperative                    | 220                         | 0.93%          | 1            |
| Central and South West                              | 4,172                       | 17.67%         | 312          |
| Central Louisiana Electric Company                  | 1,370                       | 5.80%          | 34           |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                              | 23                          | 0.10%          | 0            |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                               | 268                         | 1.13%          | 1            |
| City of McPherson, KS                               | 132                         | 0.56%          | 0            |
| City of Winfield, KS                                | 40                          | 0.17%          | 0            |
| City Power & Light, Independence, MO                | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                     | 238                         | 1.01%          | 1            |
| Empire District Electric Company                    | 278                         | 1.18%          | 1            |
| Entergy Services                                    | 8,254                       | 34.95%         | 1,222        |
| Grand River Dam Authority                           | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                           | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities               | 282                         | 1.19%          | 1            |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority                | 222                         | 0.94%          | 1            |
| Midwest Energy                                      | 15                          | 0.07%          | 0            |
| Northeast Texas Electric Cooperative                | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                  | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                 | 261                         | 1.11%          | 1            |
| St. Joseph Light & Power Company                    | 42                          | 0.18%          | 0            |
| Sunflower Electric Power Corporation                | 85                          | 0.36%          | 0            |
| Utilicorp (West Plains and Missouri Public Service) | 243                         | 1.03%          | 1            |
| Western Farmers Electric Cooperative                | 403                         | 1.71%          | 3            |
| Cooperative Power                                   | 0                           | 0.00%          | 0            |
| IES Utilities                                       | 77                          | 0.33%          | 0            |
| Interstate Power Company                            | 370                         | 1.57%          | 2            |
| Lincoln Electric System                             | 74                          | 0.32%          | 0            |
| MidAmerican Energy                                  | 371                         | 1.57%          | 2            |
| Minnesota Power                                     | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                      | 50                          | 0.21%          | 0            |
| Northern States Power                               | 232                         | 0.98%          | 1            |
| Northwestern Public Service Company                 | 0                           | 0.00%          | 0            |
| Omaha Public Power District                         | 0                           | 0.00%          | 0            |
| Otter Tail Power                                    | 8                           | 0.03%          | 0            |
| Central Illinois Public Service Co.                 | 2,334                       | 9.88%          | 98           |
| Illinois Power Company                              | 0                           | 0.00%          | 0            |
| Southern Companies                                  | 2,536                       | 10.74%         | 115          |
| Union Electric                                      | 0                           | 0.00%          | 0            |
| Tennessee Valley Authority                          | 0                           | 0.00%          | 0            |
| <b>Total</b>  | <b>23,615</b>               | <b>100.00%</b> | <b>1,815</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>2</b>     |
| <b>Post-Merger HHI</b>                              |                             |                | <b>1,818</b> |

**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern and TVA**  
**14-25 mills**

| Utility   | Change in Economic Capacity | Market Share   | HHI          |
|---|-----------------------------|----------------|--------------|
| Kansas City Power & Light                           | 1,283                       | 3.94%          | 16           |
| Western Resources                                   | 2,910                       | 8.93%          | 80           |
| Arkansas Electric Cooperative Corporation           | 1,723                       | 5.29%          | 28           |
| Associated Electric Cooperative                     | 1,382                       | 4.24%          | 18           |
| Cajun Electric Power Cooperative                    | 1,393                       | 4.28%          | 18           |
| Central and South West                              | 4,343                       | 13.33%         | 178          |
| Central Louisiana Electric Company                  | 922                         | 2.83%          | 8            |
| City of Alexandria, LA                              | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                              | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                             | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                               | 262                         | 0.80%          | 1            |
| City of McPherson, KS                               | 0                           | 0.00%          | 0            |
| City of Winfield, KS                                | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO                | 131                         | 0.40%          | 0            |
| City Utilities, Springfield, MO                     | 413                         | 1.27%          | 2            |
| Empire District Electric Company                    | 303                         | 0.93%          | 1            |
| Entergy Services                                    | 8,326                       | 25.56%         | 653          |
| Grand River Dam Authority                           | 810                         | 2.49%          | 6            |
| KAMO Electric Cooperative                           | 200                         | 0.61%          | 0            |
| Kansas City Board of Public Utilities               | 290                         | 0.89%          | 1            |
| Kansas Electric Power Cooperative                   | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority                | 116                         | 0.36%          | 0            |
| Midwest Energy                                      | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative                | 117                         | 0.36%          | 0            |
| Oklahoma Gas & Electric                             | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                  | 92                          | 0.28%          | 0            |
| Southwestern Power Administration                   | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                 | 26                          | 0.08%          | 0            |
| St. Joseph Light & Power Company                    | 218                         | 0.67%          | 0            |
| Sunflower Electric Power Corporation                | 325                         | 1.00%          | 1            |
| Utilicorp (West Plains and Missouri Public Service) | 1,023                       | 3.14%          | 10           |
| Western Farmers Electric Cooperative                | 690                         | 2.12%          | 4            |
| Cooperative Power                                   | 58                          | 0.18%          | 0            |
| IES Utilities                                       | 120                         | 0.37%          | 0            |
| Interstate Power Company                            | 53                          | 0.16%          | 0            |
| Lincoln Electric System                             | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                  | 256                         | 0.79%          | 1            |
| Minnesota Power                                     | 124                         | 0.38%          | 0            |
| Nebraska Public Power District                      | 99                          | 0.31%          | 0            |
| Northern States Power                               | 360                         | 1.10%          | 1            |
| Northwestern Public Service Company                 | 22                          | 0.07%          | 0            |
| Omaha Public Power District                         | 48                          | 0.15%          | 0            |
| Otter Tail Power                                    | 59                          | 0.18%          | 0            |
| Central Illinois Public Service Co.                 | 339                         | 1.04%          | 1            |
| Illinois Power Company                              | 3,743                       | 11.49%         | 132          |
| Union Electric                                      | 0                           | 0.00%          | 0            |
| <b>Total</b>  | <b>32,580</b>               | <b>100.00%</b> | <b>1,161</b> |
| <b>Change in HHI Resulting from Merged Company</b>  |                             |                | <b>70</b>    |
| <b>Post-Merger HHI</b>                              |                             |                | <b>1,231</b> |



**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern and TVA**  
**14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 1,283                       | 4.95%          | 25           |
| Western Resources                                  | 2,854                       | 11.02%         | 121          |
| Arkansas Electric Cooperative Corporation          | 1,408                       | 5.43%          | 30           |
| Associated Electric Cooperative                    | 1,160                       | 4.48%          | 20           |
| Cajun Electric Power Cooperative                   | 1,393                       | 5.38%          | 29           |
| Central and South West                             | 2,736                       | 10.56%         | 111          |
| Central Louisiana Electric Company                 | 325                         | 1.25%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 178                         | 0.69%          | 0            |
| Empire District Electric Company                   | 211                         | 0.81%          | 1            |
| Entergy Services                                   | 7,902                       | 30.50%         | 930          |
| Grand River Dam Authority                          | 810                         | 3.13%          | 10           |
| KAMO Electric Cooperative                          | 200                         | 0.77%          | 1            |
| Kansas City Board of Public Utilities              | 235                         | 0.91%          | 1            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 3                           | 0.01%          | 0            |
| Midwest Energy                                     | 0                           | 0.00%          | 0            |
| Northeast Texas Electric Cooperative               | 117                         | 0.45%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 92                          | 0.36%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 121                         | 0.47%          | 0            |
| Sunflower Electric Power Corporation               | 0                           | 0.00%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 837                         | 3.23%          | 10           |
| Western Farmers Electric Cooperative               | 0                           | 0.00%          | 0            |
| Cooperative Power                                  | 100                         | 0.38%          | 0            |
| IES Utilities                                      | 188                         | 0.73%          | 1            |
| Interstate Power Company                           | 31                          | 0.12%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 439                         | 1.69%          | 3            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 170                         | 0.66%          | 0            |
| Northern States Power                              | 98                          | 0.38%          | 0            |
| Northwestern Public Service Company                | 19                          | 0.07%          | 0            |
| Omaha Public Power District                        | 82                          | 0.32%          | 0            |
| Otter Tail Power                                   | 72                          | 0.28%          | 0            |
| Central Illinois Public Service Co.                | 0                           | 0.00%          | 0            |
| Illinois Power Company                             | 2,847                       | 10.99%         | 121          |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>25,912</b>               | <b>100.00%</b> | <b>1,416</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>109</b>   |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,525</b> |

