180

AmerenUE's Response to
MPSC Staff Data Request
Case No. EC-2002-1
Excess Earnings Complaint
Staff of the MPSC v. Union Electric Company d/b/a AmerenUE

No. 2937:

What jurisdictional allocation methodology is used in the determination of the FERC pro-forma open access tariff rates for AmerenUE?

Supplemental Response No. 1:

See the testimony of Craig E. Deters attached, pages 6-7 for reference to 4 CP for UE-CIPS load profile.

Signed By: Richard J. Kovach
Prepared By: Richard J. Kovach
Title: Manager, Rate Engineering

Exhibit No. 180
Date 7/12/02 Case No. EC-2002-1
Reporter Ken

Exhibit _____, CED-1

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

| | | |
|---|---|---|
| Union Electric Company and Central Illinois Public Service Company | ) ) ) | Docket Nos. EC96-007-000, ER96-677-000 and ER96-679-000 |

**PREPARED DIRECT TESTIMONY**
**OF**
**CRAIG E. DETERS**

WITNESS FOR THE STAFF
OF THE
FEDERAL ENERGY REGULATORY COMMISSION

OFFICE OF ELECTRIC POWER REGULATION
DIVISION OF INVESTIGATIONS

WASHINGTON, D.C.
DECEMBER 18, 1996

Exhibit ___, CED-1

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

| | | |
|---|---|---|
| Union Electric Company and Central Illinois Public Service Company | ) ) ) | Docket Nos. EC96-007-000, ER96-677-000 and ER96-679-000 |

Direct Testimony of
Craig E. Deters
Witness for the Staff of the
Federal Energy Regulatory Commission

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Craig E. Deters. My business address is 888 First Street, N.E., Washington, D.C. 20426.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Federal Energy Regulatory Commission (FERC) as a Public Utilities Specialist in the West Investigations Branch of the Division of Investigations in the Office of Electric Power Regulation (OEPR).

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received Bachelor and Masters of Science Degrees in Mechanical Engineering from the State University of New York at Buffalo in 1984 and 1987, respectively. Upon completion of graduate school, I was employed as a thermal engineer at the Bell Aerospace Division of Textron Corporation. As a member of an engineering support group, I performed thermal computational analysis to ensure reliable performance and conformance with military specifications. In 1989, I started working as a heating, ventilation and air conditioning engineer for an engineering consulting firm serving architectural and industrial clients. The primary focus of my work was the production of final construction bid packages. In September 1991, I returned to the State University of N.Y. at Buffalo full time and received a Masters in Business Administration Degree with a concentration in Finance in 1993.

In January 1994, I joined the staff of the Electric Rate Filings Branch of OEPR. I conducted analyses of utility company costs to determine whether proposed rate schedules met the Commission's just, reasonable and not unduly discriminatory standards. In July 1994, I transferred to my current position as a public utilities specialist in the West Investigations Branch. My current responsibilities include the review and preparation of cost-of-service studies, exhibits and testimony relating to electric utilities involved in rate proceedings before the Commission. I am a licensed Professional Engineer in the State of New York.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes, I submitted testimony in El Paso Electric Company and Central and South West Services, Inc., Docket Nos. EC94-7-000 and ER94-898-000 and in Public Service Company of New Mexico, Docket No. ER95-1800-000 et al.

Q. WHAT ASPECTS OF THIS PROCEEDING WILL YOU ADDRESS IN YOUR TESTIMONY?

A. My testimony examines two major areas involving pricing under the proposed open access tariff for Ameren Corporation (Ameren). Initially, I examine the issue of what divisor should be used to develop a transmission rate for Union Electric Company (Union Electric) and Central Illinois Public Service Company's (Central Illinois) (collectively, Applicants') open access Point-To-Point (PTP) transmission service. Secondly, I discuss rate issues associated with ancillary services to be provided under the Applicants' open access tariff. My testimony concludes with a summary comparing Staff's rates with those of the Applicants' for Ameren.

Q. WHAT MATERIALS DID YOU REVIEW IN PREPARING YOUR TESTIMONY IN THIS PROCEEDING?

A. I reviewed the joint application of the Applicants, the testimony, exhibits and workpapers of the witnesses, the relevant responses to interrogatories and both Union Electric's and Central Illinois' 1994 and 1995 Form No. 1's.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am sponsoring Exhibit ___, CED-2 which provides the 1994 and 1995 firm transmission load profiles of Ameren Corporation as supported by data responses in Exhibit ___, CED-3. Exhibit ___, CED-4 consists of schedules supporting Staff's ancillary service rates for test year 1994 and Exhibit ___, CED-5 supports Staff's ancillary service rates for test year 1995. Exhibits ___, CED-6 and ___, CED-7 are summaries comparing Staff's rates with those proposed by the Applicants for test years 1994 and 1995, respectively.

