MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

COST OF SERVICE

REVENUE REQUIREMENT

APPENDIX 3

Other Staff Schedules

KCP&L GREATER MISSOURI OPERATIONS COMPANY

GREAT PLAINS ENERGY, INC

CASE NO. ER-2012-0175

Jefferson City, Missouri
August 2012

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STAFF INDEPENDENT STUDY

A. Introduction

In Case No. ER-2010-0356 GMO filed a Company depreciation study, and requested a special amortization to address an under-recovery of plant for the general plant accounts, and a change in method of computation of monthly depreciation accruals for select general plant accounts. Pursuant to the *NonUnanimous Stipulation and Agreement Regarding Depreciation and Accumulated Additional Amortizations* ("Depreciation Stipulation") in Case No. ER-2010-0356 KCP&L Greater Missouri Operations Company (GMO) was required to perform a study regarding, among other things, the under-recovered general plant accounts. Specifically, Paragraph 10 of the Depreciation Stipulation provides:

> KCPL and GMO shall complete a thorough study regarding retirement of property from the General plant accounts due to KCPL's operation of Aquila in conjunction with Great Plains Energy's acquisition of Aquila. KCPL shall complete a similar study regarding KCPL's recent corporate office relocations. These studies must include accounts where (1) depreciation was halted or (2) unauthorized rates were used and (3) the retirements from the acquisition or relocations that occurred as addressed in Staff witness Rosella Schad's surrebuttal testimony in GMO Case No. ER-2009-0090. KCPL and GMO shall discuss the scope and the approach of the review for the studies with Staff prior to conducting the studies. The studies shall be completed and submitted to Staff, the Office of the Public Counsel, and the Industrials by the end of July 2011. KCPL shall not transfer reserve to or from the General plant accounts before the foregoing studies are submitted to Staff, the Office of the Public Counsel, and the Industrials. Upon satisfactory presentation of the results of these studies, the Signatories agree to pursue in good faith resolution of the GMO Account 119300 unrecovered reserve issue, as described by KCPL witness Ron Klote in his rebuttal testimony filed in File No. ER-2010-0356, including support of a reasonable request by GMO for an Accounting Authority Order from this Commission which will be permanently resolve this issue by balancing reserves through a transfer of depreciation reserves from Transmission plant to General plant.

GMO has not submitted study results as required by the Depreciation Stipulation. In the absence of a GMO study, Staff undertook an independent study.

The Depreciation Stipulation allowed the change in calculation method for select general plant accounts to vintage amortization, but stipulated that in the next rate case (the current case) a justification be presented to allow continuation of the vintage amortization method.

The Depreciation Stipulation also required KCPL and GMO to perform a study regarding retirements of general plant retired as a consequence of office moves and corporate mergers. GMO has not submitted study results as required by the Depreciation Stipulation

Staff's recommendations in this case include recommendations derived from Staff's study that addresses a current under-recovery in the general plant accounts of $28,575,233. Staff's study also identifies issues related to general plant vintage amortization and does not agree with record keeping changes that are included with the way GMO intends to permanently implement this method.

Following is a discussion of the accounts studied and the results obtained by Staff.

B. Analysis

Under-Recovery of Plant Accounts

For large companies such as GMO, the expected retirement rate, that is the Commission ordered depreciation rate, is normally a future projection computed from an analysis of historical retirement records. Under-recovery of depreciation reserves may occur due to:

1. The Company failing to properly record depreciation of plant still in service,
2. The depreciation analysis or record of retirement history used for projections was in some way defective, and
3. unexpected events occur resulting in retirements earlier than forecast.

Staff Study Includes

Staff's analysis of issues includes the following:

a) Determine how and why under-recovery of general plant occurred, and recommended corrective action.
b) Review the implementation and actual in use practice conducted by GMO regarding the use of vintage amortization for select general plant accounts, and expected long term effects.
c) Determine whether the current Missouri jurisdictional accumulated depreciation reserves are correctly stated for use in Missouri rate cases. Specifically, review the methods used by KCPL in booking sales and transfers to non utility or other than Missouri utilities.

Staff estimated the under-recovery of general plant and the contribution found for the possible causes. Staff finds a general plant reserve under-recovery for GMO of approximately $28,575,233, (ECORP = $23,179,896, MPS = $4,476,904 and L&P = $916,433). This includes the vintage amortized general plant accounts plus account 390 (Structures). What Staff found follows.

Failure to book appropriate Missouri depreciation.

Staff has identified three concerns with GMO's depreciation accruals that occurred prior to its acquisition by Great Plains. The first is the premature halting of depreciation accruals. The second is the use of Aquila's "Corporate" depreciation rates to book accruals which were different than the Missouri authorized rates and the third is transferred, then sold property.

Premature halting: Staff first became aware of GMO's premature halting of depreciation accruals for plant still in service in Case No. ER-2009-0090. The resulting understatement of reserves was identified in GMO's response to Data Request 0247 in that case as $3,942,866, and was updated in Rosella Shad's Surrebuttal Testimony and the Staff's Cost-of-Service Report as $4,221,178.

The effected accounts and amounts are shown in the table below. This issue has not been addressed by the company recording of any adjustment for this issue, nor has it been included in any stipulation and agreement or Commission order to date. To properly address this issue, Staff concludes that GMO should record a $4,221,178 addition to reserves and a matching reduction to earnings.

Stopped Depreciation		
Account	MPS $	L&P $
391.02	5,373	1,769
391.05	3,135,965	1,032,538
394	8,649	2,848
398	25,605	8,431
Sum	3,175,592	1,045,586
GMO Total	4,221,178	

Booking of depreciation accruals at "Corporate" depreciation rates: Booking of depreciation accruals at "Corporate" depreciation rates (not Missouri approved rates) was a normal practice under the management of Utilicorp United and Aquila. This issue resulted in the booked accumulated reserves for most general plant accounts to exceed the correct amounts for Missouri jurisdictional plant. The difference between book and appropriate Missouri reserves accumulated under Aquila for each account is recorded in FERC USOA account 119.300. FERC USOA account 119.300 is defined as "Accumulated provision for depreciation and amortization of other utility plant"

This practice of booking of depreciation accruals for general plant that did not represent the correct Missouri jurisdiction amounts was halted when Aquila was acquired by Great Plains. After the acquisition, GMO has booked depreciation accruals per the ordered Missouri depreciation rates. These amounts in account number 119.300 totaling $18,820,502 are used to adjust book reserves to Missouri reserves for GMO continue to be kept in the 119.300 account by the Company, and as a separate listing of reserves in the Staff accounting schedules for all GMO rates cases through Case No. ER-2010-0356.

In Case No. ER-2010-0356 these amounts were defined as unrecovered plant and mistakenly defined as the origin of the under-recovery of reserves in the general plant accounts. This confusion contributed greatly to difficulties in the parties agreeing on the definitions and methods to study the under-recovery of reserves as required by the Depreciation Stipulation. The AAO request referenced in Paragraph 10 of the Depreciation Stipulation to transfer reserves between the Transmission plant accounts and the General plant accounts that was to come out of the stipulated study has failed to occur. The fact that the appropriate Missouri accumulated depreciation reserves are attained by adjusting current company book reserves by amounts recorded elsewhere (account 119.300 containing a negative $18,820,501) is not a cause of any under or over-recovery of plant.

<u>Transferred, then sold property</u>**:** Staff also reviewed the Company practice of transferring certain facilities to non utility property and then selling those properties. For general plant structures account 390, Staff's investigation of facility sales transactions with respect to GMO general plant accumulated depreciation reserves is summarized as follows.

GMO transferred three facilities to non utility property and then sold them, specifically the 20 West 9th former Aquila headquarters, the Platte City Service Center and the Liberty Service Center. The transfer of an original cost of $56,095,584 for these three facilities with an accumulated depreciation of $10,985,769 resulted in a reduction in regulated rate base of $46,722,668. The facilities were eventually sold for total sales proceeds of only $12,882,362.

On the non regulated books, the Company booked a $31,520,177 write-down of assets to Goodwill for the former Aquila headquarters facility. If a normal retirement of these facilities had been booked in the regulated utility accounts, the total original cost would have been removed from plant *and* reserves, with the sales proceeds recorded into reserves as salvage resulting in a reduction of rate base by only the $12,882,362 sales proceeds, and creating a $33,840,306 deficit in the reserves. Staff's subsequent analysis, described below, of depreciation accruals in structures account 390 for GMO-ECORP, GMO-MPS and GMO-L&P found an under-recovery of reserves of only $870. For general plant accounts other than account 390, specifically the accounts for computer hardware, computer software, and communications equipment, GMO retired plant on the regulatory books that became no longer used or useful as a result of facility consolidations and relocations attributable consolidation of certain of its operations with KCPL. Staff's investigation of general plant for accounts other than account 390 estimated a shortfall in reserves $20,272,790 for GMO-ECORP, GMO-MPS and GMO-L&P.

Defective Depreciation Study

Multiple depreciation analysis conducted for past rate cases have been conducted by different Staff persons and different Company consultants. These statistical analysis all used the same Company provided retirement history and produced relatively the same estimated retirement rates. Thus, the historical retirement record itself becomes the subject for investigation.

Staff obtained and reviewed plant in service records for general plant accounts for GMO-ECORP, GMO-MPS, and GMO L&P, as well as KCPL. Staff found numerous items recorded as plant in service that Staff suspected were not still in service, and chose the Front and Manchester location to visit. Front and Manchester is a service center on KCPL's books, but houses office personnel, equipment, and supplies for combined KCPL/GMO operations, including transmission and distribution service maintenance and engineering, supplies warehousing, backup computer facilities, and the health and safety group. Staff's review of company provided detailed lists of plant and equipment in service allowed Staff to easily identify items which Staff doubted would still exist or be in service simply due to the type of item and the vintage. For example, for the Front and Manchester Service Center location, Staff questioned that items such as the following would still be in service: 22 manual typewriters from the 1970s and 1980s, a $118,821.98 Microfich camera, 150 walkie talkies from the 1980s and 1990s, and

67 fire extinguishers from 1959. Many other items were also noted and a meeting was arranged at the Front and Manchester location between Staff and KCPL personnel knowledgeable in GMO plant records. At the meeting there was no attempt to locate any of the items Staff noted as probably not still in service. Company personnel admitted that most, if not all, of the questionable items were probably not used or useful or still physically present.

With respect to account 390, Staff reviewed plant records of additions and retirements to the structures account 390 for the Front and Manchester facility. Some retirements as a result of structure modification and replacements over the years could be identified by Staff, but many addition and retirement entries were confusing and in some cases looked like duplicates for the same event. At the Front and Manchester meeting, Staff questioned Company personnel as to the method used to identify plant items that should be retired from service due to their replacement or removal during a facility modification or upgrade. The answer provided was that near the end of the project, the property records person(s) and the project management person(s) do a physical walk through and try to identify the items that are now missing or removed from service. This method of identification of retirements has a high probability of introducing errors over multiple years of layered projects if periodic physical inventories are not conducted. Some mistaken plant would be retired as well as failure to retire other items. Staff has, at various meetings with Company personnel, identified questionable book entries that did turn out to be an incorrect property item, account, or activity recorded.

Staff is not able to accurate quantify in detail the level of under-recovery directly caused by a failure to properly record retirements. The actual retirement history has essentially been lost. Staff did make an estimate - described below - as whatever is left after other known causes are accounted for. Estimates of reserve imbalances due to improper depreciation rates resulting from inaccurate retirement records were made by difference, that is whatever is left after all other causes are estimated. The total reserves shortfall of $28,573,233, minus stopped depreciation of $4,221,178, minus the unexpected events amount of $20,676,630, leaves $3,675,553 attributable to expected retirement activity not matching actual.

Of all the general plant accounts, Staff did not include transportation equipment (account 392), or power operated equipment (account 396) within its Depreciation Stipulation-related study. The depreciation studies for the last case found overall accumulated reserves for these accounts at reasonable levels for the age of the equipment at that time. Also, typical equipment in these accounts are large items with maintenance records and vehicle registration requirements etc. which although they migrate around the Company, are not easily overlooked when retirements should be booked.

Unexpected Events

Abnormal and unexpected events from a retirement standpoint have occurred at KCPL. The most significant event studied was the consolidation of certain of KCPL's operations and facilities with those of GMO's acquisition by Great Plains resulted in abnormal and unexpected retirements as a result of office and service center consolidations and relocations. See table below.

Name	City	Type	Sale Date or Termination Date	Employees or Equipment Relocated To
Aquila Headquarters	Kansas City	Owned	10/4/2010	Various other locations
Aquila Headquarters	Kansas City	Owned	10/4/2010	Various other locations
Raytown Office	Raytown	Leased	6/21/2007	Various other locations
Lenexa Data Center	Lenexa	Leased	12/31/2010	Various other locations
Omaha Data Center	Omaha	Leased	7/14/2008	PNG Nebraska sold to Black Hills
Lincoln Call Center	Lincoln	Leased	7/14/2008	PNG Nebraska sold to Black Hills
Pueblo Comm Equip.	Pueblo	Owned	7/14/2008	WestPlains CO sold to Black Hills
Great Bend Comm Equip.	Great Bend	Owned	3/31/2007	WestPlains KS. sold to Sunflower
Town Pavilion Office	Kansas City	Leased	3/31/2006	Various other locations
Liberty Service Center	Liberty	Owned	4/19/2010	Northland, Kansas City, MO
Platte City Service Center	Platte City	Owned	12/31/2008	Northland, Kansas City, MO
Ridgeway Office	Ridgeway	Owned	1/3/2007	Various other locations
Blue Springs Service Center	Blue Springs	Owned	9/30/2009	Lee's Summit Service Center
KCI Production Plant	Kansas City	Owned	12/31/2009	n/a

The years 2007 through 2011 include retirements recorded for plant and equipment that was still functionally usable, but no longer being used within the new organizational structure. These retirements resulted in a steep increase in retirement rate for general plant accounts. The result is a steep decrease in accumulated depreciation reserves as the original cost of each retirement is deducted from reserves. For retirements earlier than expected the accumulated accrued depreciation for the item is less than the original cost, resulting in a reserve deficit, or under-recovery of plant.

Staff obtained retirement records for the period of 2007 through 2011 for ECORP, MPS and L&P. Staff used the Company provide retirement records to estimate the difference in the expected (historical) retirement rate to the observed retirement rate in the general plant accounts for this five year period.

The depreciation studies for Case No. ER-2010-0356 used a retirement history that stopped on Dec. 31 2008. Even though the acquisition by Great Plains occurred in mid 2008, very few of the retirements resulting from the acquisition by Great Plains were included in this depreciation study.[1] Most office relocations and consolidations did not occur until after the end of 2008. Also, any transaction recorded as a transfer (or sold) is not included in a depreciation study because transfers do not represent mortality. Thus, the retirement rates, (average service lives) resulting from the Case No. ER-2012-0356 depreciation study does not include or represent unexpected or abnormal retirement activity due to the acquisition. Staff used the results of this depreciation study to represent an expected or "normal" retirement rate to compare against the observed retirement rate for the period that included the acquisition by Great Plains and subsequent facility consolidations.

Staff used Company provided retirement records to conduct an analysis of retirement rates for the 5 year period of 2007 through 2011. Company records show retirements booked for plant and equipment associated with consolidations/relocations that were notably short lived compared to the expected average service life for the account. But, there were also retirements attributable to the acquisition related consolidations/relocations that had notably longer lives than the expected average service life. Thus all retirements during this period were included in Staff's analysis. Staff used a method to compute the actual average service life of all of the equipment retired in these accounts for this five year period, and compared it to the "normal" average service lives for plant account. Staff's analysis shows a significant increase in retirement rates for this 5 year period. The total difference between the "normal" and actual when converted to dollars and summed for accounts 390, 391, 393, 394, 395, 397, and 398 for GMO is $20,676,360, (ECORP = $18,428,504, MPS = $1,668,920 and L&P = $578,936).

[1] This relatively slight delay in recording retirements following a major event is not unusual. Some delay is necessary until the detailed work to identify the vintages and original cost of the retired components is completed and entered into the records.

C. Derivation of Dollar Amounts

Assignment of the Contributing Sources (Causes) of the Under-Recovered Amounts

Note: A positive number in these tables represents a shortfall in reserves in these accounts.

Breakdown of GMO Unrecovered Reserves in General Plant

	GMO $ Total	ECORP $	MPS $	L&P $
Act 390 only (2008)				
Stopped Depreciation	0	0	0	0
Depreciation Mismatch	6,109,870	3,226,639	1,826,733	1,056,498
Acquisition by Great Plains	807	(319,533)	250,957	69,383
Acct 390 Under-Recovery	6,110,677	2,907,106	2,077,690	1,125,881
Amortized Accts Only (2011)				
Stopped Depreciation	4,221,178	0	3,175,592	1,045,586
Depreciation Mismatch	(2,434,175)	1,524,753	(2,194,341)	(1,764,587)
Acquisition by Great Plains	20,675,553	18,748,037	1,417,963	509,553
Amortized Accts Only	22,462,556	20,272,790	2,399,214	(209,448)
Total Amortized + Act 390				
Stopped Depreciation	4,221,178	0	3,175,592	1,045,586
Depreciation Mismatch	3,675,695	4,751,392	(367,608)	(708,089)
Acquisition by Great Plains	20,676,360	18,428,504	1,668,920	578,936
General Plant Under-Recovery	28,573,233	23,179,896	4,476,904	916,433

Amortized Accounts

The Amortized Accounts Under-Recovery line shows $22,462,556. This is the difference at Dec. 31, 2011 for all GMO vintage amortized accounts between the sum of all of the vintage amortizations and the reserves booked in these accounts. The sum of each vintages amortization for this type of depreciation expense accrual may be conducted at any time and compared to booked amounts without conducting a depreciation study. Any deviation in the two, such as from cost of removal or salvage, may be addressed in any rate case. The amount in this rate case, $22,462,556, to address represents a "stranded" amount carried over from the prior depreciation accrual method, and reflects an under accrual of depreciation. The vintage amortization method will not cover or compensate for booked accumulated depreciation reserves which do not match expected accrued amortization. It is labeled “stranded” because there is no automatic method, such as the use of remaining life depreciation rates, to address these amounts. A table, see below, titled “**Table**: **Adjustment Amounts For General Plant**” shows the amounts for each account.

Account 390, Structures and Improvements

Account 390 Under-Recovery, $6,110,677, in the above table represents an under-recovery in this account. This amount was estimate using the depreciation study results presented by GMO in the prior rate case, Case No. ER-2010-0356. It is the difference between calculated theoretical reserves and book reserves as of Dec. 31 2008.

Stopped Depreciation

For GMO, Staff’s investigation of general plant accounts to satisfy the Case No. ER-2010-0356 Depreciation Stipulation study of causes of under-recovery of plant, includes recognition of prior rate case discovery of failure under Aquila to properly book depreciation accruals for plant still in service. GMO has failed to adjust the reserves voluntarily to account for this $4,221,178 originally identified by GMO’s response to data request number 0247 in Case No. NO. ER-2009-0090.

Depreciation Mismatch

Depreciation mismatch is used as a name to indicate under or over-recovery of plant attributed to normally expected drift over time between forecast (ordered depreciation rate) and actual retirement rate. The table amounts shown were derived by difference, that is, whatever still exists after other causes are accounted for. In the above table, this is the $ 6,109,870 for account 390 and $(2,434,175) for amortized accounts, totaling $3,675,695. The actual retirement history has essentially been lost. Only an indirect estimate method is available.

Acquisition by Great Plains

The portion of the under-recovery assigned as Acquisition by Great Plains, $20,676,360, in the above table is the Missouri jurisdictional amount Staff derived from the analysis of elevated retirement rates versus normal expected retirement rates for the 5 year period of 2007 through 2011 capturing the acquision by Great Plains, and attributed to closures, relocations and consolidations of offices and service centers with KCPL.

Accounts Not Included in the Study

Of all the general plant accounts, Staff did not include transportation equipment (account 392), or power operated equipment (account 396) within this Stipulation related study. The reasons are: Depreciation studies for the last case found overall accumulated reserves for these accounts at reasonable levels for the age of the equipment at that time. These accounts were not switched to the general plant amortization method. And typical equipment in these accounts are large items with maintenance records and vehicle registration requirements etc. which although they migrate around the Company, are not easily overlooked when retirements should be booked.

D. Recommended Adjustment Amounts

The amount required to address the under-recovery of plant in GMO accounts 390, 391, 393, 394, 395, 397, and 398 is as follows:

Adjustments to increase general plant reserves.

Adjustment For stopped	$4,221,178
Adjustment For Acquisition	$20,676,360
Transfer From Transmission	$3,675,695

E. Transfer of Reserves from the Transmission accounts to General Plant Accounts

The Depreciation Stipulation suggests the transfer dollars from the over-accumulated depreciation reserves in the transmission accounts to the general plant accounts is an appropriate action to address the shortfall , (Staff's shortfall estimate of a total of $28,575,233), in general plant accounts. However, Staff's study indicated that a major portion, $20,676,360, of this shortfall in the depreciation in the general plant accounts is a result of the acquisition by Great Plains; therefore, this portion of the shortfall should be treated as an Aquila acquisition detriment. Staff's recommends an adjustment (increase) of reserves in the general plant accounts by $20,676,360.

A total GMO transmission excess reserves of $13,625,660 reported in Case No ER-2010-0356 is not sufficient to cover all of the general plant under-recovery. Book reserves compared to theoretical reserves were found to have excess reserves as follow:

Transmission Account 2008 reserves excess.			(Positive number = excess)	
	MPS		Ecorp	
352	$202,871	$74,062	$0	
353	$6,557,308	$1,060,489	$0	
354	$75,639	$3,618,931	$0	
355	($1,550,963)	$2,640,098	$0	
356	$917,205	$549	$0	
358	$16,340	$13,131	$0	
Sum	$6,218,400	$7,407,260	$0	
SUM GMO				$13,625,660

Note -> There are no transmission account reserves in ECORP. Any transfer of reserves to ECORP would have to come out of GMO-MPS and GMO-L&P in proportion to an appropriate ratio of GMO-MPS and GMO-L&P plant incorporated in ECORP.

Table: Adjustment Amounts For General Plant

The following table shows the adjustment amounts required to rebalance the general plant accounts.

GMO Summary Table Unrecovered General Plant Reserves							
Positive Number = reserve deficit							
Account	Juris Unrec 2011		Juris Unrec 2011		Juris Unrec 2011		
Acct #	ECORP		MPS		L&P		All GMO
391	1,861,687		159,399		344,032		2,365,118
391.02	5,070,047		863,726		294,233		6,228,006
391.04	10,465,873		86,640		1,277,254		11,829,767
393	(5,648)		(572)		(153,824)		(160,043)
394	14,885		(850,559)		(46,343)		(882,018)
395	13,543		(296,506)		(82,584)		(365,548)
397	2,805,308		(359,748)		775,773		3,221,333
398	47,095		188,173		(9,327)		225,941
Amortized Tot	20,272,790		(209,448)		2,399,214		22,462,556
Acc 390	2,907,106		2,077,690		1,125,881		6,110,677
Total	23,179,896		1,868,242		3,525,095		28,573,233

F. Account 119.300 and Missouri Stated Accumulated Depreciation Reserves

Staff reviewed the depreciation rates used over the years that account 119.300 was accumulating, and the compilation of the amounts accumulated in account 119.300. Staff did not find any discrepancies in these computations, and concluded that adjustments to GMO book reserves by the amounts in 119.300 is appropriate in determining Missouri reserves. In Case No. ER-2010-0356 GMO erroneously defined the amounts in an account number 119.300 as under-recovered plant and sought additional funds to address this issue. The amounts accumulated in account 119.300 originate from the days the Company was operated as Aquila. Aquila used corporate deprecation rates for General plant accounts which were different than the Missouri ordered depreciation rates. This account was simply to track the difference between book and official Missouri accumulated depreciation (reserves). Account 119.300 was used as an adjustment during Missouri rate cases to correct the book reserves to correspond to Missouri ordered accumulated depreciation expense.

G. Effect on Missouri Plant and Reserves of Sales of Plant and Equipment In Non Missouri Jurisdictions By Aquila

An element of the Depreciation Stipulation study was to investigate concerns raised by parties in Case No. ER-2010-0356 related to sales of non Missouri plant under Aquila. Staff associated this concern with the GMO request to recover in rates under-recovered plant, and then defined that under-recovery as account 119.300 which was an account created under Aquila. This concern was justified in that account 119.300 was just a record keeping account to allow adjustment of GMO book reserves to reflect correct Missouri jurisdictional reserves. The Company claim that the amount of under-recovery of plant was defined as the amount in account 119.300 was incorrect

Staff reviewed the Missouri jurisdictional plant and reserves for evidence that the sale of non Missouri assets caused changes in Missouri recorded plant and reserves. Staff found no change in the amount of Missouri jurisdictional plant or depreciation reserves other than normal recording of plant additions, plant retirements and depreciation accruals during the time these non Missouri assets were sold. In summary, Staff found no change in Missouri assets or reserves due to the sale of non Missouri assets. The non Missouri portion of the assets and associated accumulated depreciation reserves attributable to the sold plant was removed from the

Company books. Missouri allocation factors changed, but Staff found no evidence of dollar amount changes for Missouri for these transactions.

H. Continuation of General Plant Amortization ("Vintage Amortization").

Depreciation Stipulation Item 5d states: "If KCPL or GMO seek to continue use of the Amortization Method as specified in this agreement in the next rate case, they must submit testimony in that rate case showing why the Amortization Method should be continued." To date, Staff is unaware of any GMO justification meeting this requirement.

MISSOURI PUBLIC SERVICE COMMISSION

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APPENDIX 3

Other Staff Schedules

KANSAS CITY POWER & LIGHT COMPANY

CASE NO. ER-2012-0174

Jefferson City, Missouri
August 2012

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APPENDIX 3
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SCHEDULE CGF 1

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE CGF 2

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE CGF 3

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE CGF 4

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

Company Name: KCPL MO
Case Description: 2008 MO Rate Case
Case: ER-2009-0089

Response to Hyneman Chuck Interrogatories – Set MPSC_20100105
Date of Response: 01/22/2010
Responding Witness: Weisensee John

Question No. :0866
Please provide a copy of all communications (including email communications) and agreements between KCPL and the Internal Revenue Service that references either directly or indirectly the Qualifying Advanced Coal Project Investment Tax Credits Under IRC Section 48A.

RESPONSE: (do not edit or delete this line or anything above this)

Several files attached contain confidential technical, financial and business information. They are marked "Confidential."

Files attached

Q0866_1.31.08 IRS Acknowledgment of 2007 KCPL Section 48A Application.pdf
Q0866_2.6.09 IRS Certification Letter.pdf
Q0866_4.28.08 IRS Acceptance Letter.pdf
Q0866_6.16.08 IRS Correspondence regarding Memorandum of Understanding.pdf
Q0866_8.26.08 IRS Executed Memorandum of Understanding.PDF
Q0866_9.5.08 Section 48A Certification Perjury Statement.pdf
Q0866_Confidential_Appendix A –BMcD Progress Report Section 3 Engineeri 8.07.pdf
Q0866_Confidential_Appendix A -Construction Progress Status.pdf
Q0866_Confidential_Appendix A -Iatan Level 1 Summary 9.16.07.pdf
Q0866_Confidential_Appendix A -Major Engineering during August.pdf
Q0866_Confidential_Appendix A -U-2 Cost Summation for Report 9.07.pdf
Q0866_Confidential_Appendix B-1 -Site Plan.pdf
Q0866_Confidential_Appendix B-2 -KCPL Trustee's Deed.pdf
Q0866_Confidential_Appendix B-3 -KCPL Nower.pdf
Q0866_Confidential_Appendix B-4 -KCPL Iatan.pdf
Q0866_Confidential_Appendix C -Siting Study.pdf
Q0866_Confidential_Appendix E -7x24 prices.pdf
Q0866_Confidential_Appendix G -Financial Model-DCF.pdf
Q0866_Confidential_Appendix H -GPE Credit Opinion 12.27.06.pdf
Q0866_Confidential_Appendix H -GPE KCPL 10-K 2006.pdf
Q0866_Confidential_Appendix H -GPE KCPL 10-Q statements 07 1Q.pdf
Q0866_Confidential_Appendix H -GPE KCPL 10-Q statements.pdf 07 2Q.pdf
Q0866_Confidential_Appendix H –Moody's GPE Outlook Revision 12.27.06.pdf
Q0866_Confidential_Appendix H –Moody's GPE Rating Action 02.07.07.pdf
Q0866_Confidential_Appendix H -SP GPE KCPL Report 2.7.07.pdf

Q0866_Confidential_Appendix H -SP GPE Credit Rating 8.1.06 (corrected).pdf
Q0866_Confidential_Appendix H -SP KCPL Credit Rating 8.1.06 (corrected).pdf
Q0866_Confidential_Appendix I -Utility Only 2007 to 2011.pdf
Q0866_Confidential_Appendix J -Procurement Report 10.15.07.pdf
Q0866_Confidential_Appendix J -Summary of Terms and Conditions.pdf
Q0866_Confidential_Appendix K -Summary of Iatan 2 Permits _2_.pdf
Q0866_Confidential_Appendix K -Summary of Iatan 2 Permits.pdf
Q0866_Confidential_Appendix M -Iatan Updated Level 1 Schedule U2 Common 10.14.07.pdf
Q0866_Confidential_Appendix M -Level 1 Schedule Summary 09.16.07.pdf
Q0866_Confidential_Appendix M -Level Two (Unit Two Common).pdf
Q0866_Confidential_Appendix M -Master Project Scheduler.pdf
Q0866_Confidential_Appendix M -Total Project Performance 091607v1Old Baseline.pdf
Q0866_Confidential_Appendix N –Board Minutes.pdf
Q0866_Confidential_Appendix O -Iatan Ownership Agreement.pdf
Q0866_Confidential_Appendix P -Environ Rept 12.06.pdf
Q0866_Confidential_Appendix Q -Schedule to Construction.pdf
Q0866_Confidential_Appendix Q -Updated Level 1 Schedule 9.16.07.pdf
Q0866_Confidential_Appendix R –Steam Turbine Contract.pdf
Q0866_Confidential_Appendix S -PDR Iatan Unit 2 Supplement 2.pdf
Q0866_Confidential_Appendix S -Project Definition Report Section 1.pdf
Q0866_Confidential_Appendix S -Project Definition Report Section 3.pdf
Q0866_Confidential_Appendix T -Contract Exh S Executed.pdf
Q0866_Confidential_Appendix U –Alstom AQCS Executive Summary.pdf
Q0866_Confidential_Appendix U –Alstom AQCS References.pdf
Q0866_Confidential_Appendix U –Alstom Boiler Executive Summary.pdf
Q0866_Confidential_Appendix U –Alstom Boiler Supercritical References.pdf
Q0866_Confidential_Appendix U -Toshiba Intro Letter.pdf
Q0866_Confidential_Appendix U -Toshiba US Customer References.pdf
Q0866_Confidential_Appendix V -Iatan Construction Project Project Execution Plan.pdf
Q0866_Confidential_Appendix W -KCC Order Approving Stip.pdf
Q0866_Confidential_Appendix W -KCC Stipulation and Agreement.pdf
Q0866_Confidential_Appendix W -MO Reg Plan Order.pdf
Q0866_Confidential_Appendix W -MO Reg Plan Stip.pdf
Q0866_Confidential_Appendix X -Key Personnel Revised.pdf
Q0866_Confidential_Appendix X -2007 Performance Contracts.pdf
Q0866_Confidential_Appendix X -Position Roles Resp.pdf
Q0866_Confidential_Appendix Y -Carbon Capture.pdf
Q0866_Confidential_Appendix Z -Generation Interconnection Agreement final 9.21.07.pdf
Q0866_Confidential_Iatan 2 Model By DP submitted to the IRS with 2006 Application.xls
Q0866_Confidential_KCPL Advanced Coal Credit Application 10.30.07.pdf
Q0866_Confidential_KCPL Advanced Coal Credit Application 6.28.06.pdf
Q0866_Confidential_Steam Turbine Contract_Toshiba International 4.12.06.pdf
Q0866_FAA NPC 11.7.06.pdf
Q0866_FAA NPC 8.3.07.pdf
Q0866_FAA NPC 8.9.07.pdf
Q0866_IRS Correspondence regarding 2006 KCPL application 8.25.06.PDF
Q0866_MDC TESC 2.10.06.PDF
Q0866_MDNR NPDES 3.8.07.pdf
Q0866_MDNR NPDES 6.23.06.pdf
Q0866_MDNR PSD 1.31.06.pdf

Q0866_MDNR PSD 7.13.07.pdf
Q0866_MDNR PSD 8.3.07.pdf
Q0866_MDNR SWD 7.16.07.pdf
Q0866_Platte County FDP 3.17.08.pdf
Q0866_Platte County FDP 6.15.06.pdf
Q0866_Platte County FDP 8.15.07.PDF
Q0866_Platte County FDP 9.20.06.PDF
Q0866_Platte County NRC 4.10.06.pdf
Q0866_USACE Section 10 404 Permit 6.15.06.pdf
Q0866_USF W TESC 2.17.06.PDF

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SCHEDULE CGF 6

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IN ITS ENTIRETY

Company Name: KCPL MO
Case Description: 2010 KCPL Rate Case
Case: ER-2010-0355

Response to Majors Keith Interrogatories – Set MPSC_20101215
Date of Response: 12/23/2010

Question No. :0566
1. Please provide the notice of arbitration referenced on line 14, page 18 of Melissa Hardesty's rebuttal testimony. 2. Please provide a complete copy of the correspondence file between KCPL and Empire District Electric concerning the advanced coal credit arbitration. 3.A) Please describe Witness Melissa Hardesty's involvement in KCPL's decision to arbitrate the coal tax credit as opposed to coming to an agreement with Empire on the reallocation of the credit. B) Who made the decision to arbitrate the coal tax credit as opposed to coming to an agreement with Empire on the reallocation of the credit?

RESPONSE:
Please note the attachments are **Highly Confidential** pursuant to 4 CSR 240-2.135(1)(B)(6) as it contains strategies employed, to be employed, or under consideration in contract negotiations and should be handled accordingly.

1. See the files named "Q0566_HC_KEPCO Notice to Arbitrate.pdf," "Q0566_HC_MJMEUC Notice to Arbitrate.pdf," and "Q0566_HC_Empire Notice to Arbitrate.pdf" for copies of the notices of arbitration filed by the other joint owners.

2. See attached file name, "Q0566_HC_KCPL and Empire Correspondence.pdf."

3A. Melissa Hardesty provided data related to the IRS correspondence and advanced coal credit applications. She also assisted management (with the help of tax counsel) regarding the technical income tax issues related to the decision to arbitrate or not.

3B. The decision was made by a group of individuals from the Company including but not limited to: Curtis Blanc, Darrin Ives, Lori Wright, Terry Bassham, Bill Riggins, Gerald Reynolds, and Melissa Hardesty.

Response prepared by: Melissa Hardesty, Tax

Files attached:
Q0566_HC_KEPCO Notice to Arbitrate.pdf
Q0566_HC_MJMEUC Notice to Arbitrate.pdf
Q0566_HC_Empire Notice to Arbitrate.pdf
Q0566_HC_KCPL and Empire Correspondence.pdf
Q0566 MO Verification.pdf

SCHEDULE CGF 7,
PAGE 4 - 11

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LAW OFFICES OF

ANDERSON & BYRD

A Limited Liability Partnership

JOHN L. RICHESON
JAMES G. FLAHERTY
R. SCOTT RYBURN

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ROBERT A. ANDERSON
(1920-1994)
RICHARD C. BYRD
(1920-2008)

July 10, 2009

Sent by Facsimile
Original via U.S. Mail

Attn: General Counsel; and Vice President, Production
Kansas City Power & Light Company
1201 Walnut Street
Kansas City, Missouri 64106

Re: Iatan Unit 2 Facility, Qualifying Advanced Coal Project Credit

NOTICE TO ARBITRATE

General Counsel; and Vice President, Production:

On behalf of Empire District Electric Company ("Empire"), you are hereby served with this written notice to arbitrate pursuant to Section 12.2 of the IATAN UNIT 2 AND COMMON FACILITIES OWNERSHIP AGREEMENT ("Agreement").

Pursuant to the Agreement, Empire, KCPL, Kansas Electric Power Cooperative, Inc. ("KEPCo") and Missouri Joint Municipal Electric Utility Commission ("MJMEUC") have agreed upon three persons to act as arbitrators in this matter.

Matters to be Arbitrated:

1) Is Empire entitled to receive its proportionate share, or the monetary equivalent thereof, of the qualifying advanced coal project credit for the Iatan Unit 2 Facility ("Iatan 2")?

Statement of Facts or Circumstances Giving Rise to the Controversy:

Kansas City Power & Light Company ("KCPL") has applied and been approved for a qualifying advanced coal project credit for the Iatan 2 project, pursuant to 26 U.S.C.S. §48A. The Iatan 2 project qualifies for a maximum credit of $125 million dollars. KCPL has been approved for the maximum credit allowable for the Iatan 2 project. Empire's application for its allocation of a qualifying advanced coal project credit based upon its proportionate ownership share in the Iatan 2 project was not accepted by the Internal Revenue Service ("IRS") due to KCPL applying for and obtaining 100% of the maximum credit amount available for the Iatan 2 project. KCPL has refused Empire's demands that KCPL agree to tender to Empire the monetary equivalent of Empire's proportionate share of the $125 million dollar credit.

JOINT
EXHIBIT 15

Empire's Contention with Respect to the Correct Determination of the Matter to be Arbitrated:

Empire contends that KCPL should have either limited its application for the credit for the Iatan 2 project to its proportionate ownership share of the project to allow the other owners the ability to apply for their share of the credit relating to the project, or KCPL should have applied for the credit on behalf of all of the owners, with each owner receiving its proportionate share of the credit. KCPL was not entitled under the Agreement to use Empire's and the other owner's interest in the Iatan 2 project to obtain 100% of the credit for itself. The Iatan 2 project would not have otherwise qualified for the credit without taking into account the interest of the other owners.

Pursuant to the Agreement, Empire is the owner of an undivided 12% interest in the Iatan 2 project. Empire's ownership interest in the Iatan 2 project, and the Agreement entitle Empire to 12% of the advanced coal project credit applied for by KCPL.

Language within 26 U.S.C.S. §48A suggests that the advanced coal project credit may not be assignable. Even if the advanced coal project credit is not assignable, Empire is still entitled to the monetary equivalent thereof. As the operator of the Iatan 2 project, KCPL was obligated to apply for the advanced coal project credit, on behalf of itself and the other owners of the Iatan 2 project, since it applied for the maximum credit allowable for the entire Iatan 2 project. There was no language in 26 U.S.C.S. §48A that precluded KCPL from applying for the advanced coal project credit on behalf of the other owners of the Iatan 2 project. Moreover, KCPL applied for the maximum allowable credit, thus rendering the remaining owners ineligible to apply for and receive their proportionate share of the advanced coal project credit for the Iatan 2 project. This is evidenced by the IRS's refusal to accept Empire's request for its proportionate share of the credit allocated to the Iatan 2 project. Had KCPL limited its application for the credit for the Iatan 2 project to its proportionate share of the credit relating to the project, instead of requesting the maximum amount of the credit, Empire's application for its proportionate ownership share of the credit would have been accepted (Empire's application was not accepted according to the IRS because the project only qualified for a maximum credit of $125 million and that entire credit had previously been applied for and obtained by KCPL).

The Agreement contains numerous provisions which support the fact that Empire is entitled to receive its proportionate share of the advanced coal project credit. For example, in defining "Costs of Construction" the agreement states that, "Credits, reimbursements, refunds or rebates, including casualty insurance proceeds, with respect to amounts previously included in Cost of Construction, shall be applied as received to set off amounts otherwise due from the Owners at such time." Section 5.3(f) in addressing the duties of KCPL as the operator, states that KCPL shall, "provide the Owners with their proportionate benefits, or the monetary equivalent thereof, received by the Operator that arise from or are associated with costs paid by the Owners hereunder." Paragraph VI of the Iatan Unit 2 and Common Facilities Accounting Manual provides that,

> The nature of other income and deductions related to the Iatan Unit 2 Facility cannot be determined in advance. Generally, it is anticipated that such items will be allocated in proportion to

Ownership Shares or Common Facilities Ownership Shares, as appropriate, for the nature of costs or credits incurred. Other divisions may be used if appropriate to the nature of the item but only with the approval of the Controllers, or appropriately designated individuals of the Owners.