**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern and TVA**  
**20-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI        |
|--|-----------------------------|----------------|------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0          |
| Western Resources                                  | 56                          | 0.71%          | 1          |
| Arkansas Electric Cooperative Corporation          | 315                         | 4.00%          | 16         |
| Associated Electric Cooperative                    | 222                         | 2.82%          | 8          |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 0          |
| Central and South West                             | 1,607                       | 20.42%         | 417        |
| Central Louisiana Electric Company                 | 597                         | 7.59%          | 58         |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0          |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0          |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0          |
| City of Lafayette, LA                              | 262                         | 3.32%          | 11         |
| City of McPherson, KS                              | 0                           | 0.00%          | 0          |
| City of Winfield, KS                               | 0                           | 0.00%          | 0          |
| City Power & Light, Independence, MO               | 131                         | 1.67%          | 3          |
| City Utilities, Springfield, MO                    | 235                         | 2.99%          | 9          |
| Empire District Electric Company                   | 92                          | 1.17%          | 1          |
| Entergy Services                                   | 424                         | 5.39%          | 29         |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0          |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0          |
| Kansas City Board of Public Utilities              | 55                          | 0.70%          | 0          |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0          |
| Louisiana Energy and Power Authority               | 113                         | 1.44%          | 2          |
| Midwest Energy                                     | 0                           | 0.00%          | 0          |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0          |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0          |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0          |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0          |
| Southwestern Public Service Company                | 26                          | 0.33%          | 0          |
| St. Joseph Light & Power Company                   | 97                          | 1.23%          | 2          |
| Sunflower Electric Power Corporation               | 325                         | 4.13%          | 17         |
| Utilicorp (WestPlains and Missouri Public Service) | 186                         | 2.37%          | 6          |
| Western Farmers Electric Cooperative               | 690                         | 8.77%          | 77         |
| Cooperative Power                                  | 0                           | 0.00%          | 0          |
| IES Utilities                                      | 25                          | 0.32%          | 0          |
| Interstate Power Company                           | 85                          | 1.08%          | 1          |
| Lincoln Electric System                            | 0                           | 0.00%          | 0          |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0          |
| Minnesota Power                                    | 298                         | 3.78%          | 14         |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0          |
| Northern States Power                              | 726                         | 9.22%          | 85         |
| Northwestern Public Service Company                | 27                          | 0.35%          | 0          |
| Omaha Public Power District                        | 0                           | 0.00%          | 0          |
| Otter Tail Power                                   | 40                          | 0.50%          | 0          |
| Central Illinois Public Service Co.                | 339                         | 4.31%          | 19         |
| Illinois Power Company                             | 896                         | 11.39%         | 130        |
| Union Electric                                     | 0                           | 0.00%          | 0          |
| <b>Total</b>                                       | <b>7,868</b>                | <b>100.00%</b> | <b>905</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>   |
| <b>Post-Merger HHI</b>                             |                             |                | <b>905</b> |

**Marginal Economic Capacity Analysis**  
**Case 2: Entergy Market Excluding Southern and TVA**  
**25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.35%          | 0            |
| Western Resources                                  | 941                         | 4.46%          | 20           |
| Arkansas Electric Cooperative Corporation          | 0                           | 0.00%          | 0            |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 0            |
| Cajun Electric Power Cooperative                   | 220                         | 1.04%          | 1            |
| Central and South West                             | 4,172                       | 19.79%         | 392          |
| Central Louisiana Electric Company                 | 1,370                       | 6.50%          | 42           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.11%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 268                         | 1.27%          | 2            |
| City of McPherson, KS                              | 132                         | 0.62%          | 0            |
| City of Winfield, KS                               | 40                          | 0.19%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 1.13%          | 1            |
| Empire District Electric Company                   | 278                         | 1.32%          | 2            |
| Entergy Services                                   | 8,254                       | 39.16%         | 1,533        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 1.34%          | 2            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 222                         | 1.05%          | 1            |
| Midwest Energy                                     | 15                          | 0.07%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 1.24%          | 2            |
| St. Joseph Light & Power Company                   | 42                          | 0.20%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.40%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 243                         | 1.15%          | 1            |
| Western Farmers Electric Cooperative               | 403                         | 1.91%          | 4            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 77                          | 0.37%          | 0            |
| Interstate Power Company                           | 370                         | 1.76%          | 3            |
| Lincoln Electric System                            | 74                          | 0.35%          | 0            |
| MidAmerican Energy                                 | 371                         | 1.76%          | 3            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 50                          | 0.24%          | 0            |
| Northern States Power                              | 232                         | 1.10%          | 1            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 8                           | 0.04%          | 0            |
| Central Illinois Public Service Co.                | 2,334                       | 11.07%         | 123          |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>21,079</b>               | <b>100.00%</b> | <b>2,133</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>3</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,137</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 189                         | 0.42%          | 0            |
| Arkansas Electric Cooperative Corporation          | 1,723                       | 3.82%          | 15           |
| Associated Electric Cooperative                    | 222                         | 0.49%          | 0            |
| Cajun Electric Power Cooperative                   | 1,393                       | 3.09%          | 12           |
| Central and South West                             | 3,534                       | 7.83%          | 12           |
| Central Louisiana Electric Company                 | 922                         | 2.04%          | 13           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.58%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.09%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.08%          | 0            |
| City Utilities, Springfield, MO                    | 473                         | 1.05%          | 1            |
| Empire District Electric Company                   | 370                         | 0.82%          | 1            |
| Entergy Services                                   | 8,326                       | 18.46%         | 341          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 0.63%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 235                         | 0.52%          | 0            |
| Midwest Energy                                     | 15                          | 0.03%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.09%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 0.58%          | 0            |
| St. Joseph Light & Power Company                   | 139                         | 0.31%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.19%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 343                         | 0.76%          | 1            |
| Western Farmers Electric Cooperative               | 969                         | 2.15%          | 5            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 38                          | 0.08%          | 0            |
| Interstate Power Company                           | 95                          | 0.21%          | 0            |
| Lincoln Electric System                            | 17                          | 0.04%          | 0            |
| MidAmerican Energy                                 | 28                          | 0.06%          | 0            |
| Minnesota Power                                    | 248                         | 0.55%          | 0            |
| Nebraska Public Power District                     | 11                          | 0.02%          | 0            |
| Northern States Power                              | 656                         | 1.45%          | 2            |
| Northwestern Public Service Company                | 23                          | 0.05%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 86                          | 0.19%          | 0            |
| Central Illinois Public Service Co.                | 2,549                       | 5.65%          | 32           |
| Illinois Power Company                             | 1,545                       | 3.42%          | 12           |
| Union Electric                                     | 5,275                       | 11.69%         | 137          |
| Tennessee Valley Authority                         | 14,685                      | 32.55%         | 1,060        |
| <b>Total</b>                                       | <b>45,115</b>               | <b>100.00%</b> | <b>1,643</b> |
| Change in HHI Resulting from Merged Company        |                             |                | 0            |
| Post-Merger HHI                                    |                             |                | 1,643        |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern**  
**25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.45%          | 0            |
| Western Resources                                  | 1,279                       | 7.79%          | 61           |
| Arkansas Electric Cooperative Corporation          | 0                           | 0.00%          | 0            |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 0            |
| Cajun Electric Power Cooperative                   | 220                         | 1.34%          | 12           |
| Central and South West                             | 2,788                       | 16.97%         | 12           |
| Central Louisiana Electric Company                 | 1,711                       | 10.42%         | 13           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.14%          | 0            |
| City of Coffeyville, KS                            | 56                          | 0.34%          | 0            |
| City of Lafayette, LA                              | 318                         | 1.94%          | 4            |
| City of McPherson, KS                              | 182                         | 1.11%          | 1            |
| City of Winfield, KS                               | 11                          | 0.07%          | 0            |
| City Power & Light, Independence, MO               | 39                          | 0.24%          | 0            |
| City Utilities, Springfield, MO                    | 0                           | 0.00%          | 0            |
| Empire District Electric Company                   | 33                          | 0.20%          | 0            |
| Entergy Services                                   | 8,254                       | 50.26%         | 2,526        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 114                         | 0.70%          | 0            |
| Midwest Energy                                     | 13                          | 0.08%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 0                           | 0.00%          | 0            |
| Sunflower Electric Power Corporation               | 112                         | 0.68%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 103                         | 0.62%          | 0            |
| Western Farmers Electric Cooperative               | 124                         | 0.75%          | 1            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 0                           | 0.00%          | 0            |
| Interstate Power Company                           | 297                         | 1.81%          | 3            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 373                         | 2.27%          | 5            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 5                           | 0.03%          | 0            |
| Northern States Power                              | 61                          | 0.37%          | 0            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 103                         | 0.63%          | 0            |
| Otter Tail Power                                   | 8                           | 0.05%          | 0            |
| Central Illinois Public Service Co.                | 124                         | 0.75%          | 1            |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>16,424</b>               | <b>100.00%</b> | <b>2,640</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>7</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,647</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern**  
**14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 56                          | 0.15%          | 0            |
| Arkansas Electric Cooperative Corporation          | 1,408                       | 3.78%          | 14           |
| Associated Electric Cooperative                    | 222                         | 0.60%          | 0            |
| Cajun Electric Power Cooperative                   | 1,393                       | 3.74%          | 12           |
| Central and South West                             | 1,843                       | 4.95%          | 12           |
| Central Louisiana Electric Company                 | 922                         | 2.48%          | 13           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.70%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.10%          | 0            |
| City Utilities, Springfield, MO                    | 235                         | 0.63%          | 0            |
| Empire District Electric Company                   | 92                          | 0.25%          | 0            |
| Entergy Services                                   | 7,902                       | 21.24%         | 451          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 0.76%          | 1            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.31%          | 0            |
| Midwest Energy                                     | 6                           | 0.02%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.10%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 0.70%          | 0            |
| St. Joseph Light & Power Company                   | 97                          | 0.26%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.23%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 114                         | 0.31%          | 0            |
| Western Farmers Electric Cooperative               | 690                         | 1.85%          | 3            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 31                          | 0.08%          | 0            |
| Interstate Power Company                           | 86                          | 0.23%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 279                         | 0.75%          | 1            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 681                         | 1.83%          | 3            |
| Northwestern Public Service Company                | 26                          | 0.07%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 97                          | 0.26%          | 0            |
| Central Illinois Public Service Co.                | 257                         | 0.69%          | 0            |
| Illinois Power Company                             | 1,545                       | 4.15%          | 17           |
| Union Electric                                     | 3,462                       | 9.30%          | 87           |
| Tennessee Valley Authority                         | 14,685                      | 39.46%         | 1,557        |
| <b>Total</b>                                       | <b>37,212</b>               | <b>100.00%</b> | <b>2,174</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,174</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern**  
**20-25 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 133                         | 1.56%          | 2            |
| Arkansas Electric Cooperative Corporation          | 315                         | 3.70%          | 14           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 0            |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 12           |
| Central and South West                             | 1,691                       | 19.86%         | 12           |
| Central Louisiana Electric Company                 | 0                           | 0.00%          | 13           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.47%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 2.80%          | 8            |
| Empire District Electric Company                   | 278                         | 3.27%          | 11           |
| Entergy Services                                   | 424                         | 4.98%          | 25           |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 120                         | 1.40%          | 2            |
| Midwest Energy                                     | 9                           | 0.11%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 42                          | 0.49%          | 0            |
| Sunflower Electric Power Corporation               | 0                           | 0.00%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 229                         | 2.69%          | 7            |
| Western Farmers Electric Cooperative               | 279                         | 3.28%          | 11           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 47                          | 0.55%          | 0            |
| Interstate Power Company                           | 84                          | 0.99%          | 1            |
| Lincoln Electric System                            | 74                          | 0.87%          | 1            |
| MidAmerican Energy                                 | 124                         | 1.45%          | 2            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 50                          | 0.59%          | 0            |
| Northern States Power                              | 232                         | 2.72%          | 7            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 0                           | 0.00%          | 0            |
| Central Illinois Public Service Co.                | 2,292                       | 26.92%         | 725          |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 1,813                       | 21.29%         | 453          |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>8,514</b>                | <b>100.00%</b> | <b>1,307</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,307</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Including Southern**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 189                         | 0.29%          | 0            |
| Arkansas Electric Cooperative Corporation          | 1,723                       | 2.67%          | 12           |
| Associated Electric Cooperative                    | 222                         | 0.34%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 2.16%          | 13           |
| Central and South West                             | 3,534                       | 5.47%          | 30           |
| Central Louisiana Electric Company                 | 922                         | 1.43%          | 2            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.40%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.06%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.06%          | 0            |
| City Utilities, Springfield, MO                    | 473                         | 0.73%          | 1            |
| Empire District Electric Company                   | 370                         | 0.57%          | 0            |
| Entergy Services                                   | 8,326                       | 12.89%         | 166          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 0.44%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 235                         | 0.36%          | 0            |
| Midwest Energy                                     | 15                          | 0.02%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.06%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 0.40%          | 0            |
| St. Joseph Light & Power Company                   | 139                         | 0.22%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.13%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 343                         | 0.53%          | 0            |
| Western Farmers Electric Cooperative               | 969                         | 1.50%          | 2            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 38                          | 0.06%          | 0            |
| Interstate Power Company                           | 95                          | 0.15%          | 0            |
| Lincoln Electric System                            | 17                          | 0.03%          | 0            |
| MidAmerican Energy                                 | 28                          | 0.04%          | 0            |
| Minnesota Power                                    | 248                         | 0.38%          | 0            |
| Nebraska Public Power District                     | 11                          | 0.02%          | 0            |
| Northern States Power                              | 656                         | 1.01%          | 1            |
| Northwestern Public Service Company                | 23                          | 0.04%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 86                          | 0.13%          | 0            |
| Central Illinois Public Service Co.                | 2,549                       | 3.95%          | 16           |
| Illinois Power Company                             | 1,545                       | 2.39%          | 6            |
| Southern Companies                                 | 19,498                      | 30.18%         | 911          |
| Union Electric                                     | 5,275                       | 8.16%          | 67           |
| Tennessee Valley Authority                         | 14,685                      | 22.73%         | 517          |
| <b>Total</b>                                       | <b>64,613</b>               | <b>100.00%</b> | <b>1,756</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,756</b> |