**- Open Access PTP Rate Development -**

Q. PLEASE DESCRIBE HOW THE APPLICANTS PROPOSED TO COMPUTE THEIR OPEN ACCESS PTP TRANSMISSION RATE FOR THE APPLICANTS.

A. The Applicants determine an open access PTP transmission rate by dividing the total transmission revenue requirement by a PTP divisor. In their initial December 22, 1995 filing in Docket No. ER96-677-000 they proposed using the transmission system annual peak demand (annual peak) in developing an open access PTP transmission rate. See Applicants' witness Maureen A. Borkowski's Exhibit ___, MAB-2, page 1, line 1 and please note that Applicants' Exhibit ___, MAB-2 of the initial filing in Docket No. ER96-677-000 is distinct from Applicants' Exhibit ___, MAB-2 of Docket No. EC96-007-000.

The Applicants subsequently changed their position in their November 15, 1996 case-in-chief filing by using the average of the Applicants' 12 monthly transmission system peaks (average of 12 monthly peaks) to divide the Applicants' transmission revenue requirement instead of the annual transmission system peak demand (annual peak) in developing a PTP transmission rate. See Applicants' Exhibit ___, MAB-14, page 129a, line 2.

The average of 12 monthly peaks is a smaller divisor than the annual peak and materially increases the rate charged.

Ordering Paragraph (c) of the Commission's October 16, 1996 hearing order in this proceeding required Applicants to refile revised non-price terms and conditions of their post-merger tariff to comply with Order No. 888. Commission Order No. 888, Federal Energy Guidelines, Statutes & Regulations ¶ 31,036, does not mandate this alteration. In Order No. 888 at page 31,737 or page 301, (mimeo) the Commission stated that "while not requiring the use of any particular rate methodology, we will no longer summarily reject a firm point-to-point transmission rate developed by using the average of the 12 monthly peaks." The proposed change in the Applicants' position during this proceeding is not permitted by Commission policy. See the testimony of Staff witness Joe L. Dragg, Exhibit ___, JLD-1.

Q. HOW DOES STAFF TRADITIONALLY ASSIGN TRANSMISSION COSTS TO TRANSMISSION CUSTOMERS?

A. Staff typically examines the annual transmission load profile of a transmission provider in determining how costs should be allocated among transmission users. A transmission customer's actual transmission capacity utilization at the time of peak total transmission demand on the transmission system of the transmission provider is referred to as the customer's coincident peak demand. Assuming that the transmission provider incurs costs by planning to meet its transmission system's peak demands, the customer's coincident peak demand is representative of its portion of the burden of cost being placed on the transmission provider.

Staff often examines the transmission demand profile of the transmission provider to determine which of transmission provider's monthly peaks are representative of cost causation. A transmission provider, for example, with one large monthly peak of transmission demand relative to the rest of the year must plan its transmission system to meet the demand during that peak month; the relatively small demands on the transmission system during the other months are not nearly as important with respect to incurring costs on the provider and should not be used to allocate costs among customers. See Central Power and Light Company, 47 FERC ¶ 61,339 (1989).

Q. WHAT IS THE PROPOSED COMPANY'S TRANSMISSION LOAD PROFILE?

A. The Applicants' 1994 and 1995 transmission load profiles, Exhibit ___, CED-2, were created by combining Union Electric's and Central Illinois' independent profiles provided by each Applicant in Exhibit ___, CED-3. While the data provided in Exhibit ___, CED-3 is not coincident it is the best data Staff had available and is likely a good approximation of a combined Union Electric - Central Illinois load profile. The profiles suggest a four month summer peaking season, June through September. It should be noted that if the Applicants' average of

4 monthly peaks of 9,197 MW for 1994 is used as a divisor to the revenue requirement, the resulting rate is relatively close in percentage terms to that computed using the Applicants' annual peak of 9,777 MW, (9,777 MW / 9,197 MW) - 1, or only about 6.3% greater, whereas use of the average 12 monthly peaks of 7,611 MW relative to the use of the annual peak would increase rates by, (9,777 MW / 7,611 MW) - 1 or 28.5%.