These provisions of the Agreement, and the Iatan Unit 2 and Common Facilities Accounting Manual clearly demonstrate that when these agreements were executed it was the intent of all parties involved that all owners would receive their proportionate share of all credits awarded to the Iatan 2 project.

Sincerely,

J G. Flaherty

James G. Flaherty
jflaherty@andersonbyrd.com

JGF:rr
cc: Aquila, Inc., c/o Kansas City Power & Light Company
Kansas Electric Power Cooperative, Inc.
Missouri Joint Municipal Electric Utility Commission
Karl Zobrist
J. Michael Peters
Doug Healy

SCHEDULE CGF 7,
PAGE 15 - 20

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BEFORE AN ARBITRATION PANEL
CONVENED PURSUANT TO ARTICLE XII OF THE
IATAN UNIT 2 AND COMMON FACILITIES OWNERSHIP AGREEMENT

In the Matter of the Arbitration Regarding	)
Qualifying Advanced Coal Project Investment	)
Tax Credits Under Internal Revenue Code	)
Section 48A between (a) The Empire District	)
Electric Co., Kansas Electric Power	)
Cooperative, Inc., and the Missouri Joint	)
Municipal Electric Utility Commission and	)
(b) Kansas City Power & Light Co.	)

FINAL ARBITRATION AWARD

Based on the pleadings, testimony, exhibits and briefs of the parties, the findings and opinions of the Arbitration Panel are as follows:

Under the Iatan Unit 2 and Common Facilities Ownership Agreement ("Ownership Agreement"), Kansas City Power & Light Company ("KCPL") owns 54.71% of the project, Aquila, Inc. owns 18% of the project, The Empire District Electric Company ("Empire") owns 12% of the project, the Missouri Joint Municipal Electric Utility Commission ("MJMEUC") owns 11.76% of the project and Kansas Electric Power Cooperative, Inc. ("KEPCO") owns 3.53% of the project. Aquila was subsequently acquired by KCPL's parent company Great Plains Energy Inc. in July, 2008 and was re-named KCP&L Greater Missouri Operations Company ("GMO"). (The entities listed in this paragraph are referred to herein, collectively, as the "Owners.")

KEPCO is a tax-exempt organization under Section 503(c)(12)(B) of the Internal Revenue Code.

MJMEUC is a political subdivision of the State of Missouri.

Section 4.1 of the Ownership Agreement requires KCPL to discharge the planning, licensing, permitting, design, construction and testing of the Iatan 2 facility in accordance with "Good Utility Practice." Under Section 1.41 of the Ownership Agreement, the term "Good Utility Practice" is defined to mean "the standards, practices, methods and acts with respect to construction and operation of electrical generating facilities engaged in or approved by a significant portion of the electric utility industry at such time. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be a spectrum of possible standards, practices, methods, or acts expected to accomplish the desired results, having due regard for, among other things, economic factors, manufacturers' warranties and the requirements of governmental authorities of competent jurisdiction and the requirements of this Agreement." Section 1.41 states further, however, that the failure to meet the

"Good Utility Practice" standard shall not constitute a breach of the Ownership Agreement unless such failure constitutes gross negligence or willful misconduct.

Section 5.3(a) of the Ownership Agreement requires KCPL to perform its duties (as Operator) in accordance with "Good Utility Practice." Section 5.3(a) states further that the Operator shall not be liable to any other Owner for any loss, cost, damage or expense incurred by such Owner as a result of any action or failure to act by the Operator unless the Operator's action or failure to act is determined to have been gross negligence or willful misconduct.

Section 5.3(f)(iii) of the Ownership Agreement requires KCPL (as Operator) to "provide the Owners with their proportionate benefits, or the monetary equivalent thereof, received by the Operator that arise from or are associated with costs paid by the Owners hereunder."

Under Section 6.4 of the Ownership Agreement, each Owner is required to "pay its Ownership Share of the Cost of Construction." The definition of "Cost of Construction" in Section 1.26 of the Ownership Agreement states that "credits, reimbursements, refunds or rebates ... with respect to amounts previously included in Cost of Construction, shall be applied as received to set off amounts otherwise due from the Owners at such time."

Section 6.5(d) of the Ownership Agreement requires KCPL (as Operator) to notify the other owners "of all significant events the Operator deems material to the construction and/or operation of Unit 2 and/or the Common Facilities."

Section 21.1 of the Ownership Agreement states that each of the Owners shall "use Commercially Reasonable Efforts to cooperate with each other Owner in order to assist the other Owner in the performance of its duties, responsibilities and obligations under this Agreement." Section 1.20 of the Ownership Agreement states that the term "Commercially Reasonable Efforts" means "such diligent efforts, consistent with Good Utility Practice, that a party taking such actions would use in acting on its own behalf."

Section 11.6(a) of the Ownership Agreement states that KCPL (whether acting individually or in its capacity as Operator) shall not have any liability to any other Owner for any loss, cost, damage or expense incurred by such Owner except to the extent determined to have resulted from the gross negligence or willful misconduct of KCPL (or Operator).

Article VI of the Iatan Unit 2 and Common Facilities Accounting Manual states as follows: "The nature of other income and deductions related to the Iatan Unit 2 Facility cannot be determined in advance. Generally, it is anticipated that such items will be allocated in proportion to Ownership Shares or Common Facilities Ownership Shares, as appropriate, for the nature of the costs or credits incurred.

Sections 48A (Qualifying Advanced Coal Project Credit) and 50 (Other Special Rules) of the Internal Revenue Code are in Subchapter A, Part IV, Subpart E of the Internal Revenue Code.

KCPL planned to apply for the Section 48A tax credits with respect to Iatan 2 even before it negotiated the Ownership Agreement with the other Owners; yet it told none of them. In August, 2006, KCPL filed applications with the IRS and the US Department of Energy ("DOE") requesting that the Iatan 2 project be certified by the DOE as meeting the requirements set forth in Section 48A. The application was not successful. KCPL did not tell any of the other Owners that it had made this filing, nor did it discuss with them whether they should or could have filed an application at the same time or whether KCPL and some of the other Owners could have filed a joint application. These actions of KCPL constituted willful misconduct.

Once KCPL's initial application for the Section 48A tax credits was denied, KCPL lobbied for an amendment to Section 48A to allow Iatan 2 to qualify for such credits. KCPL did not tell any of the other Owners that it was doing so nor did KCPL tell any of the other Owners that it had hired a contractor and, in turn, a subcontractor to assist in determining whether Iatan 2 qualified under the amended statute. As Operator, KCPL had a duty to inform the other Owners of its efforts to determine whether Iatan 2 qualified for the Section 48A credits and what impact that would have on the construction of Iatan 2. Again, these actions of KCPL constituted willful misconduct.

In October, 2007, KCPL again filed applications with the IRS and the DOE requesting that the Iatan 2 project be certified by the DOE as meeting the requirements set forth in Section 48A. This application was successful.

On April 28, 2008, the IRS sent a letter to KCPL accepting its October, 2007 application and allocating $125 million of Section 48A credit to the Iatan 2 project.

On August 26, 2008, the IRS and KCPL entered into a Memorandum of Understanding ("MOU") regarding the $125 million allocation of Section 48A credits.

On October 31, 2008, Empire filed applications with the IRS and DOE requesting that the Iatan 2 project be certified by the DOE as meeting the requirements set forth in Section 48A, and requesting that the IRS allocate Section 48A credits to Empire for its investment in the Iatan 2 project.

On October 31, 2008, GMO filed applications with the IRS and DOE requesting that the Iatan 2 project be certified by the DOE as meeting the requirements set forth in Section 48A, and also requesting that the IRS allocate Section 48A credits to GMO for its investment in the Iatan 2 project.

On January 23, 2009, the IRS sent a letter to GMO denying its application for the Section 48A credits.

On February 6, 2009, the IRS sent a letter to KCPL certifying KCPL's Section 48A application for the Iatan 2 project.

On June 8, 2009, the IRS sent a letter to Empire denying its application for the Section 48A credits.

Despite not having told any of the other Owners of its efforts to investigate whether Iatan 2 would qualify for the Section 48A credits, and despite not having given the other Owners the opportunity to file a joint application or apply on their own behalf, KCPL nonetheless charged the other Owners for the costs of (a) evaluating whether the Section 48A credits would be available and (b) applying for the Section 48A credits. In fact, KCPL charged the other Owners for the cost of investigating whether Iatan 2 would qualify for the credits, but it never informed the other Owners of the investigation, the results thereof or its own application for the credits.

During the period in which it was investigating whether Iatan 2 would qualify for the Section 48A credits and thereafter in 2006 and 2007 when it was applying for the credits, KCPL did not inform any of the other Owners of its investigation, nor did it have any discussions with Empire, KEPCO or MJMEUC regarding the Section 48A credits or the applications with the IRS and DOE. KCPL did, however, discuss the Section 48A credits with co-Owner GMO, which was subsequently acquired by KCPL's parent company.

The actions of KCPL constituted "willful misconduct" in that KCPL acted willfully and in an opportunistic manner to garner all of the benefits of the Section 48A credits for itself while billing the other Owners for their share of certain costs incurred in qualifying the project for such credits and thereafter applying for the credits (at the same time it was sharing its plan with co-Owner GMO, with whom it would soon be affiliated). KCPL's actions also clearly constituted a breach of the implied duty of good faith and fair dealing imposed by Missouri contract law.

KCPL has not made any payments to the other Owners with respect to the tax benefits, if any, it has received as a result of obtaining the Section 48A credits.

Based on the foregoing, it is the unanimous opinion of the Arbitration Panel that:

(1) KCPL breached Sections 4.1, 5.3(a), 6.5(d) and 21.1 of the Ownership Agreement, and also the implied duty of good faith and fair dealing, by evaluating the project's eligibility for, and applying for, the Section 48A credits without bringing these matters to the attention of the other Owners;

(2) Empire sustained damages as result of KCPL's breach of Sections 4.1, 5.3(a), 6.5(d) and 21.1 of the Ownership Agreement (and also the implied duty of good faith and fair dealing), due to the fact that such breach prevented Empire from successfully applying for its fair share of the Section 48A credits allocated to the project;

(3) Despite KCPL's breach of Sections 4.1, 5.3(a), 6.5(d) and 21.1 of the Ownership Agreement (and the implied duty of good faith and fair dealing), KEPCO and MJMEUC have no right to claim tax credits under Section 48A. Section 50(b)(3) of the Internal Revenue Code states that no credit shall be determined under Subpart E with respect to any property used by an organization which is exempt from tax, unless such property is used predominately in an unrelated trade or business. Under this provision,

KEPCO could not have applied for or obtained tax credits under Section 48A with respect to KEPCO's investment in the project. Further, Section 50(b)(4)(A) states that no credit shall be determined under Subpart E with respect to any property used by a political subdivision of any state. Under this provision, MJMEUC could not have applied for or obtained tax credits under Section 48A with respect to MJMEUC's investment in the project; and

(4) KEPCO and MJMEUC rely on Sections 5.3(f)(iii) and 6.4 of the Ownership Agreement (and Article VI of the Accounting Manual attached to the Ownership Agreement). Nonetheless, although KCPL's actions may have placed MJMEUC and KEPCO in an inequitable situation, no clear evidence or testimony was adduced to demonstrate that the cited provisions were intended to apply to the indirect benefit of the Section 48A tax credits, for which neither KEPCO nor MJMEUC would otherwise be eligible. Under these circumstances, although it appears that KCPL engaged in willful and opportunistic misconduct, the Arbitration Panel cannot speculate as to how the parties might have addressed the issue of the Section 48A tax credits if KCPL had met its obligations and notified KEPCO and MJMEUC that it was investigating the Section 48A requirements and would file the Section 48A applications. Thus, the Panel cannot grant relief to MJMEUC and KEPCO.

Accordingly, IT IS HEREBY ORDERED:

(1) KCPL and Empire shall apply to the IRS for an amendment of the MOU that would allow Empire to obtain a share of the Section 48A tax credits equal to $17,712,500. If the IRS approves such an amendment to the MOU, then no further relief is required for Empire.

(2) If the application to amend the MOU is denied, or if Empire is allocated less than $17,712,500 in Section 48A tax credits under the amended MOU, then KCPL shall immediately pay the following amount to Empire: $17,712,500, less the amount of Section 48A tax credits, if any, allocated to Empire under the amended MOU.

(3) If it has not already done so, KCPL shall pay to KEPCO and MJMEUC, immediately, any amounts previously paid by KEPCO and MJMEUC with respect to the costs incurred by KCPL in (a) determining whether the Iatan 2 project qualified for the Section 48A credits, (b) working to amend Section 48A in order to ensure that the Iatan 2 facility qualified for the Section 48A credits and (c) applying for the Section 48A credits. Empire shall not be entitled to receive any such payment from KCPL.

(4) Claimants' (and, if applicable, KCPL's) requests for attorneys' or experts' fees, costs, carrying charges and interest are hereby denied.

This order is entered this 30th day of December, 2009. This order may be signed in counterparts by members of the Arbitration Panel. If signed in counterparts, this order nonetheless represents a unanimous decision of the Arbitration Panel.

Ernest L. Edwards, Jr., Chairman

Timothy E. McKee

John W. Simpson

This order is entered this 30th day of December, 2009. This order may be signed in counterparts by members of the Arbitration Panel. If signed in counterparts, this order nonetheless represents a unanimous decision of the Arbitration Panel.

Ernest L. Edwards, Jr., Chairman

Timothy E. McKee

John W. Simpson

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IATAN UNIT 2 AND COMMON FACILITIES OWNERSHIP AGREEMENT

KANSAS CITY POWER & LIGHT COMPANY,

AQUILA, INC.,

THE EMPIRE DISTRICT ELECTRIC COMPANY,

KANSAS ELECTRIC POWER COOPERATIVE, INC.

AND

MISSOURI JOINT MUNICIPAL ELECTRIC UTILITY COMMISSION

May 19, 2006

CONFIDENTIAL

IATAN UNIT 2 AND COMMON FACILITIES OWNERSHIP AGREEMENT

This IATAN UNIT 2 AND COMMON FACILITIES OWNERSHIP AGREEMENT (this "Agreement") is made as of May __, 2006, by and among KANSAS CITY POWER & LIGHT COMPANY, a Missouri corporation ("KCPL"), AQUILA, INC., a Delaware corporation ("Aquila"), THE EMPIRE DISTRICT ELECTRIC COMPANY, a Kansas corporation ("Empire"), KANSAS ELECTRIC POWER COOPERATIVE, INC., a not-for-profit generation and transmission cooperative organized under the laws of the State of Kansas ("KEPCO"), and MISSOURI JOINT MUNICIPAL ELECTRIC UTILITY COMMISSION, a body public and corporate of the State of Missouri ("MJMEUC") (each of KCPL, Aquila, Empire, KEPCO and MJMEUC, individually, an "Owner" and, collectively, the "Owners").

RECITALS

The Owners are engaged in the generation and transmission of electricity and its distribution and sale to the Owners' respective customers, and intend to construct, own and operate a coal-fired electric generating facility of approximately 800-850 MW Net Generating Capacity ("Unit 2") on the East bank of the Missouri River, near the Upper Iatan Bend, in Platte County, Missouri.

KCPL, Aquila and Empire (the "Unit 1 Owners") own as tenants in common, each with an undivided ownership interest, a coal-fired electric generating facility ("Unit 1") located adjacent to the proposed location of Unit 2 at the Initial Iatan Station Site (as hereinafter defined). KCPL operates Unit 1. The Unit 1 Owners also presently own as tenants in common, each with an undivided ownership interest, the Initial Iatan Station Site.

Unit 1 is and Unit 2 will be located on a parcel of real property that can accommodate up to four coal-fired generation units (the "Initial Iatan Station Site"). An adjacent parcel of real property will also be used in connection with the operation of Unit 1 and Unit 2 ("Nower Property"). KCPL is the sole owner of the Nower Property. The Initial Iatan Station Site and the Nower Property will be referred to collectively as the "Iatan Station Site." Legal descriptions of the Initial Iatan Station Site and the Nower Property are attached as Exhibits A and B, respectively.

The Unit 1 Owners have set forth their agreement with respect to Unit 1, the Initial Iatan Station Site, and certain common facilities in the Iatan Station Ownership Agreement dated July 31, 1978 (the "Iatan Unit 1 Ownership Agreement").

The Owners desire to participate in the construction of Unit 2 and ownership of the Iatan Unit 2 Facility (as hereinafter defined), and have agreed that the Iatan Unit 2 Facility shall be owned by the Owners as tenants in common, each with an undivided ownership interest therein as hereinafter provided.

The Unit 1 Owners own certain common facilities now in existence and serving Unit 1 (as more fully described in Exhibit C, but excluding any existing fuel inventory for Unit 1, the "Existing Common Facilities") that are anticipated to be capable of joint utilization by and for Unit 1, Unit 2 and any Additional Units (as hereinafter defined).

MJMEUC and KEPCO also desire to participate in the undivided ownership of the Existing Common Facilities to the extent they are utilized by Unit 2.

The Unit 2 Owners intend to construct and own (in common with the Unit 1 Owners as provided herein) certain enhancements and improvements to the Existing Common Facilities in order to facilitate the joint operation of Unit 1 and Unit 2 (such enhancements and improvements, as more fully described in Exhibit D, the "Common Facilities Upgrades" and, together with the Existing Common Facilities, the "Common Facilities").

At the Closing (as defined below), pursuant to assignment and assumption agreements, the form of which is set out in Exhibit E, KCPL shall transfer and assign to the other Owners certain undivided interests in permits related to Unit 2, and by virtue of the other Owners' payment of certain costs, they shall acquire undivided interests in the balance of the Iatan Unit 2 Facility and the Common Facilities and each such other Owner shall assume and agree to be bound by the provisions of all permits and other obligations under this Agreement to the extent of its Ownership Share therein as provided in Section 2.1 or Common Facilities Ownership Shares, as provided in Section 2.2, as applicable.

This Agreement is executed for the purposes of (i) confirming the nature and extent of the respective ownership interests of the Owners in the Iatan Unit 2 Facility and the Common Facilities and (ii) imposing certain covenants and obligations running with the rights, titles and interests of the Owners in and to the Iatan Unit 2 Facility and the Common Facilities, which covenants and obligations are intended to inure to the benefit of and be binding upon each of the Owners and any and all persons whomsoever having or claiming any right, title or interest therein by, from, through or under any of the Owners.

NOW, THEREFORE, the Owners, each for itself, its successors and assigns, and for the benefit of the other, its successors and assigns, hereby covenant and agree as follows:

ARTICLE I

Definitions

For purposes of this Agreement the following capitalized terms shall have the respective meanings set forth below.

1.1 "Accounting Manual" shall have the meaning specified in Section 14.2.

1.2 "Actual Emissions" shall have the meaning specified in Section 6.8(b).

1.3 "Actual Fuel Costs" shall mean the total of the following component costs:

(a) the amount billed to KCPL by suppliers for coal and other fuel for the Iatan Unit 2 Facility, including any adjustments thereto;

(b) the amount billed to KCPL by suppliers for limestone, ammonia, and any other Fuel Commodity used in pollution control equipment for the Iatan Unit 2 Facility, which are required and consumed as coal or other fuel is consumed, including any adjustments thereto;

ARTICLE IV

Construction and Testing

' 4.1 Responsibility for Construction. Except as otherwise provided for herein, KCPL shall have sole responsibility, to be discharged in accordance with Good Utility Practice, for the planning, licensing, permitting, design, construction and testing of Unit 2 and the Common Facilities Upgrades. KCPL will use Commercially Reasonable Efforts to comply with all applicable requirements of all applicable statutes and the rules and regulations of such regulatory agencies as shall have competent jurisdiction over the planning, permitting, design, licensing, construction and testing of Unit 2. KCPL shall not be liable or responsible for any failure to perform hereunder where such failure to perform is caused by or is a result of Force Majeure. KCPL agrees that prior to making any discretionary design changes, as distinguished from design changes required for reliability purposes or by law, that are expected to increase Cost of Construction by $25 million or more, KCPL will submit said proposed change to a vote of the Management Committee.

4.2 Responsibility for Interconnection Facilities. Aquila shall be responsible for (and shall use its Commercially Reasonable Efforts to complete in sufficient time to support the In-Service Operation Date) easement acquisition, development and construction of a 161 kV double circuit transmission line loop to interconnect the Iatan Station Site to the Platte City-Stranger Creek transmission line. This will also include but not be limited to relocation of the existing Iatan to St. Joseph, Missouri 345 kV line and any other transmission modifications as specified by the interconnection agreement. All such facilities to be constructed by KCPL and/or Aquila are referred to herein as the "Interconnection Facilities." KCPL will be responsible for interconnecting as specified in the interconnection agreement to the Iatan 345 kV bus for Units 1 and 2. The Aquila scope of work described herein shall be part of the Cost of Construction to the extent the costs associated with constructing the Interconnection Facilities are required by the interconnection agreement. Aquila shall coordinate all construction activities with KCPL, including transmission line and substation scope. Aquila shall not be liable or responsible for any failure to perform hereunder where such failure to perform is caused by or is a result of Force Majeure. The costs of the Interconnection Facilities, as well as any transmission credits with respect to the Interconnection Facilities, shall be allocated among the Owners in proportion to their Common Facilities Ownership Shares.

4.3 In-Service Operation Date. Subject to the terms and conditions of this Agreement, KCPL will use its Commercially Reasonable Efforts to have Unit 2 operating by the Estimated In-Service Operation Date.

4.4 Construction Power. Construction power used in connection with construction of Unit 2 shall be provided by Aquila's St. Joseph Light and Power Division under the applicable retail rate schedules or a special contract. Notwithstanding the foregoing, however, each of the Owners shall have the option to self-supply its share of construction power to the extent permitted by law.

4.5 Site Representative. During the period from the Closing Date until a reasonable interval (not to exceed one hundred eighty (180) days) after the In-Service Operation Date, each

5.2 Management Committee Action.

(a) The Management Committee shall determine and administer policies and take all other action relating to the management, operation and maintenance of the Iatan Unit 2 Facility, the Common Facilities and the Iatan Station Site by the vote of the Owners expressed through their respective representatives on the Management Committee. Each Owner shall have a vote on the Management Committee equal to its Ownership Share, in the case of decisions related to the Iatan Unit 2 Facility, and equal to its Common Facilities Ownership Share, in the case of decisions related to the Common Facilities or the Iatan Station Site. Except as specified in Section 5.5(d), the vote of an Owner or Owners whose Ownership Shares or Common Facilities Ownership Shares (as applicable) constitute a simple majority shall be necessary and sufficient for action to be taken by the Management Committee.

(b) With regard to annual budgets (both (i) operation and maintenance and (ii) capital), should a Management Committee vote on either budget yield the result of KCPL "for" and all other Owners "against," each Owner voting against shall have ten (10) business days to submit in writing its concerns with KCPL's budget proposal and what modifications it would recommend to make the proposed budget acceptable. KCPL shall review these recommendations. After consideration KCPL will either submit a revised budget, or inform the Owners that the previously submitted budget will become effective. Should a revised budget be submitted, KCPL will convene the Owners via telephone or e-mail for a vote of the Management Committee on the revised budget. This process will only be completed once in a budget year.

(c) Except for the rights contained in Section 3.1 of this Agreement, the Management Committee shall have the right, in its sole discretion, to prevent any lessee from taking any action as a result of its leasehold right to possession of any portion of the Unit 2 Site or the Nower Property.

(d) The Management Committee shall not have authority to modify or take any action inconsistent with any provision of this Agreement. Any cost or expense incurred by an Owner's Management Committee representative in connection with duties of such representative shall be borne and paid by the Owner represented by the representative.

5.3 Operator.

(a) Each Owner hereby authorizes KCPL to act (and KCPL agrees to act) as the exclusive operator to perform (in such capacity, the "Operator"), through KCPL's own employees, agents, servants and contractors, all such functions (including, without limitation, the entry into contracts for the benefit of the Owners) as may be required for the actual design, permitting, development, procurement, construction, operation and maintenance of the Iatan Unit 2 Facility, the Common Facilities and the Iatan Station Site, subject, however, to the direction and control of the Management Committee. The Operator shall at all times perform its duties in accordance with Good Utility Practice; provided, however, and notwithstanding any other provision in this Agreement to the contrary, the Operator shall not be liable to any other Owner for any loss, cost, damage or expense incurred by such Owner as a result of any action or failure to act by the Operator unless the Operator's action or failure to act is determined to have been gross negligence or willful misconduct. Each Owner understands and agrees that the

Operator shall have the sole discretion to manage its employees, agents, servants, and contractors on a day-to-day basis to accomplish needed work in the normal course of business. The Operator shall be responsible for the administration and enforcement of all contracts relating to the construction, ownership and operation of the Iatan Unit 2 Facility and Common Facilities; provided, however, that when requested by the Operator, the other Owners shall reasonably assist the Operator with these responsibilities. Although the Operator shall not be entitled to a management fee under this Agreement, each Owner shall pay its proportionate share of the Operator's total reasonable costs, including administrative overhead and taxes, incurred while performing its duties as Operator for Unit 2 in proportion to the Owners' Ownership Share and for the Common Facilities in proportion to the Owners' Common Facilities Ownership Shares as set forth in the Accounting Manual attached hereto as Exhibit J.

(b) Upon written notice to the Operator, the Owner with the next greatest Ownership Share which has the financial capability to act as Operator may, at its option, forthwith become, and assume the duties of, Operator hereunder in the stead of the existing Operator if at such time (i) the Management Committee has not elected a new Operator from among the Owners of Unit 2; (ii) either (A) the Operator shall have filed a petition commencing a voluntary bankruptcy case under Section 301 of Title 11 of the United States Code (the "Bankruptcy Code") or shall have had filed against it a petition commencing an involuntary bankruptcy case under Section 303 of the Bankruptcy Code and such involuntary petition shall remain undismissed for a period of ninety (90) days, or KCPL's or any other Owner's Ownership Share shall have been seized and held by any governmental authority having jurisdiction (any of the foregoing, an "Insolvency or Seizure") or (B) the Operator is in Default under Section 6.6 and such Default has not been cured within the applicable cure period; and (iii) such other Owner is not then the subject of an Insolvency or Seizure. KCPL shall automatically be redesignated and assume the full functions of Operator upon emerging from or otherwise curing the Insolvency or Seizure or Default that gave rise to KCPL's removal as Operator. The Operator acting during any Insolvency or Seizure or Default of KCPL shall not have the right or power to replace the then current plant personnel with the acting Operator's employees so long as KCPL's plant personnel continue to work productively and in sufficient numbers to maintain Unit 2's and the Common Facilities' operations without material impairment; in such event Owners shall continue to pay to KCPL the Owners' proportionate shares of the costs associated with such plant personnel as though KCPL were continuing to act as Operator. The acting Operator shall abide by, and shall not violate, any provision of any collective bargaining agreement KCPL has entered into with its employees; nor shall the acting Operator take any action that will materially impair the generation output or materially increase the cost of owning and/or operating any generation asset owned by KCPL. The acting Operator shall be responsible for the administration and enforcement of all existing contracts relating to the construction, ownership and operation of the Iatan Unit 2 Facility, the Common Facilities and the Iatan Station Site; provided, however, that when requested, the other Owners shall reasonably assist the acting Operator with these responsibilities, and KCPL will assist the acting Operator in any manner reasonably requested.

(c) Contracts covering design, engineering, procurement, construction and installation of all or any part of the Iatan Unit 2 Facility and/or the Common Facilities Upgrades and all other contracts relating to procurement, operation and maintenance, including contracts for the acquisition of materials, inventories, supplies, spare parts, equipment, fuel or services, but not limited to, energy imbalance charges and/or credits, uninstructed deviation penalties, less charges and uplift charges and/or credits.

6.4 Financial Obligations. On or after the Closing Date and within ten days of receipt of invoice from the Operator, each Owner (other than KCPL) shall pay its Ownership Share of the Cost of Construction incurred by KCPL as of the Closing Date, plus any interest charges or accumulated allowance for funds used during construction with respect to Cost of Construction incurred as of the Closing Date, all as reflected on said invoice. Thereafter, each Owner shall pay in accordance with the Construction Period Cash Flow Memorandum or the Operating Period Cash Flow Memorandum (as applicable) unless otherwise provided.

For the purposes of this Section 6.4, except as otherwise provided, expenditures shall not be deemed to include (i) interest charges on borrowed funds, income taxes, and property, business and occupation taxes of each Owner, which shall be borne entirely by such Owner, and (ii) depreciation, amortization and allowances for funds used during construction.

6.5 Access to Information.

(a) Subject to Article XVII and pursuant to Section II of the Accounting Manual, each Owner shall have the right to inspect and audit the books and records of the Operator as they relate to the charges surrounding the Iatan Unit 2 Facility and Common Facilities. KCPL or the Operator shall keep complete and accurate records regarding Cost of Construction and Cost of Operation of Unit 2 and Common Facilities and will make available for Owners' inspection and audit all records regarding Cost of Construction and Cost of Operation of Unit 2 and Common Facilities sufficient to allow Owners to determine that such costs and expenditures imputed to Unit 2 or the Common Facilities by KCPL under this and other ancillary agreements are accurate.

(b) The Operator shall make Commercially Reasonable Efforts to provide operating, maintenance, and capital budgets to each Owner for the upcoming five-year period by October 1 of each year, or as soon as practicable thereafter.

(c) To the extent reasonably practicable, by October 1 of each year, the Operator shall provide a schedule of planned maintenance outages to the Owners. Changes to such schedule shall be provided to the Owners, to the extent reasonably practicable, at least six (6) months prior to a scheduled outage. The Operator shall communicate as soon as practicable any changes to the outage schedule that occur within the six-month window, and the Operator will make a reasonable effort to minimize the impact of the change on all of the Owners.

(d) In addition to the foregoing, the Operator shall notify the Owners in a timely manner of all significant events the Operator deems material to the construction and/or operation of Unit 2 and/or the Common Facilities.

6.6 Default.

(a) Prior to the In-Service Operation Date, an Owner shall be in default if such Owner should:

ARTICLE XII

Arbitration

12.1 Controversies. Any controversy between or among Owners and/or the Operator arising out of or relating to this Agreement, or any breach hereof or default hereunder, shall be submitted to binding arbitration upon the request of any Owner in the manner provided herein; provided, however, that no Owner shall seek to arbitrate a controversy between or among the Owners without the Owner's most senior executive first attempting in good faith to resolve the dispute with the most senior executive(s) of the other Owner(s) involved in the dispute. Such executives shall decide, within ten (10) days of a written notice of controversy specifically referring to this Section 12.1, the maximum period during which they will attempt to resolve the dispute before any Owners or the Operator may serve a Notice to Arbitrate as provided in Section 12.2. If such executives fail for any reason to agree upon a maximum period during which they will attempt to resolve the controversy, then the maximum period shall end forty-five (45) days after the written notice of controversy specifically referring to this Section 12.1.

12.2 Notice to Arbitrate. The Owner submitting a request for arbitration shall serve a written notice (a "Notice to Arbitrate") upon all Owners including the other Owner or Owners against which a remedy or determination is sought, setting forth in detail the matter or matters to be arbitrated, including a statement of the facts or circumstances giving rise to such controversy and such Owner's contention with respect to the correct determination thereof.

12.3 Selection of Arbitrator and Venue. If the Owners directly involved in such controversy are unable to agree upon and appoint, within twenty (20) days of the date of service of the Notice to Arbitrate, three persons to act as arbitrators, then the arbitrators shall be selected by the American Arbitration Association from its then current list of neutrals. The venue for any arbitration under this Agreement shall be Kansas City, Missouri.

12.4 Scope of Arbitration. Any arbitrators serving hereunder shall give full force and effect to all provisions of this Agreement and any applicable ancillary agreement as may be involved, shall hear evidence submitted by the respective Owners, and may call for additional information, which additional information shall be furnished by the Owner(s) having such information. Consistent with the expedited nature of arbitration, each party will, upon the written request of the other party, promptly provide the other with copies of documents on which the producing party may rely in support of or in opposition to any claim or defense. Any dispute regarding discovery, or the relevance or scope thereof, shall be resolved by the arbitrators, whose findings shall be conclusive. All discovery shall be completed within forty-five (45) days following the appointment of the arbitrators, unless the arbitrators determine in their discretion that additional time is warranted, but not to exceed ninety (90) additional days. All objections to discovery are reserved for the arbitration hearing except for objections based on privilege, work product and proprietary or confidential information.

12.5 Findings and Award. All decisions concerning the arbitration, including the ultimate findings, shall be made by majority vote of the three arbitrators. The award shall be made within six (6) months of the filing of the Notice to Arbitrate (or such shorter period as the parties may agree at the commencement of the arbitration), and the arbitrators shall agree to comply with this schedule before accepting appointment; provided, however, that this time limit may be extended by agreement of the parties or by the arbitrators if necessary. The arbitrators will have no authority to provide injunctive relief (except that the arbitrators may order the disclosure of documents which have been improperly withheld from a Covered Owner, subject to strict confidentiality to protect the disclosing party's right to retain such information as confidential and proprietary); nor shall the arbitrators have the authority to award punitive or other damages not measured by the prevailing party's actual damages except as may be required by statute. The findings and award of the arbitrators shall be final, binding and conclusive with respect to the matter or matters submitted to arbitration subject to challenges alleging fraud or gross misconduct on the part of the arbitrators.

12.6 Costs. The fees and expenses of the arbitrators shall be borne equally by the Owners directly involved in such arbitration. All other expenses and costs of the arbitration shall be borne by the Owner incurring the same.

ARTICLE XIII

Force Majeure

13.1 Force Majeure. If, because of a Force Majeure, any Owner is unable to carry out and perform any of its obligations under this Agreement, and if such Owner promptly gives the other Owners written notice of such Force Majeure, then the obligation of the Owner giving such notice shall be suspended to the extent made necessary by such Force Majeure and during its continuance, provided the Owner exercises Commercially Reasonable Efforts to mitigate the effect of the Force Majeure.

ARTICLE XIV

Accounting and Payment Procedures

14.1 Planning of Cash Flow Requirements. KCPL shall project, and the Owners shall pay, the funds required for the construction (and any reconstruction following a casualty) of the Iatan Unit 2 Facility and the Common Facilities Upgrades in accordance with the Cash Flow Memorandum attached as Exhibit I-1 (the "Construction Period Cash Flow Memorandum"). KCPL shall project, and the Owners shall pay, the funds required for the operation, maintenance and capital improvement of the Iatan Unit 2 Facility and the Common Facilities in accordance with the Cash Flow Memorandum attached as Exhibit I-2 (the "Operating Period Cash Flow Memorandum"). The Construction Period Cash Flow Memorandum shall be updated periodically by KCPL to reflect changes in the cash flow requirements, modifications to the critical path, and increases and decreases in the scope of the Iatan 2 project. Any variance in actual requirements from projected requirements shall not excuse timely payment by the Owners.

14.2 Record-Keeping; Accounting Manual. KCPL will develop and keep all records and perform all accounting for the Iatan Unit 2 Facility and the Common Facilities according to GAAP and FERC guidelines as prescribed in 18 C.F.R. Pt. 101. Such accounting and record keeping shall be performed in accordance with the procedures set forth in the Accounting Manual, a copy of which is attached as Exhibit J (the "Accounting Manual"). Each Owner will copies of the resolutions adopted by KEPCO's board of directors authorizing the execution, delivery and performance of this Agreement.

19.5 MJMEUC's Representations and Warranties. MJMEUC hereby represents, warrants and covenants to the other Owners as follows:

(a) MJMEUC is a body public and corporate of the State of Missouri duly organized, validly existing and in good standing under the laws of the State of Missouri and has power and authority to own the undivided ownership interests in the Iatan Unit 2 Facility and Common Facilities to be owned by it hereunder, to execute and deliver this Agreement and to perform its obligations hereunder and to carry on its business as it is now being conducted and as it is contemplated to be conducted pursuant to this Agreement.

(b) The execution, delivery and performance by MJMEUC of this Agreement have been duly authorized by all necessary action on the part of MJMEUC, do not contravene the Joint Contract, entered into as of May 1, 1979 and amended as of February 1, 1980 and June 4, 1984, between the Contracting Municipalities, or By-Laws of MJMEUC, and do not and will not contravene the provisions of, or constitute a material default under any indenture, mortgage, security agreement, contract or other instrument to which MJMEUC is a party or by which MJMEUC is bound. Upon execution of this Agreement, MJMEUC shall deliver to the other Owners certified copies of the resolutions adopted by MJMEUC's board of directors authorizing the execution, delivery and performance of this Agreement.

ARTICLE XX

Memorandum of Agreement

20.1 Memorandum of Agreement. To the extent permitted by applicable law, the Management Committee may determine to file a memorandum of this Agreement rather than filing the entire Agreement in the relevant real estate records. The Owners will promptly execute and deliver such a memorandum upon request of the Operator.

ARTICLE XXI

Cooperation

21.1 Cooperation. Subject to the limitations contained in Section 17.2 of this Agreement, each of the Owners shall use Commercially Reasonable Efforts to cooperate with each other Owner in order to assist the other Owner in the performance of its duties, responsibilities and obligations under this Agreement. This duty to cooperate shall include providing information, and executing and delivering customary documents, certificates, opinions and instruments necessary for the other Owner to perform its duties, responsibilities and obligations under this Agreement including obtaining financing for its share of the Cost of Construction.

CONFIDENTIAL

THIS AGREEMENT CONTAINS A BINDING ARBITRATION PROVISION THAT MAY BE ENFORCED BY THE PARTIES.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized officers the day and year first above written.

KANSAS CITY POWER & LIGHT COMPANY

ATTEST:

By William H Downey
Chief Executive Officer

Date: 6-12-06

Assistant Corporate Secretary

AQUILA, INC.

ATTEST:

By
Chief Operating Officer

Date: 5/19/2006

Corporate Secretary

THE EMPIRE DISTRICT ELECTRIC COMPANY

ATTEST:

By William L. Gipson
Chief Executive Officer

Date: 5/19/2006

Janet S Watson
~~Assistant~~ Corporate Secretary

KANSAS ELECTRIC POWER COOPERATIVE, INC.

ATTEST:

By Stephen E Parr
Executive Vice President and
Chief Executive Officer

Date: 5/24/2006

Asst Corporate Secretary

CONFIDENTIAL

MISSOURI JOINT MUNICIPAL ELECTRIC
UTILITY COMMISSION

ATTEST:

By Duncan Kincheloe
General Manager and
Chief Executive Officer

Robert E. Williams
Corporate Secretary

Date: June 8, 2006

SCHEDULE CGF 10

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE CGF 11

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

JOINT OPERATING AGREEMENT

This Joint Operating Agreement (the "Agreement") is made and entered into this 10th day of October, 2008 by and between Kansas City Power & Light Company ("KCP&L") and Aquila, Inc., doing business as KCP&L Greater Missouri Operations Company ("KCP&L GMO").

WITNESSETH

WHEREAS, KCP&L is a wholly-owned subsidiary of Great Plains Energy Incorporated ("Great Plains Energy"); and

WHEREAS, Great Plains Energy acquired KCP&L GMO as of July 14, 2008, and

WHEREAS, to facilitate utility operations integration and to realize synergies, employees of KCP&L GMO were transferred to KCP&L, and employees of KCP&L will operate and manage the business and properties of both KCP&L and KCP&L GMO, and

WHEREAS, in Case No. EM-2007-0374 before the Missouri Public Service Commission (the "MPSC"), KCP&L and KCP&L GMO requested a waiver from the MPSC affiliate transaction rules to permit KCP&L to provide services and non-power goods to KCP&L GMO at fully distributed cost, and offered to execute and file a joint operating agreement to document the provision of such services and non-power goods, and

WHEREAS, the MPSC granted such waiver, authorized Great Plains Energy to acquire KCP&L GMO, and directed that such a joint operating agreement be filed with the MPSC, and

WHEREAS, KCP&L and KCP&L GMO have entered into this Agreement whereby each party agrees to provide and to accept and pay for various services and non-power goods.