**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Including Southern**  
**25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.39%          | 0            |
| Western Resources                                  | 1,279                       | 6.75%          | 46           |
| Arkansas Electric Cooperative Corporation          | 0                           | 0.00%          | 12           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 12           |
| Cajun Electric Power Cooperative                   | 220                         | 1.16%          | 13           |
| Central and South West                             | 2,788                       | 14.70%         | 216          |
| Central Louisiana Electric Company                 | 1,711                       | 9.02%          | 81           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.12%          | 0            |
| City of Coffeyville, KS                            | 56                          | 0.29%          | 0            |
| City of Lafayette, LA                              | 318                         | 1.68%          | 3            |
| City of McPherson, KS                              | 182                         | 0.96%          | 1            |
| City of Winfield, KS                               | 11                          | 0.06%          | 0            |
| City Power & Light, Independence, MO               | 39                          | 0.21%          | 0            |
| City Utilities, Springfield, MO                    | 0                           | 0.00%          | 0            |
| Empire District Electric Company                   | 33                          | 0.17%          | 0            |
| Entergy Services                                   | 8,254                       | 43.54%         | 1,895        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 114                         | 0.60%          | 0            |
| Midwest Energy                                     | 13                          | 0.07%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 0                           | 0.00%          | 0            |
| Sunflower Electric Power Corporation               | 112                         | 0.59%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 103                         | 0.54%          | 0            |
| Western Farmers Electric Cooperative               | 124                         | 0.65%          | 0            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 0                           | 0.00%          | 0            |
| Interstate Power Company                           | 297                         | 1.57%          | 2            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 373                         | 1.97%          | 4            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 5                           | 0.03%          | 0            |
| Northern States Power                              | 61                          | 0.32%          | 0            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 103                         | 0.54%          | 0            |
| Otter Tail Power                                   | 8                           | 0.04%          | 0            |
| Central Illinois Public Service Co.                | 124                         | 0.65%          | 0            |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Southern Companies                                 | 2,536                       | 13.37%         | 179          |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>18,960</b>               | <b>100.00%</b> | <b>2,467</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>5</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>2,472</b> |

**Marginal Economic Analysis Capacity**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Including Southern**  
**14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 56                          | 0.12%          | 0            |
| Arkansas Electric Cooperative Corporation          | 1,408                       | 2.93%          | 12           |
| Associated Electric Cooperative                    | 222                         | 0.46%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 2.90%          | 13           |
| Central and South West                             | 1,843                       | 3.84%          | 15           |
| Central Louisiana Electric Company                 | 922                         | 1.92%          | 4            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 0.54%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.08%          | 0            |
| City Utilities, Springfield, MO                    | 235                         | 0.49%          | 0            |
| Empire District Electric Company                   | 92                          | 0.19%          | 0            |
| Entergy Services                                   | 7,902                       | 16.47%         | 271          |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 0.59%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.24%          | 0            |
| Midwest Energy                                     | 6                           | 0.01%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.08%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 0.54%          | 0            |
| St. Joseph Light & Power Company                   | 97                          | 0.20%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.18%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 114                         | 0.24%          | 0            |
| Western Farmers Electric Cooperative               | 690                         | 1.44%          | 2            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 31                          | 0.06%          | 0            |
| Interstate Power Company                           | 86                          | 0.18%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 279                         | 0.58%          | 0            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 681                         | 1.42%          | 2            |
| Northwestern Public Service Company                | 26                          | 0.05%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 97                          | 0.20%          | 0            |
| Central Illinois Public Service Co.                | 257                         | 0.54%          | 0            |
| Illinois Power Company                             | 1,545                       | 3.22%          | 10           |
| Southern Companies                                 | 10,779                      | 22.46%         | 504          |
| Union Electric                                     | 3,462                       | 7.21%          | 52           |
| Tennessee Valley Authority                         | 14,685                      | 30.60%         | 936          |
| <b>Total</b>                                       | <b>47,991</b>               | <b>100.00%</b> | <b>1,836</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,836</b> |