Q. WHAT DO YOU CONCLUDE?

A. As I have stated, Commission Order No. 888, pages 31,736 - 31,738, is not dispositive on the criteria of when an annual peak or the average of 12 monthly peaks or if some other average of n-monthly peaks of the transmission provider should be used to determine a PTP transmission rate. My view of the Applicants' November 15, 1996 submittal indicates that they have not attempted to justify their use of an average of 12 monthly peaks on any basis other than by a reference to Order No. 888 and the discussion on this issue contained therein. As I have shown, an examination of the Applicants' monthly peaks indicates that under traditional Commission rate making practices, Applicants do not qualify for the use of the average of 12 monthly peaks. Further, Order No. 888 does not mandate the use of an average of 12 monthly peaks; it only allows the use of the average of 12 monthly peaks. Therefore, I have adopted Applicants' originally proposed use of the annual peak as the appropriate divisor in developing a PTP transmission rate.

**- Ancillary Service Rates -**

Q. WHAT ANCILLARY SERVICES HAVE THE APPLICANTS PROPOSED FOR AMEREN TO OFFER UNDER THE OPEN ACCESS TARIFF?

A. The Applicants followed Commission's Order No. 888 in providing separate Scheduling, System Control and Dispatch (Scheduling); Reactive Supply and Voltage Control (Reactive Supply); Regulation and Frequency Response (Regulation); Energy Imbalance; Operating Reserve - Spinning; and Operating Reserve - Supplemental services. Additionally, the Applicants have filed to supply Loss Compensation Service. Staff's cost support for ancillary services can be found in Exhibit ___, CED-4.

Q. ARE THERE ANY GENERAL PROBLEMS WITH THE METHODS EMPLOYED BY THE APPLICANTS IN DEVELOPING THEIR ANCILLARY SERVICE RATES?

A. Yes. There are three general problems which afflict some or all of the Applicants' proposed ancillary rates for Ameren. The Applicants used a levelized gross plant fixed charge rate methodology (gross plant method) to develop all ancillary rates while staff believes that the net plant methodology used in the traditional Electric Cost-Of-Service (ECOS method) should be used for Scheduling, Reactive Control and Regulation services. Secondly, the Applicants used the average of 12 monthly peaks divisor to determine the percentage of ancillary service cost responsibility per unit of purchased transmission capacity while

Staff believes an annual peak divisor is more appropriate. Finally, the Applicants used 1995 test year data instead of test year 1994 data to calculate ancillary service rates. As in the case of transmission rates, Staff does not believe this change in test years is permitted by Commission policy. See the testimony of Staff witness Dragg, Exhibit ___, JLD-1.

Q. PLEASE EXPLAIN WHY IT IS APPROPRIATE TO USE THE ECOS METHOD RATHER THAN THE GROSS PLANT LEVELIZED METHOD IN COMPUTING SCHEDULING, REACTIVE CONTROL AND REGULATION SERVICES.

A. There are two reasons. The first reason is the same as that indicated by Staff witness Teresina A. Zotto in Exhibit ___, TAZ-1 for using the ECOS method rather than the gross plant method in calculating the Applicants' total transmission system revenue requirement. Use of the gross plant method can result in a double recovery of costs associated with the depreciation of capital. Since the results of using the gross plant method may often be close to those attained by using the ECOS method and since ancillary services are often a small fraction of transmission pricing and with gross plant numbers readily available in the Form No. 1, Staff has often used a gross plant method to calculate these ancillary service rates. In this case, however, the ECOS method results in significantly lower Reactive Supply and Regulation rates than the gross plant method. In general, this is because of the relatively large amounts of already depreciated production plant of both companies: ($1.58

billion / $4.44 billion) = 35.6% of Union Electric's production plant and ($0.63 billion / $1.25 billion) = 50.4% of Central Illinois' production plant according to their respective Form No. 1's for end of year 1995.

Second, according to Order No. 888, a transmission customer must purchase Scheduling and Reactive Control services from the transmission provider. These are monopoly services and should be treated in a manner similar to the rate treatment for the transmission tariffs which is developed by using the ECOS method.

Q. WHY DOESN'T STAFF BELIEVE IT IS APPROPRIATE TO USE THE ECOS METHOD FOR OPERATING RESERVE SERVICE AND FOR LOSS COMPENSATION SERVICE?