NOW THEREFORE, in consideration of the promises and the mutual agreements herein contained, the parties to this Agreement covenant and agree as follows:

ARTICLE I – JOINT OPERATING SERVICES

Section 1.1 Purpose. This Agreement provides the contractual basis for the coordinated planning, construction, acquisition, disposition, operation and maintenance of KCP&L's and KCP&L GMO's business and properties to achieve synergies, consistent with reliable electric service and all legal and other requirements.

Section 1.2 KCP&L Designated Agent and Operator. KCP&L GMO hereby designates KCP&L as its agent and operator of its business and properties. KCP&L shall be responsible for and shall perform, through its employees, agents, and contractors, all such actions and functions (including, without limitation, the entry into contracts for the benefit of or as agent for KCP&L GMO) as may be required or appropriate for the proper design, planning, construction, acquisition, disposition, operation, engineering, maintenance and management of KCP&L GMO's business and properties in accordance with the terms of this Agreement (the "Services"). KCP&L GMO hereby delegates to KCP&L, and KCP&L hereby accepts responsibility and authority for the duties set forth in this Agreement.

Section 1.3 Description of the Services. The Services shall include all services required or appropriate for the design, planning, construction, acquisition, disposition, operation, engineering, maintenance and management of KCP&L GMO's business and properties. The Services exclude wholesale electricity and transmission service transactions between KCP&L and KCP&L GMO, which will be governed by applicable Federal Energy Regulatory Commission ("FERC") tariffs and rules. Such Services are more fully described in Appendix A hereto.

Section 1.4 Standards for Services. KCP&L shall provide the Services in accordance with its practices, methods, standards, guides, policies and procedures in effect from time to time which, as applicable, will be consistent with those that are generally accepted in the electric utility industry. KCP&L will comply with all applicable Federal, State and local laws, regulations, ordinances and other requirements in the provision of Services to KCP&L GMO.

Section 1.5 Facilities Services. KCP&L will use its properties, systems, agreements and other assets in providing Services (the "KCP&L Facilities Services"). KCP&L GMO consents to the use of its properties, systems and agreements by KCP&L in providing Services and in operating and managing KCP&L's own business (the "KCP&L GMO Facilities Services"). The KCP&L Facilities Services and the KCP&L GMO Facilities Services are collectively referred to as the "Facilities Services". The provision of, and payment for, the Facilities Services will be done pursuant to the terms of this Agreement.

Section 1.6 Compliance with Policies and Agreements. In connection with its receipt of the Services, each party shall comply with (i) all applicable policies and procedures of the other party, and (ii) all applicable terms and conditions of any third party agreements pursuant to which KCP&L GMO receives Services and KCP&L receives Facilities Services, including without limitation terms and conditions preserving the confidentiality and security of proprietary information of vendors.

Section 1.7 Adequacy of Personnel. KCP&L shall use commercially reasonable efforts to maintain a staff trained and experienced in provision of the Services. Notwithstanding the foregoing, KCP&L may (i) arrange for the services of nonaffiliated experts, consultants, attorneys and other third parties in connection with the performance of any of the Services or (ii) subcontract performance of the Services to one or more third parties.

Section 1.8 Parity of Services and Internal KCP&L Operations. KCP&L will at all times use its commercially reasonable efforts to provide the Services in scope, quality and schedule equivalent to those it provides to its own internal operations. In providing the Services, KCP&L will seek to maximize the aggregate synergies to both companies, and shall not take any action that would unduly prefer either party over the other party.

ARTICLE II - COMPENSATION

Section 2.1 Payment for Services. As compensation for the Services, KCP&L GMO shall reimburse KCP&L for all costs that reasonably can be identified and related to the Services performed by or on hehalf of KCP&L for KCP&L GMO including, but not limited to, KCP&L's cost of salaries and wages, office supplies and expenses, third party vendor costs, property insurance, injuries and damages, employee pensions and benefits, taxes, miscellaneous general expenses, rents, maintenance of structures and equipment, depreciation and amortization, and compensation for use of capital. Notwithstanding anything herein to the contrary, the price of the Services shall comply with all applicable rules and regulations of the FERC, the MPSC, all other applicable regulatory commissions, and the provisions of Great Plains Energy's Cost Allocation Manual, which includes KCP&L and KCP&L GMO cost allocation information, filed from time to time with the MPSC.

Section 2.2 Payment for Facilities Services. It is understood that KCP&L GMO Facilities Services may be used by KCP&L in providing Services to KCP&L GMO, as well as used by KCP&L for its own business. In order to avoid duplicate billing, the parties agree that KCP&L will be billed, and will reimburse KCP&L GMO, only for that portion of KCP&L GMO Facilities Services used by KCP&L for its own business. As compensation for Facilities Services, the receiving party shall reimburse the providing party for all costs that can reasonably be identified and related to the Facilities Services including, but not limited to, cost of salaries and wages, office supplies and expenses, third party vendor costs, property insurance, injuries and damages, employee pensions and benefits, taxes, miscellaneous general expenses, rents, maintenance of structures and equipment, depreciation and amortization, compensation for use of capital, and a return on capital associated with the assets used to provide Facilities Services. Costs recovered through Services billings shall be excluded from the costs of Facilities Services. Notwithstanding anything herein to the contrary, the price of Facilities Services shall comply with all applicable rules and regulations of the FERC, the MPSC, all other applicable regulatory commissions, and the provisions of Great Plains Energy's Cost Allocation Manual, which includes KCP&L and KCP&L GMO cost allocation information, filed from time to time with the MPSC.

Section 2.3 Billing. KCP&L shall render a monthly statement to KCP&L GMO setting forth a description of the Services and KCP&L Facilities Services rendered to KCP&L GMO in the previous month and KCP&L's costs in connection therewith. The monthly statement to KCP&L GMO will also set forth a description of KCP&L GMO Facilities Services used by KCP&L for its own business and KCP&L GMO's associated costs. KCP&L shall maintain reasonable supporting documentation in connection with costs. Payment shall be made by remittance of the amounts billed within thirty (30) days of the date of the statement or by making appropriate accounting entries on KCP&L's and KCP&L GMO's books.

Section 2.4 Dispute Resolution. In the event that a dispute arises between KCP&L and KCP&L GMO regarding the costs charged by the providing party to the receiving party for Services or Facilities Services hereunder, representatives of KCP&L and KCP&L GMO will attempt to resolve the issues. Unresolved disputes regarding costs or any other claim or dispute related to this Agreement shall be resolved by binding arbitration by the American Arbitration Association under the rules then in effect. Any award of the arbitrator(s) may be entered as a judgment in any court of competent jurisdiction.

Section 2.5 Records Inspection. KCP&L GMO at its own expense may examine KCP&L's pertinent books, records, data and other documents once each year for the purpose of evaluating the accuracy of KCP&L's statements to KCP&L GMO. Such examination shall begin no fewer than thirty (30) days after KCP&L receives a written notice requesting an examination and shall be completed no later than thirty (30) days after the start of such examination. Such examination shall be conducted by an independent auditor reasonably acceptable to both KCP&L GMO and KCP&L. If an independent auditor is used, KCP&L GMO shall cause the independent auditor to execute a nondisclosure agreement reasonably acceptable to KCP&L. Each audit shall be conducted on the premises of KCP&L during normal business hours. KCP&L shall cooperate fully in any such audit, providing the auditor reasonable access to any and all appropriate KCP&L employees and books, records and other documents reasonably necessary to assess the accuracy of KCP&L's invoices. Tbe results of the examination shall be provided to KCP&L.

If KCP&L and KCP&L GMO agree that the amount of any statement should be adjusted as a result of the examination, the amount of the adjustment shall be paid or reimbursed, as applicable, promptly with interest at a rate equal to the applicable compensation for use of capital if the adjustment is related to Services provided, or at a rate equal to the applicable return on capital used for Facilities Services billings (as such rates are described in the Great Plains Energy Cost Allocation Manual) from the due date of the applicable invoice. Any unresolved dispute shall be submitted to arbitration pursuant to Section 2.3, and any resulting award shall include interest calculated on Services or Facilities Services as previously described from the due date of the applicable invoice.

ARTICLE III – TERM AND TERMINATION

This Agreement shall become effective as of the date first written above and shall continue in force until terminated pursuant to this Article III (the "Term"). This Agreement may be terminated by either party upon at least one year's prior written notice to the other party. This Agreement shall also be subject to termination or modification at any time, without notice, if and to the extent performance under this Agreement may conflict with any applicable law, rule, regulation or order of any regulatory body adopted before or after the date of this Agreement. Further, this Agreement shall automatically terminate in the event of a direct or indirect change of control of either KCP&L or KCP&L GMO. Sections 2.4, 2.5, 4.1, 4.2, 5.3 and 5.4 shall survive expiration or termination of this Agreement for any reason.

ARTICLE IV –

DISCLAIMER OF WARRANTIES; LIMITATION OF LIABILITY

Section 4.1 EXCEPT AS SET FORTH IN SECTION 1.4, KCP&L MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE SERVICES AND HEREBY DISCLAIMS ALL SUCH REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES AS TO MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

Section 4.2 Limitation of Liability. Except with respect to its indemnification obligations set out in this Section 4.2, KCP&L's aggregate liability to KCP&L GMO pursuant to this Agreement for any acts or omissions in any 12-month period during the Term shall not exceed the aggregate charges payable to KCP&L by KCP&L GMO pursuant to Section 2.1 and 2.2 in such 12-month period. Except with respect to its indemnification obligations set out in this Section 4.2, KCP&L GMO's aggregate liability to KCP&L pursuant to this Agreement for any acts or omissions in any 12-month period during the Term shall not exceed the aggregate charges payable to KCP&L GMO by KCP&L pursuant to Section 2.2 in such 12-month period. Notwithstanding the foregoing sentences, each party hereto will defend, indemnify and save harmless the other party hereto from and against any and all liability, loss, costs, damages and expenses, including reasonable attorney's fees, caused by or arising out of the gross negligence, willful misconduct or breach of this Agreement by such indemnifying party. In no event shall any party be liable to the other party for any punitive, exemplary, indirect, special or consequential damages in connection with this Agreement.

ARTICLE V - MISCELLANEOUS

Section 5.1 Amendments. No amendment, change, or modification of this Agreement shall be valid, unless made in writing and signed by the parties hereto.

Section 5.2 No Assignment. Neither party may assign this agreement, in whole or in part, without the prior written consent of the other party.

Section 5.3 Choice of Laws. This Agreement will be deemed to be made in and in all respects shall be interpreted, construed and governed by and in accordance with the laws of Missouri, without giving effect to rules concerning conflicts of laws.

Section 5.4 No Third Party Beneficiaries. This Agreement is not intended to, and does not, confer upon any party other than KCP&L and KCP&L GMO any rights or remedies hereunder.

Section 5.5 Regulatory Filings. KCP&L and KCP&L GMO shall make all necessary regulatory filings and seek all necessary regulatory approvals for this Agreement.

Section 5.6 No Effect on Other Agreements. This Agreement shall not modify the obligations of any party under any agreement with a third party, and shall not modify any agreement between the parties under any tariff or other agreement filed with the FERC, the

MPSC or other regulatory commission.

Section 5.7 Waivers. Any waiver at any time by a party of any of its rights with respect to a default by the other party under this Agreement shall not be deemed a waiver with respect to any subsequent default of similar or different nature, nor shall it prejudice its right to deny waiver of any other default by the other party.

Section 5.8 Independent Contractor. KCP&L and KCP&L GMO agree that for the purposes of this Agreement, each party is an independent contractor to the other party. KCP&L will be solely responsible for directing the work of its personnel. KCP&L is solely responsible for the compensation of its employees assigned to provide the Services hereunder, and payment of workers' compensation, disability and other similar benefits, unemployment and other similar insurance, and for withholding, income, social security and other taxes.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date and year first above written.

Kansas City Power & Light Company

William H Downey

William H. Downey
President and Chief Operating Officer

Aquila, Inc., doing business as KCP&L Greater Missouri Operations Company

William H Downey

William H. Downey
President and Chief Operating Officer

Approved by Counsel:

William G. Riggins
General Counsel and Chief Legal Officer
Kansas City Power & Light Company
Aquila, Inc.

APPENDIX A

Description of Services

General descriptions of the Services to be provided by KCP&L to KCP&L GMO are detailed below. The descriptions are deemed to include services associated with, or related or similar to, the services contained in such descriptions. The descriptions are not intended to be exhaustive, and KCP&L will provide such additional services, whether or not referenced below, that are necessary or appropriate to meet the service needs of KCP&L GMO.

Corporate Services

Corporate Services is responsible for providing Information Technology, Purchasing, Facilities and Resource Protection services for KCP&L GMO operations. These services also apply to any new facilities that may be added from time to time.

Information Technology ("IT"): Support existing applications, technologies and infrastructure to ensure business continuity and leverage capabilities. Examples include CIS, PeopleSoft, desktop, real-time systems, radio and telecommunications. In addition, IT will work with KCP&L GMO to develop and deploy new applications and technologies as appropriate.

Purchasing: Acquire goods and services on behalf of KCP&L GMO operations, as well as for all construction projects; exercise governance and oversight over all procurement functions and ensure compliance with established policies and procedures.

Facilities: Responsible for the planning and management of existing company buildings and grounds, whether owned or leased, as well as for any new building construction or remodeling; and provide print, courier and mailroom services and records management.

Resource Protection: Responsible for the protection of the physical, human and information assets of KCP&L GMO, and for business continuity planning and adherence to applicable standards such as required by Homeland Security, etc.

Delivery

Delivery is responsible for providing customer, transmission and distribution services. This includes business performance services, claims services, customer services, major outage/catastrophic event management services, energy efficiency and demand response services, metering and infrastructure technology services, resource management, safety training and incident response services, transmission and distribution construction and maintenance management, transmission and distribution operations and maintenance, transmission, distribution and substation engineering and asset management, transmission policy, planning and compliance services to KCP&L GMO. These services also apply to any new facilities that may be added from time to time.

Business Performance Services: Develop, gather data, manage, create and maintain financial and reliability reports; provide financial analysis, training on financial systems and business support; oversee financial and accounting processes; direct the preparation of budgets and forecasts; draft certain regulatory reports and testimony; develop policies, monitor key developments in the electrical delivery arena and KCP&L GMO territories; prepare and file compliance related reporting; manage process and performance improvement; create and conduct process and performance training; and collect and analyze benchmarking and scorecard data.

Claims Services: Administer claims received relating to property damage and/or service issues in KCP&L GMO service territories; prosecute claims to recover damages for property damage against KCP&L GMO assets.

Community Liaison and Communication Services: Act as liaison with government agencies; federal, state and locally elected officials, civic organizations, and other community stakeholders affecting the KCP&L GMO service area; respond to media and governmental stakeholder requests for information; and create and present information to the public through press releases, advertising, public speaking and other available communication channels.

Community Relations Services: Identify and administer investment and membership support in KCP&L GMO's community organizations; administer contributions to nonprofit agencies identified in KCP&L GMO's service and operating territories that support at-risk youth, the environment and economic/workforce development; administer memberships with chambers, economic development corporations and other organizations in KCP&L GMO's service and operating territories; coordinate presentations and public speaking requests; identify and administer community sponsorships in coordination with partners; manage and provide support for KCP&L GMO's events, including town hall meetings and executive visits; identify and manage employees in KCP&L GMO community support roles, such as serving on boards and providing direct service to underserved people and communities.

Customer Services: Receive and process customer requests through all customer contact channels; answer customer questions, create and enter service orders, and educate customers about KCP&L GMO services; obtain and record meter data; process customer service orders; manage the field collection process at the customer premise, investigate potential revenue loss, and report irregular customer activities pertaining to their electric service; prepare and deliver accurate and timely statements and invoices to customers; manage the payment application process, reconcile payments received from customers, remit payments received, and conduct research on non-routine payments; collect amounts owed on delinquent accounts, bad debt recoveries, and bankruptcy; process and remit amounts recovered; manage and apply energy assistance payments; conduct fraud investigations, diversion investigations, and analyze customer usage and pricing for accuracy and timeliness of sending customer bills; investigate and manage commission complaints to resolution; design programs to increase funding to assist low income customers; manage programs targeted for the elderly and vulnerable (i.e., medical emergency) customers; create partnerships with energy assistance agencies; administer cold and hot weather rules; develop and present outreach programs designed to educate customers about energy usage and efficiency; design and use measurement and assessment tools to gauge effectiveness and efficiency of customer contact work processes; and collect, verify and report statistics and data as requested by internal customers.

Economic Development Services: Manage and administer business development initiatives, strategies and programs associated with retention, expansion and recruitment of major customers in KCP&L GMO's service territory; manage and develop relationships with strategic state, regional and local development groups while being familiar with state and local incentives, and financing options; assist KCP&L GMO's communities in strategic planning, setting goals and priorities, and facilitate implementation of community and economic development programs; and represent KCP&L GMO on relevant community and state boards.

Energy Efficiency and Demand Response Services ("EE/DSM"): Identify and develop products for EE/DSM including market analysis, technology review, feasibility analysis, load research and tariff development/approval; provide marketing of EE/DSM to customers; act as liaison and support EE/DSM programs with large industrial and commercial users; create and present public education and training demonstrations on EE/DSM programs; provide eServices management; and develop and provide marketing, sales and product support for unregulated, revenue generating services.

Major Outage/Catastrophic Event Management Services: Provide "command and control" management including allocation of resources, communication with MPSC, internal and external stakeholders, coordination with the Mutual Assistance Group, and analysis of operational and performance data from KCP&L GMO systems; act as liaison with government agencies, municipalities and emergency response organizations; and create and conduct training with stakeholders .

Metering and Infrastructure Technology Services: Plan, design and implement integrated technologies to better supply, manage, and enable more efficient use of energy both by the utility and the customer; identify and evaluate existing and emerging technologies in the areas of advanced metering, distribution automation, grid communication networks, advanced control centers, demand response, energy efficiency, as well as the integration of renewable and distributed supply resources; and plan, design and implement metering and meter reading infrastructure.

Resource Management: Provide supervision of resource procurement, including strategic sourcing, vendor alliance development, order management, supplier management, consignment systems and contract governance; manage vegetation management services and infrastructure monitoring and improvements consistent with approved KCP&L GMO vegetation and infrastructure plans; provide supply chain management to drive optimum service, quality and innovation for material, services and fleet management in order to achieve operational excellence and lower operational and maintenance costs; develop policies and implement contract compliance practices to ensure value is captured; provide work management asset tracking services; provide meter procurement and maintenance services; and provide shop services that include equipment testing and reconditioning, welding, mechanical services, pipefitting, plumbing and carpentry.

Safety Training and Incident Response Services: Create and present public safety education and training demonstrations; respond to incidents of personal injury and/or property damage involving employees and/or KCP&L GMO assets; and develop operating and compliance guidelines.

Transmission and Distribution Construction and Maintenance Management: Analyze, coordinate and support work for system expansion, construction, system improvements, and corrective and preventive maintenance; provide patrolling services of infrastructure and equipment; and act as company liaison to customers, municipalities, community organizations and local stakeholders.

Transmission and Distribution Operations and Maintenance: Provide "first response" to outage and irregular system operation reports and analyze, coordinate and support work to restore service and return system to regular operating status.

Transmission, Distribution and Substation Engineering and Asset Management: Analyze, coordinate and support work for delivery and substation system expansion, improvements, and corrective and preventive maintenance; provide engineering, planning, design, trouble-shooting and mapping services; support field personnel in handling right–of-way purchases, right-of-way inquiries, zoning permits and crossing permits; and establish and monitor system-wide electrical standards.

Transmission Policy, Planning and Compliance Services: Develop policies, monitor key developments in the transmission arena, and participate in industry groups and forums relevant to transmission system reliability, operations and policy issues; act as liaison with FERC, NERC, Southwest Power Pool ("SPP"), Midwest Independent Transmission System Operator ("MISO"), Edison Electric Institute ("EEI"), Kansas Electric Transmission Authority ("KETA"), the Transmission Owners and Operators Forum and other organizations and stakeholders; perform analysis and planning of transmission system; negotiate agreements with transmission stakeholders; provide support for real-time transmission system analysis, monitor system reliability and security; respond to threats against system reliability and security; provide compliance review of relevant NERC and FERC standards and policies; administer transmission tariffs; and provide accounting of energy flowing across transmission system and monitor transmission revenues received.

Supply

Supply is responsible for all aspects of providing the electric energy necessary to reliably, and in compliance with applicable laws, fulfill the electric demands of KCP&L GMO customers. In order to effectively meet this obligation, Supply shall provide the following general services to KCP&L GMO: resource planning; plant operations and maintenance; fuel procurement and logistics; generation dispatch; power purchases and sales; new unit construction; and system black-start. These services shall apply to all present and future KCP&L GMO generating facilities. These services also include the optimization of all KCP&L GMO jointly owned units and all capacity and energy contracts that exist or may be entered into from time to time.

KCP&L and KCP&L GMO will be operated and planned for as separate control areas with wholesale transactions governed by applicable FERC tariffs and rules, until and unless otherwise determined by the parties and approved by all applicable regulatory bodies.

Resource Planning: Develop periodic integrated resource plans, capacity testing, reliability reporting, and interconnection applications; coordinate new source review as needed; and maintain fleet generation statistics.

Plant Operations and Maintenance: Conduct safety training, safety incident investigation, training of the operating and maintenance staff; develop/maintain operating procedures; manage operating staff; maintain planning (near term and long term); maintain facilities and equipment; outage planning; maintenance management; contractor management; inventory management; and environmental compliance and reporting.

Fuel Procurement and Logistics: Develop fuel procurement plan, fuel procurement for power production (coal, oil and natural gas); arrange for fuel delivery, nomination of required natural gas deliveries, procurement, delivery of all plant combustion reagents (lime, limestone, ammonia, urea, etc.); fuel handling and storage at the plants; and fuel inventory management, sale or off-site disposal of coal combustion products (including fly ash, bottom ash, and scrubber by-products).

Generation Dispatch: Unit scheduling; maintenance of reserve requirements; coordination with the RTO; and coordination with generating stations and load balancing.

Power Purchases and Sales: Manage day ahead and real time sales and/or purchases to effectively meet customer demand; secure transmission paths; cultivate wholesale customers on both the buy and sell side; track and manage RTO transactions and costs; and manage participation in RTO markets as they become available (energy imbalance market, ancillary services, etc.).

New Unit Construction: Organize and manage the construction efforts necessary to place new generating assets into service or to retro-fit existing facilities with new process equipment necessary to allow the unit to continue to operate, including the removal of abandoned equipment, as may be necessary.

Black Start: Maintain and periodically test the system black-start capability.

Human Resources

Services are provided to KCP&L GMO by employees of KCP&L. Human Resources ("HR") is responsible for the planning, development, and implementation of all aspects of human capital strategy which complements and reinforces the strategies of KCP&L GMO and its affiliates. HR will meet KCP&L GMO's needs through the general services categories described below.

Employee Relations – HR uses a Generalist model in working with operating groups as business partners to ensure close alignment with, and proactive support of, operating needs.

Labor Relations – Provide centralized leadership in working collaboratively with the IBEW locals, including labor strategy, negotiations, grievances, arbitrations, job bidding, and other activities.

Staffing and Recruitment – Ensure a robust pipeline of talent into the organization by creatively sourcing candidates and overseeing/coordinating the recruiting, interviewing, testing, placement, and on-boarding processes; and manage a variety to specialized sourcing programs ranging from college recruiting, internship programs, high programs, diversity programs, and other practices.

Compensation and Benefits – Recommend and develop the overall reward program to ensure the acquisition and retention of talent and effective cost management, including base salary, incentive, and all other benefit and recognition programs; and oversee Affirmative Action Programs.

Safety and Medical – Oversee worker's compensation and return-to-work programs, DOT, and other health and safety programs.

Winning Culture – Work to ensure a workforce that is engaged, innovative, accountable, and high-performing.

Training and Development – Ensure an effective professional workforce through the development/delivery of programs through the GPE University; identify suitable external programs and leadership development opportunities; and identify, coaching, and development of high potential employees; and oversee an assessment center, workforce planning, periodic employee surveys, and effective performance management processes.

Human Resource Information System – Ensure secure and effective systems that allow accurate reporting of employee-related information; develop and implement systems and processes that enable increased employee and manager self-service; and promote and implement process improvements for HR.

HR Service Center - The HR Service Center provides a "one-stop shop" for efficient response to employees' and retirees' HR questions.

HR Strategy and Planning – Ensure awareness of best practices and adopts as appropriate; ensures goals, metrics, and plans are established to enhance service and efficiency; and craft and implement company-wide strategies to address chronic workforce challenges.

Finance and Accounting Services

Finance and Accounting Services ("F&A") is responsible for all aspects of providing services across the organization necessary to support the operations of KCP&L GMO and all other corporate entities. These services are provided by KCP&L to the other entities. F&A will meet KCP&L GMO's need for F&A services through the general services categories described below.

Accounting Systems: Provide system support of financial systems for all entities, including KCP&L GMO. Major financial systems include the PeopleSoft financial and HR systems, CIS+ customer billing system, and the property management system, PowerPlant. System support is categorized into operations and project management functions. The operations function includes; run the month-end financial close process; maintain PeopleSoft and PowerPlant security for the organization; update PeopleSoft chart fields; maintain the PeopleSoft allocation processes; maintain PeopleSoft trees for reporting, and nVision and query development for the organization; including support provided in gathering financial information to respond to regulatory, customer, or audit requests. The project management function includes upgrades and system enhancements and consists of gathering requirements, developing timelines, developing and maintaining test scripts for testing phases, and signoff during implementations.

Accounts Payable: Provide accounts payable transaction processing and reporting for all Great Plains Energy entities, including KCP&L GMO. Primary services provided include: Create/maintain vendor profiles; receive/process paper/electronic invoices and payments; prepare vendor 1099s; review/update invoice approval workflow; review/update voucher account coding; reconcile payment records and vendor balances; research/resolve purchase order payment exceptions; provide monthly reporting metrics; and receive/research/provide vendor and/or payment inquiries.

Audit Services: Examine and evaluate the adequacy and effectiveness of the organization's governance, risk management process, internal control system structure, and the quality of performance in carrying out assigned responsibilities to achieve the organization's stated goals and objectives. Primary services provided include: review the reliability and integrity of financial and operating information and the means used to identify, measure, classify, and report such information; review the systems established to ensure compliance with those policies, plans, procedures, laws, and regulations, including relevant provisions of the Sarbanes-Oxley Act of 2002, which could have a significant impact on operations and reports, and assessing whether the organization is in compliance; review the means of safeguarding assets and, as appropriate, verifying the existence of such assets; review operations or programs to ascertain whether results are consistent with established objectives and goals and whether the operations or programs are being carried out as planned; review specific matters at the request of the audit committee or management, as appropriate; monitor and evaluate the effectiveness of the organization's risk management system; and review, where contractually authorized, accounting and other relevant records of joint ventures, contractors, suppliers, and other third party business associates.

Corporate Accounting: Maintain the accounting books and records of all Great Plains Energy entities, including KCP&L GMO. Primary services provided include: establish and maintain accounting policies and procedures; establish and monitor internal controls; record revenues, operation and maintenance expenses, other income/expense and assets and liabilities, and analyze activity in accounts; and perform account monitoring and reconciliations, management reports, certain regulatory reports and provide financial support to operations, regulatory affairs and other internal customers, as requested.

Corporate Finance: Direct the Company's corporate finance function, which includes the development, analysis, and implementation of financial plans and capital structure so as to maintain continuous access to capital at the lowest overall cost. Primary services provided include: prepare documentation and satisfy the filing requirements associated with the Company's financing and lead negotiations of specific costs and terms of security issues and/or leases by working directly with the underwriters; minimize the cost of debt by managing the variable rate debt portfolio utilizing interest rate management products; support the Company's regulatory efforts, including cost of capital analysis / testimony preparation assistance; primary day-to-day management of relationships with rating agencies, members of the Company's bank group and any other investment banks; and preparation of financial materials for internal and external stakeholders as requested and required.

Corporate Planning & Budgeting: Develop budgets and financial forecasts for all Great Plains Energy entities, including KCP&L GMO. Primary services provided include: collection of departmental operating and capital budgets; allocation of budgeted pension and benefit costs, jointly owned facilities, and other allocable costs between business units; and development of forecasted financial statements as needed.

Corporate Treasury: Responsible for all cash management activities, including short-term financing facilities, for all Great Plains Energy entities, including KCP&L GMO. Primary services provided include: maintain an appropriate level of liquidity through supervision of cash management activities, maintenance of banking relationships and accessing of capital markets for longer-term funding; issue commercial paper or draw on credit facilities as needed, keeping an appropriate maturity ladder; conduct intra-company lending/borrowing to share liquidity within the corporation and minimize idle balances; oversee issuance of letters of credit and guarantees; assist Enterprise Risk in monitoring and maintaining credit support; maintain banking and brokerage relationships, negotiate lines of credit and determine banking/treasury management services to use; monitor and manage investment portfolios in compliance with the corporate investment policy; supervise remittance processing activities in coordination with the Customer Service division; establish and monitor external remittance processing agents (lockbox, direct debit, pay-stations, credit/debit cards, etc.) so to offer customers, reliable, lost cost service; assist in the issuance of capital market securities; provide input in the determination of desired capital structure through detailed cash forecasting; assure compliance with Sarbanes-Oxley requirements and maintenance of proper documentation and controls; provide information for rate cases, regulatory filings, financings and other applications; develop and maintain department policies; create and maintain a corporate wide investment policy; and oversee required accounting and record keeping to maintain the general ledger and reconcile cash accounts.

Income and Transaction Taxes: Responsible for all aspects of maintaining the tax books and records of all Great Plains Energy entities, including KCP&L GMO. Tax services can be categorized in five major functions providing the primary services as follows: prepare, review and file all consolidated and separate federal, state and local income, franchise, sales, use, gross receipts, fuel excise, property and other miscellaneous tax returns and payments; research tax issues and questions, including interpretation of rules and proceedings, develop short and long range planning for all types of taxes and monitor and review new or proposed tax laws, regulations, court decisions and industry positions; provide tax data for budget estimates and rate cases, provide reports of tax activity and projected cash requirements and prepare, review and record tax data for financial reports; supervise and review tax audit activities; respond to vendor-related tax matters associated with tax compliance or tax saving opportunities and process customer tax refunds and adjustments to customer accounts.

Insurance: Provide the following insurance services: place and administer Property and Casualty insurance policies, including Property, Liability, Workers Compensation and Management Liability; file and manage Property insurance claims; review contracts and agreements as needed for adequacy of insurance provisions; issue Certificates of Insurance and other evidence of coverage; and place and administer bonds.

Property Accounting: Maintain all fixed asset and intangible property records for all Great Plains Energy entities, including KCP&L GMO. Primary services provided include: set up, maintain and close capital projects; provide analysis of capital projects; calculate, record and report AFUDC; maintain fixed assets and accumulated depreciation; perform month end close processes; support billing of joint owner projects; support construction projects, including those associated with the Comprehensive Energy Plan; and perform processes to support day-to-day property accounting activity and prepare necessary internal and external reports, and support regulatory filings and depreciation studies.

Regulatory Accounting: Serve as the primary liaison between the Regulatory Affairs and Accounting Services teams and provide Accounting Services support for all jurisdictional filings and regulatory reporting for the Company, including KCP&L GMO. Primary services provided include: primary accounting support of rate case process including accounting adjustment planning and preparation; primary accounting support and data request response preparation and review; support of rate case process for accounting focused issue areas; regulatory reporting preparation and filing for all jurisdictional areas including the preparation of the annual FERC Form 1 and quarterly FERC Form 3-Q and certain other monthly, quarterly and annual statistical reports and jurisdictional surveillance reporting; development, tracking and reporting of all merger synergies and transition costs created/incurred across the organization, as relates to the acquisition of KCP&L GMO; and maintenance, review and analysis of critical revenue requirement input components, including regulatory asset and liability tracking and maintenance, debt assignment process maintenance and tracking and FERC account activity analysis for rate case adjustment impacts.

Risk Management: Provide the following risk management services on behalf of KCP&L GMO: credit risk management to include complete credit reviews for wholesale counterparties; develop, gather data, manage, create and maintain financial, reliability and accounting reports; develop credit limits for wholesale counterparties and monitor credit exposure on an ongoing basis; manage collateral requirements with wholesale counterparties and manage daily margining requirements; review contracts and agreements for adequacy of credit risk provisions; monitor the external credit markets and develop policies and procedures to help mitigate potential credit risks; prepare and file compliance related reporting; market risk management which includes monitor wholesale commodity transactions and verify that transaction types are covered by risk control policies, monitor wholesale commodity transactions and monitor compliance with risk control limits; develop market volatility curves for new transaction locations and commodities within the deal capture system; monitor the wholesale power and gas markets and develop policies and procedures to help mitigate market risks; and prepare and file compliance related reporting.

Strategic Planning and Development: Provide strategy development and coordination in the following areas: manage the development and approval process for the Company's long term strategic plans; coordinate strategic planning for major asset decisions; coordinate internal and public policy positions on renewable energy, climate change, nuclear power, energy efficiency and other energy related issues; and develop and manage renewable energy resource strategy and development of the renewable resource portfolio.

Legal and Environmental Services

Legal and Environmental Services is responsible for providing legal advice and representation and environmental services to KCP&L GMO. The following is a representative list of the types of services provided.

Legal Advice and Representation: Advise and represent KCP&L GMO concerning anticipated and pending litigation matters, contract negotiation and administration, general corporate matters and regulatory compliance, including the representation of KCP&L GMO before the MPSC, the FERC, and other regulatory bodies; provide legal advice and support for securities filings, financings and their administration; and provide legal advice and support for other transactions and matters as requested.

Environmental Services: Advise KCP&L GMO concerning compliance with all applicable environmental laws and regulations, including the obtainment of any requisite environmental permits related to KCP&L GMO's operations.

Regulatory Affairs

Regulatory Affairs is responsible for all aspects of providing services across the organization necessary to support the regulatory strategies that achieve corporate goals and which satisfy the requirements of regulatory policies, rules and procedures for KCP&L GMO The following is a representative list of the types of services provided.

Maintain a working knowledge state and federal regulatory practices, rules and regulations, KCP&L GMO tariffs, regulatory affairs activities of other utilities, and regulatory trends; contribute to the achievement of corporate goals by developing regulatory strategies to enhance earnings, mitigate risk, and guide regulatory and legislative industry restructuring; provide justification for KCP&L GMO's need for changes in rate levels by directing the preparation of filing requirements and responses to Commission complaint investigations, and by submitting testimony; build relationships with state and federal regulators, and consumer counsels; represent KCP&L GMO by serving as a regulatory expert before regulatory commissions, legislatures, and other public forums; work with the Commission and staff of the Missouri Public Service Commission, FERC and legislative committees to establish regulatory policy; oversee economic, engineering, and financial analysis in relation to revenues and costs, day-to day administration of rates, rules, regulations, and tariff filings, review and strategy of revenue requirements, determination of rate designs, and revenue verification; contribute to the development of revenue and resource planning by providing review of cost studies and by participating in the development and review of KCP&L GMO objectives and strategies; and provide information and training to other divisions (departments) on regulatory requirements, rates, rules, and regulations and provide assistance to operational departments in fulfilling regulatory requirements.

Corporate Secretary and Governance

These functions are primarily responsible for ensuring compliance with applicable corporation laws and regulations, the requirements of organizational documents, and appropriate corporate governance principles. These functions are also responsible for the design, maintenance and administration of director and officer compensation programs. The following is a representative list of the types of services provided: prepare and maintain Board and Committee communications, minutes, materials and other corporate documents; provide advice and analysis to directors and officers on current and emerging corporate governance matters, and recommend appropriate actions in light of those matters; prepare and file all documents necessary to maintain the corporate existence of KCP&L GMO and its subsidiaries; ensure that KCP&L GMO conducts its business in compliance with applicable corporate legal and organizational requirements; act as a liaison between management and the Board of Directors; design, maintain and administer director and officer compensation programs; and provide corporate compliance program management, support and training.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of KCP&L Greater Missouri Operations Company for Approval to Make Certain Changes in its Charges for Electric Service.	))))	File No. ER-2010-0356

REPORT AND ORDER

Issue Date: May 4, 2011

Effective Date: May 14, 2011

evidence establishing a causal connection or "nexus" between the alleged imprudent action and the costs incurred.

Decision – Iatan

The costs for construction resurfacing, campus relocation for the Iatan 2 Turbine Building, the WSI change order, and the temporary auxiliary boiler shall be excluded from rate base. All other rate base additions shall be included in rate base.

B. Crossroads

Was the decision to add the approximately 300 MW of capacity from Crossroads prudent?

If the decision to add Crossroads was prudent, what is the appropriate valuation of Crossroads?

If Crossroads is included in rate base, should the accumulated deferred taxes associated with Crossroads be used as an offset to rate base?

If Crossroads is included in rate base, should the transmission expense to get the energy from Crossroads to MPS's territory be included in expenses?

If transmission expense is included, should the Commission reflect any transmission cost savings to the Company resulting in its future participation in SPP as a network service customer related to the Crossroads plant be an offset?

Findings of Fact – Crossroads

219. GMO seeks recovery of costs associated with its capacity planning, namely: (1) the construction of three 105 MW combustion turbines at South Harper and a 200 MW system-participation based purchased power agreement ("PPA"); and (2) adding Crossroads Energy Center ("Crossroads") to the MPS generation fleet. Staff,

the Industrials, and Dogwood Energy dispute the prudence of these decisions and their associated costs.

History and Prudence

220. The Crossroads issues have their genesis from GMO's (then known as Aquila, Inc.) anticipation in the late 1990's and early 2000's of the deregulation and decoupling of generation from regulated electric utility operations in Missouri and its participation in the energy market in Missouri and other states through a non-regulated subsidiary, Aquila Merchant Services, Inc.

221. As part of its merchant generation activities, in 2000, Aquila Merchant, with Calpine, built the Aries Plant (now known as Dogwood). The Aries Plant is a natural gas-fired, 585 MW, combined-cycle, intermediate generating facility within Aquila, Inc.'s MPS service area. A five-year PPA with Aquila, Inc. that expired in May 2005 was used as an anchor for building the facility.[280]

222. Aquila Merchant also purchased eighteen 75 MW model 7EA combustion turbines from General Electric and, in 2002, at least three 105 MW model 501D combustion turbines from Siemens-Westinghouse.[281]

223. Aquila Merchant used four of the 75 MW combustion turbines at the facility it built near Clarksdale, Mississippi in 2002—Crossroads.[282] Aquila Merchant sold, at substantial discounts from its cost, three of the 75 MW combustion turbines to unaffiliated entities in 2003. Aquila Merchant released one of the 75 MW combustion turbines back to the manufacturer, and in 2003 installed six of them at the Goose Creek

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[280] Ex. GMO 210, p. 91.
[281] Ex. GMO 215, pp. 39, 48.
[282] Ex. GMO 216, p. 4.

Energy Center and the other four at the Raccoon Creek Energy Center, both in Illinois.[283] Aquila Merchant kept the three 105 MW Siemens-Westinghouse combustion turbines it purchased in 2002 intending to install them at the 585 MW, combined-cycle generating facility for a purchased power agreement with GMO after the 5-year purchased power agreement with GMO expired in May 2005. When it could not sell them, they were stored until 2005 when they were installed as regulated units at South Harper to be used for the MPS service area.[284]

224. Aquila Merchant sold both its Goose Creek Energy Center and its Raccoon Creek Energy Center to Union Electric Company d/b/a AmerenUE (now d/b/a Ameren Missouri) at substantially below book value in 2006.[285]

225. The table that follows shows the installed cost per kilowatt of 17 of the combustion turbines Aquila Merchant bought and took delivery of, and the price per kilowatt it received when it disposed of them:[286]

[283] Ex. GMO 215, pp. 47-51.
[284] Ex. GMO 215, pp. 39-40.
[285] Ex. GMO 215, p. 47.
[286] Ex. GMO 215, p. 51; Ex. GMO 262, Staff MPS Accounting Schedules 3-1, 3-2, 6-1 and 6-2.

