

Exhibit No.:
Issue: Demand Response and Affordability
Witness: Susan K. Nathan
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Sponsoring Party: Kansas City Power & Light Company
Case No.: EO-2005-0329
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. EO-2005-0329

DIRECT TESTIMONY

OF

SUSAN K. NATHAN

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

**Kansas City, Missouri
April 2005**

DIRECT TESTIMONY

OF

SUSAN K. NATHAN

Case No. EO-2005-0329

1 **Q: Please state your name and business address.**

2 A: My name is Susan K. Nathan. My business address is 1201 Walnut, Kansas City,
3 Missouri 64106.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Kansas City Power & Light Company ("KCPL") as Manager, Product
6 Management.

7 **Q. What are your responsibilities?**

8 A. My responsibilities include providing leadership and direction to the Product
9 Management Team, including developing overall marketing programs for our assigned
10 products and services and coordinating the execution of promotional strategies and
11 programs to efficiently and effectively promote and implement these products and
12 services. My duties also include initiating and bringing to market new products and
13 services and innovations to existing products and services.

14 **Q. Please describe your education, experience and employment history.**

15 A. I graduated from the University of St. Thomas in 1990 with a Masters in Business
16 Administration. I was first employed at KCPL in 2003 as the Manager, Product
17 Management. In this capacity, I perform all marketing functions for KPCL. Prior to my
18 employment at KCPL, I worked at Aquila from 1997 to 2002 in Retail Operations and

1 Marketing. Prior to moving to Kansas City to work for Aquila, I worked at Minnegasco
2 (now CenterPoint Energy) in Minneapolis from 1981 through 1996. During that time, all
3 but one year was spent implementing and managing energy efficiency programs.

4 **Q. Have you previously testified in a proceeding at the Missouri Public Service
5 Commission or before any other utility regulatory agency?**

6 A. I have never testified before the Missouri Public Service Commission (“MPSC”).
7 However, I have testified before the Minnesota Public Utilities Commission on behalf of
8 Minnegasco on matters concerning Minnegasco’s demand-side management programs.

9 **Q. What is the purpose of your testimony?**

10 A. The purpose of my testimony is to discuss the proposed Demand Response, Efficiency,
11 and Affordability Programs. For these programs, I will discuss the expected costs and
12 benefits, the collaborative process for evaluating these programs, and the accumulation of
13 these costs into the regulatory asset account.

14 **Q: Did the subteam within Team A participate in developing the proposed portfolio of
15 Demand Response, Efficiency and Affordability Programs?**

16 A: Yes. The subteam reviewed the proposed Demand Response Programs and actively
17 participated in developing the proposed portfolio of Efficiency and Affordability
18 Programs.

19 **Q: Who participated on the subteam?**

20 A: The subteam consisted of representatives from: KCPL; the Staff of the MPSC; the Staff
21 of the Kansas Corporation Commission; the Missouri Department of Natural Resources;
22 the Missouri Office of Public Counsel; the Citizens Utilities Ratepayer Board; the Sierra

1 Club; the Concerned Citizens of Platte County; the Missouri Industrial Energy
2 Consumers; other industrial customers; and individual citizens.

3 **Q: What were the goals for the subteam in relation to Efficiency Programs?**

4 A: The goals were to develop a portfolio of Efficiency Programs that cost effectively gain
5 participation and cost effectively provide kW and kWh savings.

6 **Q: Did you have any guidelines that were used to develop the portfolio of Efficiency
7 Programs?**

8 A: Yes, the guidelines were to develop, through a collaborative approach, programs that:

- 9 1. Help customers use energy more efficiently, achieve a reduction in the need for
10 additional generation, and improve the environment;
- 11 2. Focus on increasing energy efficiency in buildings, especially for new
12 construction and major renovations;
- 13 3. Provide educational, financial, and direct impact solutions;
- 14 4. Balance the costs of the programs with the benefits, including societal benefits,
15 especially where quantifiable; and
- 16 5. Focus on making the programs material while providing opportunities for wide-
17 spread participation in residential and commercial classes so a significant portion
18 of customers have opportunities to directly benefit from programs.