A. For Regulation and Operating Reserve services, Order No. 888 allows a transmission customer to make alternative comparable arrangements to satisfy its obligations and thus avoid direct purchase of these services from the transmission provider. Commission Order No. 888 does not require the transmission provider to offer loss compensation service. Since there is no guarantee of long term sales of these services, the traditional concept of pricing based on long term planning costs and long term cost recovery is undermined. I see no reason to penalize transmission providers with relatively large amounts of depreciated production plant by capping rates for these services at those justified only by net plant returns except for Regulation service. For Regulation service, while Order No. 888

does allow a transmission customer to make alternative comparable arrangements, the problem of committing on-line generation whose output will be raised or lowered to follow moment-to-moment changes in load while fully complying with the local reliability council's requirements does not seem to easily lend itself to being a marketplace service leaving the transmission customer with little alternative but to purchase the service from the transmission provider in many instances.

Q. WHY DOES STAFF BELIEVE IT IS APPROPRIATE TO USE AN ANNUAL PEAK DIVISOR INSTEAD OF THE AVERAGE OF 12 MONTHLY PEAKS DIVISOR AS PROPOSED BY THE APPLICANTS TO DEVELOP ANCILLARY RATES?

A. There are two reason. The Applicants' proposal to use the Applicants' average of 12 monthly peaks as a divisor to calculate a PTP customer's requirement obligation for Regulation, Operating Reserve - Spinning and Operating Reserve - Supplemental services as well as its use by the Applicants to determine a Reactive Control rate is inappropriate because it mismatches with the Applicants proposal that PTP transmission customers be billed on a full contract demand basis permitting an over recovery of costs. If only a single simple devisor is to be used to determine a rate, then the annual system peak is a better estimate of total demand. See Staff's proposed tariff language changes for these services in the testimony of Staff witness Hugh Stewart, Exhibit ___, HS-1. Second, Staff's use of an annual peak divisor to develop rates for ancillary services is consistent with Staff's use of an annual peak divisor to develop the base transmission rates.

Q. WHAT IS THE IMPACT ON THE ANCILLARY RATES OF USING THE ECOS METHOD RATHER THAN GROSS PLANT METHOD?

A. For Reactive Supply and Voltage Control, Staff supports a rate of $ / kW-mo using the ECOS method and would support a rate of $ / kW-mo using the gross plant method representing a % increase. For Regulation, Staff supports a rate of $ / kW-mo using the ECOS method and would support $ / kW-mo using the gross plant method representing a % increase. Staff used the gross plant method for Scheduling because it had not been able to obtain requisite net plant data from the Applicants.

Q. ARE THERE MORE SPECIFIC DETAILS RELATING TO EACH OF THE ANCILLARY SERVICES?

A. Yes. I have relied upon three fellow staff witnesses for issues of engineering judgement and technical expertise with respect to the details of ancillary services. Their testimony is the basis for much of the substance underlying the ancillary service rates, see the testimony staff witness Saeed Farrokhpay, Exhibit ___, SF-1, James S. Ballard, Exhibit ___, JSB-1 and Hugh Stewart, Exhibit ___, HS-1. The details of the cost support and Staff positions for each of the proposed ancillary services can be found below. Schedules of cost support for each ancillary service can be found in Exhibit ___, CED-4.

## Scheduling, System Control and Dispatch Service

The Applicants propose a daily fee of $50 for users of the transmission system. This rate is not appropriate. It is unrelated to either the amount of transmission service provided or the number of scheduling changes made by a customer. Staff proposes a charge based upon the amount of transmission capacity purchased.

As indicated in Exhibit ___, CED-4, page 1, the computer & telecommunication system plant charge is recovered under this ancillary service and not in the open access revenue requirement, see the testimony of staff witness Natalie Y. Tingle-Stewart, Exhibit ___, NYTS-1. The correct amounts of computer & telecommunications equipment and O&M system control and load dispatching is included according to staff witness Hugh Stewart, Exhibit ___, HS-1.

## Reactive Supply and Voltage Control Service

Staff uses an annual peak transmission divisor instead of the Applicant's average of 12 monthly peaks to avoid over recovery of costs from PTP transmission customers. Staff witness Ballard derives the reactive plant percentage shown in Exhibit ___, CED-4, page 2 in his testimony, Exhibit ___, JSB-1 where he also discusses the appropriate selection of plants used in determining the rate and proposes Staff tariff schedule language.

**Regulation and Frequency Response Service**

Staff's cost support is shown in Exhibit ___, CED-4, page 3. The rate shown is Staff's calculation of the underlying cost to Applicants' of supplying production capacity to provide the service. The amount to be billed to the transmission customer is Applicants' assigned regulation margin divided by the Applicants' annual peak multiplied by the production cost. See the testimony of Staff witness Stewart, Exhibit ___, HS-1 for proposed tariff schedule language.