Installed site	No. of Turbines	Date Installation / Sold	Cost	Capacity	Price per kilowatt
Raccoon Creek **Goose Creek**	4 6	2003 installed 2006 sold to Ameren	$175 million	850,000 kW	**$205.88**
South Harper	3	2001 Purchased 2005 installed	At Dec 31, 2010 Plant $120.4 million Reserve $24.4 Net $95.9	315,000 kW	**$382.16**
Crossroads	4	2002 installed 2008 transferred to MPS regulated	At Dec 31, 2010 Plant $119.2 million Reserve 32.1 Net $87.1 million Transmission upgrades (intangibles) Plant $22.5 million Reserve 4.4 Net $18.1 million Total Plant $141.7 million Reserve 36.5 Net $105.2 million	300,000 kW	**$427.46**

226. Although every other investor-owned electric utility in Missouri built generation, Aquila, Inc. had a corporate policy not to build regulated generating units that it followed until it built South Harper in 2005.[287] Instead, Aquila, Inc. relied exclusively on purchased power to meet its retail customers' increasing demands for electricity.

[287] Ex. GMO 217, pp. 34 and 39.

227. In 2000, Aquila, Inc. entered into the five-year purchased power agreement for power from the Aries Plant. That agreement, which expired in May 2005, provided for 500 MW of capacity in the summer and 320 MW in the winter.[288]

228. Aquila, Inc. knew in 2000 when it began taking power under the five-year purchased power agreement that it would have to replace that capacity by June of 2005.[289]

229. In 2001, Aquila, Inc. began exploring what options might be available in 2005 to replace the 500 MW of capacity. It did so by issuing a request for proposals ("RFPs") in the spring of 2001 for delivery of energy beginning in June of 2005. Because of changes in the industry, Aquila, Inc. reissued those RFPs in early 2003.[290]

230. Staff has criticized and challenged GMO's[291] capacity planning in rate cases over the past decade. It did so in File Nos. ER-2001-672 and ER-2004-0034, criticizing Aquila, Inc. for entering into the five-year purchased power agreement for power from a 585 MW natural gas-fired combined cycle generating unit built by Calpine and Aquila, Inc.'s affiliate Aquila Merchant Services, Inc., instead of building generation it owned. Staff also criticized Aquila, Inc. in File No. ER-2005-0436, challenging the prudency of how Aquila, Inc. built South Harper in the face of opposition to the siting of that facility and its decision to only install three 105 MW combustion turbines instead of five. And Staff had criticism again in File Nos. ER-2007-0004 and ER-2009-0090,

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288 Ex. GMO 210, p. 91; Ex. GMO 233, p. 4.

289 Ex. GMO 3601, pp. 3-5 and 8-11. Other capacity issues which will also create pressure for GMO to find new capacity solutions include the expiration of a 75 MW purchased power agreement with the Nebraska Public Power District ("NPPD") in 2014 (Ex. GMO 11, p. 6; and Tr. 4045) coal plant retirements, and integration of intermittent resources such as wind generation (Ex. GMO 3601, pp. 4 and 10-13).

290 Ex. GMO 210, Appendix 5, Sch. LMM-1,p. 1.

291 Even when it was known as Aquila, Inc.

taking issue with the prudency of Aquila, Inc./GMO for installing three 105 MW combustion turbines in 2005 instead of five.

231. At Aquila, Inc.'s June 26, 2003, resource planning update meeting with Staff and the Office of the Public Counsel, it presented the results of its analysis of the proposals it received. With the exception of one proposal, the proposals were for purchased power agreements, with the source of the capacity and energy varying among wind, coal, combustion turbines, and combined-cycle units. Aquila, Inc. also disclosed then that one bid for 600 MW of capacity which Aquila, Inc. considered to be "excellent" had been made. By September 10, 2003, however, the bid had been withdrawn and not replaced.[292]

232. On January 27, 2004, only sixteen months before its 500 MW capacity agreement would expire, Aquila, Inc. met with and informed Staff of Aquila, Inc.'s power acquisition process for the following five years. In that meeting GMO presented its preferred/proposed resource plan to build what became South Harper, and enter into three-to-five year purchased power agreements for the balance of its resource needs based on the responses to the spring 2003 request for proposals. Staff responded it was concerned that Aquila, Inc. would become overly dependent on short-term purchased power agreements and needed to evaluate adding baseload generation.[293]

233. At its next resource planning update, on February 9, 2004, Aquila, Inc., based on a twenty-year planning period, disclosed that its least cost resource plan was to build five 105 MW combustion turbines in 2005 and buy a small amount of capacity from the market in 2005, meet load growth with additional market purchases until 2009,

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[292] Ex. GMO 210, Appendix 5, Sch. LMM-1 at pp. 1-2.
[293] Ex. GMO 210, Appendix 5, Sch. LMM-1 at p. 2.

when it would build an additional 105 MW combustion turbine and a second in 2010, as well as pursue adding baseload capacity for 2010. Therefore, in February of 2004, about sixteen months before its five-year 500 MW purchased power agreement expired, Aquila, Inc.'s least cost resource plan included building five 105 MW combustion turbines in 2005.[294]

234. At its following semi-annual update to Staff and the Office of the Public Counsel, held on July 9, 2004, GMO disclosed it had entered into an agreement to purchase 75 MW of power from NPPD, but that its least cost plan still included building five 105 MW combustion turbines in 2005, although its preferred plan still was to build three 105 MW combustion turbines in 2005 and rely on purchased power for the balance of its needs. Therefore, in July of 2004, about eleven months before its five-year 100 MW purchased power agreement expired, Aquila, Inc.'s least cost resource plan included building five 105 MW combustion turbines in 2005.[295]

235. After prudently exploring and planning its capacity needs following the expiration of its five-year 500 MW purchased power agreement in May of 2005, GMO elected not to build five combustion turbines, and instead built three 105 MW combustion turbines at South Harper, a site designed for up to six 105 MW combustion turbines, and entered into PPA that included base load capacity in order to diversify its resource portfolio additions. "GMO concluded that it would be prudent to spread the execution and operating risks from the resource additions between building combustion turbines and adding a PPA that contained some level of base load capacity."[296]

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[294] Ex. GMO 210, Appendix 5, Sch. LMM-1 at p. 3.
[295] Ex. GMO 210, Appendix 5, Sch. LMM-1 at p. 3.
[296] Ex. GMO 11, p. 4.

236. Staff argues that its adjustments[297] "reflect the continuation of Staff's position that GMO should have prudently addressed its capacity needs for MPS to replace the Aires PPA when it expired on May 31, 2005."[298] Notably, Staff's conclusion is based on the same analysis as that developed and used by the Company in deciding to pursue the three combustion turbine/system-participation PPA.

237. The difference between Staff's preferred five combustion turbine plan and the Company's three Combustion turbine/system-participation PPA plan is minimal.[299] Even Staff witness Lena Mantle testifies that she did not believe the cost difference between the Company's preferred plan and Staff's five combustion turbine option over 20 years was significant,[300] and that she did not find the Company's decision based on this difference to be imprudent.[301]

238. Ultimately, the Company did not precisely implement its preferred plan. Based on the 2004 analysis, the preferred plan called for three 105 MW combustion turbines and a 200 MW system PPA. The three combustion turbines were completed in the summer of 2005, but the Company was unable to complete the system PPA. Instead, the Company entered into a 9-year 75 MW base load contract with the Nebraska Public Power District ("NPPD") and purchased power from Crossroads short-term for the remaining 200 MW.[302]

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[297] The Company denotes the two additional 105 MW combustion turbines Staff would impute to GMO instead of Crossroads as "phantom turbines."
[298] Ex. GMO 210, p.103.
[299] Ex. GMO 217, Sch. 119.
[300] Tr. 4090.
[301] Tr. 4091.
[302] Ex. GMO 210, Appendix 5, Sch. LMM-1, pp. 1 and 3.

239. After a thorough analysis of available options, the Company determined the 300 MW Crossroads Energy Center was the lowest cost option for meeting its requirements.

240. In August 2008, after the Great Plains Energy acquisition of Aquila, the Crossroads unit was transferred to the regulated books of GMO.[303]

241. In 2010, per the Stipulation and Agreement in GMO's last rate case, GMO conducted a 20-year analysis to determine a preferred plan after reviewing and analyzing the responses from a 2007 Request for Proposals for supply resources.[304] The analysis showed that Crossroads would result in the lowest 20-year net present value of revenue requirements ("NPVRR").

Delivered Natural Gas Prices

242. Historically the prices of natural gas delivered to Crossroads (Clarksdale, Mississippi) have been higher than the prices of natural gas delivered to South Harper (Peculiar, Missouri).[305] More recently, in the first ten months of 2010, the average commodity cost for natural gas shipped to Crossroads was less than gas shipped to South Harper. Moreover, the average delivered cost of natural gas to Crossroads was about half the average delivered cost of natural gas to South Harper.[306] The explanation is that while the commodity prices of natural gas are higher at Crossroads than at South Harper, adding the firm transportation costs to the commodity price for natural gas at South Harper results in a higher natural gas price at South Harper than

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303 Ex. 216, p. 5.
304 Ex. GMO 11, p. 8.
305 Ex. GMO 217, p. 43.
306 Ex. GMO 8, p. 2.

the natural gas price that was paid at Crossroads the past two years—2009 and 2010.[307]

243. One of the benefits of Crossroads over the two turbines at South Harper "is that natural gas shipped to Crossroads typically comes from a different supply region than natural gas shipped to South Harper. This allows the GMO to take advantage of short-term pricing disparities."[308] With Crossroads in the portfolio "the Company can choose to generate electricity from the region with the lower priced natural gas."[309] However, the lower natural gas prices at Crossroads are offset by much higher electric transmission costs, discussed below.[310]

Transmission Cost

244. Staff argues that the cost of transmission to move energy from Crossroads in Mississippi to GMO's service territory justifies, in part, removing Crossroads from GMO's cost of service. The Company argues that the cost of transmission is offset by the lower gas reservation costs.

245. The cost of transmission to move energy from Crossroads to customers served by MPS is a very significant cost that is far greater than the transmission costs for power plants located in the MPS district.[311] The annual energy transmission cost was estimated as $406,000 per month.[312] This is also substantially higher on an annual

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[307] Ex. GMO 217, p. 44.
[308] Ex. GMO 8, pp. 4-5.
[309] Ex. GMO 8, p. 5.
[310] Ex. GMO 217, p. 44.
[311] Ex. GMO 217, p.7; Ex. GMO 11, p. 10.
[312] Tr. 4050.

basis than the transmission plant costs for the Aries site where the three South Harper Turbines were originally planned to be installed.[313]

246. This higher transmission cost is an ongoing cost that will be paid every year that Crossroads is operating to provide electricity to customers located in and about Kansas City, Missouri. GMO does not incur any transmission costs for its other production facilities that are located in its MPS district that are used to serve its native load customers in that district. This ongoing transmission cost GMO incurs for Crossroads is a cost that it does not incur for South Harper, and is the cause of one of the biggest differences in the on-going operating costs between the two facilities.

247. It is not just and reasonable to require ratepayers to pay for the added transmission costs of electricity generated so far away in a transmission constricted location. Thus, the Commission will exclude the excessive transmission costs from recovery in rates.

Special Protection Scheme

248. Crossroads faces local (Mississippi) transmission constraints, because the existing lines cannot carry the full load of the plant under certain circumstances.[314] As a result, it is subject to a special protection scheme mandated by the Southwest Power Pool ("SPP").[315]

249. The special protection scheme requires the ramp down of the output of one of its four combustion turbines if a particular one of the two transmission lines used to move energy from Crossroads to MPS becomes unavailable. This risk of capacity

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313 Ex. GMO 217, p. 7.

314 Tr. 4050.

315 Ex. GMO 3601, p. 8; Tr. 4051, Ex. GMO 3603, p. 14 and pp. 31-33; Tr. 4125.

loss is one of the transmission-related risks of Crossroads. GMO's MPS retail customers should bear neither the costs nor risks associated with the transmission limitations in getting electricity from Crossroads to MPS.[316] In determining that transmission costs will be excluded, the Commission has sufficiently addressed these risks and costs.

Plant Managerial Oversight

250. Staff also expressed concern with GMO's ability to provide appropriate management oversight of a plant located in Mississippi.

251. To reduce transmission losses and outages power plants are built close to where the electricity is needed—close to customers.[317] Crossroads, however, is located over 9 hours and 525 miles from Kansas City, Missouri.[318]

252. No KCPL employees operate Crossroads, rather, GMO has contracted with the City of Clarksdale, Mississippi to operate Crossroads under an agreement with the Clarksdale Public Utilities Commission.[319]

253. A tolling agreement for the capacity and energy of the plant was originally held by MEP Clarksdale Power, LLC, which became Aquila Merchant Services, which assigned the agreement to Aquila, Inc., which is now GMO. The agreement runs through 2032 with a right to extend up to ten more years. GMO also holds a purchase

[316] Ex. GMO 233, pp. 5-6.
[317] Ex. GMO 217, p. 42.
[318] Ex. GMO 217, p. 42
[319] Ex. GMO 31, p. 2.

option, but does not intend to exercise it because the advantages of tax exempt financing would be lost.[320] The municipal ownership facilitated tax exempt financing.[321]

254. GMO witness Rollison identifies the agreement as a "Generation, Operations and Maintenance Agreement" between Clarksdale and GMO. The agreement "permits GMO to receive the output of the plant in exchange for payments that cover fixed and variable costs to produce the electrical output, as well as to maintain and operate the facility."[322] The Generation Agreement between the Clarksdale Public Utilities Commission and GMO states that "GMO has the right to review and approve the annual Operating Plan which constitutes a comprehensive and detailed plan for operating the facility for [the] coming two-year period."[323] In addition, GMO has the authority to review and approve the annual operating plan and budget, as well as to audit costs and inspect the facility.[324]

255. GMO is supposed to pay Clarksdale an "Availability Incentive Bonus Fee" for increased availability of generation and has the right to invoke an "Availability Liquidated Damages" clause for reduced availability, although there is no evidence as to whether or how often such clauses have actually been applied.[325] There would be no comparable internal fees if GMO owned and operated the plant itself.[326]

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[320] Ex. GMO 3601, p. 7-8; Ex. GMO 31, p. 2; Ex. GMO 42, p. 55; Tr. 4053 and 4059.
[321] Tr. 4053.
[322] Ex. GMO 31, p. 2-3.
[323] Ex. GMO 31, p. 3.
[324] Ex. GMO 31, p. 3; Tr. 4078-79.
[325] Tr. 4076.
[326] Tr. 4076.

256. The City agrees to protect GMO from various risks by means of an indemnification clause.[327]

257. With the exceptions of the Wolf Creek nuclear plant (of which KCPL is a minority owner) and the Jeffrey Energy Center (of which GMO is a minority owner), KCPL employees operate all other KCPL and GMO plants.[328]

258. GMO also has ownership interest in other generating facilities operated and managed by non-GMO employees. It is not uncommon in the industry to have plants run by someone other than the owner. For example, KCP&L runs plants for Westar, Empire, GMO and MJMEUC. Further, other utilities run Wolf Creek and Jeffrey Energy Center, of which KCP&L and GMO, respectively, are minority owners.

259. GMO personnel have visited the site six times over the past two years.[329]

260. The ability of GMO to provide managerial oversight to the plant is only slightly hampered by the long distance location of the plant facilities.

261. The management oversight has not proven to be a problem and therefore is not a reason for denial of recovery.

Ultimate Finding Regarding Prudence of Crossroads

262. Considering the costs involved, the fact that this was an affiliate transaction rather than an arms-length transaction, the relative reliability of transmission, the excessive costs of that transmission, the reduced costs for natural gas and the alternative supply source, the distance of the power in location to the customers served, and the other facts set out above, the Commission finds that the decision not to

[327] Ex. GMO 31, p. 4.
[328] Tr. 4054, 4075 and 4079.
[329] Ex. GMO 3601, pp. 4-5; Tr. 4052-54; and Tr. 4078-79.

build two more 105 MW combustion turbines at South Harper was not imprudent. In addition, the decision to include Crossroads in the generation fleet at an appropriate value was prudent with the exception of the additional transmission expense, when other low-cost options were available. Paying the additional transmission costs required to bring energy all the way from Crossroads and including Crossroads at net book value with no disallowances, is not just and reasonable and is discussed in detail below.

Valuation of Crossroads

263. With regard to the valuation of Crossroads, Staff's primary recommendation is that Crossroads should be disallowed in its entirety.[330] It argues alternatively that if the Commission decides to allow Crossroads in GMO's cost of service, then the value of Crossroads for ratemaking purposes is $51.6 million or another alternative of $61.8 million. GMO believes its valuation of Crossroads at $104 million is appropriate.[331]

264. GMO argues that because it did not dismantle the plant and it was able to obtain transmission from Crossroads to GMO, the value of the plant was $94.75 million, assuming that $20 million in transmission upgrades would be required. GMO was ultimately able to obtain transmission service with only a minimal transmission investment of $145,000, bringing its estimated value of Crossroads to $114.60

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[330] Ex. GMO 210, p. 92.

[331] Ex. GMO 12, p. 3.

million.[332] This value is more than the net book value of $104 million GMO has requested for ratemaking treatment in this case.[333]

265. At December 31, 2010, the plant and transmission facilities values for Crossroads were:[334]

Plant in Service	$119.1 million
Depreciation Reserve	$ 32.1 million
Net Plant	$ 87.0 million
Transmission Rights -- Intangible	$ 22.5 million
Reserve	$ 4.4 million
Net Transmission	$ 18.1 million
Total Crossroads Plant	$141.7 million
Reserve	$ 36.5 million
Net Plant	$105.2 million

266. Aquila, Inc. attempted to sell Crossroads, but was unable to sell it.[335] It follows that, absent a write-down which GMO has not taken, the market value of Crossroads is less than its booked value.

267. In February 2007, Great Plains Energy announced that it was seeking to acquire Aquila, Inc. Given several recent divestitures by Aquila, Great Plains acquisition amounted to simply the Missouri regulated electric operations as well as the Crossroads Energy Center. Over the next several months, Great Plains made three separate filings with the Securities Exchange Commission regarding the "fair value" of the Crossroads unit. As Great Plains indicated:

> The preliminary internal analysis indicated a fair value estimate of Aquila's non-regulated Crossroads power generating facility of approximately $51.6 million. This analysis is significantly affected by assumptions regarding the current market for sales of units of similar capacity. The

[332] Ex. GMO 12, p. 3.

[333] Ex. GMO 12, p. 3.

[334] Ex. GMO 262, Schs. 3-1, 3-2, 6-1 and 6-2.

[335] See the specifics regarding bids in the "Highly Confidential" Information at Ex. GMO 216, p. 13.

> $66.3 million adjustment reflects the difference between the fair value of the combustion turbines at $51.6 million and the $117.9 million book value of the facility at March 31, 2007. Great Plains Energy management believes this to be an appropriate estimate of the fair value of the facility.[336]

The valuations disclosed by Great Plains to the Securities Exchange Commission were made under oath.

268. GMO claims that the fair market value of Crossroads is established by an RFP conducted in March 2007, prior to the SEC disclosures. GMO postulates that, the responses to this RFP, demonstrate that fair market value is comparable to the proposed net book value. GMO fails to explain, however, given the alleged results of the RFP, why it announced to the Securities Exchange Commission, mere months later, that "fair value" was only $51.6 million.

269. GMO's assertion is also inconsistent with real world evidence as to the diminution in value experienced by these deregulated generating assets. The evidence indicates that, following the crash of the deregulated electric market and the bankruptcy of Enron, many deregulated generating assets, including combustion turbines identical to those in service at Crossroads, experienced a significant devaluation.[337] Specifically, the evidence indicates that Aquila sold General Electric combustion turbines, identical to those installed at Crossroads in 2006. At that time, Aquila also sold its ownership interest in Raccoon Creek and Goose Creek in Illinois to AmerenUE. Given the deterioration in the deregulated market, Aquila took a write-off, from net book value, of

[336] Ex. GMO 216, p. 12 (citing to Great Plains Energy & Aquila Joint Proxy Statement / Prospectus, filed with the SEC on May 8, 2007, at page 175).
[337] Ex. GMO 215, p. 58; Ex. GMO 217, p. 6.

$99.7 million.[338] Aquila sold other General Electric turbines to Nebraska and Colorado utilities.[339] Again, the price received by Aquila was significantly affected by the deterioration in the deregulated energy market.[340]

270. These sales by Aquila, of combustion turbines identical to those installed at Crossroads, are not only a good indicator of the fair market value, but also clearly show that the fair market value of these General Electric combustion turbines was significantly below the net book value.

271. When conducting its due diligence review of Aquila's assets for determining its offer price for Aquila, GPE would have considered the transmission constraints and other problems associated with Crossroads.[341] It is incomprehensible that GPE would pay book value for generating facilities in Mississippi to serve retail customers in and about Kansas City, Missouri. And, it is a virtual certainty that GPE management was able to negotiate a price for Aquila that considered the distressed nature of Crossroads as a merchant plant which Aquila Merchant was unable to sell despite trying for several years. Further, it is equally likely that GPE was in as good a position to negotiate a price for Crossroads as AmerenUE was when it negotiated the purchases of Raccoon Creek and Goose Creek, both located in Illinois, from Aquila Merchant in 2006.

272. The ten 75 MW General Electric model 7EA combustion turbines installed at Raccoon Creek and Goose Creek that Aquila Merchant sold to AmerenUE in 2006 are ten of the eighteen combustion turbines Aquila Merchant bought at the same time.

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338 Ex. GMO 215, p. 51.
339 Ex. GMO 215, p. 48.
340 Ex. GMO 215, p. 48.
341 Ex. GMO 216, p. 7.

Four of those eighteen were installed at Crossroads. The turbines sold at an average installed cost of $205.88 per kW.[342] Based on that average installed cost of $205.88 per kW, the 300 MW of combustion turbines at Crossroads would have an installed cost of $61.8 million.

273. Aquila Merchant purchased a total of 21 combustion turbines. It offered three of them at below its cost to several entities, including KCPL, in 2002 before it stored them. These turbines were eventually installed at South Harper and are in MPS's rate base at a discount from what Aquila Merchant paid for them. Aquila merchant also sold thirteen other combustion turbines below its cost to buy them as follows:[343]

- Goose Creek—6 General Electric turbines sold to AmerenUE in 2006.
- Raccoon Creek—4 General Electric turbines sold to AmerenUE in 2006.
- Utility in Beatrice, Nebraska – 2 General Electric turbines sold in 2002.
- Utility in Colorado – 1 General Electric turbines sold in 2002.

274. All the above generating assets are now serving customers at prices consistent with the turbine market after the Enron collapse.[344] Even Aquila wrote-down from what Aquila Merchant paid for them the combustion turbines it installed at South Harper to comply with the Commission's affiliated transaction rule.[345] Yet, in this case GMO is seeking to include the full value of Crossroads on its books, without a write-down, in MPS's rate base.

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[342] Ex. GMO 215, pp. 50-51.
[343] Ex. GMO 216, pp. 47 and 49.
[344] Ex. GMO 215, pp. 48-51.
[345] Ex. GMO 216, pp. 17-18.

275. Considering the depressed market as exhibited by the sale of similar turbines to Ameren, and the valuation of these assets reported to the SEC by GPE, the Commission finds that $61.8 million is an accurate reflection of the fair market value of Crossroads as required by the affiliate transaction rule as of July 14, 2008.

Deferred Income Taxes

276. Since Crossroads became part of the non-regulated operations of Aquila Merchant in 2002, deferred income taxes accumulated.[346] In all instances, KCPL and GMO use deferred income taxes relating to regulated investment assets as an offset (reduction) to rate base, except now for Crossroads.[347] It is GMO's position that since Crossroads was not part of its regulated operations when those deferred taxes were created, they should not be used as an offset to MPS's rate base now. If the Commission authorizes GMO to rate base Crossroads in this case, then it is Staff's position that all the accumulated deferred income taxes associated with Crossroads should be offset against rate base attributable to MPS.

277. The accumulated deferred taxes associated with Crossroads should be applied as an offset to MPS's rate base.[348]

[346] Ex. GMO 210, p. 109.
[347] Ex. GMO 210, p. 109.
[348] Ex. GMO 210, p. 110.

Dogwood

278. Dogwood Energy, LLC (Dogwood) is both a retail power customer of GMO and a wholesale power supplier to GMO.[349] As a customer, Dogwood supported Staff's disallowance of Crossroads and imputation of two phantom turbines in order "to protect GMO's retail customers, including Dogwood, against exorbitant rates."[350] With regard to its interest as a wholesale supplier to GMO, Dogwood suggests that the Commission discourage GMO from using the Crossroads facility and instead replace it with a local unit -- such as Dogwood's combined cycle facility.[351]

279. Dogwood argues that the cost of natural gas to Dogwood is cheaper than to Crossroads, transmission service to Crossroads is problematic and the Company's resource planning analyses are flawed because the Company failed to contact Dogwood. In addition, Dogwood makes a number of legal challenges to inclusion of Crossroads in rates.

280. Contrary to Dogwood's arguments, the testimony and evidence presented in this case demonstrate that the delivered cost of natural gas is cheaper to Crossroads than to Dogwood, however that cost is offset by the transmission costs. In addition, GMO's firm transmission service is reliable and sufficient and GMO has repeatedly considered Dogwood in its resource planning decisions, including the Company's recent 2010 Stipulation 8 Capacity Study.

281. Dogwood has not been the lowest cost resource option.

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349 Ex. GMO 3601, p. 3.
350 Ex. GMO 3601, p. 4.
351 Ex. GMO 3601, p. 4.

Conclusions of Law – Crossroads

24. This issue concerns the appropriate valuation to place on the Crossroads generating unit recently devoted by GMO to serving its ratepayers. The Supreme Court has held that the utility must be permitted to earn a return on the "fair value" of the property devoted to the public convenience.

> The corporation may not be required to use its property for the benefit of the public without receiving just compensation for the services rendered by it. . . . We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation . . . must be the ***fair value of the property being used by it for the convenience of the public***. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be extracted from it than the services rendered by it are reasonably worth.[352]

25. The Commission's authority to establish the valuation of an electric corporation's plant has also been memorialized in Section 393.230:

> ***The commission shall have the power to ascertain the value of the property of every . . . electrical corporation . . . in this state and every fact which in its judgment may or does have any bearing on such value.*** The commission shall have power to make revaluations from time to time and to ascertain all new construction, extensions and additions to the property of every . . . electrical corporation. (emphasis added).

26. Recognizing that Crossroads was transferred from a non-regulated affiliate to the Missouri regulated operations, the Commission's affiliate transaction rule is implicated. The affiliate transaction rule, as it applies to the immediate issue, provides that the purchase of "goods or services" from an affiliate shall be "the ***lesser*** of: (a) fair market price; or (b) the fully distributed cost."[353]

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[352] *Smyth v. Ames*, 169 U.S. 466, 546-547 (1898) (emphasis added).
[353] 4 CSR 240-20.015(2)(A) (emphasis added).

27. The Commission concludes that if included in rate base at a fair market value, rather than the higher net book value paid to its affiliate, and except for the additional cost of transmission from Mississippi to Missouri, the Company's 2004 decision to pursue the construction of three 105 MW combustion turbines at South Harper and pursue a 200 MW system-participation based purchased power agreement, and the Company's decision to add the Crossroads generating facility to the MPS generation fleet were prudent and reasonable decisions.

28. The Commission rejects Staff's adjustment to disallow the recovery of the entirety of Crossroads in the Company's cost of service and instead recover the cost of the "phantom turbines." The Commission concludes, however, that GMO is requesting the Commission value these turbines based on that overly high valuation (net book value) and that Crossroads includes significantly higher transmission costs it will incur over the life of Crossroads. The Commission concludes that Crossroads should be included in rate base at a value of $61.8 million based on the average installed dollar per kilowatt basis AmerenUE paid for the combustion turbines at Raccoon Creek and Goose Creek.

29. In addition to the valuation, the Commission concludes that but for the location of Crossroads customers would not have to pay the excessive cost of transmission. Therefore, transmission costs from the Crossroads facility, including any related to OSS shall be disallowed from expenses in rates and therefore also not recoverable through GMO's fuel adjustment clause ("FAC").

30. The Commission concludes deferred taxes shall be an offset to rate base.

31. The Commission rejects the Industrials' position to the extent and for the same reasons set out in response to Staff's arguments.

Decision – Crossroads

The Commission rejects Staff's adjustment to disallow the recovery of Crossroads in the Company's cost of service and replace it with the cost of two "phantom turbines." The Commission also rejects GMO's inclusion of Crossroads in rate base at its net book value. The Commission determines that given Great Plains' statements to the Securities Exchange Commission shortly before the transfer of the Crossroads unit to the Missouri regulated operations, as well as the arms-length sale of other General Electric combustion turbines by Aquila, that the fair market value of Crossroads at the time of transfer (August 2008) was $61.8 million. Given the subsequent 32 months, the fair market value of Crossroads for purposes of establishing rate base in this case should also reflect 32 months of depreciation on that unit.

The Commission further determines that it is not just and reasonable for GMO customers to pay the excessive cost of transmission from Mississippi and it shall be excluded. Finally, deferred income taxes shall also be an offset to rate base.

C. Jeffrey FGD Rebuild Project

Should the Jeffrey Rate Base Additions be included in rate base in this proceeding?

Should the Commission presume that the costs of the Jeffrey Rate Base Additions were prudently incurred until a serious doubt has been raised as to the prudence of the investment by a party to this proceeding?

Has a serious doubt regarding the prudence of the Jeffrey Rate Base Additions been raised by any party in this proceeding?

SCHEDULE CGF 14

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

A Methodology to Calculate Representative Prices for Purchased Energy in the Spot Market

Developed by Energy Department
Missouri Public Service Commission
March 18, 1996

Methodology to Calculate Representative Prices for Purchased Energy in the Spot Market

Developed by Staff of the Missouri Public Service Commission

March 1996

INTRODUCTION

Each electric utility company must decide the order in which it starts and runs its generating units, generally starting with the least expensive unit and adding more expensive units to meet its load. Simultaneously it must decide to purchase power from its neighboring electric utilities if the purchase price is less than its own generation cost. By doing this the electric utility is attempting to economically dispatch to meet its load.

Using computer programs, the commission staff simulates the economic dispatch to determine the fuel expense allowed in customer's rates. This computer simulation requires, as one of the inputs, representative prices of purchased power in the spot market to make economic dispatching decisions in meeting the load. Spot market purchases are those purchases made by the utility from various interconnected utilities without a contract for energy and demand charges.

This paper explains the staff's method for calculating a representation of spot market prices for purchased power. The method uses historical actual data to calculate a representation of a normal, or expected spot market.

OVERVIEW

The simulation makes dispatching decisions for every hour by comparing purchase power prices with generation costs. Generation costs are based on unit heat rates and fuel prices. Purchase power prices are based on the market prices of power available on the spot market. A month of typical spot market prices plotted against hourly load results in a scatter plot (See Figure 1). It appears that generally the higher the load the higher the price. However this is not a good enough relationship to determine prices.

What is needed for the simulation is a representation of purchased power prices. Several ways of representing the actual prices were considered during the development of this methodology. One possible way to represent the prices is to calculate an average price (See Figure 2). It is clear that this representation doesn't allow the simulation to consider the full range of hourly fluctuations in prices. A better representation might be to group the actual prices into similar ranges and use several curves (See Figure 3). But again the straight horizontal lines do not consider the full range of hourly fluctuating prices.

Another possible representation of prices might be a diagonal line passing through the more denser areas of prices and reflecting the fact that generally the higher the load the higher the price (See Figure 4). A more accurate representative line can be calculated from the actual data and results in a linear regression line (See Figure 5). This curve is still only a fair representation of the actual prices.

At this point in the development of representative prices it was decided to use a statistical approach. A frequency plot of the historical prices was done using a price increment of 5 dollars (See Figure 6). This curve was compared to the shape of several distribution curves including a triangular distribution curve (See Figure 7), a lognormal distribution curve (See Figure 8), and a normal distribution curve (See Figure 9).

Electric utilities purchase power at a price derived from the cost of producing the power. With fixed costs based on high initial capital costs, relatively equal plant efficiencies, and slowly rising or steady variable costs based on fuel and labor it make sense that a minimum price for power exists in the spot market. With competition between utilities for sales in the spot market, and installed capacity higher than demand requirements it makes sense that a maximum price for power exists. A better representation of the spot market prices might be a truncated distribution curve.

The frequency curve (Figure 6) of the actual data was then compared to the shape of a truncated lognormal curve (See Figure 10), and a truncated normal distribution curve (See Figure 11). The best fit appears to be the truncated normal distribution curve.

Actual purchase power prices are submitted by the electric utilities to the staff and are used to determine the fuel expense allowed. However, in any hour the utility didn't actually purchase power there won't be a price available to use in the calculations of representative prices. The more hours with no purchase price the more difficult it is to determine a representative price (See Figure 12).

Averaging the existing prices to fill in where no price exists results in the proper number of prices for the simulation, but the results are a flat or stepped curve representation of the spot market price for power. Economically dispatching to average prices would not reflect the many changes in available power prices. Using a distribution curve to represent purchased power prices eliminates the problem of missing actual prices.

Electric utilities may be forced to purchase power at a price which is much higher than usual because of system operating problems, or regional weather related problems causing a short supply of the cheaper spot market power. These occurrences do not reflect the economical purchase power spot market used for dispatching. Looking at the curve in Figure 1 one can see where several prices at the load range of 1700 MW are significantly spaced from the rest of the prices. These same prices plotted against the hour of the day clearly shows the prices at hours 1600, 1700, 1800, and 1900 are significantly outside the group of prices for those hours (See Figure 13).

A plot of the average hourly price calculated with the abnormally high prices and the average hourly price calculated without the abnormally high prices can be found in Figure 14. A more detailed look at the specific hours of 1600, 1700, 1800, and 1900 is shown in Figure 15. A comparison of the differences between the two calculated average prices is shown in Figure 16. These abnormal prices, or outliers if not eliminated would produce results that are not representative of the majority of actual prices.

Statistical calculations are performed on the actual data to produce a distribution curve from which the representative prices can be determined. One function of the calculations is the elimination of actual prices that occur outside the statistical range of the group of prices, outliers. Figure 17 is a plot of the actual maximum and minimum price for each hour and the resulting maximum and minimum price after the outlier prices are eliminated.

The results of the statistical calculations are used to determine a representative price for every hour which can be used by the simulation to economically dispatch. A comparison of the monthly representative hourly prices and the actual hourly prices is shown in Figure 18.

METHODOLOGY

The data needed for the calculation of the representative prices is received on a monthly basis from the electric utilities. Actual hourly prices are reviewed by the staff and in any hour that there is more than one price, a weighted average price is calculated by totaling the cost and megawatts in that hour.

To simplify the statistical calculations the data is divided into groups. By examining Figure 13 again, a natural division of the data would appear to be by the hour of the day. So the monthly data is divided into 24 groups representing each hour of a day, and the statistical calculations are performed on each of these groups.

Abnormally high prices can occur because a utility may be forced to purchase power at times when it is not economical to do so. Abnormally low prices, although much rarer can also occur. Statistically these abnormal prices are identified as those exceeding the calculated maximum and minimum prices of the expected range of prices. The maximum and minimum prices are determined by a fixed number of standard deviations from the mean. Any price outside of this range is replaced with the maximum or minimum price of the range. The fixed number is referred to here as the outlier target.

Figure 19 shows a generic normal distribution curve with the endpoints of three ranges marked. These ranges were calculated from three different outlier targets, and are used to determine the percent of total area under the curve used for each target. The Staff selected 2.39 to be used as the outlier target, which results in an area used equal to 98% of the total curve, or a confidence interval of 98%. In other words any price in the distribution would have only a 2% chance of falling outside of the area represented by a outlier target of 2.39.

To determine representative spot market prices, the Staff enters actual price parameters to define the range of the distribution into a computer program which calculates a statistical distribution of the prices. The results are a range of prices and the probability of their occurrence represented by a cumulative distribution curve for each of the 24 groups.

The resulting cumulative curves are shifted slightly to reflect the fact that the frequency plot of actual prices is not a perfect normal distribution. Additional prices for each group are calculated by straight line interpolation from the cumulative distribution curves in order to get representative hourly prices for all of the days in the month. The representative prices are assigned to an hour of the month in decreasing order in conjunction with decreasing actual hourly load.

The resulting representative spot market prices are used in the simulation to perform an hourly economic dispatch.