**Marginal Economic Analysis Capacity**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Including Southern**  
**20-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 133                         | 0.77%          | 1            |
| Arkansas Electric Cooperative Corporation          | 315                         | 1.83%          | 12           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 12           |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 13           |
| Central and South West                             | 1,691                       | 9.81%          | 96           |
| Central Louisiana Electric Company                 | 0                           | 0.00%          | 0            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.23%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 1.38%          | 2            |
| Empire District Electric Company                   | 278                         | 1.61%          | 3            |
| Entergy Services                                   | 424                         | 2.46%          | 6            |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 120                         | 0.69%          | 0            |
| Midwest Energy                                     | 9                           | 0.05%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 42                          | 0.24%          | 0            |
| Sunflower Electric Power Corporation               | 0                           | 0.00%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 229                         | 1.33%          | 2            |
| Western Farmers Electric Cooperative               | 279                         | 1.62%          | 3            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 47                          | 0.27%          | 0            |
| Interstate Power Company                           | 84                          | 0.49%          | 0            |
| Lincoln Electric System                            | 74                          | 0.43%          | 0            |
| MidAmerican Energy                                 | 124                         | 0.72%          | 1            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 50                          | 0.29%          | 0            |
| Northern States Power                              | 232                         | 1.35%          | 2            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 0                           | 0.00%          | 0            |
| Central Illinois Public Service Co.                | 2,292                       | 13.30%         | 177          |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Southern Companies                                 | 8,719                       | 50.59%         | 2,560        |
| Union Electric                                     | 1,813                       | 10.52%         | 111          |
| Tennessee Valley Authority                         | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>17,233</b>               | <b>100.00%</b> | <b>3,000</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>3,000</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern and TVA**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 189                         | 0.75%          | 1            |
| Arkansas Electric Cooperative Corporation          | 1,723                       | 6.85%          | 12           |
| Associated Electric Cooperative                    | 222                         | 0.88%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 5.54%          | 13           |
| Central and South West                             | 3,534                       | 14.05%         | 197          |
| Central Louisiana Electric Company                 | 922                         | 3.67%          | 13           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 1.04%          | 1            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.16%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.15%          | 0            |
| City Utilities, Springfield, MO                    | 473                         | 1.88%          | 4            |
| Empire District Electric Company                   | 370                         | 1.47%          | 2            |
| Entergy Services                                   | 8,326                       | 33.10%         | 1,096        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 1.12%          | 1            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 235                         | 0.94%          | 1            |
| Midwest Energy                                     | 15                          | 0.06%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.16%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 1.04%          | 1            |
| St. Joseph Light & Power Company                   | 139                         | 0.55%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.34%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 343                         | 1.36%          | 2            |
| Western Farmers Electric Cooperative               | 969                         | 3.85%          | 15           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 38                          | 0.15%          | 0            |
| Interstate Power Company                           | 95                          | 0.38%          | 0            |
| Lincoln Electric System                            | 17                          | 0.07%          | 0            |
| MidAmerican Energy                                 | 28                          | 0.11%          | 0            |
| Minnesota Power                                    | 248                         | 0.98%          | 1            |
| Nebraska Public Power District                     | 11                          | 0.04%          | 0            |
| Northern States Power                              | 656                         | 2.61%          | 7            |
| Northwestern Public Service Company                | 23                          | 0.09%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 86                          | 0.34%          | 0            |
| Central Illinois Public Service Co.                | 2,549                       | 10.13%         | 103          |
| Illinois Power Company                             | 1,545                       | 6.14%          | 38           |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>25,155</b>               | <b>100.00%</b> | <b>1,520</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,520</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern and TVA**  
**14-20 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 56                          | 0.29%          | 0            |
| Arkansas Electric Cooperative Corporation          | 1,408                       | 7.39%          | 12           |
| Associated Electric Cooperative                    | 222                         | 1.16%          | 12           |
| Cajun Electric Power Cooperative                   | 1,393                       | 7.31%          | 13           |
| Central and South West                             | 1,843                       | 9.67%          | 93           |
| Central Louisiana Electric Company                 | 922                         | 4.84%          | 23           |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 262                         | 1.37%          | 2            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 0                           | 0.00%          | 0            |
| City Power & Light, Independence, MO               | 38                          | 0.20%          | 0            |
| City Utilities, Springfield, MO                    | 235                         | 1.23%          | 2            |
| Empire District Electric Company                   | 92                          | 0.48%          | 0            |
| Entergy Services                                   | 7,902                       | 41.45%         | 1,718        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 282                         | 1.48%          | 2            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 116                         | 0.61%          | 0            |
| Midwest Energy                                     | 6                           | 0.03%          | 0            |
| Northeast Texas Electric Cooperative               | 39                          | 0.20%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 261                         | 1.37%          | 2            |
| St. Joseph Light & Power Company                   | 97                          | 0.51%          | 0            |
| Sunflower Electric Power Corporation               | 85                          | 0.45%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 114                         | 0.60%          | 0            |
| Western Farmers Electric Cooperative               | 690                         | 3.62%          | 13           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 31                          | 0.16%          | 0            |
| Interstate Power Company                           | 86                          | 0.45%          | 0            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 0                           | 0.00%          | 0            |
| Minnesota Power                                    | 279                         | 1.47%          | 2            |
| Nebraska Public Power District                     | 0                           | 0.00%          | 0            |
| Northern States Power                              | 681                         | 3.57%          | 13           |
| Northwestern Public Service Company                | 26                          | 0.14%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 97                          | 0.51%          | 0            |
| Central Illinois Public Service Co.                | 257                         | 1.35%          | 2            |
| Illinois Power Company                             | 1,545                       | 8.10%          | 66           |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>19,065</b>               | <b>100.00%</b> | <b>1,977</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,977</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern and TVA**  
**14-25 mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 0                           | 0.00%          | 0            |
| Western Resources                                  | 133                         | 1.99%          | 4            |
| Arkansas Electric Cooperative Corporation          | 315                         | 4.70%          | 12           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 12           |
| Cajun Electric Power Cooperative                   | 0                           | 0.00%          | 13           |
| Central and South West                             | 1,691                       | 25.23%         | 637          |
| Central Louisiana Electric Company                 | 0                           | 0.00%          | 0            |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 0                           | 0.00%          | 0            |
| City of Coffeyville, KS                            | 0                           | 0.00%          | 0            |
| City of Lafayette, LA                              | 0                           | 0.00%          | 0            |
| City of McPherson, KS                              | 0                           | 0.00%          | 0            |
| City of Winfield, KS                               | 40                          | 0.60%          | 0            |
| City Power & Light, Independence, MO               | 0                           | 0.00%          | 0            |
| City Utilities, Springfield, MO                    | 238                         | 3.55%          | 13           |
| Empire District Electric Company                   | 278                         | 4.15%          | 17           |
| Entergy Services                                   | 424                         | 6.33%          | 40           |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 120                         | 1.78%          | 3            |
| Midwest Energy                                     | 9                           | 0.14%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 42                          | 0.63%          | 0            |
| Sunflower Electric Power Corporation               | 0                           | 0.00%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 229                         | 3.42%          | 12           |
| Western Farmers Electric Cooperative               | 279                         | 4.16%          | 17           |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 47                          | 0.70%          | 0            |
| Interstate Power Company                           | 84                          | 1.25%          | 2            |
| Lincoln Electric System                            | 74                          | 1.11%          | 1            |
| MidAmerican Energy                                 | 124                         | 1.84%          | 3            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 50                          | 0.75%          | 1            |
| Northern States Power                              | 232                         | 3.46%          | 12           |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 0                           | 0.00%          | 0            |
| Otter Tail Power                                   | 0                           | 0.00%          | 0            |
| Central Illinois Public Service Co.                | 2,292                       | 34.20%         | 1,170        |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>6,701</b>                | <b>100.00%</b> | <b>1,970</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>0</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>1,970</b> |

**Marginal Economic Capacity Analysis**  
**Case 3: Regional Market Assuming Zero Transmission Cost**  
**Excluding Southern and TVA**  
**25-35 Mills**

| Utility  | Change in Economic Capacity | Market Share   | HHI          |
|--|-----------------------------|----------------|--------------|
| Kansas City Power & Light                          | 74                          | 0.45%          | 0            |
| Western Resources                                  | 1,279                       | 7.79%          | 61           |
| Arkansas Electric Cooperative Corporation          | 0                           | 0.00%          | 12           |
| Associated Electric Cooperative                    | 0                           | 0.00%          | 12           |
| Cajun Electric Power Cooperative                   | 220                         | 1.34%          | 13           |
| Central and South West                             | 2,788                       | 16.97%         | 288          |
| Central Louisiana Electric Company                 | 1,711                       | 10.42%         | 109          |
| City of Alexandria, LA                             | 0                           | 0.00%          | 0            |
| City of Clarksdale, MS                             | 23                          | 0.14%          | 0            |
| City of Coffeyville, KS                            | 56                          | 0.34%          | 0            |
| City of Lafayette, LA                              | 318                         | 1.94%          | 4            |
| City of McPherson, KS                              | 182                         | 1.11%          | 1            |
| City of Winfield, KS                               | 11                          | 0.07%          | 0            |
| City Power & Light, Independence, MO               | 39                          | 0.24%          | 0            |
| City Utilities, Springfield, MO                    | 0                           | 0.00%          | 0            |
| Empire District Electric Company                   | 33                          | 0.20%          | 0            |
| Entergy Services                                   | 8,254                       | 50.26%         | 2,526        |
| Grand River Dam Authority                          | 0                           | 0.00%          | 0            |
| KAMO Electric Cooperative                          | 0                           | 0.00%          | 0            |
| Kansas City Board of Public Utilities              | 0                           | 0.00%          | 0            |
| Kansas Electric Power Cooperative                  | 0                           | 0.00%          | 0            |
| Louisiana Energy and Power Authority               | 114                         | 0.70%          | 0            |
| Midwest Energy                                     | 13                          | 0.08%          | 0            |
| Northeast Texas Electric Cooperative               | 0                           | 0.00%          | 0            |
| Oklahoma Gas & Electric                            | 0                           | 0.00%          | 0            |
| Oklahoma Municipal Power Authority                 | 0                           | 0.00%          | 0            |
| Southwestern Power Administration                  | 0                           | 0.00%          | 0            |
| Southwestern Public Service Company                | 0                           | 0.00%          | 0            |
| St. Joseph Light & Power Company                   | 0                           | 0.00%          | 0            |
| Sunflower Electric Power Corporation               | 112                         | 0.68%          | 0            |
| Utilicorp (WestPlains and Missouri Public Service) | 103                         | 0.62%          | 0            |
| Western Farmers Electric Cooperative               | 124                         | 0.75%          | 1            |
| Cooperative Power                                  | 0                           | 0.00%          | 0            |
| IES Utilities                                      | 0                           | 0.00%          | 0            |
| Interstate Power Company                           | 297                         | 1.81%          | 3            |
| Lincoln Electric System                            | 0                           | 0.00%          | 0            |
| MidAmerican Energy                                 | 373                         | 2.27%          | 5            |
| Minnesota Power                                    | 0                           | 0.00%          | 0            |
| Nebraska Public Power District                     | 5                           | 0.03%          | 0            |
| Northern States Power                              | 61                          | 0.37%          | 0            |
| Northwestern Public Service Company                | 0                           | 0.00%          | 0            |
| Omaha Public Power District                        | 103                         | 0.63%          | 0            |
| Otter Tail Power                                   | 8                           | 0.05%          | 0            |
| Central Illinois Public Service Co.                | 124                         | 0.75%          | 1            |
| Illinois Power Company                             | 0                           | 0.00%          | 0            |
| Union Electric                                     | 0                           | 0.00%          | 0            |
| <b>Total</b>                                       | <b>16,424</b>               | <b>100.00%</b> | <b>3,037</b> |
| <b>Change in HHI Resulting from Merged Company</b> |                             |                | <b>7</b>     |
| <b>Post-Merger HHI</b>                             |                             |                | <b>3,044</b> |