19 **Q: What were the goals for the subteam in relation to Affordability Programs?**

20 A: The goals for the Affordability Programs were the same as those for the efficiency
21 programs with the addition of increasing customer and employee contributions to Dollar-
22 Aide by 5% per year, using 2004 as the base year.

1 **Q: Did you have any guidelines that were used to develop the portfolio of Affordability**
2 **Programs?**

3 A: Yes. The first 4 guidelines for the development of the Affordability Programs were the
4 same as the first 4 guidelines for the development of the Efficiency Programs. The fifth
5 guideline was different. The fifth guideline for the Affordability Programs read
6 “Leverage participation by other parties, *i.e.*, Federal weatherization funding, Habitat for
7 Humanity, local government development projects, HUD housing, gas companies.”

8 **Q: What were the goals and guidelines for the subteam in relation to Demand Response**
9 **Programs?**

10 A: There were no goals or guidelines for the subteam in relation to Demand Response
11 Programs as the original scope of the subteam only included Efficiency and Affordability
12 Programs. Toward the end of the subteam’s series of meetings, interest was expressed in
13 knowing about the Demand Response Programs and KCPL reviewed the programs with
14 the subteam members.

15 **Q: What was the result of this subteam’s efforts?**

16 A: The result is the portfolio of proposed programs that KCPL submitted to the MPSC as
17 Appendix C to the Stipulation and Agreement.

18 **Q: Were outside firms/consultants used to assist the subteam in developing the**
19 **portfolio of programs?**

20 A: Yes, Applied Energy Group was used to research other utility programs and perform the
21 screening Benefit-Cost ratio tests. Rocky Mountain Institute was also consulted to
22 provide input and feedback on assumptions and overall direction.

1 **Q: How did you select the programs that were proposed?**

2 A: Where appropriate, we tested programs against two screening tests—the “Total Resource
3 Test” and the “Societal Test.” If the tested program did not pass both tests, we adjusted
4 some of the program features, such as the amount of incentive, or marketing costs. If the
5 program still did not pass both tests, we discarded the concept. We also assessed other
6 issues associated with the implementation of some of the concepts, such as refrigerator
7 recycling and, due to the time constraints and difficulty of implementation, chose to set
8 aside some programs for further research at a later date. We then brought the ideas back
9 to the subteam.

10 We also received ideas for programs from the members of the subteam and ran those
11 through the initial screening tests. Examples include: Change a Light, Change the
12 World; Building Operator Certification; and other Energy Star-based programs.

13 We tried to balance the portfolio with educational/information programs and direct
14 impact programs for each market segment to allow all customers the opportunity to
15 benefit from these programs. Schedule SKN-1 is a chart that demonstrates the market
16 coverage that the portfolio provides.

17 **Q: What model was used for the initial screening benefit-cost tests?**

18 A: We first used the California model for the initial screening benefit-cost tests. We
19 calculated four cost-benefit tests: the Societal Test; the Participant Test; the Rate Impact
20 Measure Test; and the Total Resource Test. The Total Resource Test was used to
21 determine whether the program seemed to be cost effective. We also provided the
22 projected impacts of these programs for inclusion in MIDAS runs.

1 **Q: What are the proposed programs?**

2 A: There are two proposed Demand Response Programs, ten proposed Efficiency Programs,
3 two proposed Affordability Programs, and two proposed additional funding areas.

4 Specifically, the proposed programs are:

5 Demand Response

- 6 • Air Conditioning Cycling (Residential and Small Commercial)
- 7 • The Alliance, an Energy Partnership (Commercial & Industrial Curtailment)

8 Efficiency

- 9 • Residential:
 - 10 ○ Online Energy Information and Analysis
 - 11 ○ Home Performance with Energy Star (Training)
 - 12 ○ Change a Light, Change the World
 - 13 ○ Cool Homes Program (High Efficiency Cooling Rebates)
 - 14 ○ Energy Star Homes (New Construction)
- 15 • Commercial/Industrial
 - 16 ○ Online Energy Information and Analysis
 - 17 ○ C&I Energy Audits
 - 18 ○ C&I Custom Rebates – Retrofit
 - 19 ○ C&I Custom Rebates – New Construction
 - 20 ○ Building Operator Certification (Training)