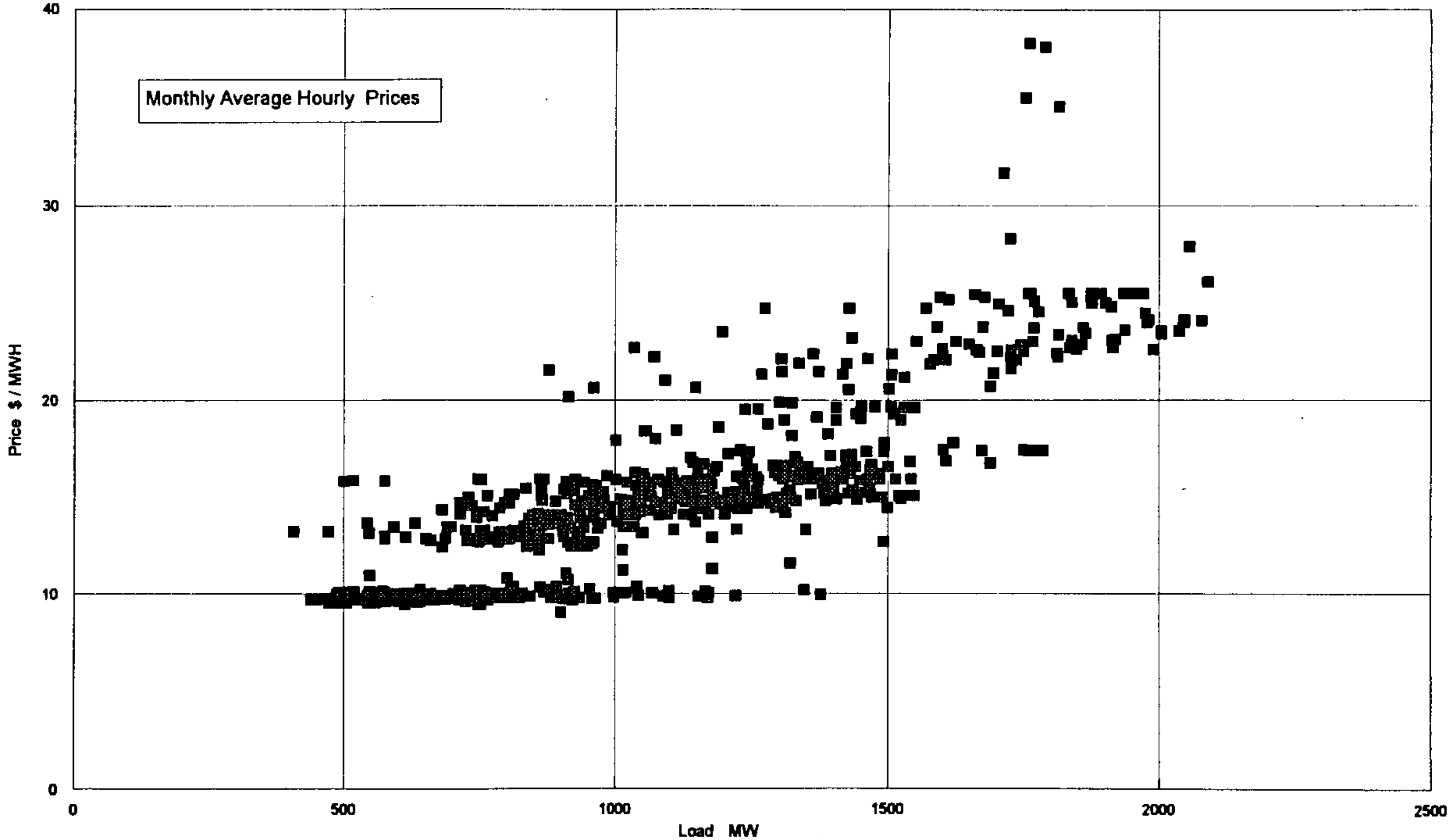


FIGURE 1

Appendix 3,
Schedule ELM - 1

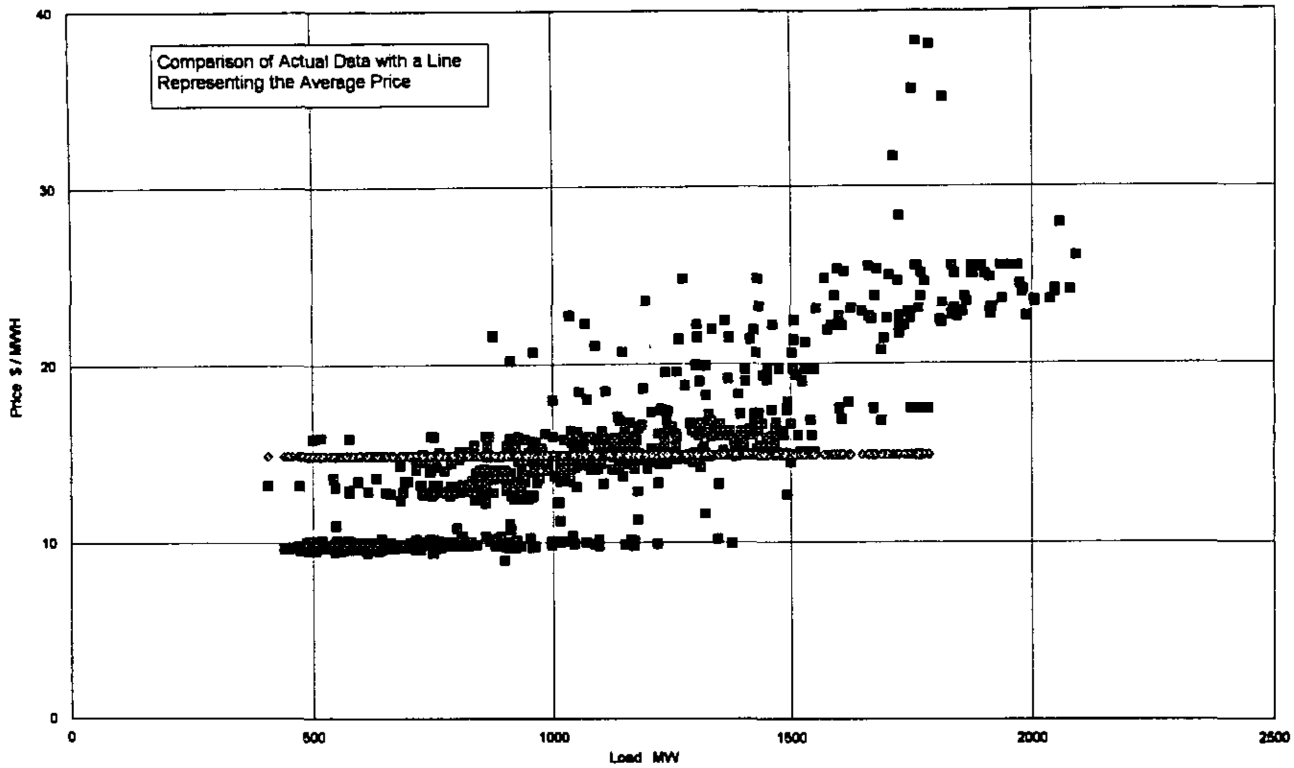


FIGURE 2

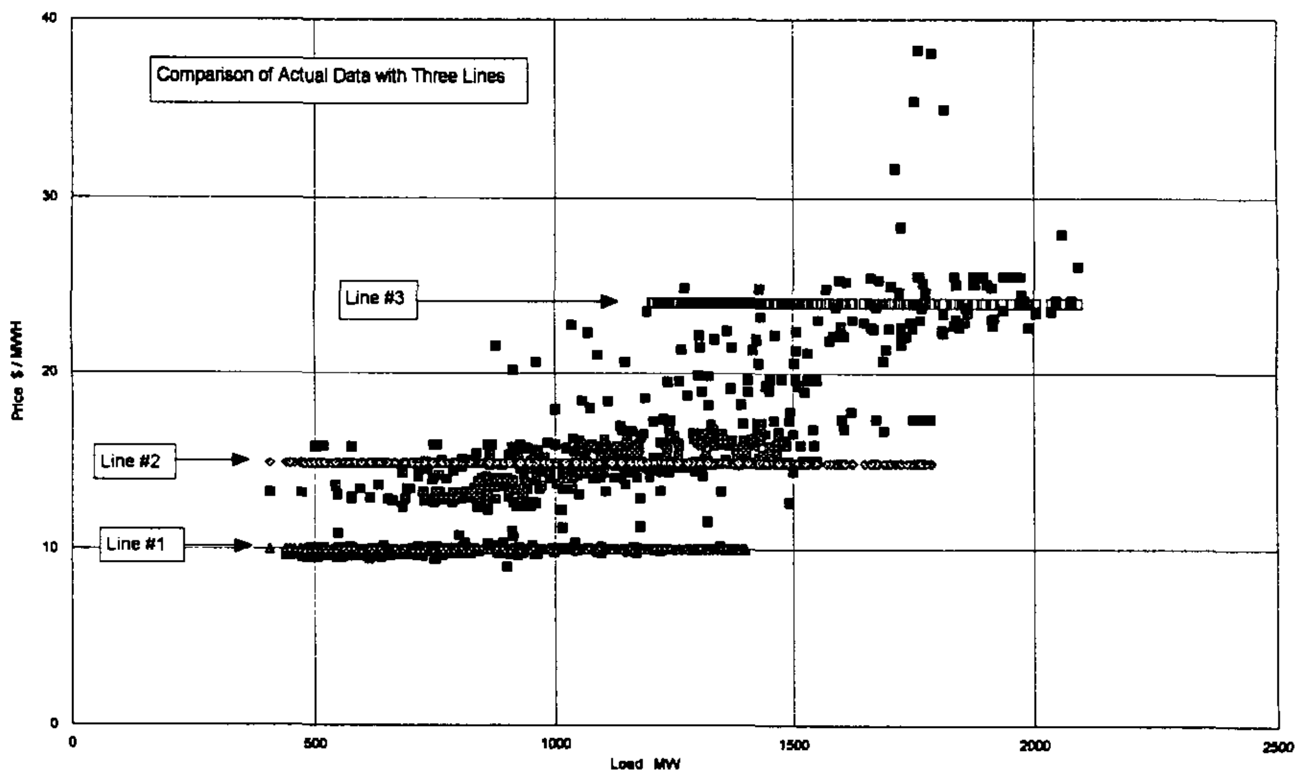


FIGURE 3

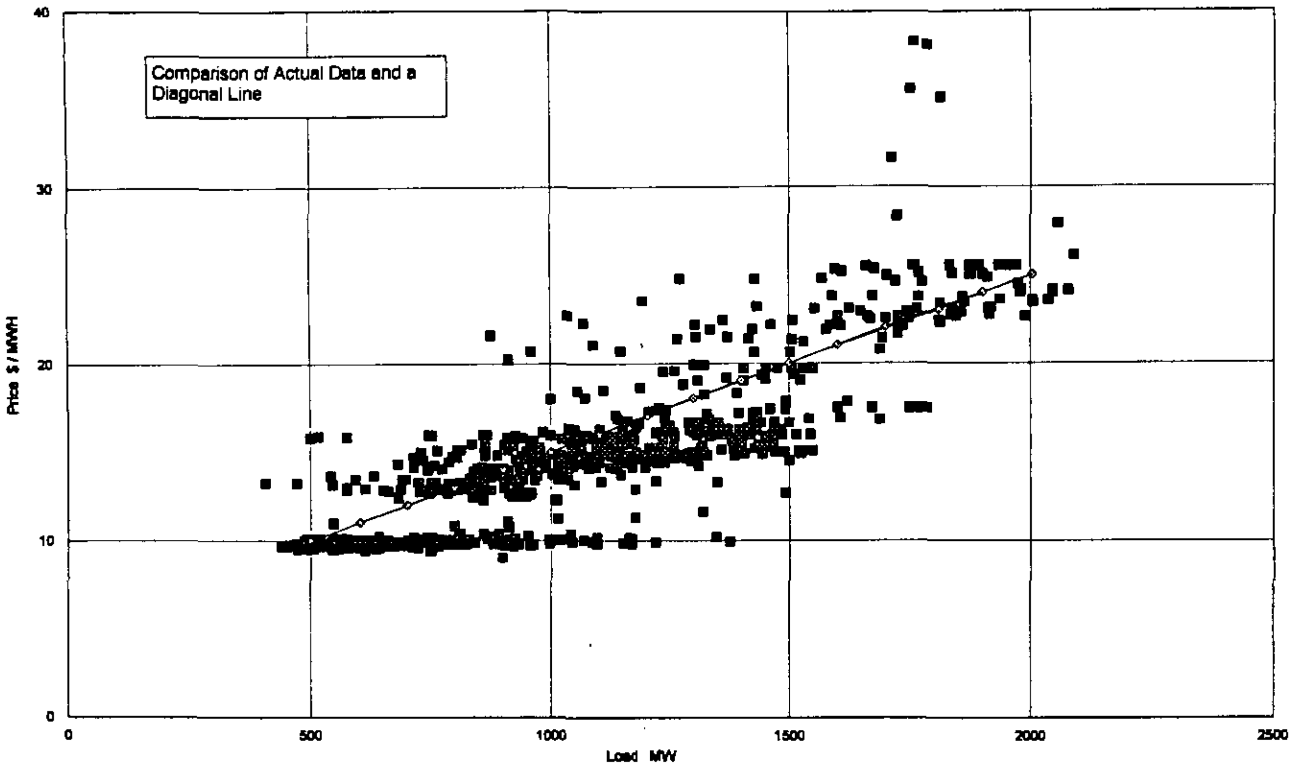


FIGURE 4

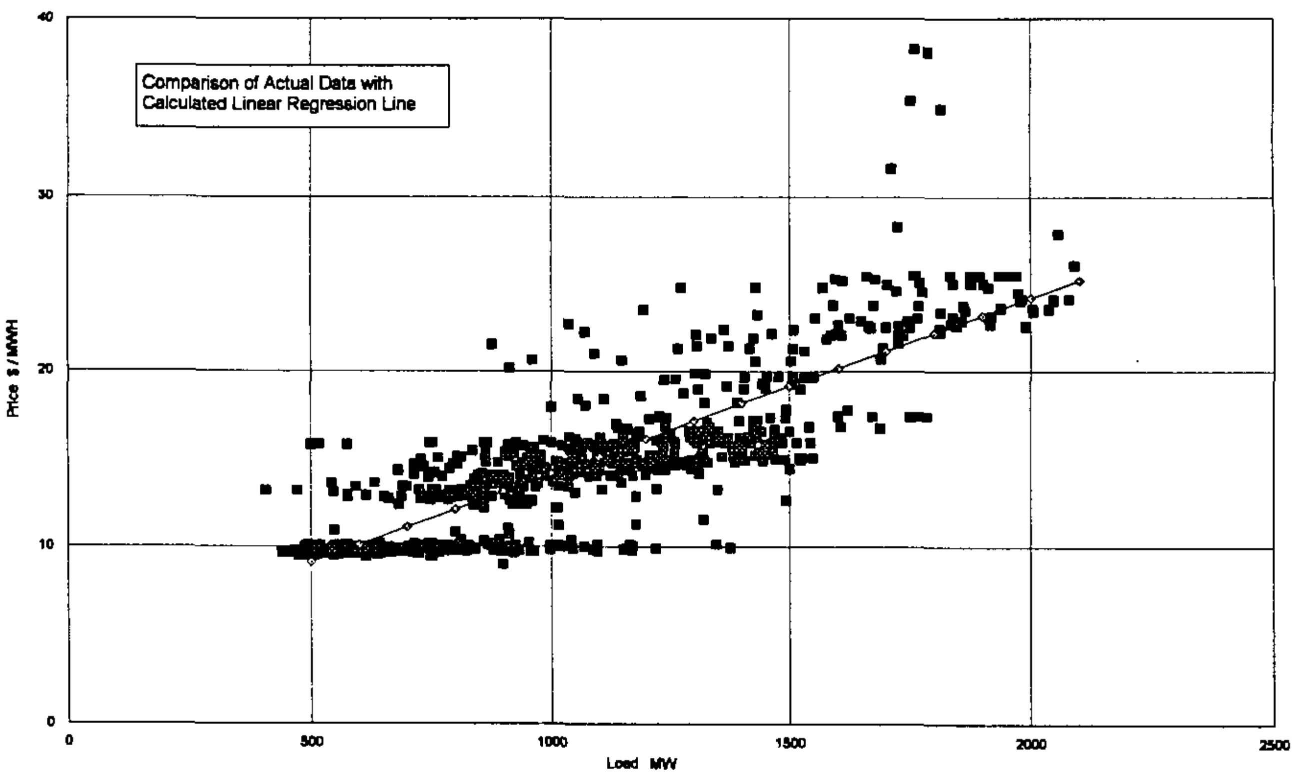


FIGURE 5

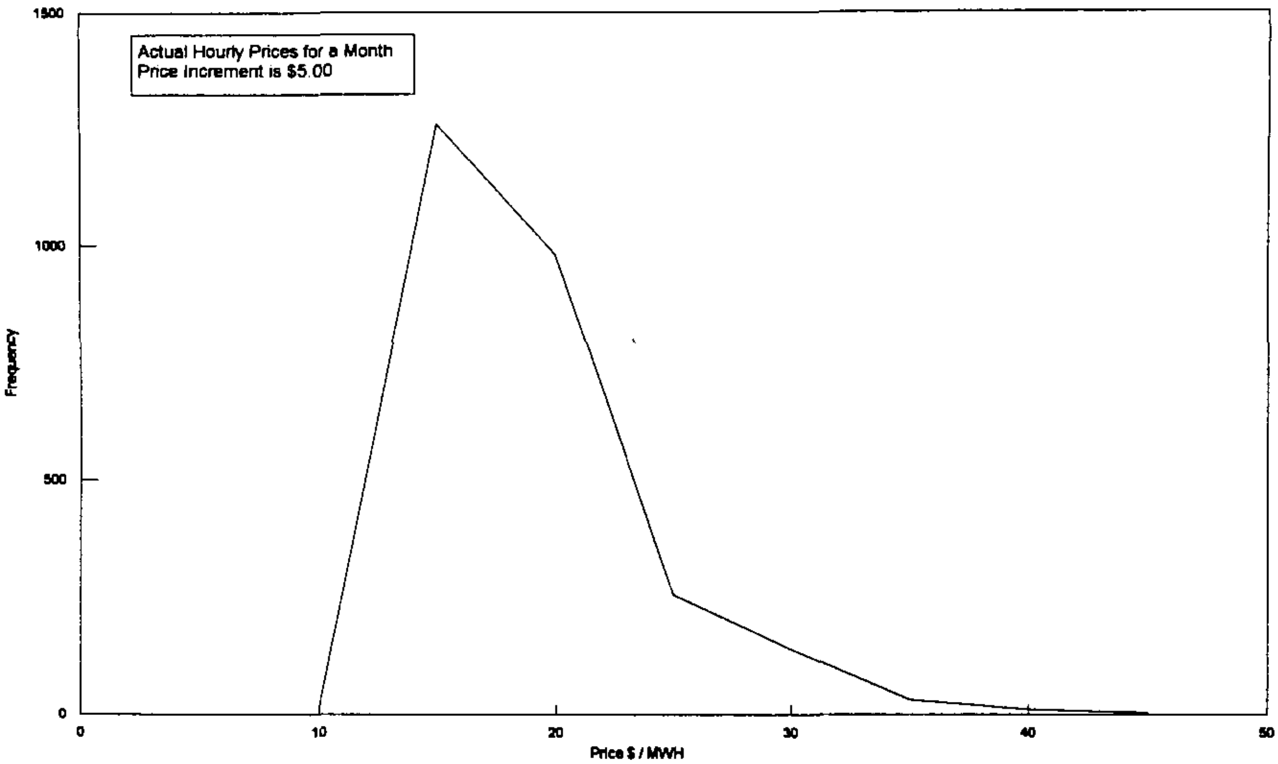


FIGURE 6

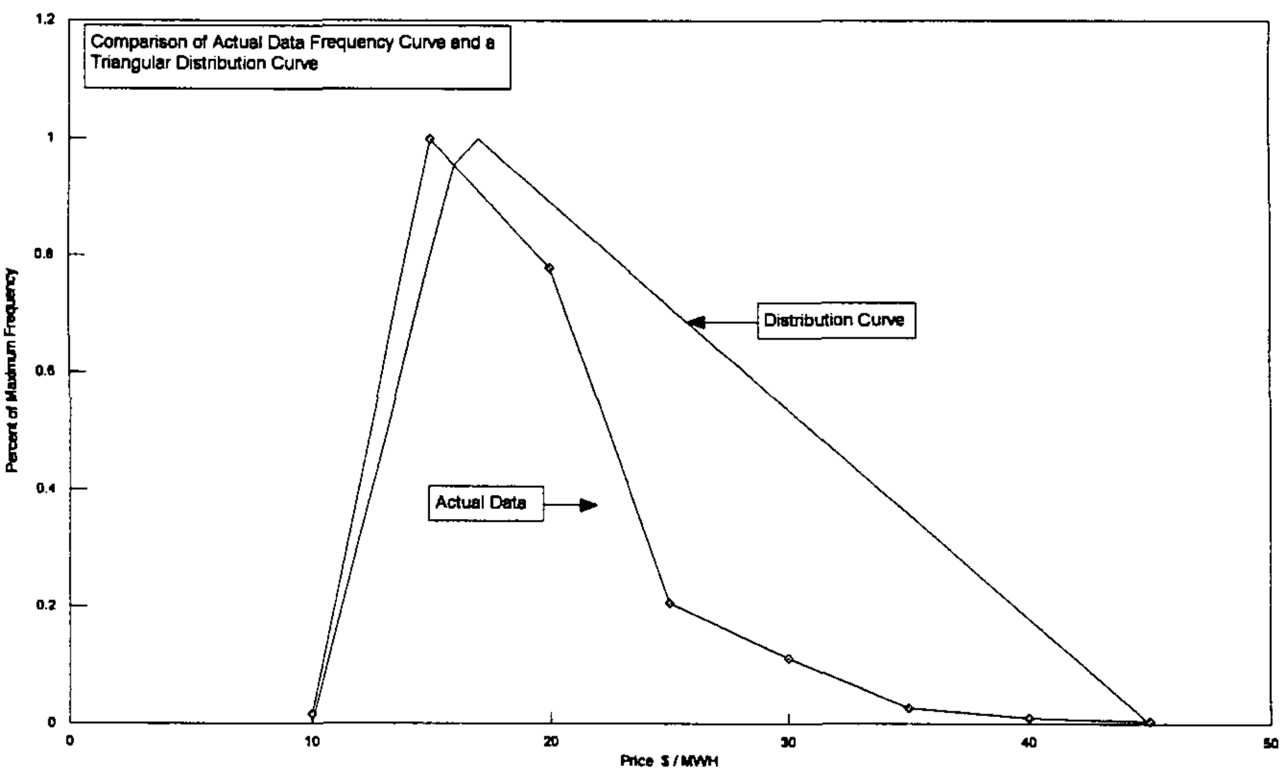


FIGURE 7

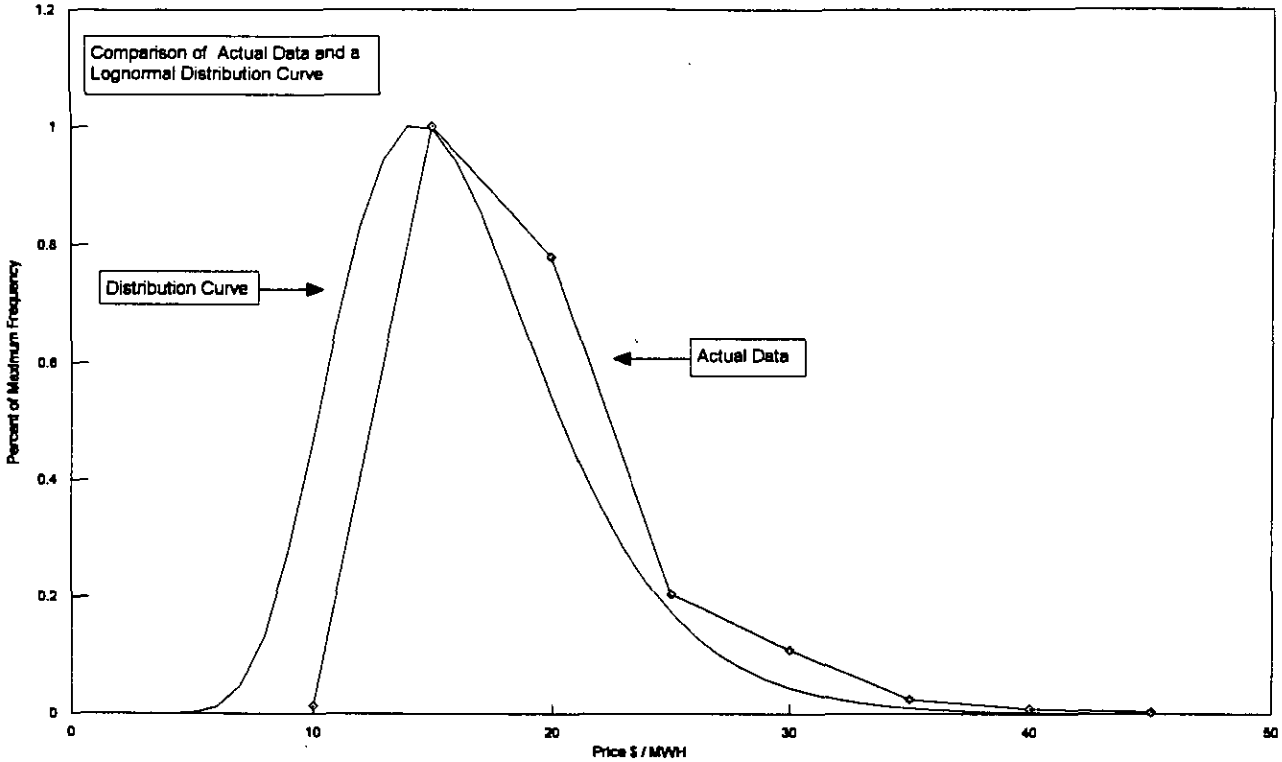


FIGURE 8

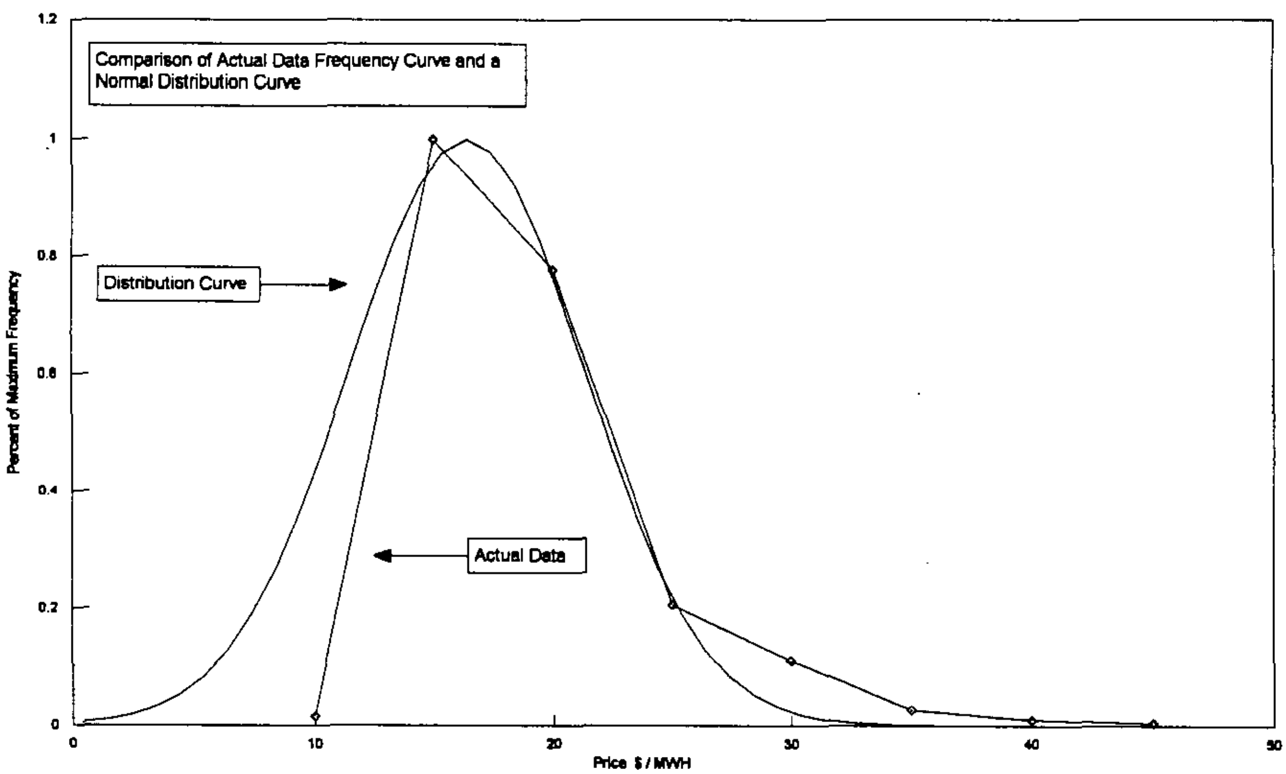


FIGURE 9

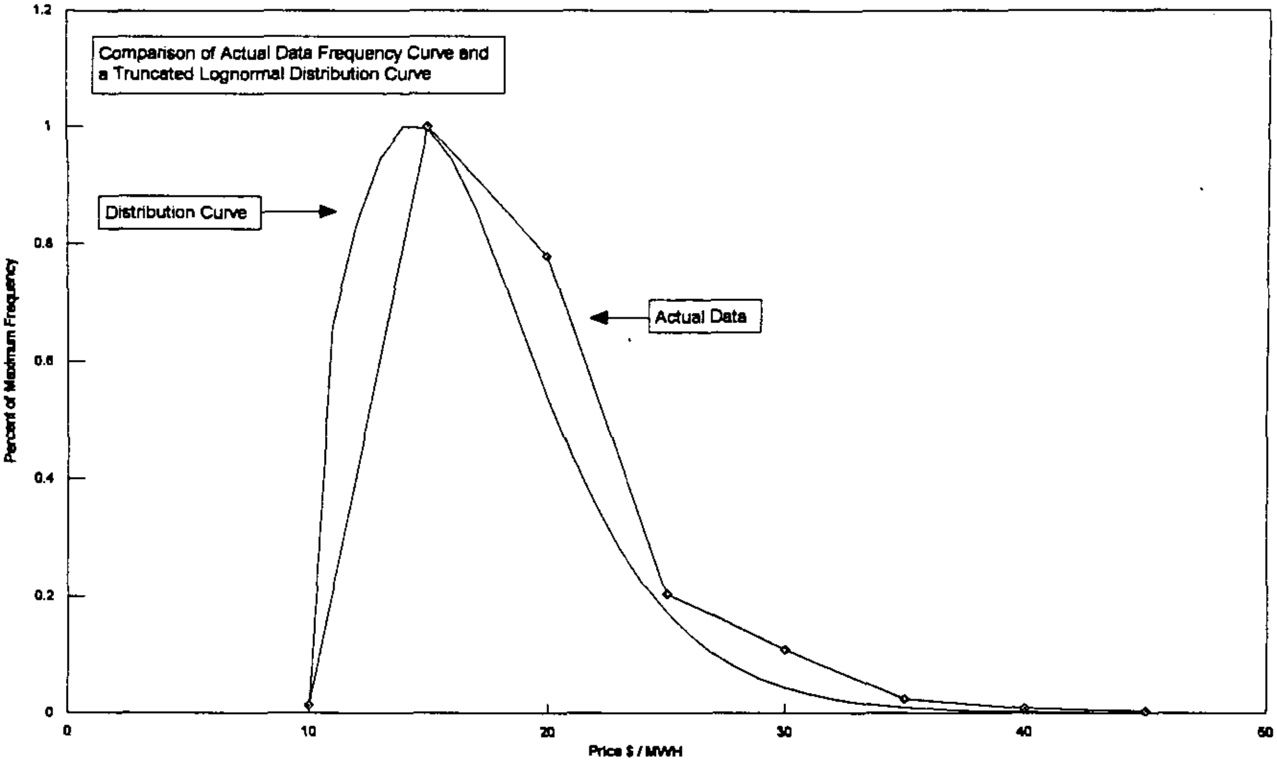


FIGURE 10

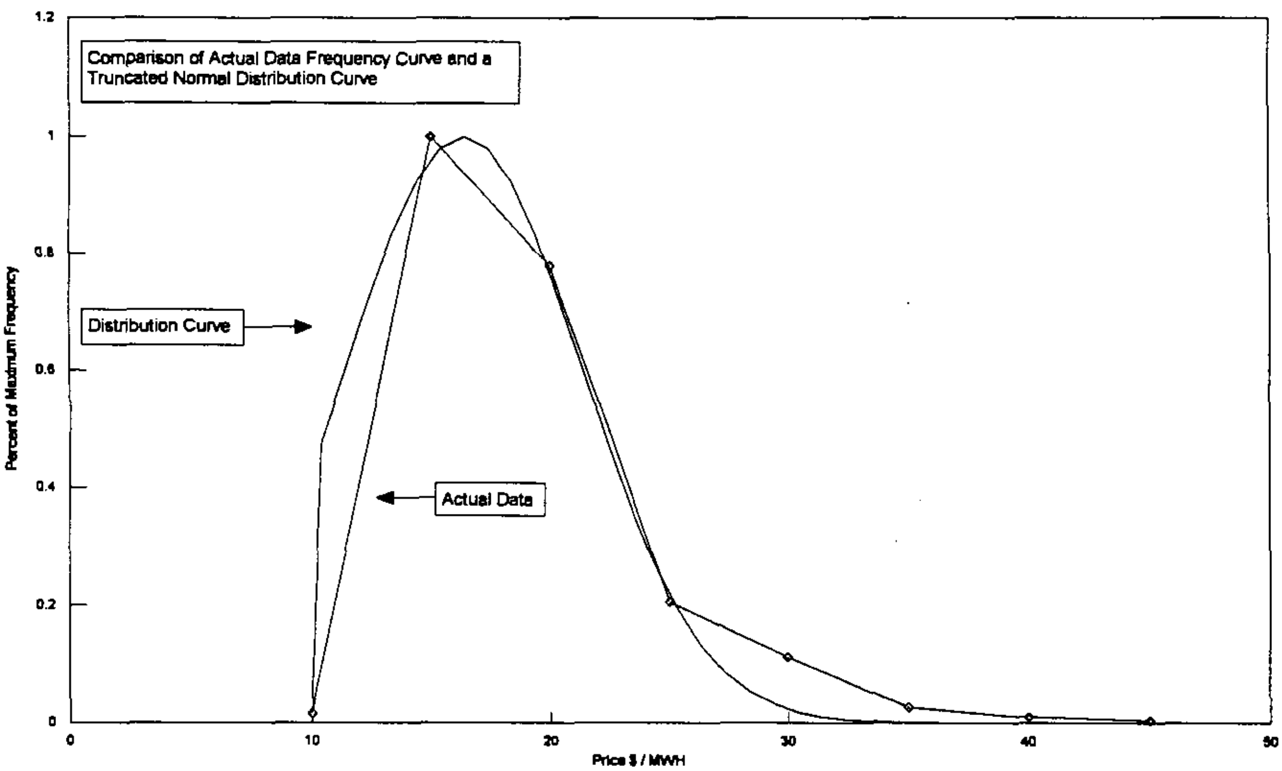


FIGURE 11

Average Hourly Prices by Hour and Day of the Month for One Month

Day of Month \ Hour of Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	10.00	10.00	10.00	10.00	10.00	10.00	14.00	15.00	15.00	15.00	16.00	18.00	16.00	16.00	18.00	16.00	16.00	18.00	16.00	15.00	15.00	NO DATA	12.00	10.00
2	10.00	10.00	10.00	10.00	10.00	10.00	14.00	15.00	15.00	15.00	16.00	16.00	16.00	17.00	16.00	16.00	16.00	16.00	18.00	15.00	15.00	15.00	12.00	10.00
3	10.00	10.00	10.00	10.00	10.00	10.00	14.00	14.00	13.00	13.00	13.00	14.00	13.00	14.00	16.00	14.00	13.00	15.00	14.00	15.00	15.00	15.00	12.00	10.00
4	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	18.00	14.00	14.00	13.00	14.00	16.00	14.00	14.00	15.00	14.00	15.00	15.00	15.00	12.00	10.00
5	NO DATA	10.00	NO DATA	10.00	10.00	10.00	16.00	16.00	18.00	17.00	16.00	18.00	19.00	22.00	22.00	22.00	19.00	18.00	16.00	15.00	15.00	15.00	12.00	10.00
6	NO DATA	10.00	NO DATA	10.00	10.00	10.00	15.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	20.00	16.00	16.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	10.00	10.00
7	10.00	10.00	10.00	10.00	10.00	10.00	16.00	16.00	17.00	17.00	17.00	17.00	17.00	NO DATA	NO DATA	NO DATA	NO DATA	38.00	35.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
8	10.00	NO DATA	NO DATA	10.00	10.00	10.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	16.00	15.00	16.00	NO DATA	NO DATA	NO DATA	18.00	16.00	16.00	16.00	15.00	10.00	10.00
9	10.00	10.00	10.00	10.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	16.00	16.00	16.00	18.00	16.00	NO DATA	NO DATA	16.00	10.00	10.00
10	10.00	10.00	10.00	10.00	10.00	10.00	13.00	13.00	12.00	13.00	13.00	NO DATA	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	10.00	10.00
11	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	13.00	13.00	13.00	NO DATA	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	10.00	10.00
12	10.00	10.00	10.00	10.00	10.00	10.00	13.00	13.00	14.00	14.00	14.00	NO DATA	14.00	15.00	14.00	13.00	14.00	14.00	14.00	15.00	15.00	15.00	10.00	10.00
13	10.00	10.00	10.00	10.00	10.00	10.00	14.00	14.00	15.00	15.00	14.00	18.00	14.00	15.00	14.00	13.00	14.00	14.00	14.00	15.00	15.00	15.00	10.00	10.00
14	10.00	10.00	10.00	10.00	10.00	10.00	15.00	15.00	18.00	15.00	15.00	15.00	16.00	16.00	15.00	15.00	15.00	15.00	16.00	15.00	15.00	NO DATA	10.00	10.00
15	10.00	10.00	10.00	10.00	10.00	10.00	16.00	16.00	16.00	17.00	16.00	16.00	17.00	NO DATA	16.00	17.00	16.00	17.00	18.00	17.00	17.00	22.00	10.00	10.00
16	10.00	10.00	NO DATA	NO DATA	NO DATA	10.00	16.00	19.00	19.00	19.00	19.00	22.00	22.00	NO DATA	24.00	24.00	22.00	25.00	23.00	23.00	20.00	22.00	10.00	10.00
17	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	19.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	23.00	23.00	NO DATA	NO DATA	22.00	NO DATA	NO DATA
18	NO DATA	13.00	13.00	13.00	13.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	19.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	23.00	23.00	NO DATA	NO DATA	22.00	NO DATA	NO DATA
19	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	19.00	NO DATA	NO DATA	NO DATA	NO DATA	25.00	25.00	25.00	23.00	22.00	NO DATA	22.00	NO DATA	NO DATA
20	13.00	13.00	13.00	NO DATA	13.00	13.00	13.00	13.00	13.00	13.00	25.00	25.00	25.00	23.00	25.00	26.00	26.00	25.00	25.00	25.00	25.00	25.00	15.00	15.00
21	13.00	13.00	13.00	13.00	13.00	13.00	21.00	20.00	22.00	22.00	22.00	NO DATA	NO DATA	NO DATA	25.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	25.00	NO DATA	15.00	15.00
22	13.00	14.00	14.00	14.00	14.00	14.00	19.00	20.00	22.00	22.00	NO DATA	NO DATA	NO DATA	NO DATA	25.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	25.00	22.00	15.00	15.00
23	15.00	14.00	14.00	14.00	14.00	14.00	23.00	23.00	22.00	23.00	23.00	23.00	24.00	23.00	24.00	25.00	25.00	24.00	NO DATA	NO DATA	15.00	NO DATA	NO DATA	NO DATA
24	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	17.00	17.00	18.00	18.00	18.00	17.00	15.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
25	NO DATA	13.00	13.00	13.00	13.00	13.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	15.00	15.00	15.00	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
26	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	14.00	14.00	14.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	12.00
27	10.00	10.00	10.00	NO DATA	10.00	10.00	15.00	15.00	NO DATA	15.00	15.00	15.00	16.00	16.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	12.00	12.00
28	10.00	10.00	10.00	NO DATA	10.00	10.00	14.00	15.00	NO DATA	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	12.00	12.00
29	10.00	10.00	10.00	NO DATA	10.00	10.00	14.00	15.00	15.00	NO DATA	NO DATA	NO DATA	15.00	15.00	NO DATA	NO DATA	15.00	15.00	15.00	15.00	15.00	15.00	12.00	12.00
30	10.00	10.00	10.00	10.00	10.00	10.00	14.00	14.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	12.00	12.00

Total Number of Average Prices : 524
Total Number of Possible Average Prices : 720