# Summary Table Economic Capacity Market Including Southern

## Post-Merger HHI

| Destination "Market"                        | Price Level |       |       |       |
|---|-------------|-------|-------|-------|
|   | 14          | 20    | 25    | 35    |
| Western Resources/KCPL TDUs                 | 1,723       | 1,085 | 903   | 1,333 |
| Associated Electric Cooperative             | 1,341       | 938   | 1,295 | 1,394 |
| Central and South West                      | 1,232       | 872   | 1,290 | 1,353 |
| City Power & Light, Independence, MO        | 1,689       | 1,129 | 950   | 1,368 |
| Empire District Electric Company            | 1,405       | 965   | 1,342 | 1,393 |
| Kansas City Board of Public Utilities       | 1,714       | 1,069 | 903   | 1,333 |
| Lincoln Electric System                     | 948         | 712   | 606   | 1,003 |
| MidAmerican Energy Company                  | 832         | 704   | 618   | 1,014 |
| Midwest Energy                              | 1,729       | 1,094 | 902   | 1,334 |
| Missouri Public Service Company (UtiliCorp) | 1,468       | 999   | 854   | 1,355 |
| Nebraska Public Power District              | 930         | 711   | 621   | 1,003 |
| Oklahoma Gas & Electric Company             | 1,511       | 1,002 | 1,349 | 1,397 |
| Omaha Public Power District                 | 900         | 668   | 598   | 991   |
| St. Joseph Light & Power Company            | 1,552       | 1,099 | 888   | 1,378 |
| Union Electric                              | 1,515       | 1,721 | 1,372 | 1,333 |
| WestPlains Energy - Kansas (UtiliCorp)      | 1,599       | 1,094 | 894   | 1,333 |

## Change in HHI

| Destination "Market"                        | Price Level |     |    |    |
|---|-------------|-----|----|----|
|   | 14          | 20  | 25 | 35 |
| Western Resources/KCPL TDUs                 | 135         | 182 | 89 | 37 |
| Associated Electric Cooperative             | 95          | 108 | 39 | 32 |
| Central and South West                      | 65          | 109 | 38 | 30 |
| City Power & Light, Independence, MO        | 77          | 195 | 98 | 37 |
| Empire District Electric Company            | 105         | 133 | 40 | 32 |
| Kansas City Board of Public Utilities       | 134         | 179 | 89 | 37 |
| Lincoln Electric System                     | 43          | 84  | 51 | 26 |
| MidAmerican Energy Company                  | 34          | 70  | 46 | 25 |
| Midwest Energy                              | 111         | 183 | 89 | 37 |
| Missouri Public Service Company (UtiliCorp) | 158         | 133 | 76 | 35 |
| Nebraska Public Power District              | 42          | 84  | 50 | 26 |
| Oklahoma Gas & Electric Company             | 88          | 144 | 41 | 32 |
| Omaha Public Power District                 | 70          | 76  | 46 | 26 |
| St. Joseph Light & Power Company            | 101         | 177 | 89 | 36 |
| Union Electric                              | 43          | 42  | 21 | 20 |
| WestPlains Energy - Kansas (UtiliCorp)      | 102         | 183 | 88 | 37 |



**Summary Table**  
**Marginal Economic Capacity**  
**Market Including Southern**

**Post-Merger HHI**

| <b>Destination "Market"</b>                 | <b>14-25</b> | <b>25-35</b> | <b>14-20</b> | <b>20-25</b> |
|---|--------------|--------------|--------------|--------------|
| Western Resources/KCPL TDUs                 | 1,019        | 2,827        | 1,253        | 1,846        |
| Associated Electric Cooperative             | 1,353        | 1,914        | 1,139        | 2,733        |
| Central and South West                      | 1,383        | 1,725        | 1,015        | 2,579        |
| City Power & Light, Independence, MO        | 1,087        | 2,706        | 1,463        | 2,154        |
| Empire District Electric Company            | 1,361        | 1,769        | 1,133        | 2,459        |
| Kansas City Board of Public Utilities       | 1,023        | 2,827        | 1,218        | 1,914        |
| Lincoln Electric System                     | 827          | 2,945        | 1,248        | 1,779        |
| MidAmerican Energy Company                  | 855          | 3,250        | 1,249        | 1,467        |
| Midwest Energy                              | 1,021        | 2,841        | 1,321        | 1,663        |
| Missouri Public Service Company (UtiliCorp) | 968          | 3,292        | 1,203        | 1,278        |
| Nebraska Public Power District              | 882          | 3,067        | 1,295        | 1,947        |
| Oklahoma Gas & Electric Company             | 1,363        | 1,800        | 1,216        | 2,216        |
| Omaha Public Power District                 | 860          | 3,295        | 1,107        | 1,804        |
| St. Joseph Light & Power Company            | 1,037        | 3,158        | 1,612        | 2,013        |
| Union Electric                              | 1,320        | 1,985        | 2,103        | 2,918        |
| WestPlains Energy - Kansas (UtiliCorp)      | 1,054        | 2,876        | 1,452        | 1,614        |

**Change in HHI**

| <b>Destination "Market"</b>                 | <b>14-25</b> | <b>25-35</b> | <b>14-20</b> | <b>20-25</b> |
|---|--------------|--------------|--------------|--------------|
| Western Resources/KCPL TDUs                 | 51           | 1            | 201          | 0            |
| Associated Electric Cooperative             | 17           | 4            | 100          | 0            |
| Central and South West                      | 24           | 3            | 170          | 0            |
| City Power & Light, Independence, MO        | 78           | 1            | 301          | 0            |
| Empire District Electric Company            | 17           | 3            | 137          | 0            |
| Kansas City Board of Public Utilities       | 51           | 1            | 195          | 0            |
| Lincoln Electric System                     | 9            | 1            | 31           | 0            |
| MidAmerican Energy Company                  | 0            | 1            | 0            | 0            |
| Midwest Energy                              | 68           | 1            | 267          | 0            |
| Missouri Public Service Company (UtiliCorp) | 0            | 1            | 0            | 0            |
| Nebraska Public Power District              | 9            | 1            | 32           | 0            |
| Oklahoma Gas & Electric Company             | 23           | 3            | 211          | 0            |
| Omaha Public Power District                 | 6            | 1            | 22           | 0            |
| St. Joseph Light & Power Company            | 0            | 1            | 0            | 0            |
| Union Electric                              | 11           | 4            | 34           | 0            |
| WestPlains Energy - Kansas (UtiliCorp)      | 71           | 1            | 303          | 0            |

# Summary Table Economic Capacity Market Excluding Southern

## Post-Merger HHI

| Destination "Market"                        | Price Level |       |       |       |
|---|-------------|-------|-------|-------|
|   | 14          | 20    | 25    | 35    |
| Western Resources/KCPL TDUs                 | 1,677       | 1,129 | 974   | 960   |
| Associated Electric Cooperative             | 1,257       | 1,003 | 1,049 | 1,078 |
| Central and South West                      | 1,171       | 913   | 1,064 | 1,043 |
| City Power & Light, Independence, MO        | 1,562       | 1,174 | 1,028 | 961   |
| Empire District Electric Company            | 1,296       | 1,015 | 1,096 | 1,077 |
| Kansas City Board of Public Utilities       | 1,665       | 1,109 | 974   | 960   |
| Lincoln Electric System                     | 898         | 727   | 629   | 676   |
| MidAmerican Energy Company                  | 806         | 733   | 648   | 707   |
| Midwest Energy                              | 1,649       | 1,141 | 974   | 962   |
| Missouri Public Service Company (UtiliCorp) | 1,444       | 1,062 | 920   | 1,005 |
| Nebraska Public Power District              | 877         | 727   | 648   | 676   |
| Oklahoma Gas & Electric Company             | 1,455       | 1,054 | 1,104 | 1,081 |
| Omaha Public Power District                 | 862         | 680   | 624   | 679   |
| St. Joseph Light & Power Company            | 1,481       | 1,153 | 954   | 959   |
| Union Electric                              | 1,132       | 1,028 | 1,001 | 1,031 |
| WestPlains Energy - Kansas (UtiliCorp)      | 1,489       | 1,140 | 963   | 960   |