21 Affordability

- 22 • Affordable New Homes (New Construction)
- 23 • Low Income Weatherization

1 The two funding areas are for a PAYS-type program (which has yet to be developed) and
2 research.

3 **Q: Is the selection of these programs finalized?**

4 A: No, as stated on pages 47 and 48 of the Stipulation and Agreement, KCPL commits to
5 developing an advisory group (the “Customer Programs Advisory Group” or “CPAG”) to
6 advise KCPL in the development, implementation, monitoring and evaluation of the
7 programs. KCPL agrees to meet and provide updates to the CPAG at least once every six
8 months for the purposes specified in the Stipulation and Agreement. Further evaluation
9 needs to be made on the Efficiency Programs prior to implementation to better determine
10 the impact of the Efficiency Programs on KCPL and the anticipated cost effectiveness of
11 the Efficiency Programs. KCPL will work with the CPAG to complete the necessary pre-
12 implementation evaluations to determine the initial implementation plan for the
13 Efficiency Programs within four months of the effective date of an Order from the MPSC
14 approving the Stipulation and Agreement.

15 **Q: Do you intend to implement these programs internally or outsource the programs?**

16 A: Whether these programs are implemented internally or outsourced will depend on the
17 program itself. However, even if they are outsourced, KCPL will actively oversee the
18 programs to ensure efficient and effective implementation, customer participation and
19 customer satisfaction.

20 **Q: What are the expected participation rates for these programs?**

21 A: The expected participation rates for each of these programs are detailed in Schedule
22 SKN-2.

1 **Q: Will the participation goals of each program as stated in Schedule SKN-2 to the**
2 **testimony be accomplished?**

3 A: KCPL is committed to implementing, in 2005, the programs slated for implementation in
4 year one and to implementing, in 2006, the programs slated for implementation in year
5 two. However, some programs such as Change a Light, Change the World and the
6 residential new construction program are time or season sensitive and will be affected by
7 the timing of the completion of the remaining work by the CPAG.

8 **Q: What are the expected costs of the programs?**

9 A: The current estimated cost associated with Demand Response, Efficiency and
10 Affordability Programs for the five (5) year period is \$29 million (Missouri) as detailed
11 on Appendix C of the Stipulation and Agreement. The initially budgeted expenditures
12 for the five (5) year period for Missouri are \$13.8 million for Demand Response
13 Programs, \$2.5 million for Affordability Programs, and \$12.7 million for Efficiency
14 Programs.

15 **Q. What drives these costs?**

16 A: The major cost areas of the programs are as follows. The predominant cost area of a
17 program will depend on the program itself.

- 18 • Implementation costs – Costs incurred in implementing the program, which may
19 include costs for vendors and training. These costs are primarily external costs.
- 20 • Administrative costs – Costs associated with internal KCPL labor for program
21 planning and oversight.
- 22 • Marketing costs – Costs associated with promoting the programs and developing
23 collateral materials.

1 • Customer incentive costs – Costs paid to the customer. Customers in this sense
2 can be the end-use customer or a trade ally, such as a builder.

3 • Evaluation costs – Costs we expect to incur when we evaluate the programs.

4 The total costs, and the proposed allocation by State, are also detailed in Appendix C to
5 the Stipulation and Agreement.

6 **Q. What benefits are expected to be realized?**

7 A. The benefits of the program include:

8 • Increased customer knowledge of how to use energy wisely

9 • Energy savings and demand savings.

10 • Other societal benefits such as reduced environmental emissions, increased local
11 jobs, and increased disposable income by participants that could contribute to the
12 local economy.

13 **Q: Do you have plans for the evaluation of these programs?**

14 A: The high-level evaluation plan is outlined for each program in Appendix C to the
15 Stipulation and Agreement. We intend to develop a more thorough evaluation plan for
16 each program with the CPAG.

17 **Q: Do you plan to perform evaluations internally?**

18 A: We believe a disinterested third-party should perform the evaluations. However, we are
19 open to input from the members of the CPAG.