FIGURE 12

Appendix 3,
Schedule ELM - 1

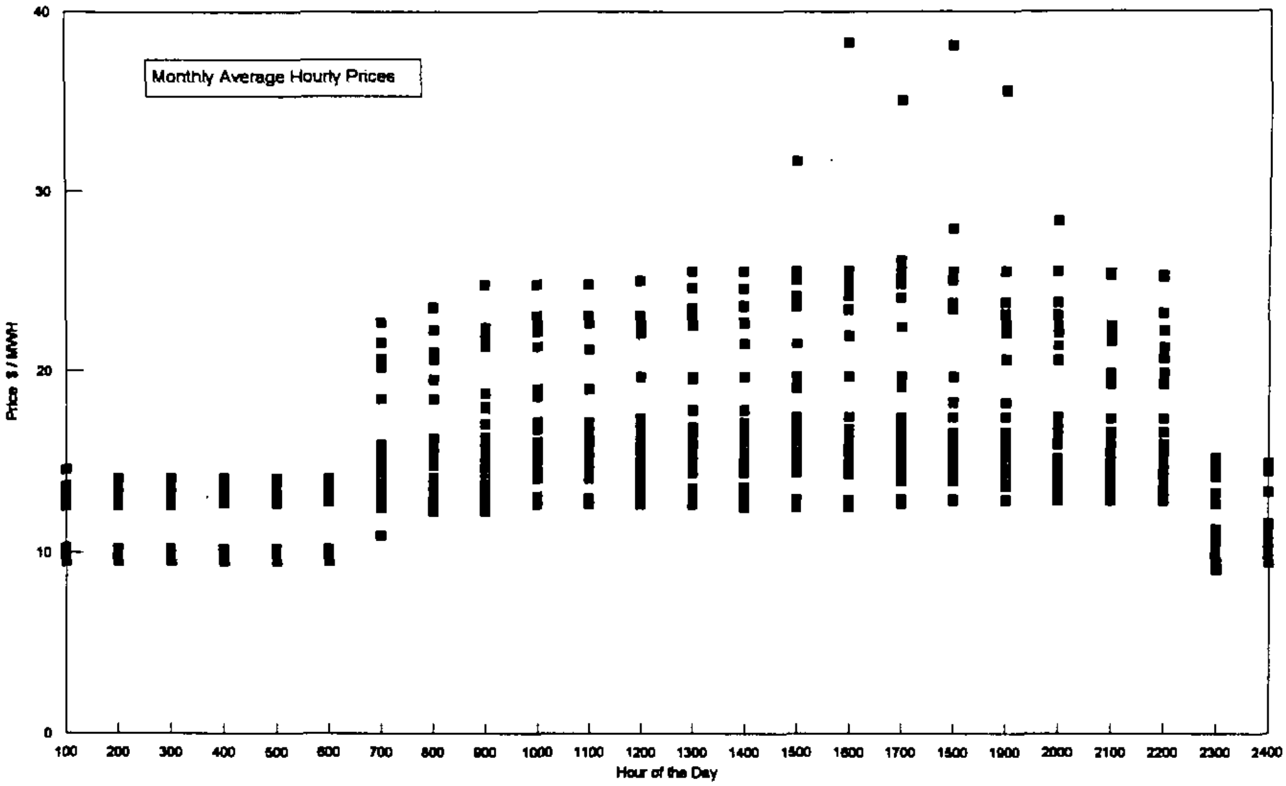


FIGURE13

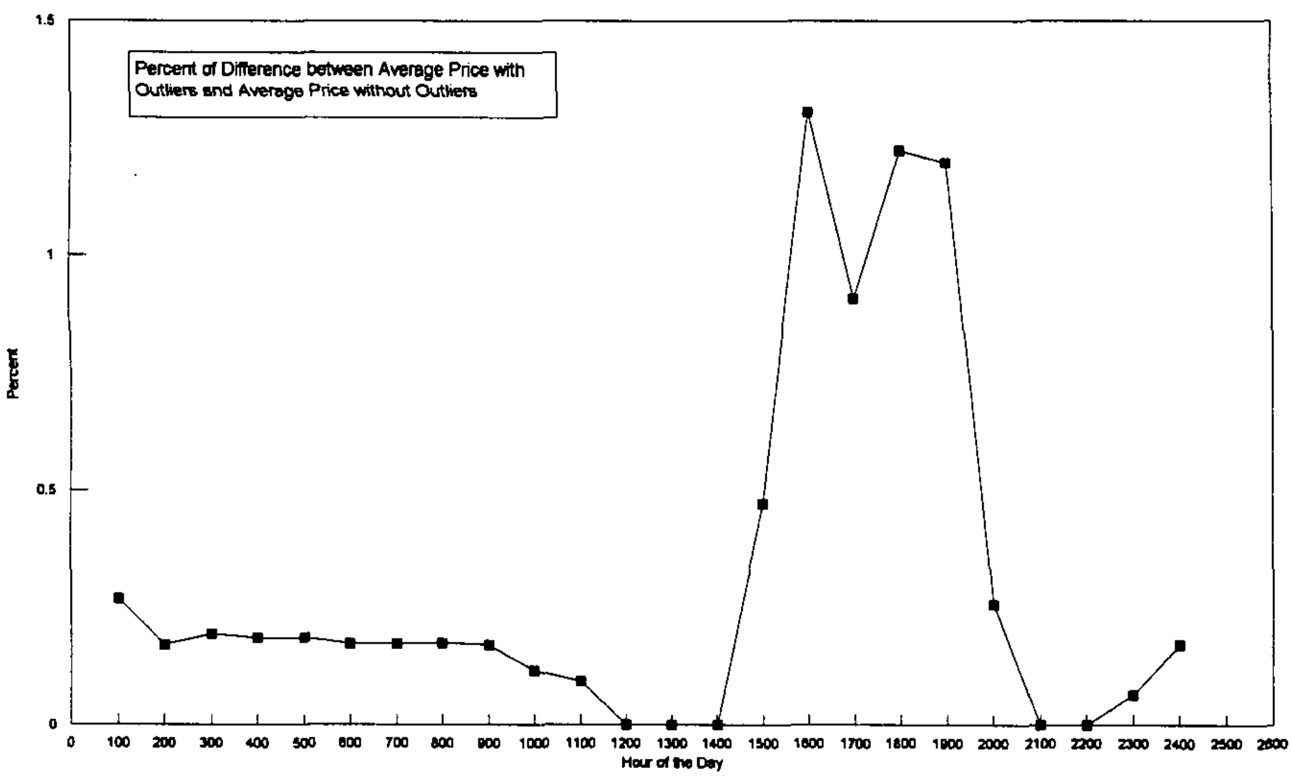


FIGURE 14

Appendix 3,
Schedule ELM - 1

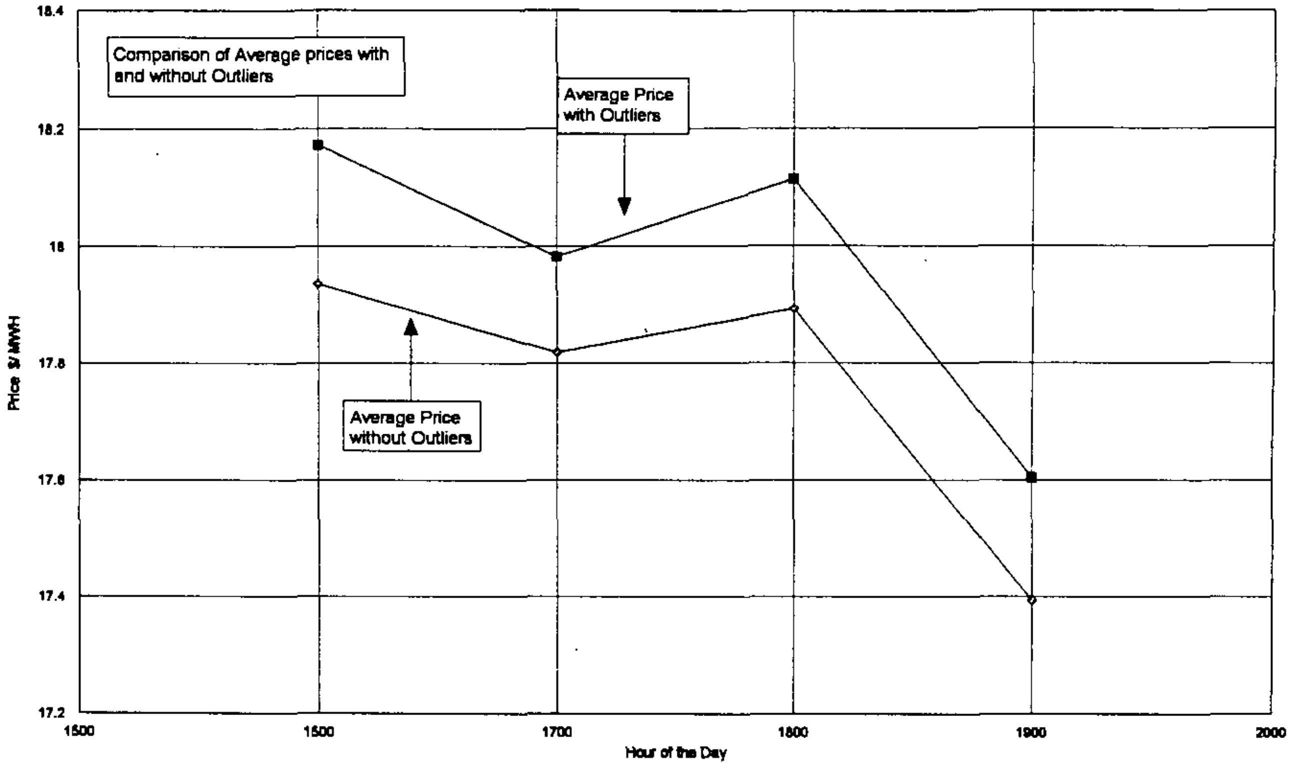


FIGURE 15

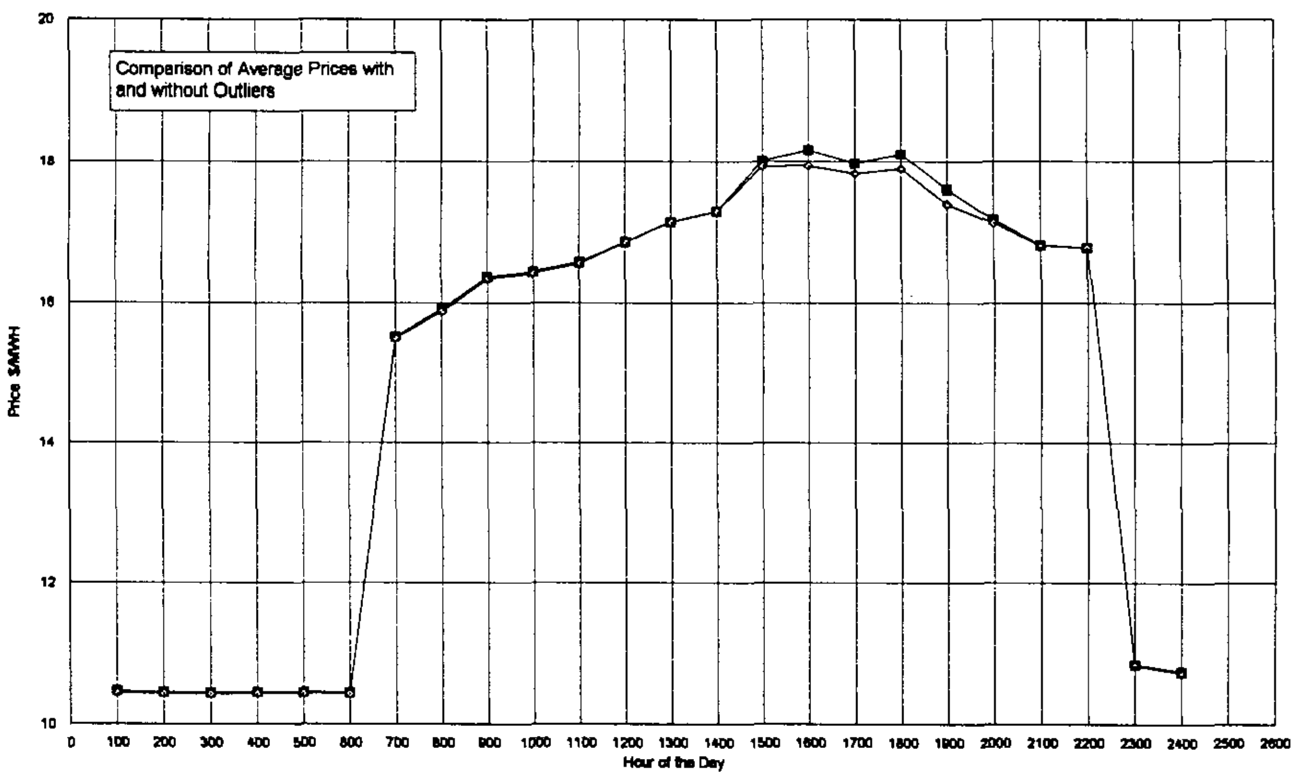


FIGURE 16

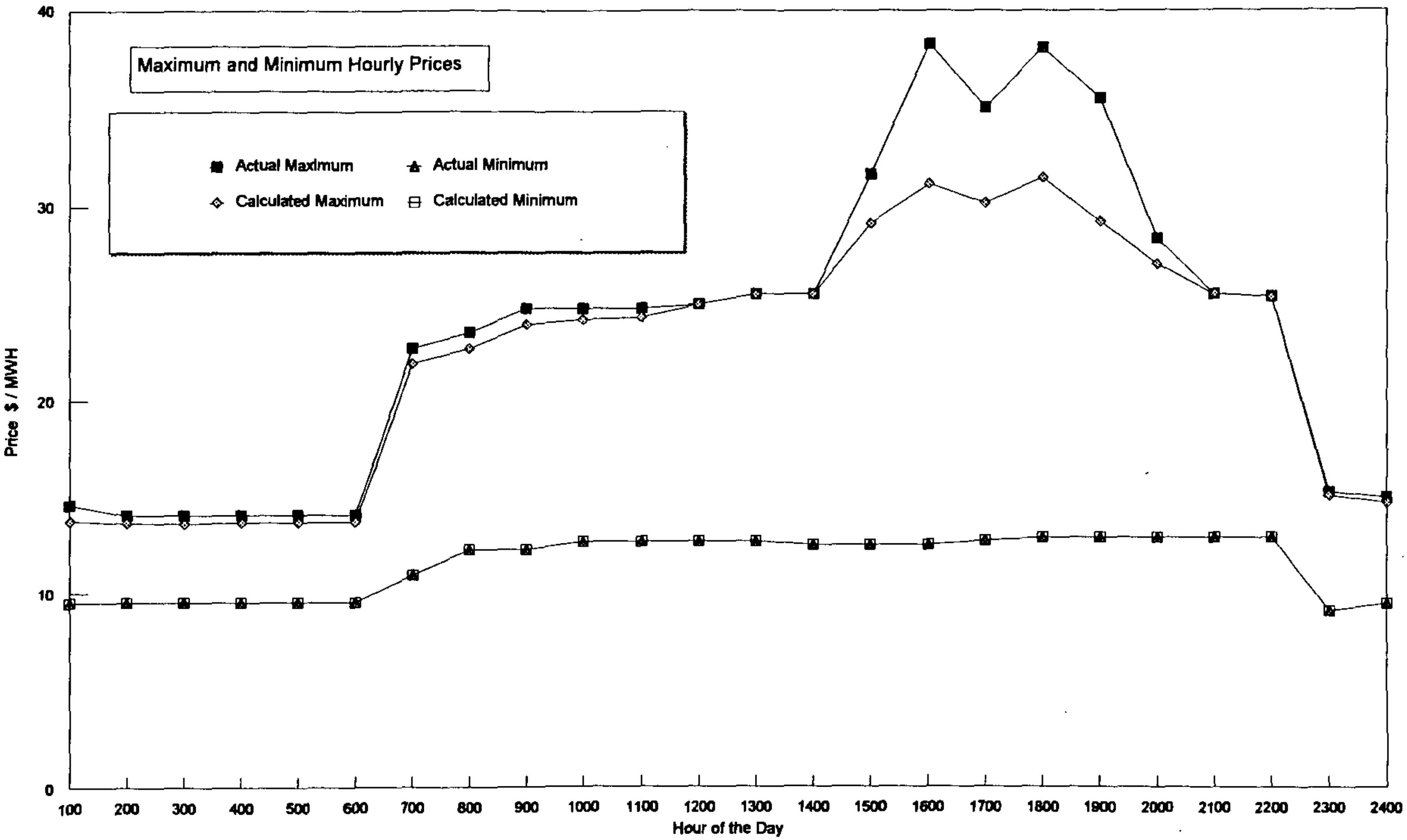

Maximum and Minimum Hourly Prices
Actual Maximum
Actual Minimum
Calculated Maximum
Calculated Minimum
Price $ / MWH
0
10
20
30
40
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
Hour of the Day

FIGURE 17

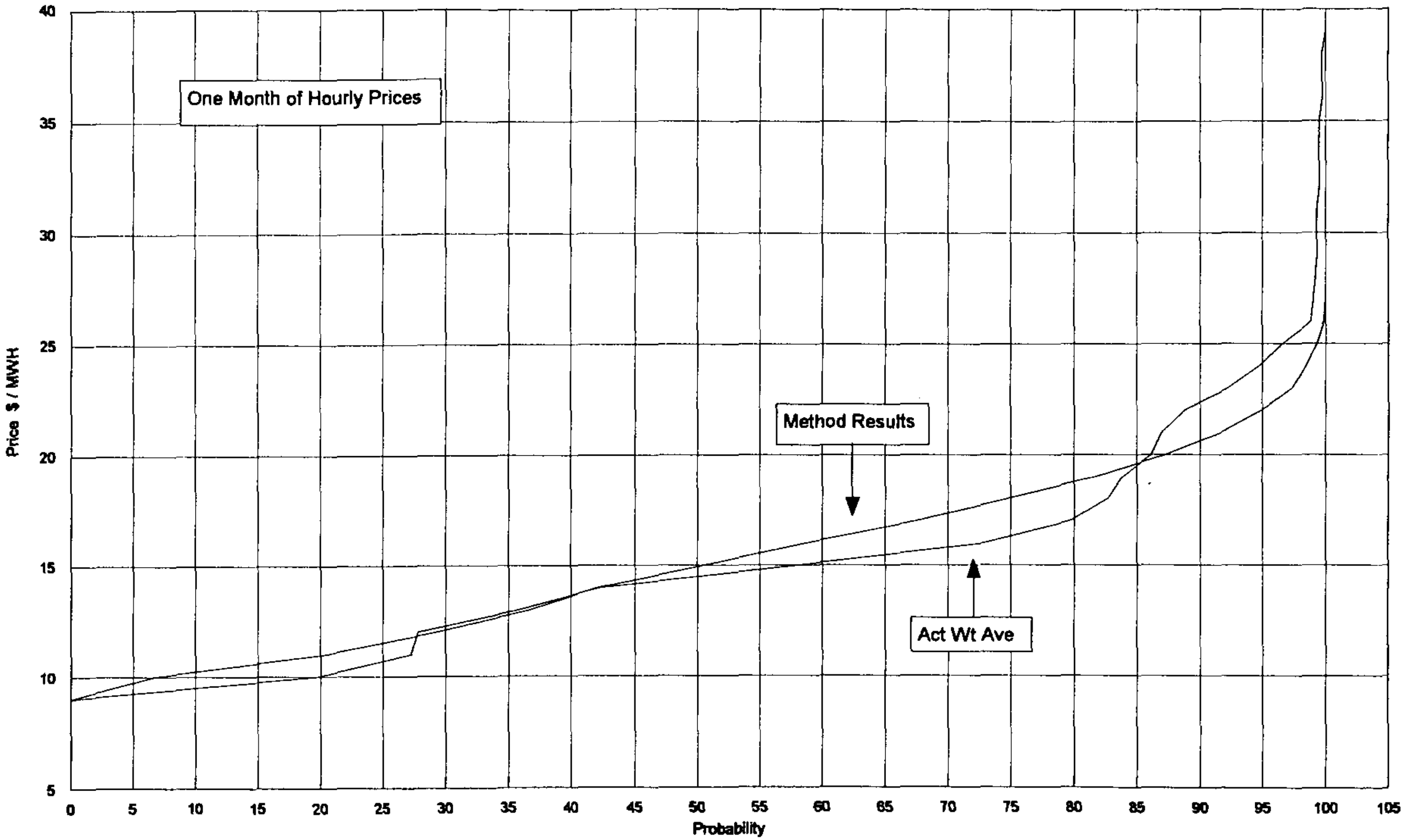

One Month of Hourly Prices
Method Results
Act Wt Ave
Price $ / MWH
40
35
30
25
20
15
10
5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
Probability

FIGURE 18

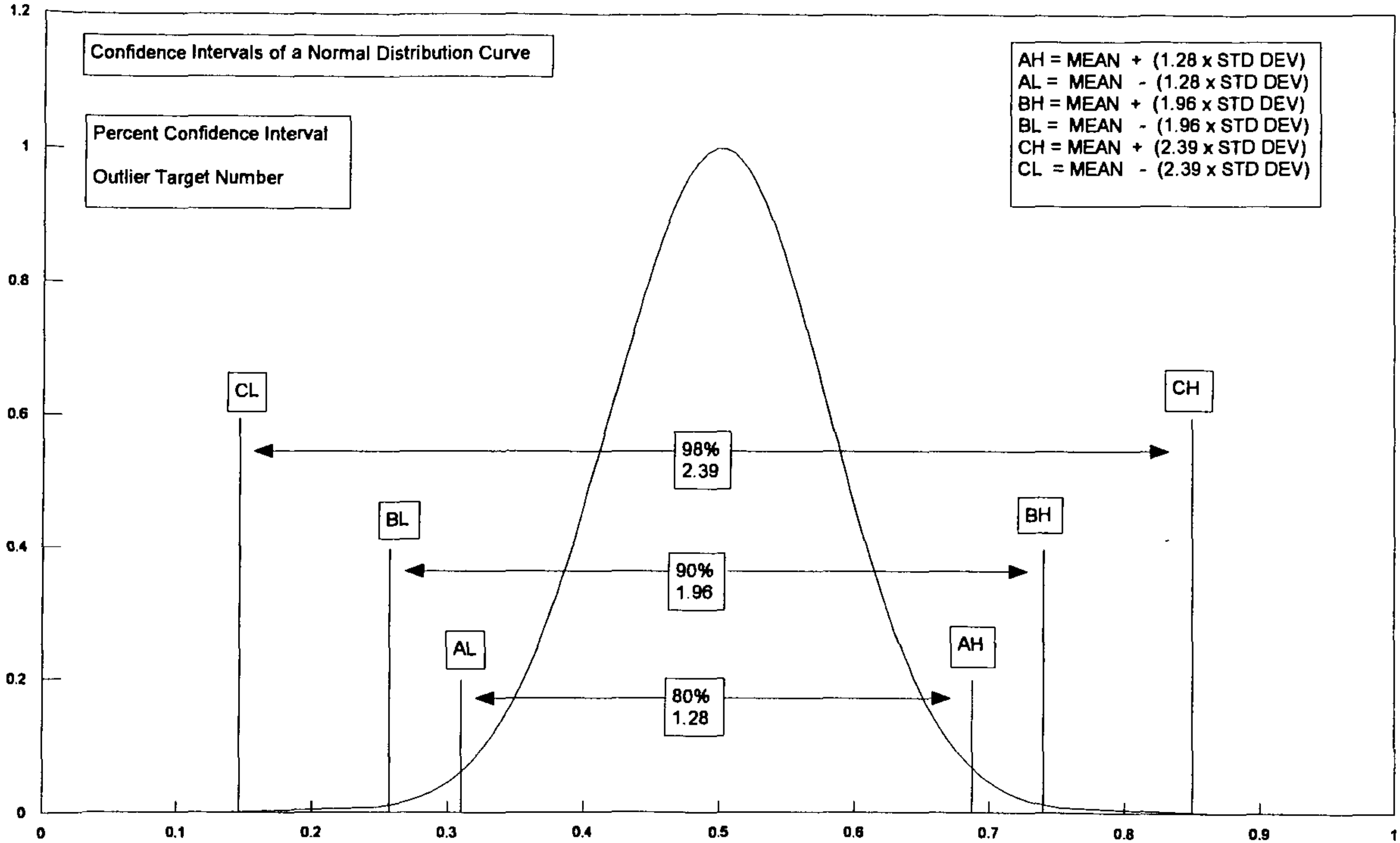

Confidence Intervals of a Normal Distribution Curve
Percent Confidence Interval
Outlier Target Number
AH = MEAN + (1.28 x STD DEV)
AL = MEAN - (1.28 x STD DEV)
BH = MEAN + (1.96 x STD DEV)
BL = MEAN - (1.96 x STD DEV)
CH = MEAN + (2.39 x STD DEV)
CL = MEAN - (2.39 x STD DEV)
CL
CH
98%
2.39
BL
BH
90%
1.96
AL
AH
80%
1.28
1.2
1
0.8
0.6
0.4
0.2
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1

FIGURE 19

APPENDIX A

PROCEDURES FOR CALCULATING SPOT MARKET POWER PRICES

FOR USE IN PRODUCTION COST MODEL

1. Load a month of the hourly interchange power price data and the hourly net system loads from the 20.080 data into a LOTUS 123 worksheet. See Figure A-1 and A-2.
2. Transfer all price data for capacity contract purchases and sales to another worksheet. Capacity contracts should be identified by the Electric Utility as such.
3. For the remaining data calculate the hourly weighted average price for each hour of the month. Total cost for an hour divided by the total MWHs of the hour.
4. Create a matrix using the weighted average prices with hour of the day across the top, and day of the month down the left side. See Figure A-3.
5. Eliminate any zeros by making the cell blank.
6. Determine the average value for each of the 24 columns using the LOTUS @AVE Function. Place the results in a row below the matrix. See Figure A-4.
7. Determine the standard deviation for each of the 24 columns using the LOTUS @STD Function. Place the results in the row below the average values. See Figure A-4.
8. Determine the minimum price for each of the 24 columns, using the LOTUS @MIN Function. Place the results in a row below the standard deviation values. See Figure A-4.
9. Determine the maximum price for each of the 24 columns, using the LOTUS @MAX Function. Place the results in a row below the minimum values. See Figure A-4.
10. Calculate the statistical maximum and minimum prices for each column using 2.39 as the outlier target. Place the results in a row below the maximum values. See Figure A-5.

    Maximum price = average price + (2.39 x Standard Deviation)
    Minimum price = average price - (2.39 x Standard Deviation)

11. In each column replace any prices higher than the calculated statistical maximum price for that column with the calculated statistical maximum price for that column. See Figure A-6.
12. In each column replace any prices lower than the calculated statistical minimum price for that column with the calculated statistical minimum price for that column. See Figure A-7.

13. Create @RISK TNORMAL Functions for each of the 24 columns and identify the cell location of the input data. Place the functions in a row below the calculated maximum and minimum price rows. See Figure A-8.

@RISK FUNCTION IS: @<<RISK>>TNORMAL(AVE,STDDEV,MIN,MAX)

Input data is the average price, the standard deviation, the minimum price, and the maximum price for each column. Enter the cell location for each in the function.

14. Go into LOTUS Add-in program called @RISK. Identify the Output as the row of @RISK TNORMAL Functions created in step 12. Set the iterations for 2000. Set the Settings for Latin Hypercube Sampling. Run @RISK.
15. Place the resulting statistic reports in a file. End @RISK.
16. Bring the file with the statistical reports into the LOTUS 123 worksheet.
17. Create a matrix using the @RISK outputs with hour of the day across the top, and percentiles down the left side. See Figure A-9.
18. To shift the output prices to reflect an imperfect normal distribution, put the numbers shown below in a column left of the matrix staring with zero at the top. See Figure A-10.

0.000
5.556
11.111
16.667
22.222
27.778
33.333
38.889
44.444
50.000
54.545
59.091
63.636
68.182
72.727
77.273
81.818
86.364
90.909
95.455
100.000

These numbers reflect a shift of the 50 percentile prices to the 45 percentile while maintaining equal increments above and below 50 percentile and keeping the same maximum and minimum prices.

19. Divide each number in the column created in step 17 by the results of: 100/((number of days in the month)- 1). Add one to the results and round each result to the nearest whole number. See Figure A-11.
20. Add whole numbers to the column created in step 18 where needed by adding rows until the total number of rows equal the number of days in the month. See Figure A-12.
21. Create prices for the rows created in step 19 by interpolating between the existing prices in each of the 24 columns. See Figure A-13 and A-14.
22. Sort the hourly system load by hour and in ascending order of MWH. See Figure A-15.
23. Sort the hourly calculated prices by hour and in ascending order of price.
24. Align up the hourly loads in step 21 with the hourly prices in step 22. Sort the results by date and hour. See Figure A-16 and A-17.
25. Calculate the 24 maximum hourly amount of MWs for each hour. Assign this amount of MWs for the hours in the month.

FIGURES

CO NAME	P/S	DATE	HOUR	MW	PRICE	COST
ABC	P	01/01/95	100	10	10.00	100.00
ABC	P	01/01/95	200	15	10.00	150.00
ABC	P	01/01/95	300	10	10.20	102.00
ABC	S	01/01/95	400	15	10.20	153.00
ABC	P	01/01/95	500	20	10.20	204.00
ABC	P	01/01/95	600	25	10.30	257.50
ABC	P	01/01/95	700	20	10.30	206.00
ABC	P	01/01/95	800	25	10.40	260.00
ABC	P	01/01/95	900	30	10.50	315.00
ABC	P	01/01/95	1000	20	10.50	210.00
ABC	P	01/01/95	1100	25	10.60	265.00
ABC	P	01/01/95	1200	20	12.00	240.00
ABC	P	01/01/95	1300	25	12.00	300.00
ABC	P	01/01/95	1400	30	12.00	360.00
ABC	P	01/01/95	1500	35	13.00	455.00
ABC	P	01/01/95	1600	30	14.00	420.00
ABC	P	01/01/95	1700	35	14.00	490.00
KLM	P	01/01/95	100	15	27.50	412.50
KLM	P	01/01/95	200	20	25.00	500.00
KLM	P	01/01/95	300	15	25.75	386.25
KLM	P	01/01/95	400	20	25.75	515.00
KLM	P	01/01/95	500	25	25.50	637.50
KLM	P	01/01/95	600	30	26.00	780.00
KLM	P	01/01/95	700	25	25.75	643.75
KLM	P	01/01/95	800	30	26.25	787.50
KLM	P	01/01/95	900	35	27.00	945.00
KLM	P	01/01/95	1000	25	26.25	656.25
KLM	P	01/01/95	1100	30	27.25	817.50
KLM	P	01/01/95	1200	25	30.00	750.00
KLM	P	01/01/95	1300	30	37.50	1125.00
KLM	P	01/01/95	1400	35	32.50	1137.50
KLM	P	01/01/95	1500	40	35.00	1400.00
KLM	P	01/01/95	1600	35	37.50	1312.50
KLM	P	01/01/95	1700	40	37.50	1500.00
WWW	P	01/01/95	100	20	30.00	600.00
WWW	P	01/01/95	200	25	30.00	750.00
WWW	P	01/01/95	300	20	30.30	606.00
WWW	P	01/01/95	400	25	30.30	757.50
WWW	P	01/01/95	500	30	30.60	918.00
WWW	P	01/01/95	600	35	30.60	1071.00
WWW	P	01/01/95	700	30	30.90	927.00
WWW	P	01/01/95	800	35	31.50	1102.50
WWW	P	01/01/95	900	40	31.80	1272.00
WWW	P	01/01/95	1000	30	31.50	945.00
WWW	P	01/01/95	1100	35	31.80	1113.00
WWW	P	01/01/95	1200	30	39.00	1170.00
WWW	P	01/01/95	1300	35	42.00	1470.00
WWW	S	01/01/95	1400	40	37.50	1500.00
WWW	P	01/01/95	1500	45	40.50	1822.50
WWW	P	01/01/95	1600	40	45.00	1800.00
WWW	P	01/01/95	1700	45	46.50	2092.50
XYZ	P	01/01/95	100	12	22.00	264.00
XYZ	P	01/01/95	200	17	20.00	340.00
XYZ	P	01/01/95	300	12	20.50	246.00
XYZ	P	01/01/95	400	17	20.50	348.50
XYZ	P	01/01/95	500	22	20.50	451.00
XYZ	P	01/01/95	600	27	20.50	553.50
XYZ	P	01/01/95	700	22	20.50	451.00
XYZ	P	01/01/95	800	27	20.60	556.20
XYZ	P	01/01/95	900	32	21.20	678.40
XYZ	P	01/01/95	1000	22	21.20	466.40
XYZ	P	01/01/95	1100	27	21.40	577.80
XYZ	P	01/01/95	1200	22	26.00	572.00
XYZ	P	01/01/95	1300	27	26.00	702.00
XYZ	P	01/01/95	1400	32	30.00	960.00
XYZ	P	01/01/95	1500	37	30.00	1110.00
XYZ	P	01/01/95	1600	32	29.00	928.00
XYZ	P	01/01/95	1700	37	29.00	1073.00

FIGURE A-1

Data for dates 01/03/95 through 01/31/95 have been left off intentionally because of space limitations

SYSTEM HOURLY LOADS

DATE	HOUR	LOAD
01/01/95	100	200
01/01/95	200	204
01/01/95	300	204
01/01/95	400	210
01/01/95	500	212
01/01/95	600	212
01/01/95	700	214
01/01/95	800	215
01/01/95	900	213
01/01/95	1000	217
01/01/95	1100	220
01/01/95	1200	240
01/01/95	1300	260
01/01/95	1400	300
01/01/95	1500	310
01/01/95	1600	290
01/01/95	1700	280
01/01/95	1800	300
01/01/95	1900	310
01/01/95	2000	290
01/01/95	2100	270
01/01/95	2200	260
01/01/95	2300	220
01/01/95	2400	210
01/02/95	100	201
01/02/95	200	205
01/02/95	300	205
01/02/95	400	211
01/02/95	500	213
01/02/95	600	213
01/02/95	700	215
01/02/95	800	216
01/02/95	900	214
01/02/95	1000	218
01/02/95	1100	221
01/02/95	1200	241
01/02/95	1300	261
01/02/95	1400	301
01/02/95	1500	311
01/02/95	1600	291
01/02/95	1700	281
01/02/95	1800	301
01/02/95	1900	311
01/02/95	2000	291
01/02/95	2100	271
01/02/95	2200	261
01/02/95	2300	221
01/02/95	2400	211

FIGURE A-2

Appendix 3,
Schedule ELM - 1

WEIGHTED AVERAGES

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
01/02/95	25.32	23.69	24.66	24.15	23.88	23.83	24.07	24.23	24.55	24.61	24.83	29.55
01/03/95	24.79	23.19	24.12	23.64	23.39	23.38	23.57	23.74	24.08	24.10	24.34	28.88
01/04/95	25.87	24.19	25.18	24.67	24.40	24.36	24.59	24.78	25.09	25.14	25.38	30.14
01/05/95	24.63	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.89	24.21	24.28	24.49	29.09
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.96	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.08	24.31	28.88
01/09/95	25.03	23.42	24.35	23.89	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.18
01/10/95	25.15	23.53	24.49	23.99	23.72	23.68	23.91	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.08	25.04	24.53	24.28	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.68	24.07	25.01	24.49	24.21	24.16	24.40	24.58	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.60	24.11	23.85	23.83	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.86
01/15/95	24.57	22.89	23.82	23.44	23.19	23.16	23.37	23.54	23.65	23.89	24.13	28.65
01/16/95	25.29	23.67	24.64	24.13	23.87	23.83	24.08	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78
01/18/95	24.60	23.01	23.95	23.48	23.20	23.18	23.36	23.55	23.86	23.91	24.13	28.88
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.98	23.71	23.66	23.69	24.07	24.39	24.43	24.67	29.29
01/21/95	24.83	23.25	24.18	23.71	23.48	23.43	23.64	23.82	24.13	24.17	24.41	28.98
01/22/95	25.64	24.16	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.16
01/23/95	25.75	24.09	25.08	24.57	24.30	24.27	24.49	24.67	25.00	25.04	25.26	30.01
01/24/95	24.77	23.17	24.12	23.62	23.38	23.32	23.55	23.71	24.02	24.07	24.30	28.68
01/25/95	24.92	23.32	24.26	23.78	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.08
01/26/95	26.20	24.53	25.53	25.01	24.74	24.69	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.18	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.39	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.76	23.98	24.15	24.46	24.51	24.76	29.37
01/30/95	25.84	24.18	25.18	24.65	24.37	24.32	24.58	24.73	25.04	25.11	25.33	30.16
01/31/95	25.52	23.89	24.85	24.36	24.10	24.07	24.29	24.46	24.79	24.83	25.07	29.77

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.89	30.49	32.56	32.84	29.80	30.76	27.15	24.88	23.97	22.76	22.59
01/02/95	32.19	30.28	31.95	34.11	34.41	31.27	32.16	28.46	25.86	25.11	23.84	23.66
01/03/95	31.58	29.64	31.30	33.42	33.71	30.73	31.83	27.88	25.32	24.60	23.38	23.19
01/04/95	32.95	30.93	32.65	34.66	35.16	32.04	32.98	29.08	26.41	25.66	24.36	24.19
01/05/95	31.36	29.46	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.64	31.50	33.63	33.92	30.89	31.80	28.04	25.48	24.76	23.50	23.33
01/07/95	32.08	30.14	31.81	33.98	34.26	31.17	32.08	28.33	25.74	25.00	23.74	23.56
01/08/95	31.51	29.62	31.28	33.39	33.68	30.67	31.55	27.86	25.31	24.59	23.35	23.18
01/09/95	31.94	29.95	31.65	33.79	34.07	31.11	32.04	28.16	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.26	25.68	24.95	23.68	23.51
01/11/95	32.70	30.78	32.46	34.65	34.96	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	43.03	40.80	42.43	34.87	31.68	32.58	28.65	26.21	25.45	24.16	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.88
01/14/95	32.58	30.61	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.26	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.64	23.66
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.65	24.68
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.84	25.12	24.40	23.18	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.86	28.95	26.31	25.56	24.27	24.10
01/24/95	31.52	29.62	31.26	33.36	33.68	30.64	31.52	27.84	25.30	24.57	23.33	23.16
01/25/95	31.75	29.82	31.49	33.62	33.91	30.90	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.36	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.28	25.70	24.96	23.69	23.52
01/28/95	31.62	29.72	31.38	33.50	33.79	30.76	31.84	27.94	25.39	24.66	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.76	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.08	23.90

FIGURE A-3

WEIGHTED AVERAGES

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
01/02/95	25.32	23.69	24.66	24.15	23.88	23.83	24.07	24.23	24.55	24.61	24.83	29.55
01/03/95	24.79	23.19	24.12	23.84	23.39	23.38	23.57	23.74	24.06	24.10	24.34	28.88
01/04/95	25.87	24.19	25.18	24.67	24.40	24.38	24.59	24.76	25.09	25.14	25.38	30.14
01/05/95	24.63	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.89	24.21	24.26	24.49	29.09
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.96	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.06	24.31	28.88
01/09/95	25.03	23.42	24.35	23.69	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.16
01/10/95	25.15	23.53	24.49	23.99	23.72	23.66	23.91	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.06	25.04	24.53	24.26	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.68	24.02	25.01	24.49	24.21	24.16	24.40	24.58	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.60	24.11	23.85	23.83	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.86
01/15/95	24.57	22.99	23.82	23.44	23.19	23.16	23.37	23.54	23.85	23.89	24.13	28.65
01/16/95	25.29	23.67	24.64	24.13	23.87	23.83	24.06	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.66	25.89	30.78
01/18/95	24.60	23.01	23.95	23.46	23.20	23.16	23.38	23.55	23.86	23.91	24.13	28.88
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.96	23.71	23.68	23.69	24.07	24.39	24.43	24.67	29.29
01/21/95	24.83	23.25	24.18	23.71	23.46	23.43	23.64	23.82	24.13	24.17	24.41	28.98
01/22/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.18
01/23/95	25.75	24.09	25.06	24.57	24.30	24.27	24.49	24.67	25.00	25.04	25.28	30.01
01/24/95	24.77	23.17	24.12	23.62	23.38	23.32	23.55	23.71	24.02	24.07	24.30	28.88
01/25/95	24.92	23.32	24.26	23.78	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.06
01/26/95	26.20	24.53	25.53	25.01	24.74	24.89	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.16	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.38	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.76	23.98	24.15	24.48	24.51	24.76	29.37
01/30/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.18
01/31/95	25.52	23.89	24.85	24.38	24.10	24.07	24.29	24.46	24.79	24.83	25.07	29.77
AVE	25.25	23.62	24.58	24.09	23.82	23.79	24.01	24.16	24.50	24.55	24.78	29.44
STD DEV	0.5158	0.4789	0.5040	0.4884	0.4809	0.4768	0.4844	0.4858	0.4901	0.4956	0.4988	0.6021
MIN	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
MAX	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.89	30.49	32.56	32.84	29.90	30.76	27.15	24.68	23.97	22.78	22.59
01/02/95	32.19	30.28	31.95	34.11	34.41	31.27	32.18	28.48	25.88	25.11	23.84	23.66
01/03/95	31.58	29.64	31.30	33.42	33.71	30.73	31.63	27.86	25.32	24.60	23.38	23.19
01/04/95	32.95	30.93	32.65	34.86	35.16	32.04	32.98	29.08	26.41	25.68	24.38	24.19
01/05/95	31.38	29.46	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.84	31.50	33.63	33.92	30.89	31.80	28.04	25.48	24.76	23.50	23.33
01/07/95	32.06	30.14	31.81	33.96	34.28	31.17	32.06	28.33	25.74	25.00	23.74	23.56
01/08/95	31.51	29.62	31.28	33.39	33.68	30.67	31.55	27.88	25.31	24.59	23.35	23.18
01/09/95	31.84	29.95	31.65	33.79	34.07	31.11	32.04	28.16	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.29	25.66	24.95	23.68	23.51
01/11/95	32.70	30.76	32.48	34.65	34.98	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	43.03	40.60	42.43	34.87	31.88	32.58	28.65	26.21	25.45	24.18	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.68
01/14/95	32.58	30.61	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.29	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.84	23.66
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.66
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.84	25.12	24.40	23.16	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.88	28.95	26.31	25.56	24.27	24.10
01/24/95	31.52	29.62	31.26	33.38	33.66	30.64	31.52	27.84	25.30	24.57	23.33	23.16
01/25/95	31.75	29.82	31.49	33.62	33.91	30.90	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.36	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.28	25.70	24.98	23.69	23.52
01/28/95	31.62	29.72	31.38	33.50	33.79	30.76	31.64	27.94	25.39	24.66	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.76	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.06	23.90
AVE	32.14	30.60	32.14	34.29	34.33	31.25	32.18	28.39	25.80	25.06	23.79	23.62
STD DEV	0.6453	2.3491	1.6691	1.6320	0.6901	0.6174	0.6348	0.5720	0.5193	0.5025	0.4760	0.4709
MIN	30.74	28.89	30.49	32.56	32.84	29.90	30.76	27.15	24.68	23.97	22.78	22.59
MAX	33.61	43.03	40.60	42.43	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.66