## Change in HHI

| Destination "Market"                        | Price Level |     |     |    |
|---|-------------|-----|-----|----|
|   | 14          | 20  | 25  | 35 |
| Western Resources/KCPL TDUs                 | 275         | 271 | 117 | 74 |
| Associated Electric Cooperative             | 171         | 146 | 73  | 63 |
| Central and South West                      | 110         | 148 | 70  | 60 |
| City Power & Light, Independence, MO        | 160         | 296 | 131 | 76 |
| Empire District Electric Company            | 195         | 186 | 77  | 63 |
| Kansas City Board of Public Utilities       | 273         | 266 | 117 | 74 |
| Lincoln Electric System                     | 66          | 109 | 62  | 46 |
| MidAmerican Energy Company                  | 49          | 89  | 56  | 44 |
| Midwest Energy                              | 231         | 274 | 117 | 74 |
| Missouri Public Service Company (UtiliCorp) | 288         | 186 | 97  | 70 |
| Nebraska Public Power District              | 64          | 109 | 61  | 46 |
| Oklahoma Gas & Electric Company             | 166         | 205 | 78  | 63 |
| Omaha Public Power District                 | 103         | 98  | 56  | 45 |
| St. Joseph Light & Power Company            | 194         | 263 | 117 | 74 |
| Union Electric                              | 130         | 128 | 69  | 63 |
| WestPlains Energy - Kansas (UtiliCorp)      | 203         | 273 | 115 | 74 |

# **Summary Table** **Marginal Economic Capacity** **Market Excluding Southern**

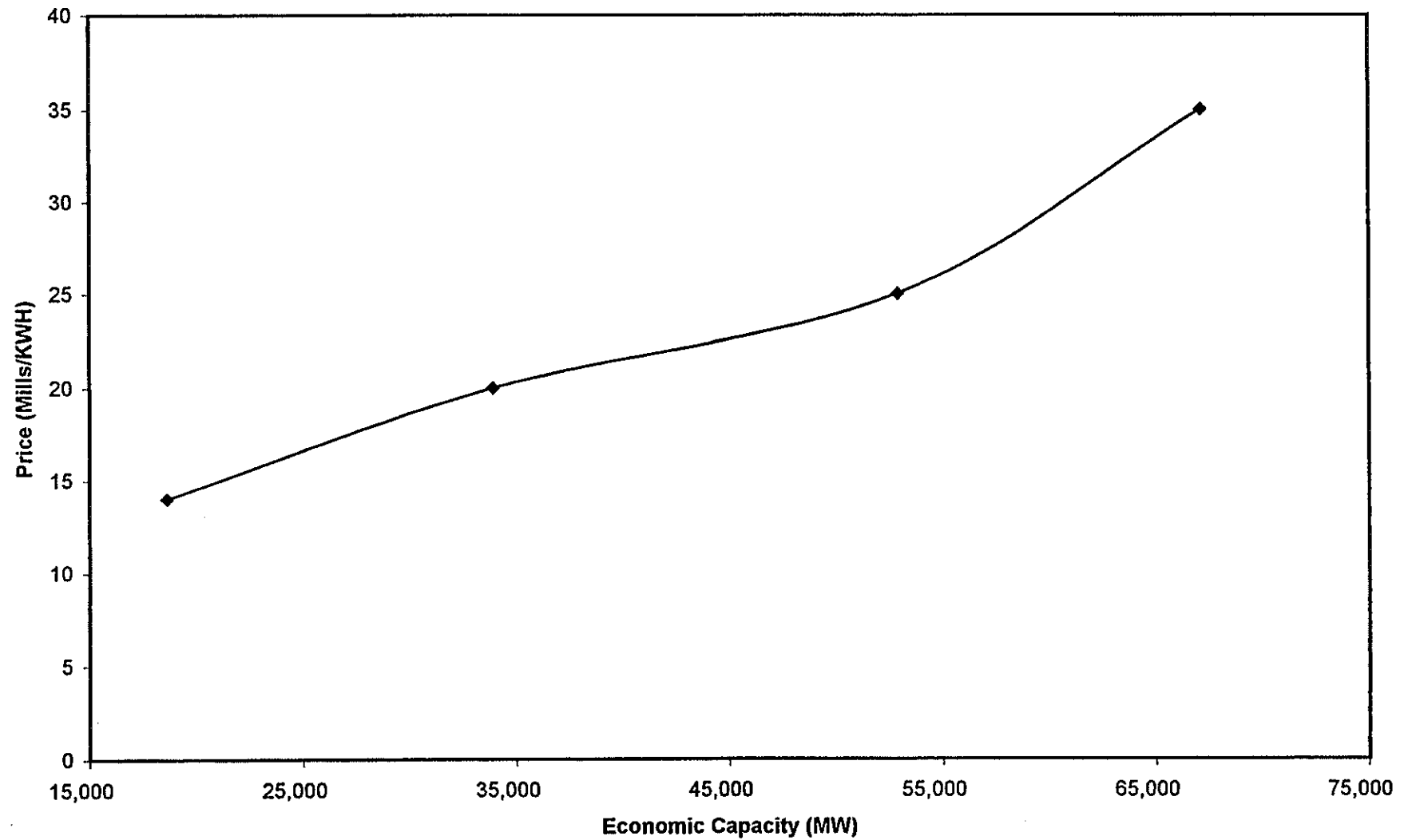
## **Post-Merger HHI**

| <b>Destination "Market"</b>                 | <b>14-25</b> | <b>25-35</b> | <b>14-20</b> | <b>20-25</b> |
|---|--------------|--------------|--------------|--------------|
| Western Resources/KCPL TDUs                 | 1,179        | 1,789        | 1,253        | 1,846        |
| Associated Electric Cooperative             | 1,138        | 1,690        | 1,139        | 2,088        |
| Central and South West                      | 1,153        | 1,395        | 1,015        | 2,244        |
| City Power & Light, Independence, MO        | 1,087        | 1,673        | 1,463        | 2,154        |
| Empire District Electric Company            | 1,142        | 1,590        | 1,133        | 2,087        |
| Kansas City Board of Public Utilities       | 1,023        | 1,788        | 1,218        | 1,914        |
| Lincoln Electric System                     | 827          | 1,887        | 1,248        | 1,779        |
| MidAmerican Energy Company                  | 855          | 2,163        | 1,249        | 1,467        |
| Midwest Energy                              | 1,021        | 1,810        | 1,321        | 1,663        |
| Missouri Public Service Company (UtiliCorp) | 968          | 2,150        | 1,203        | 1,278        |
| Nebraska Public Power District              | 882          | 2,038        | 1,295        | 1,947        |
| Oklahoma Gas & Electric Company             | 1,160        | 1,642        | 1,216        | 1,808        |
| Omaha Public Power District                 | 860          | 2,269        | 1,107        | 1,804        |
| St. Joseph Light & Power Company            | 1,171        | 2,097        | 1,612        | 2,013        |
| Union Electric                              | 1,150        | 1,531        | 1,034        | 2,371        |
| WestPlains Energy - Kansas (UtiliCorp)      | 1,054        | 1,863        | 1,452        | 1,614        |

## **Change in HHI**

| <b>Destination "Market"</b>                 | <b>14-25</b> | <b>25-35</b> | <b>14-20</b> | <b>20-25</b> |
|---|--------------|--------------|--------------|--------------|
| Western Resources/KCPL TDUs                 | 51           | 4            | 201          | 0            |
| Associated Electric Cooperative             | 33           | 9            | 100          | 0            |
| Central and South West                      | 47           | 8            | 170          | 0            |
| City Power & Light, Independence, MO        | 78           | 4            | 301          | 0            |
| Empire District Electric Company            | 33           | 7            | 137          | 0            |
| Kansas City Board of Public Utilities       | 51           | 4            | 195          | 0            |
| Lincoln Electric System                     | 9            | 4            | 31           | 0            |
| MidAmerican Energy Company                  | 0            | 5            | 0            | 0            |
| Midwest Energy                              | 68           | 4            | 267          | 0            |
| Missouri Public Service Company (UtiliCorp) | 0            | 6            | 0            | 0            |
| Nebraska Public Power District              | 9            | 5            | 32           | 0            |
| Oklahoma Gas & Electric Company             | 44           | 7            | 211          | 0            |
| Omaha Public Power District                 | 6            | 6            | 22           | 0            |
| St. Joseph Light & Power Company            | 0            | 4            | 0            | 0            |
| Union Electric                              | 34           | 11           | 100          | 0            |
| WestPlains Energy - Kansas (UtiliCorp)      | 71           | 4            | 303          | 0            |