20 **Q: Do you intend to use a collaborative approach to evaluate the programs?**

21 A: Yes, we will work with the CPAG to finalize evaluation plans and review the results of
22 all program evaluations.

23 **Q: When will the evaluations be completed?**

1 A: For programs that have an evaluation plan, we commit to completing the evaluation of
2 the initial two years of each program within six months of the end of each program's
3 second year.

4 **Q: How will the results of the evaluations be used?**

5 A: We intend to share the results of the evaluations with the CPAG and, along with their
6 input, use the results of the evaluations to select and design future programs. These
7 actions would include improving the existing program, canceling the existing program, or
8 developing new programs.

9 **Q: How do you intend to track the costs associated with these proposed programs?**

10 A: We have created specific program codes for all the proposed Demand Response, Energy
11 Efficiency and Affordability Programs, and all expenses associated with each program
12 will use the specific program code. Other codes will be used to designate what the
13 expenses were for. All expenses coded to these proposed programs will be captured in
14 the regulatory asset account.

15 **Q: How do you intend to recover the costs associated with these proposed programs?**

16 A: KCPL will accumulate the Demand Response, Efficiency and Affordability Program
17 costs in regulatory asset accounts as the costs are incurred. Beginning with the 2006 Rate
18 Filing, KCPL will begin amortizing the accumulated costs over a ten (10) year period.
19 KCPL will continue to place the Demand Response, Efficiency and Affordability
20 Program costs in the regulatory asset account, and costs for each vintage subsequent to
21 the 2006 Rate Filing will be amortized over a ten (10) year period. The Parties to the
22 Stipulation and Agreement reserved the right to establish a fixed amortization amount in
23 any KCPL rate case prior to June 1, 2011. The amounts accumulated in these regulatory

- 1 asset accounts shall be allowed to earn a return not greater than KCPL's AFUDC rate.
- 2 The class allocation of the costs will be determined when the amortizations are approved.
- 3 **Q. Does that conclude your testimony?**
- 4 **A. Yes, it does.**

Market Covered by Each Program

Program	Type	Afford- ability	Resi- dential	Sm Comm	Med C&I	Large C&I
Demand Response						
• A/C Cycling	Dmd Rsp		X	X		
• The Alliance, an Energy Partnership	Dmd Rsp				X	X
Energy Efficiency						
• Online Analysis (Nexus)	Educ		X			
• Home Performance-Training	Educ		X			
• Change a Light, Change the World	Dir Imp		X			
• Cool Homes Program	Dir Imp		X			
• Energy Star Homes	Dir Imp	X				
• PAYS-type concept	Dir Imp		X			
• Online Analysis (Nexus)	Educ			X	X	X
• C&I Audits	Educ			X	X	X
• Custom Rebates-Retrofit	Dir Imp			X	X	X
• Custom Rebates-New Const	Dir Imp			X	X	X
• Bldg Operator Certification	Dir Imp				X	X
• Market Research	Educ					
Affordability						
• Affordable New Homes	Dir Imp	X				
• Low Income Weatherization	Dir Imp	X				

Projected Participation Rates

	Year 1	Year 2	Year 3	Year 4	Year 5
	2005	2006	2007	2008	2009
<i>Demand Response</i>					
Residential A/C Cycling	4,077	4,692	4,064	6,558	11,014
Commercial Curtailment	23	108	36	42	36
<i>Energy Efficiency-Residential</i>					
Online EE information/analysis-Res	4,500	4,800	4,900	2,700	2,800
Home Performance-Training	0	500	700	1,000	1,000
Change a Light-Save the World	15,000	15,000	15,000	15,000	15,000
Cool Homes Program	2,000	3,000	3,000	3,000	3,000
Energy Star Homes	0	500	1,000	1,000	1,000
PAYS-type Concept	0	0	0	0	0
<i>Energy Efficiency-C&I</i>					
Online EE information/analysis-Com	0	600	600	600	400
C&I Energy Audits	0	200	200	200	200
Custom Rebates-Retrofit	0	200	300	300	300
Custom Rebates-New Const	50	75	75	75	75
Building Operator Certification	0	100	100	100	100
Research	0	0	0	0	0
<i>Affordability</i>					
Affordable New Homes	20	40	40	40	40
Low Income Weatherization	287	320	354	387	420