FIGURE A-4

Appendix 3,
Schedule ELM - 1

WEIGHTED AVERAGES

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
01/02/95	25.32	23.69	24.68	24.15	23.88	23.83	24.07	24.23	24.55	24.61	24.83	29.55
01/03/95	24.79	23.19	24.12	23.64	23.39	23.36	23.57	23.74	24.08	24.10	24.34	28.68
01/04/95	25.67	24.19	25.18	24.67	24.40	24.36	24.59	24.76	25.09	25.14	25.38	30.14
01/05/95	24.63	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.89	24.21	24.26	24.49	29.09
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.98	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.08	24.31	28.68
01/09/95	25.03	23.42	24.35	23.89	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.16
01/10/95	25.15	23.53	24.49	23.99	23.72	23.68	23.81	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.08	25.04	24.53	24.28	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.68	24.02	25.01	24.49	24.21	24.16	24.40	24.58	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.60	24.11	23.85	23.83	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.68
01/15/95	24.57	22.99	23.92	23.44	23.19	23.16	23.37	23.54	23.85	23.89	24.13	28.65
01/16/95	25.29	23.67	24.64	24.13	23.87	23.83	24.08	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.66	25.89	30.78
01/18/95	24.60	23.01	23.95	23.46	23.20	23.16	23.38	23.55	23.86	23.91	24.13	28.68
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.96	23.71	23.68	23.89	24.07	24.39	24.43	24.67	29.29
01/21/95	24.83	23.25	24.18	23.71	23.46	23.43	23.84	23.82	24.13	24.17	24.41	28.98
01/22/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.16
01/23/95	25.75	24.09	25.08	24.57	24.30	24.27	24.49	24.67	25.00	25.04	25.28	30.01
01/24/95	24.77	23.17	24.12	23.62	23.36	23.32	23.55	23.71	24.02	24.07	24.30	28.68
01/25/95	24.82	23.32	24.26	23.78	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.06
01/26/95	26.20	24.53	25.53	25.01	24.74	24.69	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.18	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.39	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.76	23.98	24.15	24.48	24.51	24.76	29.37
01/30/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.16
01/31/95	25.52	23.89	24.85	24.38	24.10	24.07	24.29	24.46	24.79	24.83	25.07	29.77
AVE	25.25	23.62	24.58	24.09	23.82	23.79	24.01	24.18	24.50	24.55	24.78	29.44
STD DEV	0.5158	0.4799	0.5040	0.4864	0.4809	0.4768	0.4644	0.4856	0.4901	0.4958	0.4968	0.6021
MIN	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
MAX	26.42	24.70	25.72	25.18	24.90	24.65	25.09	25.27	25.59	25.66	25.89	30.78
CALC MIN	24.02	22.48	23.38	22.92	22.67	22.65	22.85	23.02	23.33	23.36	23.59	28.00
CALC MAX	26.48	24.77	25.79	25.25	24.97	24.93	25.17	25.34	25.67	25.73	25.97	30.88

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.69	30.49	32.58	32.84	29.90	30.76	27.15	24.68	23.97	22.76	22.59
01/02/95	32.19	30.28	31.95	34.11	34.41	31.27	32.16	28.46	25.86	25.11	23.84	23.68
01/03/95	31.58	29.64	31.30	33.42	33.71	30.73	31.63	27.88	25.32	24.60	23.36	23.19
01/04/95	32.95	30.93	32.65	34.86	35.16	32.04	32.98	29.06	26.41	25.68	24.36	24.19
01/05/95	31.38	29.46	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.84	31.50	33.63	33.92	30.89	31.80	28.04	25.48	24.78	23.50	23.33
01/07/95	32.08	30.14	31.81	33.98	34.26	31.17	32.06	28.33	25.74	25.00	23.74	23.58
01/08/95	31.51	29.62	31.28	33.39	33.68	30.67	31.55	27.88	25.31	24.59	23.35	23.18
01/09/95	31.94	29.95	31.65	33.79	34.07	31.11	32.04	28.16	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.28	25.68	24.95	23.68	23.51
01/11/95	32.70	30.78	32.48	34.65	34.98	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	43.03	40.60	42.43	34.87	31.68	32.58	28.85	26.21	25.45	24.16	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.68
01/14/95	32.58	30.61	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.28	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.84	23.66
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.68
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.64	25.12	24.40	23.16	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.86	28.95	26.31	25.56	24.27	24.10
01/24/95	31.52	29.62	31.26	33.38	33.68	30.84	31.52	27.84	25.30	24.57	23.33	23.18
01/25/95	31.75	29.62	31.49	33.62	33.91	30.90	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.36	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.28	25.70	24.96	23.69	23.52
01/28/95	31.62	28.72	31.38	33.50	33.79	30.78	31.64	27.94	25.39	24.68	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.78	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.08	23.80
AVE	32.14	30.60	32.14	34.29	34.33	31.25	32.16	28.39	25.80	25.06	23.79	23.62
STD DEV	0.9453	2.3491	1.6691	1.6320	0.6901	0.6174	0.6348	0.5720	0.5193	0.5025	0.4760	0.4709
MIN	30.74	28.69	30.49	32.58	32.84	29.90	30.76	27.15	24.68	23.97	22.76	22.59
MAX	33.61	43.03	40.60	42.43	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.68
CALC MIN	30.60	24.98	28.15	30.39	32.68	29.78	30.64	27.02	24.55	23.86	22.65	22.49
CALC MAX	33.68	36.21	36.13	38.19	35.98	32.73	33.68	29.75	27.04	26.26	24.93	24.74

FIGURE A-5

Appendix 3,
Schedule ELM - 1

WEIGHTED AVERAGES

These averages are higher than the calculated maximum values

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.46	23.70	28.18
01/02/95	25.32	23.69	24.88	24.15	23.88	23.83	24.07	24.23	24.55	24.61	24.83	29.55
01/03/95	24.78	23.19	24.12	23.64	23.39	23.36	23.57	23.74	24.08	24.10	24.34	28.88
01/04/95	25.87	24.19	25.18	24.67	24.40	24.38	24.59	24.78	25.09	25.14	25.38	30.14
01/05/95	24.63	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.89	24.21	24.26	24.49	29.08
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.98	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.08	24.31	28.88
01/09/95	25.03	23.42	24.35	23.89	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.18
01/10/95	25.15	23.53	24.49	23.99	23.72	23.68	23.91	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.08	25.04	24.53	24.26	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.88	24.02	25.01	24.49	24.21	24.16	24.40	24.58	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.60	24.11	23.85	23.83	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.86
01/15/95	24.57	22.99	23.92	23.44	23.19	23.18	23.37	23.54	23.85	23.89	24.13	28.65
01/16/95	25.29	23.67	24.64	24.13	23.87	23.83	24.08	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78
01/18/95	24.60	23.01	23.95	23.46	23.20	23.18	23.38	23.55	23.88	23.91	24.13	28.68
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.98	23.71	23.68	23.89	24.07	24.39	24.43	24.87	29.29
01/21/95	24.83	23.25	24.18	23.71	23.46	23.43	23.64	23.82	24.13	24.17	24.41	28.98
01/22/95	25.84	24.18	25.18	24.69	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.18
01/23/95	25.75	24.09	25.08	24.57	24.30	24.27	24.48	24.67	25.00	25.04	25.26	30.01
01/24/95	24.77	23.17	24.12	23.62	23.38	23.32	23.55	23.71	24.02	24.07	24.30	28.88
01/25/95	24.92	23.32	24.28	23.78	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.08
01/26/95	26.20	24.53	25.53	25.01	24.74	24.69	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.18	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.39	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.78	23.98	24.15	24.48	24.51	24.78	29.37
01/30/95	25.84	24.18	25.18	24.65	24.37	24.32	24.58	24.73	25.04	25.11	25.33	30.18
01/31/95	25.52	23.89	24.85	24.36	24.10	24.07	24.29	24.48	24.79	24.83	25.07	29.77
AVE	25.25	23.62	24.58	24.09	23.82	23.79	24.01	24.18	24.50	24.55	24.78	29.44
STD DEV	0.5158	0.4798	0.5040	0.4884	0.4809	0.4768	0.4844	0.4856	0.4901	0.4956	0.4968	0.6021
MIN	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.18
MAX	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78
CALC MIN	24.02	22.48	23.36	22.92	22.67	22.65	22.85	23.02	23.33	23.38	23.58	28.00
CALC MAX	26.48	24.77	25.79	25.25	24.97	24.93	25.17	25.34	25.67	25.73	25.97	30.88

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.89	30.49	32.58	32.64	29.90	30.78	27.15	24.68	23.97	22.78	22.59
01/02/95	32.19	30.28	31.95	34.11	34.41	31.27	32.18	28.48	25.86	25.11	23.84	23.68
01/03/95	31.58	29.64	31.30	33.42	33.71	30.73	31.63	27.88	25.32	24.60	23.38	23.19
01/04/95	32.95	30.93	32.65	34.88	35.18	32.04	32.98	29.08	26.41	25.68	24.36	24.19
01/05/95	31.38	29.46	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.84	31.50	33.63	33.92	30.89	31.80	28.04	25.48	24.78	23.50	23.33
01/07/95	32.08	30.14	31.81	33.98	34.28	31.17	32.08	28.33	25.74	25.00	23.74	23.58
01/08/95	31.51	29.62	31.28	33.39	33.68	30.87	31.55	27.88	25.31	24.59	23.35	23.18
01/09/95	31.94	29.95	31.65	33.79	34.07	31.11	32.04	28.16	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.26	25.68	24.95	23.68	23.51
01/11/95	32.70	30.78	32.46	34.65	34.98	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	$\boxed{43.03}$	$\boxed{40.60}$	$\boxed{42.43}$	34.87	31.68	32.58	28.85	26.21	25.45	24.18	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.68
01/14/95	32.58	30.61	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.26	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.84	23.68
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.66
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.64	25.12	24.40	23.16	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.90	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.86	28.95	26.31	25.56	24.27	24.10
01/24/95	31.52	29.62	31.29	33.38	33.68	30.64	31.52	27.84	25.30	24.57	23.33	23.16
01/25/95	31.75	29.82	31.49	33.62	33.91	30.90	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.38	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.28	25.70	24.98	23.69	23.52
01/28/95	31.62	29.72	31.38	33.50	33.79	30.78	31.64	27.94	25.39	24.68	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.76	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.08	23.90
AVE	32.14	30.60	32.14	34.29	34.33	31.25	32.18	28.39	25.80	25.08	23.79	23.62
STD DEV	0.6453	2.3491	1.6691	1.6320	0.6901	0.6174	0.6348	0.5720	0.5193	0.5025	0.4760	0.4709
MIN	30.74	28.89	30.49	32.56	32.64	29.90	30.76	27.15	24.88	23.97	22.78	22.59
MAX	33.61	43.03	40.60	42.43	35.87	32.65	33.81	29.65	26.95	26.18	24.85	24.66
CALC MIN	30.60	24.98	28.15	30.39	32.68	29.78	30.64	27.02	24.55	23.88	22.65	22.49
CALC MAX	33.68	$\boxed{36.21}$	$\boxed{36.13}$	$\boxed{38.19}$	35.98	32.73	33.68	29.75	27.04	26.26	24.93	24.74

FIGURE A-6

Appendix 3,
Schedule ELM - 1

WEIGHTED AVERAGES

These averages have been replaced with the calculated values

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
01/02/95	25.32	23.69	24.68	24.15	23.88	23.63	24.07	24.23	24.55	24.61	24.83	29.55
01/03/95	24.79	23.19	24.12	23.64	23.39	23.36	23.57	23.74	24.08	24.10	24.34	28.68
01/04/95	25.87	24.19	25.18	24.67	24.40	24.38	24.59	24.78	25.09	25.14	25.38	30.14
01/05/95	24.83	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.89	24.21	24.28	24.49	29.09
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.98	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.08	24.31	28.88
01/09/95	25.03	23.42	24.35	23.89	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.16
01/10/95	25.15	23.53	24.49	23.99	23.72	23.68	23.91	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.08	25.04	24.53	24.28	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.68	24.02	25.01	24.49	24.21	24.16	24.40	24.56	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.60	24.11	23.85	23.63	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.86
01/15/95	24.57	22.99	23.92	23.44	23.19	23.18	23.37	23.54	23.85	23.89	24.13	28.65
01/16/95	25.29	23.67	24.64	24.13	23.87	23.83	24.06	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.66	25.89	30.78
01/18/95	24.60	23.01	23.95	23.46	23.20	23.16	23.38	23.55	23.86	23.91	24.13	28.68
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.98	23.71	23.68	23.89	24.07	24.39	24.43	24.67	29.29
01/21/95	24.83	23.25	24.18	23.71	23.48	23.43	23.64	23.82	24.13	24.17	24.41	28.98
01/22/95	25.84	24.18	25.18	24.65	24.37	24.32	24.58	24.73	25.04	25.11	25.33	30.18
01/23/95	25.75	24.09	25.08	24.57	24.30	24.27	24.49	24.67	25.00	25.04	25.28	30.01
01/24/95	24.77	23.17	24.12	23.62	23.38	23.32	23.55	23.71	24.02	24.07	24.30	28.88
01/25/95	24.92	23.32	24.28	23.78	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.06
01/26/95	26.20	24.53	25.53	25.01	24.74	24.69	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.16	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.39	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.76	23.98	24.15	24.48	24.51	24.76	29.37
01/30/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.18
01/31/95	25.52	23.89	24.85	24.38	24.10	24.07	24.29	24.46	24.79	24.83	25.07	29.77
AVE	25.25	23.62	24.58	24.09	23.82	23.79	24.01	24.18	24.50	24.55	24.78	29.44
STD DEV	0.5156	0.4799	0.5040	0.4884	0.4809	0.4768	0.4844	0.4858	0.4901	0.4956	0.4988	0.6021
MIN	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
MAX	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.66	25.89	30.78
CALC MIN	24.02	22.48	23.38	22.92	22.67	22.65	22.85	23.02	23.33	23.36	23.59	28.00
CALC MAX	26.48	24.77	25.79	25.25	24.97	24.93	25.17	25.34	25.67	25.73	25.97	30.88

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.89	30.49	32.56	32.84	29.90	30.78	27.15	24.68	23.97	22.76	22.59
01/02/95	32.19	30.28	31.85	34.11	34.41	31.27	32.16	28.48	25.88	25.11	23.84	23.68
01/03/95	31.58	29.84	31.30	33.42	33.71	30.73	31.63	27.88	25.32	24.60	23.36	23.19
01/04/95	32.95	30.93	32.65	34.86	35.18	32.04	32.98	29.06	26.41	25.68	24.36	24.19
01/05/95	31.38	29.48	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.84	31.50	33.63	33.92	30.89	31.80	28.04	25.48	24.76	23.50	23.33
01/07/95	32.06	30.14	31.81	33.98	34.28	31.17	32.06	28.33	25.74	25.00	23.74	23.56
01/08/95	31.51	29.62	31.28	33.39	33.88	30.67	31.55	27.86	25.31	24.59	23.35	23.18
01/09/95	31.84	29.95	31.65	33.79	34.07	31.11	32.04	28.18	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.26	25.68	24.95	23.68	23.51
01/11/95	32.70	30.76	32.46	34.65	34.98	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	$\boxed{36.21}$	$\boxed{36.13}$	$\boxed{36.19}$	34.87	31.68	32.58	28.85	26.21	25.45	24.16	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.68
01/14/95	32.56	30.81	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.26	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.84	23.68
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.68
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.64	25.12	24.40	23.16	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.86	28.95	26.31	25.58	24.27	24.10
01/24/95	31.52	29.62	31.28	33.38	33.66	30.64	31.52	27.84	25.30	24.57	23.33	23.16
01/25/95	31.75	29.82	31.49	33.62	33.91	30.80	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.36	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.28	25.70	24.98	23.69	23.52
01/28/95	31.62	29.72	31.38	33.50	33.79	30.76	31.64	27.94	25.39	24.66	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.76	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.08	23.90
AVE	32.14	30.60	32.14	34.29	34.33	31.25	32.18	28.39	25.80	25.06	23.79	23.62
STD DEV	0.6453	2.3491	1.6691	1.6320	0.6901	0.6174	0.6346	0.5720	0.5193	0.5025	0.4760	0.4709
MIN	30.74	28.89	30.49	32.56	32.84	29.90	30.78	27.15	24.68	23.97	22.76	22.59
MAX	33.61	36.21	36.13	36.19	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.66
CALC MIN	30.60	24.98	28.15	30.39	32.68	29.78	30.84	27.02	24.55	23.86	22.65	22.49
CALC MAX	33.68	$\boxed{36.21}$	$\boxed{36.13}$	$\boxed{36.19}$	35.98	32.73	33.68	29.75	27.04	26.26	24.93	24.74

FIGURE A-7

Appendix 3,
Schedule ELM - 1

WEIGHTED AVERAGES

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
01/02/95	25.32	23.69	24.66	24.15	23.66	23.63	24.07	24.23	24.55	24.61	24.63	29.55
01/03/95	24.79	23.19	24.12	23.64	23.39	23.36	23.57	23.74	24.06	24.10	24.34	28.88
01/04/95	25.87	24.19	25.18	24.67	24.40	24.36	24.59	24.78	25.09	25.14	25.38	30.14
01/05/95	24.63	23.05	23.98	23.50	23.24	23.21	23.43	23.59	23.90	23.95	24.18	28.73
01/06/95	24.97	23.35	24.30	23.80	23.54	23.50	23.72	23.69	24.21	24.28	24.49	29.09
01/07/95	25.19	23.58	24.54	24.04	23.78	23.73	23.96	24.13	24.44	24.50	24.73	29.39
01/08/95	24.74	23.17	24.09	23.62	23.37	23.34	23.55	23.73	24.04	24.08	24.31	28.88
01/09/95	25.03	23.42	24.35	23.89	23.64	23.62	23.82	24.00	24.33	24.35	24.61	29.16
01/10/95	25.15	23.53	24.49	23.99	23.72	23.68	23.91	24.08	24.39	24.44	24.68	29.32
01/11/95	25.70	24.06	25.04	24.53	24.26	24.22	24.45	24.62	24.94	25.00	25.23	30.01
01/12/95	25.68	24.02	25.01	24.49	24.21	24.16	24.40	24.56	24.88	24.95	25.17	29.98
01/13/95	25.28	23.65	24.80	24.11	23.85	23.63	24.04	24.22	24.55	24.58	24.83	29.45
01/14/95	25.61	23.95	24.93	24.42	24.15	24.10	24.34	24.50	24.82	24.88	25.11	29.86
01/15/95	24.57	22.99	23.92	23.44	23.19	23.16	23.37	23.54	23.85	23.89	24.13	28.85
01/16/95	25.29	23.87	24.64	24.13	23.87	23.83	24.06	24.23	24.54	24.60	24.82	29.52
01/17/95	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78
01/18/95	24.60	23.01	23.95	23.46	23.20	23.18	23.36	23.55	23.86	23.91	24.13	28.68
01/19/95	25.70	24.03	25.01	24.51	24.24	24.20	24.43	24.60	24.93	24.97	25.22	29.94
01/20/95	25.11	23.50	24.44	23.96	23.71	23.68	23.89	24.07	24.38	24.43	24.67	29.29
01/21/95	24.83	23.25	24.18	23.71	23.46	23.43	23.64	23.82	24.13	24.17	24.41	28.98
01/22/95	25.84	24.18	25.18	24.65	24.37	24.32	24.56	24.73	25.04	25.11	25.33	30.18
01/23/95	25.75	24.09	25.06	24.57	24.30	24.27	24.49	24.67	25.00	25.04	25.28	30.01
01/24/95	24.77	23.17	24.12	23.62	23.36	23.32	23.55	23.71	24.02	24.07	24.30	28.88
01/25/95	24.92	23.32	24.26	23.76	23.53	23.50	23.71	23.88	24.20	24.24	24.48	29.06
01/26/95	26.20	24.53	25.53	25.01	24.74	24.69	24.93	25.11	25.43	25.49	25.72	30.59
01/27/95	25.16	23.54	24.50	24.00	23.73	23.69	23.92	24.09	24.40	24.45	24.68	29.34
01/28/95	24.84	23.25	24.19	23.70	23.45	23.41	23.63	23.80	24.11	24.16	24.39	28.98
01/29/95	25.23	23.59	24.54	24.05	23.79	23.78	23.98	24.15	24.48	24.51	24.78	29.37
01/30/95	25.84	24.18	25.16	24.65	24.37	24.32	24.58	24.73	25.04	25.11	25.33	30.16
01/31/95	25.52	23.69	24.85	24.36	24.10	24.07	24.29	24.48	24.79	24.85	25.07	29.77
AVE	25.25	23.62	24.56	24.09	23.82	23.79	24.01	24.18	24.50	24.55	24.78	29.44
STD DEV	0.5156	0.4799	0.5040	0.4884	0.4809	0.4768	0.4844	0.4856	0.4901	0.4956	0.4968	0.6021
MIN	24.15	22.60	23.51	23.04	22.79	22.75	22.97	23.13	23.43	23.48	23.70	28.16
MAX	26.42	24.70	25.72	25.18	24.90	24.85	25.09	25.27	25.59	25.68	25.89	30.78
CALC MIN	24.02	22.48	23.36	22.92	22.67	22.65	22.85	23.02	23.33	23.36	23.59	28.00
CALC MAX	26.48	24.77	25.79	25.25	24.97	24.93	25.17	25.34	25.67	25.73	25.97	30.88
@RISK	26.13165	24.44108	25.44295	24.91784	24.64089	24.5954	24.83283	25.005	25.33017	25.38959	25.62464	30.46487

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.74	28.89	30.49	32.56	32.64	29.90	30.76	27.15	24.68	23.97	22.76	22.59
01/02/95	32.19	30.28	31.95	34.11	34.41	31.27	32.16	28.48	25.86	25.11	23.84	23.68
01/03/95	31.58	29.84	31.30	33.42	33.71	30.73	31.63	27.86	25.32	24.60	23.36	23.19
01/04/95	32.95	30.93	32.65	34.86	35.16	32.04	32.98	29.08	26.41	25.66	24.38	24.19
01/05/95	31.38	29.46	31.10	33.21	33.49	30.49	31.37	27.70	25.17	24.45	23.21	23.04
01/06/95	31.78	29.84	31.50	33.63	33.92	30.89	31.80	28.04	25.46	24.78	23.50	23.33
01/07/95	32.06	30.14	31.81	33.96	34.28	31.17	32.08	28.33	25.74	25.00	23.74	23.56
01/08/95	31.51	29.62	31.28	33.39	33.68	30.67	31.55	27.86	25.31	24.59	23.35	23.18
01/09/95	31.94	29.95	31.65	33.79	34.07	31.11	32.04	28.16	25.59	24.88	23.62	23.46
01/10/95	32.02	30.07	31.74	33.90	34.18	31.13	32.03	28.26	25.68	24.95	23.68	23.51
01/11/95	32.70	30.78	32.46	34.65	34.98	31.78	32.68	28.92	26.27	25.51	24.23	24.04
01/12/95	32.63	38.21	36.13	38.19	34.87	31.68	32.58	28.65	26.21	25.45	24.18	23.98
01/13/95	32.23	30.23	31.93	34.10	34.38	31.37	32.31	28.41	25.83	25.10	23.83	23.68
01/14/95	32.56	30.81	32.30	34.49	34.79	31.65	32.57	28.77	26.14	25.39	24.10	23.92
01/15/95	31.29	29.39	31.03	33.14	33.42	30.44	31.33	27.63	25.11	24.39	23.16	22.99
01/16/95	32.18	30.28	31.94	34.10	34.39	31.28	32.17	28.45	25.85	25.10	23.84	23.68
01/17/95	33.61	31.57	33.31	35.57	35.87	32.65	33.61	29.65	26.95	26.18	24.85	24.66
01/18/95	31.31	29.41	31.05	33.15	33.43	30.43	31.32	27.64	25.12	24.40	23.18	23.00
01/19/95	32.74	30.72	32.44	34.63	34.93	31.84	32.78	28.87	26.24	25.49	24.20	24.03
01/20/95	31.99	30.05	31.73	33.88	34.17	31.13	32.03	28.25	25.68	24.94	23.69	23.52
01/21/95	31.63	29.73	31.40	33.52	33.81	30.79	31.68	27.98	25.41	24.68	23.44	23.27
01/22/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/23/95	32.81	30.80	32.52	34.73	35.02	31.93	32.86	28.95	26.31	25.56	24.27	24.10
01/24/95	31.52	29.62	31.26	33.38	33.66	30.64	31.52	27.84	25.30	24.57	23.33	23.16
01/25/95	31.75	29.82	31.49	33.62	33.91	30.90	31.79	28.03	25.48	24.75	23.50	23.33
01/26/95	33.34	31.36	33.10	35.34	35.64	32.41	33.32	29.49	26.79	26.01	24.70	24.52
01/27/95	32.01	30.09	31.75	33.90	34.19	31.11	32.01	28.26	25.70	24.96	23.69	23.52
01/28/95	31.62	29.72	31.36	33.50	33.79	30.76	31.64	27.94	25.39	24.66	23.42	23.25
01/29/95	32.15	30.16	31.85	34.01	34.29	31.29	32.22	28.33	25.75	25.03	23.76	23.59
01/30/95	32.84	30.90	32.60	34.80	35.11	31.89	32.79	29.04	26.39	25.62	24.32	24.14
01/31/95	32.51	30.55	32.25	34.44	34.73	31.63	32.54	28.72	26.10	25.35	24.06	23.90
AVE	32.14	30.60	32.14	34.29	34.33	31.25	32.16	28.39	25.80	25.06	23.79	23.62
STD DEV	0.6453	2.3491	1.6691	1.6320	0.6901	0.6174	0.6348	0.5720	0.5193	0.5025	0.4760	0.4709
MIN	30.74	28.89	30.49	32.56	32.64	29.90	30.76	27.15	24.68	23.97	22.76	22.59
MAX	33.61	38.21	36.13	38.19	35.87	32.85	33.61	29.65	26.95	26.18	24.85	24.68
CALC MIN	30.60	24.98	26.15	30.39	32.68	29.78	30.64	27.02	24.55	23.86	22.85	22.49
CALC MAX	33.68	38.21	36.13	38.19	35.98	32.73	33.68	29.75	27.04	26.26	24.93	24.74
@RISK	33.24758	34.90333	35.15141	37.22006	35.50129	32.30811	33.24619	29.3537	26.67539	25.91011	24.59441	24.41382

FIGURE A-8

Appendix 3,
Schedule ELM - 1

OUTPUT of @RISK Calculations

Percentile %	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
0	24.15348	22.60166	23.51557	23.04034	22.79163	22.75242	22.96696	23.1348	23.43628	23.48329	23.70377	28.16837	30.75042	28.88938	30.49593
5	24.46777	22.89525	23.82105	23.34374	23.09234	23.05819	23.2714	23.44035	23.74967	23.79375	24.02219	28.53196	31.15703	29.1636	30.75565
10	24.62519	23.04355	23.97441	23.49401	23.24091	23.20609	23.42208	23.59037	23.90213	23.94594	24.17617	28.7161	31.35867	29.42498	30.9875
15	24.73947	23.15041	24.08593	23.60354	23.34776	23.31221	23.53049	23.69941	24.01171	24.05681	24.28783	28.85063	31.50315	29.67124	31.19951
20	24.83373	23.23784	24.17727	23.6922	23.43554	23.39956	23.6188	23.78787	24.10122	24.1476	24.37791	28.96006	31.62114	29.90847	31.39638
25	24.91551	23.31392	24.2571	23.76995	23.51167	23.47583	23.69533	23.86507	24.17896	24.22585	24.45765	29.05457	31.72333	30.13777	31.58465
30	24.9893	23.38245	24.32975	23.83987	23.5809	23.54448	23.76523	23.93472	24.24988	24.29716	24.52863	29.14121	31.81673	30.36368	31.76488
35	25.05849	23.44695	24.39746	23.90567	23.64581	23.60808	23.83012	23.99991	24.31585	24.36388	24.59532	29.22199	31.90341	30.58895	31.94121
40	25.12461	23.50832	24.46154	23.96757	23.70715	23.66907	23.89181	24.06232	24.37837	24.42694	24.65936	29.29829	31.9857	30.81144	32.11519
45	25.18812	23.56753	24.52372	24.02814	23.76631	23.72818	23.95202	24.12218	24.43896	24.48871	24.72061	29.37334	32.06591	31.03693	32.28881
50	25.25106	23.62616	24.58497	24.08816	23.82528	23.78685	24.01149	24.18181	24.49867	24.54903	24.78143	29.4461	32.1448	31.26743	32.46562
55	25.31396	23.68505	24.64705	24.14745	23.88396	23.8447	24.07006	24.24077	24.55903	24.60948	24.84203	29.52001	32.2236	31.50305	32.64362
60	25.3785	23.74415	24.70933	24.20844	23.94382	23.90428	24.13056	24.30132	24.61963	24.67118	24.90363	29.59435	32.3038	31.74821	32.82909
65	25.44411	23.80568	24.77385	24.2704	24.00493	23.96482	24.19225	24.36335	24.68255	24.73432	24.96707	29.67139	32.3866	32.00721	33.02314
70	25.51371	23.87042	24.84156	24.33634	24.0699	24.02928	24.25756	24.42876	24.74853	24.80124	25.03398	29.75242	32.47422	32.28559	33.22986
75	25.58881	23.93994	24.91465	24.40705	24.13963	24.09803	24.32741	24.49893	24.81917	24.87307	25.1058	29.83949	32.56799	32.58823	33.45383
80	25.67157	24.01639	24.99518	24.48499	24.2165	24.17469	24.40504	24.57645	24.89725	24.95198	25.18584	29.93555	32.67062	32.93164	33.7052
85	25.76616	24.10456	25.08849	24.57517	24.30434	24.26227	24.49382	24.66534	24.98796	25.04265	25.27674	30.04518	32.79021	33.32781	33.99907
90	25.88392	24.21294	25.20197	24.68531	24.41395	24.37004	24.60379	24.77528	25.09806	25.15498	25.38942	30.18194	32.93675	33.82863	34.36584
95	26.04986	24.36633	25.36236	24.84139	24.56575	24.52084	24.7574	24.92976	25.25424	25.31108	25.54649	30.37223	33.14421	34.54213	34.88731
100	26.42078	24.69506	25.72112	25.181	24.89484	24.84946	25.09273	25.25859	25.59079	25.65042	25.88612	30.7821	33.6086	36.18057	36.12933

Data for hours 1600 through 2400 have been left off intentionally because of space limitations

FIGURE A-9

OUTPUT of @RISK Calculations

NEW Percentile %	Percentile %	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
0.000	0	24.15348	22.60166	23.51557	23.04034	22.79163	22.75242	22.96696	23.1348	23.43628	23.48329	23.70377	28.16837	30.75042	28.88938	30.49593
5.556	5	24.46777	22.89525	23.82105	23.34374	23.09234	23.05819	23.2714	23.44035	23.74967	23.79375	24.02219	28.53196	31.15703	29.1636	30.75565
11.111	10	24.62519	23.04355	23.97441	23.49401	23.24091	23.20609	23.42208	23.59037	23.90213	23.94594	24.17617	28.7161	31.35867	29.42498	30.9875
16.667	15	24.73947	23.15041	24.08593	23.60354	23.34776	23.31221	23.53049	23.69941	24.01171	24.05681	24.28783	28.85063	31.50315	29.67124	31.19951
22.222	20	24.83373	23.23784	24.17727	23.6922	23.43554	23.39956	23.6188	23.78787	24.10122	24.1476	24.37791	28.96006	31.62114	29.90847	31.39638
27.778	25	24.91551	23.31392	24.2571	23.76995	23.51167	23.47583	23.69533	23.86507	24.17896	24.22585	24.45765	29.05457	31.72333	30.13777	31.58465
33.333	30	24.9893	23.38245	24.32975	23.83987	23.5809	23.54448	23.76523	23.93472	24.24988	24.29716	24.52863	29.14121	31.81673	30.36368	31.76488
38.889	35	25.05849	23.44695	24.39746	23.90567	23.64581	23.60808	23.83012	23.99991	24.31585	24.36388	24.59532	29.22199	31.90341	30.58895	31.94121
44.444	40	25.12461	23.50832	24.46154	23.96757	23.70715	23.66907	23.89181	24.06232	24.37837	24.42694	24.65936	29.29829	31.9857	30.81144	32.11519
50.000	45	25.18812	23.56753	24.52372	24.02814	23.76631	23.72818	23.95202	24.12218	24.43896	24.48871	24.72061	29.37334	32.06591	31.03693	32.28881
54.545	50	25.25106	23.62616	24.58497	24.08816	23.82528	23.78685	24.01149	24.18181	24.49867	24.54903	24.78143	29.4461	32.1448	31.26743	32.46562
59.091	55	25.31396	23.68505	24.64705	24.14745	23.88396	23.8447	24.07006	24.24077	24.55903	24.60948	24.84203	29.52001	32.2236	31.50305	32.64362
63.636	60	25.3785	23.74415	24.70933	24.20844	23.94382	23.90428	24.13056	24.30132	24.61963	24.67118	24.90363	29.59435	32.3038	31.74821	32.82909
68.182	65	25.44411	23.80568	24.77385	24.2704	24.00493	23.96482	24.19225	24.36335	24.68255	24.73432	24.96707	29.67139	32.3866	32.00721	33.02314
72.727	70	25.51371	23.87042	24.84156	24.33634	24.0699	24.02928	24.25756	24.42876	24.74853	24.80124	25.03398	29.75242	32.47422	32.28559	33.22986
77.273	75	25.58881	23.93994	24.91465	24.40705	24.13963	24.09803	24.32741	24.49893	24.81917	24.87307	25.1058	29.83949	32.56799	32.58823	33.45383
81.818	80	25.67157	24.01639	24.99518	24.48499	24.2165	24.17469	24.40504	24.57645	24.89725	24.95198	25.18584	29.93555	32.67062	32.93164	33.7052
86.364	85	25.76616	24.10456	25.08849	24.57517	24.30434	24.26227	24.49382	24.66534	24.98796	25.04265	25.27674	30.04518	32.79021	33.32781	33.99907
90.909	90	25.88392	24.21294	25.20197	24.68531	24.41395	24.37004	24.60379	24.77528	25.09806	25.15498	25.38942	30.18194	32.93675	33.82863	34.36584
95.455	95	26.04986	24.36633	25.36236	24.84139	24.56575	24.52084	24.7574	24.92976	25.25424	25.31108	25.54649	30.37223	33.14421	34.54213	34.88731
100.000	100	26.42078	24.69506	25.72112	25.181	24.89484	24.84946	25.09273	25.25859	25.59079	25.65042	25.88612	30.7821	33.6086	36.18057	36.12933

Data for hours 1600 through 2400 have been left off intentionally because of space limitations

FIGURE A-10

1

OUTPUT of @RISK Calculations

Day	NEW Percentile %	Percentile %	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
1	0.000	0	24.15348	22.60166	23.51557	23.04034	22.79163	22.75242	22.96696	23.1348	23.43628	23.48329	23.70377	28.16837	30.75042	28.88938	30.49593
3	5.556	5	24.46777	22.89525	23.82105	23.34374	23.09234	23.05819	23.2714	23.44035	23.74967	23.79375	24.02219	28.53196	31.15703	29.1636	30.75565
4	11.111	10	24.62519	23.04355	23.97441	23.49401	23.24091	23.20609	23.42208	23.59037	23.90213	23.94594	24.17617	28.7161	31.35867	29.42498	30.9875
6	16.667	15	24.73947	23.15041	24.08593	23.60354	23.34776	23.31221	23.53049	23.69941	24.01171	24.05681	24.28783	28.85063	31.50315	29.67124	31.19951
8	22.222	20	24.83373	23.23784	24.17727	23.6922	23.43554	23.39956	23.6188	23.78787	24.10122	24.1476	24.37791	28.96006	31.62114	29.90847	31.39638
9	27.778	25	24.91551	23.31392	24.2571	23.76995	23.51167	23.47583	23.69533	23.86507	24.17896	24.22585	24.45765	29.05457	31.72333	30.13777	31.58465
11	33.333	30	24.9893	23.38245	24.32975	23.83987	23.5809	23.54448	23.76523	23.93472	24.24988	24.29716	24.52863	29.14121	31.81673	30.36368	31.76488
13	38.889	35	25.05849	23.44695	24.39746	23.90567	23.64581	23.60808	23.83012	23.99991	24.31585	24.36388	24.59532	29.22199	31.90341	30.58895	31.94121
14	44.444	40	25.12461	23.50832	24.46154	23.96757	23.70715	23.66907	23.89181	24.06232	24.37837	24.42694	24.65936	29.29829	31.9857	30.81144	32.11519
16	50.000	45	25.18812	23.56753	24.52372	24.02814	23.76631	23.72818	23.95202	24.12218	24.43896	24.48871	24.72061	29.37334	32.06591	31.03693	32.28881
17	54.545	50	25.25106	23.62616	24.58497	24.08816	23.82528	23.78685	24.01149	24.18181	24.49867	24.54903	24.78143	29.4461	32.1448	31.26743	32.46562
19	59.091	55	25.31396	23.68505	24.64705	24.14745	23.88396	23.8447	24.07006	24.24077	24.55903	24.60948	24.84203	29.52001	32.2236	31.50305	32.64362
20	63.636	60	25.3785	23.74415	24.70933	24.20844	23.94382	23.90428	24.13056	24.30132	24.61963	24.67118	24.90363	29.59435	32.3038	31.74621	32.82909
21	68.182	65	25.44411	23.80568	24.77385	24.2704	24.00493	23.96482	24.19225	24.36335	24.68255	24.73432	24.96707	29.67139	32.3866	32.00721	33.02314
23	72.727	70	25.51371	23.87042	24.84156	24.33634	24.0699	24.02928	24.25756	24.42876	24.74853	24.80124	25.03398	29.75242	32.47422	32.28559	33.22986
24	77.273	75	25.58881	23.93994	24.91465	24.40705	24.13963	24.09803	24.32741	24.49893	24.81917	24.87307	25.1058	29.83949	32.56799	32.58823	33.45383
26	81.818	80	25.67157	24.01639	24.99518	24.48499	24.2165	24.17469	24.40504	24.57645	24.89725	24.95198	25.18584	29.93555	32.67062	32.93164	33.7052
27	86.364	85	25.76616	24.10456	25.08849	24.57517	24.30434	24.26227	24.49382	24.66534	24.98796	25.04265	25.27674	30.04518	32.79021	33.32781	33.99907
28	90.909	90	25.88392	24.21294	25.20197	24.68531	24.41395	24.37004	24.60379	24.77528	25.09806	25.15498	25.38942	30.18194	32.93675	33.82863	34.36584
30	95.455	95	26.04986	24.36633	25.36236	24.64139	24.56575	24.52084	24.7574	24.92976	25.25424	25.31106	25.54649	30.37223	33.14421	34.54213	34.88731
31	100.000	100	26.42078	24.69506	25.72112	25.181	24.89484	24.84946	25.09273	25.25859	25.59079	25.65042	25.88612	30.7821	33.6086	36.18057	36.12933

Data for hours 1600 through 2400 have been left off intentionally because of space limitations