### Economic Capacity Delivered to Relevant Market at Alternative Price Levels



## Power Plants Served by Western Resources' Natural Gas System

| Power Plant                           | Capacity (MW)    | 1996 Purchases from<br>Western Resources (MCF) | Alternative Pipeline Source    |
|---------------------------------------|------------------|--|--------------------------------|
| KC,KS BPU Kaw Transport               | 161.300          | 99,786   | (A) KPOC, WNG                  |
| KC,KS BPU Quindaro Transport          | 239.100          | 4,136  | (A) KPOC, WNG                  |
| City of Augusta                       | 23.740           | 3,186  | (A) Getty, WNG, (C) KPOC       |
| City of Baldwin                       | 6.120            | -  | (A) WNG                        |
| City of Beloit Transport              | 19.350           | 44,915   | (A) WNG                        |
| City of Girard                        | 10.925           | -  | (A) WNG                        |
| City of Holton Transport              | 16.270           | 51,312   | (A) WNG                        |
| City of Lincoln                       | 10.650           | -  | (A) WNG, NGPL                  |
| City of Minneapolis Transport         | 10.200           | 32,058   | (A) NNG, WNG                   |
| City of Muhvane                       | 7.490            | -  | (A) WNG, (C) PNG               |
| City of Osborne                       | 7.235            | 3,522  | (A) WNG                        |
| City of Osawatomie                    | 7.000            | -  | (A) KPOC, PEPL (C) WNG         |
| City of Ottawa                        | 31.250           | 39,109   | (A) WNG, KPOC (C) PE           |
| City of Sabetha Transport             | 18.036           | 45,734   | (A) WNG                        |
| City of Wellington Transport          | 41.000           | 222,962  | (A) WNG, PNG                   |
| WestPlains Energy - Clifton Transport | 88.000           | 89,488   | (A) NNG                        |
| WestPlains Energy - Mullergren        | 81.600           | 1,120,499                                      | (A) NNG (B) WNG, NGPL          |
| BPU - McPherson Transport             | 26.600           | 135,724  | (B) KPOC                       |
| City of Ashland                       | 4.975            | 780  | (A) NNG, NGPL                  |
| City of Belleville Transport          | 13.125           | 53,084   | NONE                           |
| City of Belleville Sales              |                  |  |                                |
| City of Clay Center Transport         | 24.600           | 270,381  | NONE                           |
| City of Ellinwood Transport           | 8.500            | 8,000  | (A) WNG, NNG                   |
| City of Greensburg Sales              | 7.800            | 11,050   | (A) PEPL, KGS, (B) ANR (C) WNG |
| City of Hoisington Transport          | 13.200           | 11,121   | (A) NGPL, NNG, (B) WNG         |
| Hutchinson Power Plant Transport      |                  | 1,478,764                                      | (A) WNG, PNG                   |
| City of Kingman Transport             | 21.550           | 455,486  | (A) KGS, (B) PEPL              |
| City of Larned Transport              | 19.250           | 195,887  | (A) KNI, (B) NGPL              |
| City of Pratt Transport               | 31.300           | 736,815  | (C) KGS, PEPL                  |
| City of Russell Transport             | 34.343           | 407,490  | NONE                           |
| City of St. John Transport            | 4.600            | 7  | (A) ANR                        |
| City of Stafford Transport            | 5.100            | 5,470  | (A) WNG, ANR                   |
| City of Wamego Transport              | 8.100            | 29,906   | (A) ANR                        |
| City of Washington                    | 9.035            | -  | (A) NNG                        |
| <b>Total</b>                          | <b>1,011.344</b> | <b>5,656,670</b>                               |                                |

Sources: Western Resources.

Electrical World: Directory of Electric Power Producers, 1997.**KEY**Distance

- (A) 0 - 3 Miles  
(B) 3 - 5 Miles  
(C) 5 - 10 Miles

Pipelines

ANR - American Natural Resources Gathering Co.  
Getty - Getty Pipeline  
KPOC - Kansas Pipeline Operating Corporation  
KGS - Kansas Gas Supply  
KNI - KN Interstate  
NGPL - Natural Gas Pipeline of America  
NNG - Northern Natural Gas  
PNG - Peoples Natural Gas  
PEPL - Panhandle Eastern Pipeline  
WNG - Williams Natural Gas

### Power Plant Customers Connected to the ONEOK System

| Plant                              | Location      | Capacity<br>(MW) | Annual Gas<br>Volume (CMF) | Connected Into<br>Another Pipeline |
|------------------------------------|---------------|------------------|----------------------------|------------------------------------|
| Mid-Continent Power                | Pryor         | 150.0            | 4,420,711                  |                                    |
| Oklahoma Gas & Electric            | Oklahoma City | 78.0             | 4,642                      | X                                  |
| Stillwater Public Utilities        | Stillwater    | 22.7             | 216,803                    |                                    |
| Oklahoma Municipal Power Authority | Ponca City    | 54.0             | 547,411                    |                                    |
| The University of Oklahoma         | Norman        | 16.3             | 743,317                    |                                    |
| Oklahoma State University          | Stillwater    | 6.0              | 691,194                    |                                    |
| Public Service of Oklahoma         | Tulsa         | 443.3            | 3,700,000 *                | X                                  |
| Public Service of Oklahoma         | Jenks         | 947.8            | 12,000,000 *               | X                                  |
| Public Service of Oklahoma         | Oologah       | 160.0            | 4,100,000 **               | X                                  |
| Public Service of Oklahoma         | Oologah       | 480.0            |                            | X                                  |
| Public Service of Oklahoma         | Southwest     | 484.6            | 10,300,000 *               | X                                  |
| Grand River Dam Authority ***      | Pryor         | 1000.0           | 467,907                    |                                    |
| Fort Howard                        | Mukogee       | 50.0             | 1,200,000                  |                                    |
| Weyhauser                          | Valliant      | 50.0             | 6,000,000                  |                                    |
| Total                              |               |                  | 44,391,985. *              |                                    |

\*Estimated annual consumption based on new contract with service beginning January 1998.

\*\*Represents volume of both Oologah plants

\*\*\*This capacity is for two plants located in Chauteau. These plants are considered to be part of the Pryor Industrial Complex. These plants are primarily coal-fired; gas is used only occasionally for peaking purposes.

Sources: Western Resources.

*Electrical World: Directory of Electric Power Producers*, McGraw-Hill Companies, 1997.

UNITED STATE OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Western Resources, Inc. and )  
Kansas City Power & Light Company )

Docket No. EC97-\_\_\_\_-000

Verification Pursuant to 18 C.F.R. § 33.7

State of Kansas )  
County of Shawnee )

ss.

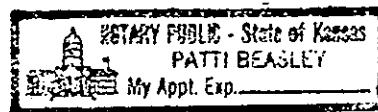
NOW, BEFORE ME, the undersigned authority, personally came and appeared, Steven L. Kitchen who, after first being duly sworn by me, did depose and say:

That he is Executive Vice President and Chief Financial Officer for Western Resources, Inc., one of the Applicants in the above proceeding; that he has the authority to verify the foregoing Application and Exhibits on behalf of Western Resources, Inc. and its jurisdictional subsidiaries; that to the best of his knowledge, information, and belief, all of the statements contained in said Application and Exhibits are true and correct.

  
\_\_\_\_\_  
Steven L. Kitchen

Subscribed and sworn to before me this 15<sup>th</sup> day of September, 1997.

  
\_\_\_\_\_  
Notary Public



My Appointment Expires: November 18, 2000

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Western Resources, Inc. and )  
Kansas City Power & Light Company )

Docket No. EC97-\_\_\_\_-000

Verification Pursuant to 18 C.F.R. § 33.7

State of Missouri )  
County of Jackson ) ss.

NOW, BEFORE ME, the undersigned authority, personally came and appeared, Mark C. Sholander who, after first being duly sworn by me, did depose and say:

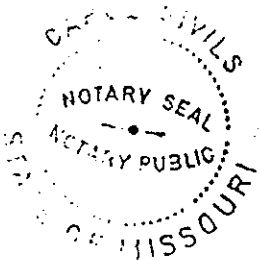
That he is General Counsel for Kansas City Power & Light Company, one of the Applicants in the above proceeding; that he has the authority to verify the foregoing Application and Exhibits on behalf of Kansas City Power & Light Company and its jurisdictional subsidiaries; that to the best of his knowledge, information, and belief, all of the statements contained in said Application and Exhibits are true and correct.

Mark C. Sholander  
Mark C. Sholander

Subscribed and sworn to before me this 10th day of September, 1997.

Carol Sivile  
Notary Public

My Appointment Expires: CAROL SIVILE  
Notary Public - State of Missouri  
Commissioned in Clay County  
My Commission Expires June 15, 1999





## WORKPAPERS TO DIRECT TESTIMONY OF ROBERT M. SPANN

Dr. Spann's workpapers are contained on the CD-ROM provided with his testimony. A guide to these workpapers is attached hereto.

Dr. Spann used the following software in performing his analyses or preparing documentation:

- Microsoft Excel 97
- Microsoft Power Point 97
- Microsoft Word 97
- SAS version 6.12 (using WINEDIT text editor and DBMSCOPY to copy SAS database into Excel
- Atlas GIS version 3.0
- FERC Form 1 Software. The software is provided with the workpapers, as are the data. Please note that the 1995 data are provided in unexpanded \*.exe files.

For the potential convenience of certain parties, the Excel files have been provided in both the 97 version and version 5.0. These files are contained in separate directories on the CD-ROM to minimize confusion. Please note that Dr. Spann's files were created in Excel 97 and it is possible that version 5.0 does not contain all of the functions used. Similarly, Word documents have been provided in both Word 97 and version 6.0.