FIGURE A-11

OUTPUT of @RISK Calculations

NEW Day	NEW Percentile %	Percentile %	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
1	0.000	0	24.15348	22.60166	23.51557	23.04034	22.79163	22.75242	22.96696	23.1348	23.43628	23.48329	23.70377	28.16837	30.75042	28.88938	30.49593
2																	
3	5.556	5	24.46777	22.89525	23.82105	23.34374	23.09234	23.05819	23.2714	23.44035	23.74967	23.79375	24.02219	28.53196	31.15703	29.1636	30.75565
4	11.111	10	24.62519	23.04355	23.97441	23.49401	23.24091	23.20609	23.42208	23.59037	23.90213	23.94594	24.17617	28.7161	31.35867	29.42498	30.9875
5																	
6	16.667	15	24.73947	23.15041	24.08593	23.60354	23.34776	23.31221	23.53049	23.69941	24.01171	24.05681	24.28783	28.85063	31.50315	29.67124	31.19951
7																	
8	22.222	20	24.83373	23.23784	24.17727	23.6922	23.43554	23.39956	23.6188	23.78787	24.10122	24.1476	24.37791	28.96006	31.62114	29.90847	31.39638
9	27.778	25	24.91551	23.31392	24.2571	23.76995	23.51167	23.47583	23.69533	23.86507	24.17896	24.22585	24.45765	29.05457	31.72333	30.13777	31.58465
10																	
11	33.333	30	24.9893	23.38245	24.32975	23.83987	23.5809	23.54448	23.76523	23.93472	24.24988	24.29716	24.52863	29.14121	31.81673	30.36368	31.76488
12																	
13	38.889	35	25.05849	23.44695	24.39746	23.90567	23.64581	23.60808	23.83012	23.99991	24.31585	24.36388	24.59532	29.22199	31.90341	30.58895	31.94121
14	44.444	40	25.12461	23.50832	24.46154	23.96757	23.70715	23.66907	23.89181	24.06232	24.37837	24.42694	24.65936	29.29829	31.9857	30.81144	32.11519
15																	
16	50.000	45	25.18812	23.56753	24.52372	24.02814	23.76631	23.72818	23.95202	24.12218	24.43896	24.48871	24.72061	29.37334	32.06591	31.03693	32.28881
17	54.545	50	25.25106	23.62616	24.58497	24.08816	23.82528	23.78685	24.01149	24.18181	24.49867	24.54903	24.78143	29.4461	32.1448	31.26743	32.46562
18																	
19	59.091	55	25.31396	23.68505	24.64705	24.14745	23.88396	23.8447	24.07006	24.24077	24.55903	24.60948	24.84203	29.52001	32.2236	31.50305	32.64362
20	63.636	60	25.3785	23.74415	24.70933	24.20844	23.94382	23.90428	24.13056	24.30132	24.61963	24.67118	24.90363	29.59435	32.3038	31.74821	32.82909
21	68.182	65	25.44411	23.80568	24.77385	24.2704	24.00493	23.96482	24.19225	24.36335	24.68255	24.73432	24.96707	29.67139	32.3866	32.00721	33.02314
22																	
23	72.727	70	25.51371	23.87042	24.84156	24.33634	24.0699	24.02928	24.25756	24.42876	24.74853	24.80124	25.03398	29.75242	32.47422	32.28559	33.22986
24	77.273	75	25.58881	23.93994	24.91465	24.40705	24.13963	24.09803	24.32741	24.49893	24.81817	24.87307	25.1058	29.83949	32.56799	32.58823	33.45383
25																	
26	81.818	80	25.67157	24.01639	24.99518	24.48499	24.2165	24.17469	24.40504	24.57645	24.89725	24.95198	25.18584	29.93555	32.67062	32.93164	33.7052
27	86.364	85	25.76616	24.10456	25.08849	24.57517	24.30434	24.26227	24.49362	24.66534	24.98796	25.04265	25.27674	30.04518	32.79021	33.32781	33.99907
28	90.909	90	25.88392	24.21294	25.20197	24.68531	24.41395	24.37004	24.60379	24.77528	25.09806	25.15498	25.38942	30.18194	32.93675	33.82863	34.36584
29																	
30	95.455	95	26.04986	24.36633	25.36236	24.84139	24.56575	24.52084	24.7574	24.92976	25.25424	25.31108	25.54649	30.37223	33.14421	34.54213	34.88731
31	100.000	100	26.42078	24.69506	25.72112	25.181	24.89484	24.84946	25.09273	25.25859	25.59079	25.65042	25.88612	30.7821	33.6086	36.18057	38.12933

Data for hours 1600 through 2400 have been left off intentionally because of space limitations

FIGURE A-12

OUTPUT of @RISK Calculations

This row of prices is the result of interpolating between the prices in the row above and the row below

NEW Day	NEW Percentile %	Percentile %	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
1	0.000	0	24.15348	22.60166	23.51557	23.04034	22.79163	22.75242	22.96696	23.1348	23.43628	23.48329	23.70377	28.16837	30.75042	28.88938	30.49593
2			24.31063	22.74846	23.66831	23.19204	22.94199	22.90531	23.11918	23.28758	23.59298	23.63852	23.86298	28.35017	30.95373	29.02649	30.62579
3	5.556	5	24.46777	22.89525	23.82105	23.34374	23.09234	23.05819	23.2714	23.44035	23.74967	23.79375	24.02219	28.53196	31.15703	29.1636	30.75565
4	11.111	10	24.62519	23.04355	23.97441	23.49401	23.24091	23.20609	23.42208	23.59037	23.90213	23.94594	24.17617	28.7161	31.35867	29.42498	30.9875
5			24.68233	23.09698	24.03017	23.54878	23.29434	23.25915	23.47629	23.64489	23.95692	24.00138	24.232	28.78337	31.43091	29.54811	31.09351
6	16.667	15	24.73947	23.15041	24.08593	23.60354	23.34776	23.31221	23.53049	23.69941	24.01171	24.05681	24.28783	28.85063	31.50315	29.67124	31.19951
7			24.7866	23.19413	24.1316	23.64787	23.39165	23.35589	23.57465	23.74364	24.05647	24.10221	24.33287	28.90535	31.56215	29.78986	31.29795
8	22.222	20	24.83373	23.23784	24.17727	23.6922	23.43554	23.39956	23.6188	23.78787	24.10122	24.1476	24.37791	28.96006	31.62114	29.90847	31.39638
9	27.778	25	24.91551	23.31392	24.2571	23.76995	23.51167	23.47583	23.69533	23.86507	24.17896	24.22585	24.45765	29.05457	31.72333	30.13777	31.58465
10			24.95241	23.34819	24.29343	23.80491	23.54629	23.51016	23.73028	23.8999	24.21442	24.26151	24.49314	29.09789	31.77003	30.25073	31.67477
11	33.333	30	24.9893	23.38245	24.32975	23.83987	23.5809	23.54448	23.76523	23.93472	24.24988	24.29716	24.52863	29.14121	31.81873	30.36368	31.76488
12			25.0239	23.4147	24.36361	23.87277	23.61336	23.57628	23.79768	23.96732	24.28287	24.33052	24.56198	29.1816	31.86007	30.47632	31.85305
13	38.889	35	25.05649	23.44695	24.39746	23.90567	23.64581	23.60808	23.83012	23.99991	24.31585	24.36388	24.59532	29.22199	31.90341	30.58895	31.94121
14	44.444	40	25.12461	23.50832	24.46154	23.96757	23.70715	23.66907	23.89181	24.06232	24.37837	24.42694	24.65936	29.29829	31.9857	30.81144	32.11519
15			25.15637	23.53793	24.49263	23.99786	23.73673	23.69863	23.92192	24.09225	24.40867	24.45783	24.68999	29.33582	32.02581	30.92419	32.202
16	50.000	45	25.18812	23.56753	24.52372	24.02814	23.76631	23.72818	23.95202	24.12218	24.43896	24.48871	24.72061	29.37334	32.06591	31.03693	32.28881
17	54.545	50	25.25106	23.62816	24.58497	24.08816	23.82528	23.78685	24.01149	24.18181	24.49867	24.54903	24.78143	29.4461	32.1448	31.26743	32.46562
18			25.28251	23.65561	24.61601	24.11781	23.85462	23.81578	24.04078	24.21129	24.52885	24.57926	24.81173	29.48306	32.1842	31.38524	32.55462
19	59.091	55	25.31396	23.68505	24.64705	24.14745	23.88396	23.8447	24.07006	24.24077	24.55903	24.60948	24.84203	29.52001	32.2236	31.50305	32.64362
20	63.636	60	25.3785	23.74415	24.70933	24.20844	23.94382	23.90428	24.13056	24.30132	24.61963	24.67118	24.90363	29.59435	32.3038	31.74821	32.82909
21	68.182	65	25.44411	23.80568	24.77385	24.2704	24.00493	23.96482	24.19225	24.36335	24.68255	24.73432	24.96707	29.67139	32.3866	32.00721	33.02314
22			25.47891	23.83805	24.80771	24.30337	24.03742	23.99705	24.22491	24.39606	24.71554	24.76778	25.00053	29.71191	32.43041	32.1464	33.1265
23	72.727	70	25.51371	23.87042	24.84156	24.33634	24.0699	24.02928	24.25756	24.42876	24.74853	24.80124	25.03398	29.75242	32.47422	32.28559	33.22986
24	77.273	75	25.58881	23.93994	24.91465	24.40705	24.13963	24.09803	24.32741	24.49893	24.81917	24.87307	25.1058	29.83949	32.56799	32.58823	33.45383
25			25.63019	23.97817	24.95492	24.44602	24.17807	24.13636	24.36623	24.53769	24.85821	24.91253	25.14582	29.88752	32.61931	32.75994	33.57952
26	81.818	80	25.67157	24.01639	24.99518	24.48499	24.2165	24.17469	24.40504	24.57645	24.89725	24.95198	25.18584	29.93555	32.67062	32.93164	33.7052
27	86.364	85	25.76616	24.10456	25.08849	24.57517	24.30434	24.26227	24.49382	24.66534	24.98796	25.04265	25.27674	30.04518	32.79021	33.32781	33.99907
28	90.909	90	25.88392	24.21294	25.20197	24.68531	24.41395	24.37004	24.60379	24.77528	25.09806	25.15498	25.38942	30.18194	32.93675	33.82863	34.36584
29			25.96689	24.28964	25.28217	24.76335	24.46985	24.44544	24.6806	24.85252	25.17615	25.23303	25.46796	30.27709	33.04048	34.18538	34.62658
30	95.455	95	26.04986	24.36633	25.36238	24.84139	24.56575	24.52084	24.7574	24.92976	25.25424	25.31108	25.54649	30.37223	33.14421	34.54213	34.88731
31	100.000	100	28.42078	24.69506	25.72112	25.181	24.89484	24.84946	25.09273	25.25859	25.59079	25.65042	25.88612	30.7821	33.6086	36.18057	36.12933

Data for hours 1600 through 2400 have been left off intentionally because of space limitations

FIGURE A-13

FINAL CALCULATED PRICES

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
1	24.15	22.60	23.52	23.04	22.79	22.75	22.97	23.13	23.44	23.46	23.70	28.17
2	24.31	22.75	23.67	23.19	22.94	22.91	23.12	23.29	23.59	23.64	23.86	28.35
3	24.47	22.90	23.82	23.34	23.09	23.06	23.27	23.44	23.75	23.79	24.02	28.53
4	24.63	23.04	23.97	23.49	23.24	23.21	23.42	23.59	23.90	23.95	24.18	28.72
5	24.68	23.10	24.03	23.55	23.29	23.26	23.48	23.64	23.98	24.00	24.23	28.78
6	24.74	23.15	24.09	23.60	23.35	23.31	23.53	23.70	24.01	24.06	24.29	28.65
7	24.79	23.19	24.13	23.65	23.39	23.36	23.57	23.74	24.06	24.10	24.33	28.91
8	24.83	23.24	24.18	23.69	23.44	23.40	23.62	23.79	24.10	24.15	24.38	28.98
9	24.92	23.31	24.26	23.77	23.51	23.46	23.70	23.87	24.18	24.23	24.46	29.05
10	24.95	23.35	24.29	23.80	23.55	23.51	23.73	23.90	24.21	24.26	24.49	29.10
11	24.99	23.38	24.33	23.84	23.58	23.54	23.77	23.93	24.25	24.30	24.53	29.14
12	25.02	23.41	24.36	23.87	23.61	23.58	23.80	23.97	24.28	24.33	24.56	29.18
13	25.06	23.45	24.40	23.91	23.65	23.61	23.83	24.00	24.32	24.36	24.60	29.22
14	25.12	23.51	24.46	23.97	23.71	23.67	23.89	24.06	24.38	24.43	24.66	29.30
15	25.16	23.54	24.49	24.00	23.74	23.70	23.92	24.09	24.41	24.46	24.69	29.34
16	25.19	23.57	24.52	24.03	23.77	23.73	23.95	24.12	24.44	24.49	24.72	29.37
17	25.25	23.63	24.58	24.09	23.83	23.79	24.01	24.16	24.50	24.55	24.78	29.45
18	25.28	23.66	24.62	24.12	23.85	23.82	24.04	24.21	24.53	24.58	24.81	29.48
19	25.31	23.69	24.65	24.15	23.88	23.84	24.07	24.24	24.56	24.61	24.84	29.52
20	25.38	23.74	24.71	24.21	23.94	23.90	24.13	24.30	24.62	24.67	24.90	29.59
21	25.44	23.81	24.77	24.27	24.00	23.96	24.19	24.36	24.68	24.73	24.97	29.67
22	25.48	23.84	24.81	24.30	24.04	24.00	24.22	24.40	24.72	24.77	25.00	29.71
23	25.51	23.87	24.84	24.34	24.07	24.03	24.26	24.43	24.75	24.80	25.03	29.75
24	25.59	23.94	24.91	24.41	24.14	24.10	24.33	24.50	24.82	24.87	25.11	29.84
25	25.63	23.98	24.95	24.45	24.18	24.14	24.37	24.54	24.86	24.91	25.15	29.89
26	25.67	24.02	25.00	24.48	24.22	24.17	24.41	24.58	24.90	24.95	25.19	29.94
27	25.77	24.10	25.09	24.56	24.30	24.26	24.49	24.67	24.99	25.04	25.28	30.05
28	25.88	24.21	25.20	24.69	24.41	24.37	24.60	24.78	25.10	25.15	25.39	30.18
29	25.97	24.29	25.28	24.76	24.49	24.45	24.68	24.85	25.18	25.23	25.47	30.28
30	26.05	24.37	25.36	24.84	24.57	24.52	24.76	24.93	25.25	25.31	25.55	30.37
31	26.42	24.70	25.72	25.16	24.89	24.85	25.09	25.28	25.59	25.85	25.89	30.78

Day	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	30.75	28.69	30.50	32.56	32.84	29.90	30.78	27.16	24.68	23.97	22.76	22.60
2	30.85	29.03	30.63	32.70	33.06	30.10	30.97	27.33	24.84	24.13	22.91	22.74
3	31.16	29.16	30.78	32.84	33.28	30.31	31.18	27.51	25.00	24.29	23.06	22.89
4	31.38	29.42	30.99	33.08	33.49	30.50	31.38	27.69	25.17	24.45	23.21	23.04
5	31.43	29.55	31.08	33.19	33.57	30.57	31.46	27.75	25.22	24.50	23.26	23.10
6	31.50	29.67	31.20	33.30	33.65	30.64	31.53	27.82	25.28	24.56	23.32	23.15
7	31.58	29.79	31.30	33.40	33.71	30.70	31.59	27.87	25.33	24.60	23.36	23.19
8	31.62	29.91	31.40	33.50	33.77	30.75	31.64	27.92	25.38	24.65	23.40	23.23
9	31.72	30.14	31.58	33.69	33.88	30.85	31.74	28.01	25.46	24.73	23.48	23.31
10	31.77	30.25	31.67	33.78	33.93	30.90	31.79	28.05	25.50	24.77	23.51	23.34
11	31.82	30.38	31.76	33.87	33.98	30.94	31.84	28.10	25.53	24.80	23.55	23.38
12	31.86	30.48	31.85	33.96	34.03	30.98	31.88	28.13	25.57	24.84	23.58	23.41
13	31.90	30.59	31.94	34.05	34.07	31.02	31.92	28.17	25.60	24.87	23.61	23.44
14	31.99	30.81	32.12	34.22	34.16	31.10	32.00	28.25	25.67	24.93	23.67	23.50
15	32.03	30.92	32.20	34.31	34.20	31.14	32.04	28.28	25.70	24.97	23.70	23.53
16	32.07	31.04	32.29	34.40	34.25	31.18	32.08	28.32	25.73	25.00	23.73	23.56
17	32.14	31.27	32.47	34.57	34.33	31.26	32.16	28.39	25.80	25.06	23.79	23.62
18	32.18	31.39	32.55	34.68	34.37	31.29	32.20	28.42	25.83	25.09	23.82	23.65
19	32.22	31.50	32.84	34.75	34.41	31.33	32.24	28.46	25.86	25.12	23.85	23.67
20	32.30	31.75	32.83	34.93	34.50	31.41	32.32	28.53	25.92	25.18	23.91	23.73
21	32.38	32.01	33.02	35.12	34.59	31.49	32.40	28.60	25.99	25.25	23.97	23.79
22	32.43	32.15	33.13	35.22	34.64	31.53	32.44	28.64	26.03	25.28	24.00	23.82
23	32.47	32.29	33.23	35.33	34.68	31.57	32.48	28.68	26.08	25.31	24.03	23.86
24	32.57	32.59	33.45	35.55	34.76	31.66	32.58	28.76	26.14	25.38	24.10	23.92
25	32.62	32.76	33.58	35.67	34.84	31.71	32.63	28.81	26.18	25.43	24.14	23.96
26	32.67	32.93	33.71	35.80	34.89	31.76	32.68	28.85	26.22	25.47	24.18	24.00
27	32.79	33.33	34.00	36.09	35.02	31.87	32.80	28.96	26.31	25.56	24.26	24.09
28	32.94	33.83	34.37	36.45	35.17	32.01	32.94	29.09	26.43	25.67	24.37	24.19
29	33.04	34.19	34.63	36.70	35.28	32.11	33.04	29.17	26.51	25.75	24.45	24.27
30	33.14	34.54	34.89	36.96	35.39	32.21	33.15	29.26	26.59	25.83	24.52	24.34
31	33.61	36.18	36.13	38.18	35.87	32.85	33.60	29.65	26.94	26.18	24.84	24.66

FIGURE A-14

Appendix 3,
Schedule ELM - 1

Data for hours 0300 through 2400 have been left off intentionally because of space limitations

SYSTEM HOURLY LOADS

DATE	HOUR	LOAD
01/01/95	100	200
01/02/95	100	201
01/03/95	100	202
01/04/95	100	204
01/05/95	100	205
01/06/95	100	206
01/07/95	100	207
01/08/95	100	208
01/09/95	100	210
01/10/95	100	211
01/11/95	100	213
01/12/95	100	214
01/13/95	100	215
01/14/95	100	216
01/15/95	100	217
01/16/95	100	218
01/17/95	100	220
01/18/95	100	221
01/19/95	100	222
01/20/95	100	223
01/21/95	100	224
01/22/95	100	226
01/23/95	100	227
01/24/95	100	229
01/25/95	100	230
01/26/95	100	231
01/27/95	100	232
01/28/95	100	233
01/29/95	100	234
01/30/95	100	235
01/31/95	100	237
01/01/95	200	204
01/02/95	200	205
01/03/95	200	206
01/04/95	200	208
01/05/95	200	209
01/06/95	200	210
01/07/95	200	211
01/08/95	200	212
01/09/95	200	214
01/10/95	200	215
01/11/95	200	217
01/12/95	200	218
01/13/95	200	219
01/14/95	200	220
01/15/95	200	221
01/16/95	200	222
01/17/95	200	224
01/16/95	200	225
01/19/95	200	226
01/20/95	200	227
01/21/95	200	228
01/22/95	200	230
01/23/95	200	231
01/24/95	200	233
01/25/95	200	234
01/26/95	200	235
01/27/95	200	236
01/28/95	200	237
01/29/95	200	238
01/30/95	200	239
01/31/95	200	241

FIGURE A-15

Data for hours 0300 through 2400 have been left off intentionally because of space limitations

SYSTEM HOURLY LOADS

DATE	HOUR	LOAD	PRICE
01/01/95	100	200	24.15
01/02/95	100	201	24.31
01/03/95	100	202	24.47
01/04/95	100	204	24.63
01/05/95	100	205	24.68
01/06/95	100	206	24.74
01/07/95	100	207	24.79
01/08/95	100	208	24.83
01/09/95	100	210	24.92
01/10/95	100	211	24.95
01/11/95	100	213	24.99
01/12/95	100	214	25.02
01/13/95	100	215	25.06
01/14/95	100	216	25.12
01/15/95	100	217	25.16
01/16/95	100	218	25.19
01/17/95	100	220	25.25
01/18/95	100	221	25.28
01/19/95	100	222	25.31
01/20/95	100	223	25.38
01/21/95	100	224	25.44
01/22/95	100	226	25.48
01/23/95	100	227	25.51
01/24/95	100	229	25.59
01/25/95	100	230	25.63
01/26/95	100	231	25.67
01/27/95	100	232	25.77
01/28/95	100	233	25.88
01/29/95	100	234	25.97
01/30/95	100	235	26.05
01/31/95	100	237	26.42
01/01/95	200	204	22.60
01/02/95	200	205	22.75
01/03/95	200	206	22.90
01/04/95	200	208	23.04
01/05/95	200	209	23.10
01/06/95	200	210	23.15
01/07/95	200	211	23.19
01/08/95	200	212	23.24
01/09/95	200	214	23.31
01/10/95	200	215	23.35
01/11/95	200	217	23.38
01/12/95	200	218	23.41
01/13/95	200	219	23.45
01/14/95	200	220	23.51
01/15/95	200	221	23.54
01/16/95	200	222	23.57
01/17/95	200	224	23.63
01/18/95	200	225	23.66
01/19/95	200	226	23.69
01/20/95	200	227	23.74
01/21/95	200	228	23.81
01/22/95	200	230	23.84
01/23/95	200	231	23.87
01/24/95	200	233	23.94
01/25/95	200	234	23.98
01/26/95	200	235	24.02
01/27/95	200	236	24.10
01/28/95	200	237	24.21
01/29/95	200	238	24.29
01/30/95	200	239	24.37
01/31/95	200	241	24.70

FIGURE A-16

FINAL PRICE MATRIX

	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
01/01/95	24.15	22.60	23.52	23.04	22.79	22.75	22.97	23.13	23.44	23.48	23.70	28.17
01/02/95	24.31	22.75	23.67	23.19	22.94	22.91	23.12	23.29	23.59	23.64	23.86	28.35
01/03/95	24.47	22.90	23.82	23.34	23.09	23.06	23.27	23.44	23.75	23.79	24.02	28.53
01/04/95	24.63	23.04	23.97	23.49	23.24	23.21	23.42	23.59	23.90	23.95	24.16	28.72
01/05/95	24.68	23.10	24.03	23.55	23.29	23.26	23.48	23.64	23.96	24.00	24.23	28.78
01/06/95	24.74	23.15	24.09	23.60	23.35	23.31	23.53	23.70	24.01	24.06	24.29	28.85
01/07/95	24.79	23.19	24.13	23.65	23.39	23.36	23.57	23.74	24.06	24.10	24.33	28.91
01/08/95	24.83	23.24	24.18	23.69	23.44	23.40	23.62	23.79	24.10	24.15	24.38	28.96
01/09/95	24.92	23.31	24.26	23.77	23.51	23.48	23.70	23.87	24.18	24.23	24.46	29.05
01/10/95	24.95	23.35	24.29	23.80	23.55	23.51	23.73	23.90	24.21	24.26	24.49	29.10
01/11/95	24.99	23.38	24.33	23.84	23.58	23.54	23.77	23.93	24.25	24.30	24.53	29.14
01/12/95	25.02	23.41	24.36	23.87	23.61	23.58	23.80	23.97	24.28	24.33	24.56	29.18
01/13/95	25.06	23.45	24.40	23.91	23.65	23.61	23.83	24.00	24.32	24.36	24.60	29.22
01/14/95	25.12	23.51	24.46	23.97	23.71	23.67	23.89	24.06	24.38	24.43	24.66	29.30
01/15/95	25.16	23.54	24.49	24.00	23.74	23.70	23.92	24.09	24.41	24.46	24.69	29.34
01/16/95	25.19	23.57	24.52	24.03	23.77	23.73	23.95	24.12	24.44	24.49	24.72	29.37
01/17/95	25.25	23.63	24.58	24.09	23.83	23.79	24.01	24.18	24.50	24.55	24.78	29.45
01/18/95	25.28	23.66	24.62	24.12	23.85	23.82	24.04	24.21	24.53	24.58	24.81	29.48
01/19/95	25.31	23.69	24.65	24.15	23.88	23.84	24.07	24.24	24.56	24.61	24.84	29.52
01/20/95	25.36	23.74	24.71	24.21	23.94	23.90	24.13	24.30	24.62	24.67	24.90	29.59
01/21/95	25.44	23.81	24.77	24.27	24.00	23.96	24.19	24.36	24.68	24.73	24.97	29.67
01/22/95	25.48	23.84	24.81	24.30	24.04	24.00	24.22	24.40	24.72	24.77	25.00	29.71
01/23/95	25.51	23.87	24.84	24.34	24.07	24.03	24.26	24.43	24.75	24.80	25.03	29.75
01/24/95	25.59	23.94	24.91	24.41	24.14	24.10	24.33	24.50	24.82	24.87	25.11	29.84
01/25/95	25.63	23.98	24.95	24.45	24.18	24.14	24.37	24.54	24.86	24.91	25.15	29.89
01/26/95	25.67	24.02	25.00	24.48	24.22	24.17	24.41	24.58	24.90	24.95	25.19	29.94
01/27/95	25.77	24.10	25.09	24.58	24.30	24.26	24.49	24.67	24.99	25.04	25.28	30.05
01/28/95	25.88	24.21	25.20	24.69	24.41	24.37	24.60	24.78	25.10	25.15	25.39	30.18
01/29/95	25.97	24.29	25.28	24.76	24.49	24.45	24.68	24.85	25.18	25.23	25.47	30.28
01/30/95	26.05	24.37	25.36	24.84	24.57	24.52	24.76	24.93	25.25	25.31	25.55	30.37
01/31/95	26.42	24.70	25.72	25.18	24.89	24.85	25.09	25.26	25.59	25.65	25.89	30.78

	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
01/01/95	30.75	28.89	30.50	32.56	32.64	29.90	30.76	27.16	24.68	23.97	22.76	22.60
01/02/95	30.95	29.03	30.63	32.70	33.06	30.10	30.97	27.33	24.84	24.13	22.91	22.74
01/03/95	31.16	29.18	30.76	32.84	33.28	30.31	31.18	27.51	25.00	24.29	23.06	22.89
01/04/95	31.36	29.42	30.99	33.08	33.49	30.50	31.38	27.69	25.17	24.45	23.21	23.04
01/05/95	31.43	29.55	31.09	33.19	33.57	30.57	31.46	27.75	25.22	24.50	23.26	23.10
01/06/95	31.50	29.67	31.20	33.30	33.65	30.64	31.53	27.82	25.28	24.56	23.32	23.15
01/07/95	31.56	29.79	31.30	33.40	33.71	30.70	31.59	27.87	25.33	24.60	23.36	23.19
01/08/95	31.62	29.91	31.40	33.50	33.77	30.75	31.64	27.92	25.38	24.65	23.40	23.23
01/09/95	31.72	30.14	31.56	33.69	33.86	30.85	31.74	28.01	25.46	24.73	23.48	23.31
01/10/95	31.77	30.25	31.67	33.76	33.93	30.90	31.79	28.05	25.50	24.77	23.51	23.34
01/11/95	31.82	30.36	31.78	33.87	33.96	30.94	31.84	28.10	25.53	24.80	23.55	23.38
01/12/95	31.86	30.48	31.85	33.96	34.03	30.98	31.88	28.13	25.57	24.84	23.58	23.41
01/13/95	31.90	30.59	31.94	34.05	34.07	31.02	31.92	28.17	25.60	24.87	23.61	23.44
01/14/95	31.99	30.81	32.12	34.22	34.16	31.10	32.00	28.25	25.67	24.93	23.67	23.50
01/15/95	32.03	30.92	32.20	34.31	34.20	31.14	32.04	28.28	25.70	24.97	23.70	23.53
01/16/95	32.07	31.04	32.29	34.40	34.25	31.18	32.08	28.32	25.73	25.00	23.73	23.56
01/17/95	32.14	31.27	32.47	34.57	34.33	31.26	32.16	28.39	25.80	25.06	23.79	23.62
01/18/95	32.18	31.39	32.55	34.66	34.37	31.29	32.20	28.42	25.83	25.09	23.82	23.65
01/19/95	32.22	31.50	32.64	34.75	34.41	31.33	32.24	28.46	25.86	25.12	23.85	23.67
01/20/95	32.30	31.75	32.83	34.93	34.50	31.41	32.32	28.53	25.92	25.18	23.91	23.73
01/21/95	32.39	32.01	33.02	35.12	34.59	31.49	32.40	28.60	25.99	25.25	23.97	23.79
01/22/95	32.43	32.15	33.13	35.22	34.64	31.53	32.44	28.64	26.03	25.28	24.00	23.82
01/23/95	32.47	32.29	33.23	35.33	34.68	31.57	32.48	28.68	26.06	25.31	24.03	23.86
01/24/95	32.57	32.59	33.45	35.55	34.78	31.68	33.58	28.76	26.14	25.39	24.10	23.92
01/25/95	32.62	32.76	33.58	35.67	34.84	31.71	32.63	28.81	26.18	25.43	24.14	23.96
01/26/95	32.67	32.93	33.71	35.80	34.89	31.76	32.68	28.85	26.22	25.47	24.18	24.00
01/27/95	32.79	33.33	34.00	36.09	35.02	31.87	32.80	28.96	26.31	25.56	24.26	24.09
01/28/95	32.94	33.83	34.37	36.45	35.17	32.01	32.94	29.09	26.43	25.67	24.37	24.19
01/29/95	33.04	34.19	34.63	36.70	35.26	32.11	33.04	29.17	26.51	25.75	24.45	24.27
01/30/95	33.14	34.54	34.89	36.96	35.39	32.21	33.15	29.28	26.59	25.83	24.52	24.34
01/31/95	33.61	36.18	36.13	38.18	35.87	32.65	33.60	29.65	26.94	26.18	24.84	24.66

FIGURE A-17

KANSAS CITY POWER & LIGHT - GMO
CASE NO. ER-2012-0175

GMO LOW INCOME WEATHERIZATION
FUNDING, EXPENDITURES AND PRODUCTION
PROGRAM YEAR 2011

Agency Number	Low-Income Weatherization Administered by Department of Natural Resources Divison of Energy Subrgrantee Agency Name and Location	Annual Funds Authorized in ER-2010-0356	Total Funding 2011	Funds Rolled Over from Previous Year [1]	Administrative Expenses	Funds Net of Administrative Expense	Jobs Completed	Jobs in Progress end of 2011	Funds Undistributed 2011
10	Kansas City Housing and Community Development Department, (KCHCDD) **								**
19	West Central Missouri Community Action Agency, Appleton City (WCMCAA) **								**
13	Missouri Valley Community Action Agency (MVCAA) **								**
1	Community Services, Inc. of Northwest Missouri, Maryville (CSI) **								**
4	Community Action Partnership of Greater St. Joseph (CAPSTJO) **								**
6	Green Hills Community Action Agency, Trenton (GHCAA) **								**
	Funds Authorized in Case No. ER-2010-0356 but not **								**
	Total GMO Missouri Program	$150,000 **							**

[1] Beginning in 2011, unused funds are not rolled to next year

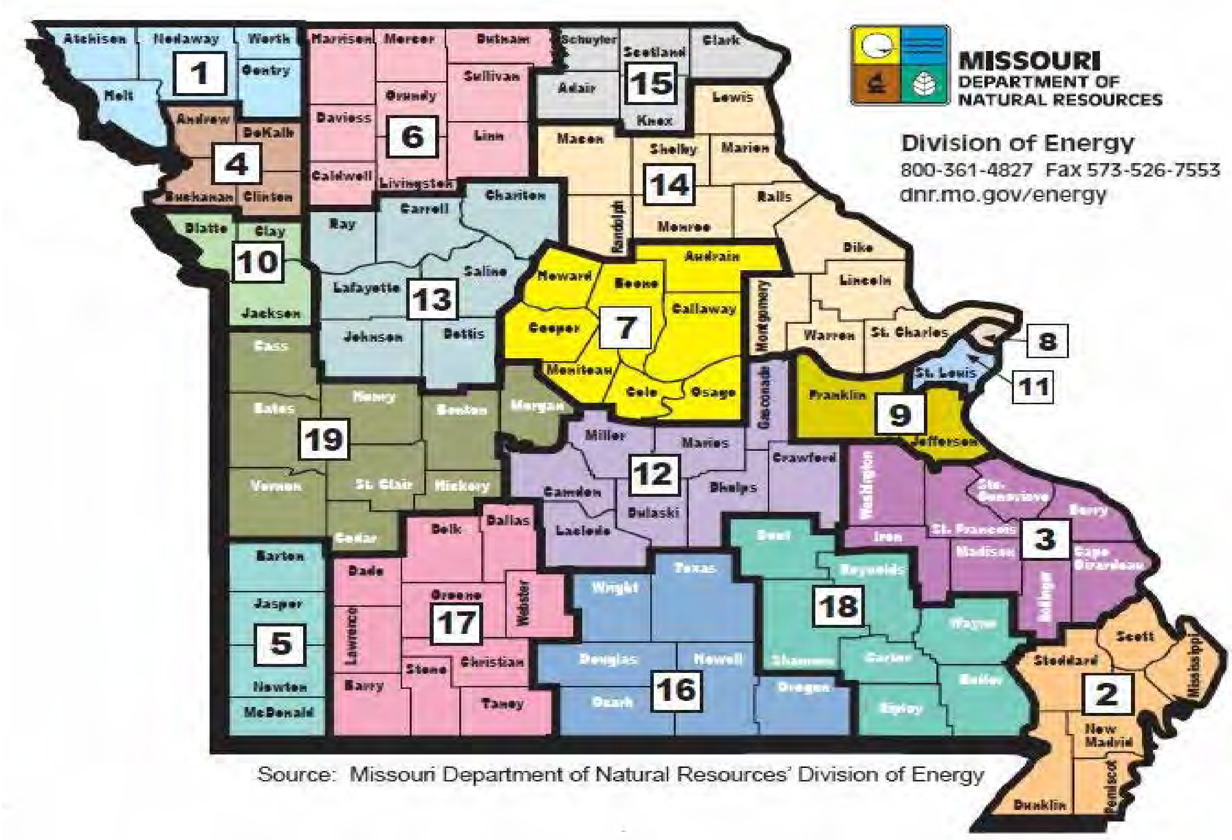
(Source - KCP&L Low Income Weatherization Program Status Report filed April 13, 2012 and DR 0260)

Schedule HEW 1
Highly Confidential

Schedule HEW 1
Highly Confidential

KANSAS CITY POWER & LIGHT - GMO
CASE NO. ER-2012-0175

MDNR Subgrantees (Weatherization Agencies)
for Low Income Weatherization



1 Community Services, Inc. of Northwest Missouri, Maryville (CSI)
2 Delta Area Economic Opportunity Corporation, Portageville (DAEOC)
3 East Missouri Action Agency, Park Hills (EMAA)
4 Community Action Partnership of Greater St. Joseph (CAPSTJO)
5 Economic Security Corporation of the Southwest Area, Joplin (ESC)
6 Green Hills Community Action Agency, Trenton (GHCAA)
7 Central Missouri Community Action, Columbia (CMCA)
8 Urban League of Metro. St. Louis (ULMSL)
9 Jefferson-Franklin Community Action Corporation, Hillsboro (JFCAC)
10 Kansas City Housing and Community Development Department, (KCHCDD)
11 Community Action Agency of St. Louis County, Overland (CAASTLC)
12 Missouri Ozarks Community Action, Inc., Richland (MOCA)
13 Missouri Valley Community Action Agency (MVCAA)
14 North East Community Action Corporation, Bowling Green (NECAC)
15 Northeast Missouri Community Action Agency, Kirksville (NMCAA)
16 Ozark Action, Inc., West Plains (OAI)
17 Ozarks Area Community Action Corp., Springfield (OACAC)
18 South Central Missouri Community Action Agency, Winona (SCMCAA)
19 West Central Missouri Community Action Agency, Appleton City (WCMCAA)
INDEPENDENCE
O'FALLON
ST. CHARLES
Helping Ministry Neighborhood Development Corporation, Hayti (HMNDC)
Mid-America Regional Council, Kansas City (MARC)

Elegible for GMO Low Income Weatherization Funds

KANSAS CITY POWER & LIGHT - GMO
CASE NO. ER-2012-0175

Weatherization Funding for the Subgrantee Agencies [1]

GMO Subgrantees		GMO 2012	Spent thru 6/30/2012	Balance
KCHCDD	**			
WCMCAA				
MVCAA				
CSI				
CAPSTJO				[2]
GHCAA				
Unallocated				[3] **
Total		$ 150,000		

[1] Source -Staff DR 0260 and DR MDNR_20120627

[2] Previously was included in CSI

[3] Amount Authorized in Case No. ER-2010-0356 but not allocated

Schedule HEW 3
Highly Confidential

KCP&L Greater Missouri Operations Company
Case No. ER-2012-0175

St. Joseph Landfill Gas Electrical Generator

In-Service Test Criteria

1. All major construction work is complete.

   Based on personal observations of the facility on the following dates, all major construction is complete: November 10, 2011 and March 30, 2012.

2. All preoperational tests have been successfully completed.

   Preoperational tests were completed in November 2011 through March 2012 to support in-service testing in March 2012.

3. Unit successfully meets all contract operational guarantees. (Note: Some operational contract guarantee verification periods may extend beyond the duration of the schedule for a rate case or the in-service criteria evaluation period and/or the guarantees may be subject to liquidated damages. These guarantees will be evaluated for applicability.)

   Applicable operational contract guarantees have been satisfied. Some guarantee periods have not been completed at the time of this evaluation.

4. Unit successfully demonstrates its ability to initiate the proper start sequence resulting in the unit transitioning from zero (0) rpm to rated load.

   Based on data obtained during the interval, 10:48, March 14, 2012 through 11:21, March 14, 2012, the generating unit successfully completed a start sequence from zero (0) rpm to rated load.

5. Unit successfully demonstrates its ability to initiate the proper shutdown sequence resulting in the unit transitioning from rated load to zero (0) rpm.

   Based on data obtained during the interval, 14:03, March 21, 2012 through 14:28, March 21, 2012, the generating unit successfully completed a shutdown sequence from rated load to zero (0) rpm.

6. Unit successfully demonstrates its ability to operate at or above minimum load for one hundred sixty eight (168) hours.

   Based on data obtained during the interval, 11:15, March 14, 2012 through 14:15, March 21, 2012, the generating unit successfully operated above minimum load for greater than one hundred sixty eight (168) hours.

7. Unit successfully demonstrates its ability to operate at or above its design capacity factor for one hundred twenty (120) hours. If the design capacity factor is not specified, it will be assumed to be seventy percent (70%) unless the utility can offer evidence justifying a lower value.

   Based on data obtained during the interval, 11:25, March 14, 2012 through 14:05, March 21, 2012, the generating unit successfully operated above a seventy percent (70%) capacity factor for greater than one hundred twenty (120) hours.

8. Unit successfully demonstrates its ability to operate at an average capacity factor of ninety five percent (95%) for four (4) hours.

   Based on data obtained during the interval, 11:35, March 14, 2012 through 15:35, March 14, 2012, the generating unit successfully operated above a ninety five percent (95%) capacity factor for four (4) hours.

9. Landfill gas collection/supply system is capable of delivering fuel to support items (6), (7) and (8), listed above.

   Based on data obtained during the testing for Items 6 through 8 (above), the landfill gas collection/supply system is capable of delivering fuel to support those items.

10. Sufficient transmission/distribution interconnection facilities shall exist for the total unit design net electrical capacity at the time the unit is declared fully operational and used for service.

    Based on review of drawings, data, and other information related to the interconnection of the generating unit to the distribution system, there is sufficient interconnection capacity.

11. Sufficient transmission/distribution facilities shall exist for the total unit design net electrical capacity into the utility service territory at the time the unit is declared fully operational and used for service.

    Based on review of drawings, data, and other information related to the distribution facilities connecting to the utility service territory, there is sufficient capacity for the generating unit net capacity.