## Guide to Spann Workpapers

### Sources of Exhibits in Direct Testimony

| RMS Exhibit Number | Description   | Exhibit Filename(s)   | Linked Files  | Intermediate Sources | Original Sources         | Comments   |
|--------------------|---|---|---|----------------------|--------------------------|--|
| 1                  | RMS Resume  |   |   |                      |                          |  |
| 2                  | Bubble Diagram  | INTERCON.PPT  |   | CONMATRIX.XLS        | Forms 714                |  |
| 3                  | Tier I Interconnections, Generating Capacity                            | TIERIMW.XLS   | MARKET1.XLS   | CONMATRIX.XLS        | Forms 714, EIA Form 860. | CONMATRIX.XLS provides interconnections; MARKET1.XLS provides generating capacity.   |
| 4                  | WR/KCPL Summary of Purchases/Sales                                      | EXH4.XLS  | EXH5.XLS, EXH8.XLS  |                      | FERC Forms 1             |  |
| 5                  | WR/KCPL Short-Term and Non-Firm Sales for Resale, Sorted Alphabetically | EXH5.XLS  |   |                      | FERC Forms 1             |  |
| 6                  | WR/KCPL Sales to Power Marketers vs. Utilities                          | WEST.XLS  |   |                      | FERC Forms 1             | Power marketers identified from Power Markets Week, QPM Database   |
| 7                  | Top Ten Customers of KCPL/WR  | COMBINED.XLS  |   | EXH5.XLS             | FERC Forms 1             |  |
| 8                  | WR/KCPL Long-Term Firm Sales for Resale, Sorted Alphabetically          | EXH8.XLS  |   |                      | FERC Forms 1             |  |
| 9                  | Maps of Purchasers/Competitors  | MAP5.PRJ, MAP5EX.PRJ  | EXH5.XLS, EXH8.XLS, COMBINED.XLS, 1072FERC.XLS, CSW-95.XLS, ALL_ENTR.XLS, CSWPPURCH.XLS, EMPIR-96.XLS, MIDAMER-96.XLS, MDWST-96.XLS, OKGE-96.XLS, STJO-96.XLS, UNION-96.XLS, UTLCRP96.XLS |                      | FERC Forms 1             |  |
| 10                 | Tier I Purchases, Sorted Alphabetically                                 | COMBINED.XLS, 1072FERC.XLS, CSW-95.XLS, ALL_ENTR.XLS, CSWPPURCH.XLS, EMPIR-96.XLS, MIDAMER-96.XLS, MDWST-96.XLS, OKGE-96.XLS, STJO-96.XLS, UNION-96.XLS, UTLCRP96.XLS |   |                      | FERC Forms 1             |  |
| 11                 | Net Exports/Imports for 1995/96   | MATRIX.XLS  |   |                      | Forms 714                |  |
| 12                 | Scheduled Interchanges for 1995/96                                      | INTER.XLS   |   |                      | Forms 714                |  |
| 13                 | Cost and Capacity of Plants by Fuel Type by State                       | STATE.XLS   |   |                      | CQ96.PDF, IPP95.PDF      | Adobe Acrobat files: Cost and Quality of Fuels - 1996 and Inventory of Power Producers - 1995. Retrieved by Internet from EIA. |

| RMS Exhibit Number | Description   | Exhibit Filename(s)  | Linked Files | Intermediate Sources                  | Original Sources   | Comments                                 |
|--------------------|---|--|--------------|---------------------------------------|--|--|
| 14                 | Spot Price Graphs and Correlations/Differences Matrices           | PMWSPOT.XLS  |              |                                       | Power Markets Week, various issues.  |  |
| 15                 | Total Capacity of SPP/Union/MAPP                                  | HHIWRKCP.XLS   | MARKET1.XLS  |                                       | EIA Form 860 and Form 423 data.  |  |
| 16                 | Baseload Capacity of SPP/Union/MAPP                               | MARKPIV1.XLS   | MARKET1.XLS  |                                       | EIA Form 860 and Form 423 data.  |  |
| 17                 | CPEX Map  |  |              |                                       | Provided by CPEX.  |  |
| 18                 | CPEX Distributions, SPP Distribution                              | CPEX.XLS, SPOTSPP.XLS  |              | CPEXRAW.XLS, PMWSPOT.XLS              | Power Markets Week, various issues; CPEX.  |  |
| 19                 | Tier I Purchases, Sorted by Price                                 | COMBINED.XLS, 1072FERC.XLS, CSW-95.XLS, ALL_ENTR.XLS, CSWPURCH.XLS, EMPIR-96.XLS, MIDAMER-96.XLS, MDWST-96.XLS, OKGE-96.XLS, STJO-96.XLS, UNION-96.XLS, UTLGRP96.XLS |              |                                       | FERC Forms 1   |  |
| 20                 | WR/KCPL Short-Term and Non-Firm Sales for Resale, Sorted by Price | EXH5.XLS   |              |                                       | FERC Forms 1   |  |
| 21                 | Regional/Entergy Markets - HHIs                                   | REG_MKTF.XLS, ENTMKTF.XLS, REG2MKTF.XLS  |              | MARKET1.XLS, DMREGION.XLS, HOPTAB.XLS | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | Files located under sub-directory "EIA6" |
| 22                 | Regional/Entergy Markets - HHIs                                   | REG_MKTF.XLS, ENTMKTF.XLS, REG2MKTF.XLS  |              | MARKET1.XLS, DMREGION.XLS, HOPTAB.XLS | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | Files located under sub-directory "EIA6" |
| 23                 | Regional/Entergy Markets - HHIs                                   | REG_MKTF.XLS, ENTMKTF.XLS, REG2MKTF.XLS  |              | MARKET1.XLS, DMREGION.XLS, HOPTAB.XLS | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | Files located under sub-directory "EIA6" |
| 24                 | Regional/Entergy Markets - HHIs                                   | REG_MKTF.XLS, ENTMKTF.XLS, REG2MKTF.XLS  |              | MARKET1.XLS, DMREGION.XLS, HOPTAB.XLS | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | Files located under sub-directory "EIA6" |

| RMS Exhibit Number | Description                       | Exhibit Filename(s) | Linked Files | Intermediate Sources                  | Original Sources   | Comments  |
|--------------------|-----------------------------------|---------------------|--------------|---------------------------------------|--|---|
| 25                 | Destination - HHIs                | SUMMARY.XLS         | *MKTf.XLS    | MARKET1.XLS, DMREGION.XLS, HOPTAB.XLS | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | Files located under sub-directory "EIA6", one file per destination "market" with filename *MKTf.XLS, preceded by destination's initials |
| 26                 | Graph of Empire Economic Capacity | SUMMARY.XLS         |              | EMPMKTf.XLS                           | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. |   |
| 27                 | Gas Plant Customers of Western    | PLANTPWR.XLS        |              |                                       | Electrical World Directory of Electric Power Plants  |   |
| 28                 | ONEOK Customers                   | EPPCUST.XLS         |              |                                       | Electrical World Directory of Electric Power Plants  |   |

## Additional Data Files

|  |   |  |   |  |   |
|--|---|--|---|--|---|
| Matrix of Interconnections                           | CONMATRIX.XLS   |  |   | Form 714   |   |
| Database of plant capacities and fuel costs          | MARKET1.XLS   |  | F42396.DBF, TYPE3Y95.DBF, PLANTY95.DBF, UTILITY95.DBF, 96423NEW.XLS, NEW96423.SD2 YEAR860, MEP96_1.SAS, TUPFUEL2.SD2. | EIA Form 860, Form 423. Fuel Cost for NPPD, OPPD, Lincoln Electric, and SWPA and capacity for SWPA from RDI Powerdat, FERC Form 1 Software for various other plants. | See MARKET1.DOC for description.  |
| Transmission Costs                                   | DMREGION.XLS  |  |   |  | See PATHS.DOC for description.  |
| Number of Wheels                                     | HOPTAB.XLS  |  |   |  | See PATHS.DOC for description.  |
| Form 714 Loads and Lambdas                           | 96SPP.EXE, 96MAPP.EXE, 96ERCOT.EXE, 96MAIN.EXE, 96SERC1.EXE, 96SERC2.EXE, 96ECAR.EXE, FORM714.EXE |  |   | Downloaded from FERC Electronic Bulletin Board.  | Expand *.exe files in DOS by typing filename then "-d" to preserve subdirectories |
| Form 423 and Form 860                                | F423_96.EXE, F860_95.EXE  |  |   | Downloaded from EIA website.   | Expand *.exe files in DOS by typing filename.                                     |
| 1997 SPP Summer Peak Assessment                      | SPPSTUDY.TXT (Data), SPPDEFS.TXT (Definitions of Column Headers)                                  |  |   |  | Delimited Text Files  |
| Utilities Located in Other Utilities' Control Areas. | MUNCIPA.DOC   |  |   |  |   |
| 1997 SPP OE-411 data.                                | SPPOE411.XLS  |  |   | OE-411.  |   |

| RMS<br>Exhibit<br>Number | Description            | Exhibit Filename(s) | Linked Files | Intermediate Sources | Original Sources              | Comments   |
|--------------------------|------------------------|---------------------|--------------|----------------------|-------------------------------|--|
|                          | 1997 MAIN OE-411 data. | MAIN411.EXE         |              |                      | Downloaded from MAIN website. | Expand *.exe files in DOS by<br>typing filename. |
|                          | 1997 MAPP OE-411 data. | MAPPEIA.EXE         |              |                      | Downloaded from MAPP website. | Expand *.exe files in DOS by<br>typing filename. |