**Operating Reserve - Spinning Reserve Service**

See Exhibit ___, CED-4, page 4 for Staff's cost support. See the testimony of Staff witness Farrokhpay, Exhibit ___, SF-1, for the selection of the appropriate plants used in developing the rate. See the testimony of Staff witness Stewart, Exhibit _, HS-1 for proposed tariff schedule language.

**Operating Reserve - Supplemental Reserve Service**

See Exhibit ___, CED-4, page 5 for Staff's cost support. See the testimony of Staff witness Farrokhpay, Exhibit ___, SF-1, for the selection of the appropriate plants used in determining the rate. See the testimony of Staff witness Stewart, Exhibit _, HS-1 for proposed tariff schedule language.

### Loss Compensation Service

See Exhibit ___, CED-4, pages 6 and 7 for Staff's cost support for capacity and energy loss compensation cost support, respectively.

### - Summary of Transmission Rates -

Q. DO YOU HAVE A SUMMARY OF THE OPEN ACCESS TRANSMISSION TARIFF RATES SUPPORTED BY STAFF?

A. Yes, Exhibit ___, CED-6 summarizes Staff's rates for test year 1994 and compares them with those proposed by the Applicants while Exhibit ___, CED-7 presents Staff's rates for test year 1995. The summaries include the Network Transmission Revenue Requirement and PTP transmission rates as filed by the Applicants in their initial December 22, 1995 filing, in Docket No. ER96-677-000. The Applicants' November 15, 1996 filing requested higher rates for PTP transmission service but as indicated by Staff witness Dragg in Exhibit ___, JLD-1, an applicant can not receive rates higher than its initial request in a proceeding.

Commission Order No. 888, issued April 24, 1996, at page 31,719 requires a transmission provider to offer and price each of the six required ancillary services separately whereas the Applicants had initially filed bundled rates. Hence, Staff's summaries include the Applicants' proposed ancillary service rates as stated in the Applicants' November 15, 1996 filing.

Q. IS THERE ANY DIFFICULTY IN DIRECTLY COMPARING THE NUMERICAL RATES REPORTED BY THE APPLICANTS' FOR ANCILLARY SERVICES IN EXHIBIT ___, MAB-13 WITH THOSE CALCULATED BY STAFF?

A. Yes. For Regulation, Operating Reserve - Spinning Reserve and Operating Reserve - Supplemental Reserve services, the Applicants' have included a 12 monthly peak average divisor in the text of the service schedule separate from their reported rates. Staff believes that the annual peak demand should be used as a divisor as indicated in the change of tariff language suggested by Staff witness Stewart, Exhibit ___, HS-1. If the tariff language were left unchanged, however, and only the numerical values were to be replaced in the Applicants' tariff schedules, the value to be used incorporating the use of the 1994 annual peak (9,777 MW) instead of the average of the 12 monthly peaks (7,611 MW) can be found by multiplying Staff's rates by ratio of (7,611 MW / 9,777 MW) and are reported in the summary. It should be emphasized that these numbers have been altered only to facilitate a comparison between the Applicants' and Staff's positions. Staff believes the rates with its proposed language changes should be MW-mo, MW-mo and MW-mo for Regulation, Operating Reserves - Spinning and Supplemental services, respectively.

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

| | | |
|---|---|---|
| Union Electric Company and Central Illinois Public Service Company | ) ) ) | Docket Nos. EC96-007-000, ER96-677-000 and ER96-679-000 |

AFFIDAVIT OF

Craig E. Deters

Craig E. Deters, being first duly sworn, on oath states that he is the Craig E. Deters whose prepared testimony was served on all parties to the above-referenced proceeding. Craig E. Deters further states that if asked the questions contained in the text of such testimony that he would give answers that are herein set forth and that he adopts the aforesaid answers as his cross-answering testimony in this proceeding.

Craig E. Deters

Craig E. Deters

Washington, D.C.

Subscribed and sworn to before this 18th day of December, 1996.

Saida A. Shaalan

Notary Public

My commission expires August 1, 2001.

SAIDA A. SHAALAN NOTARY PUBLIC DISTRICT OF COLUMBIA

Exhibit _____, CED-2

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

| | | |
|---|---|---|
| Union Electric Company and Central Illinois Public Service Company | ) ) ) | Docket Nos. EC96-007-000, ER96-677-000 and ER96-679-000 |

**SUPPORTING DOCUMENTS**
**OF**
**CRAIG E. DETERS**

WITNESS FOR THE STAFF
OF THE
FEDERAL ENERGY REGULATORY COMMISSION

OFFICE OF ELECTRIC POWER REGULATION
DIVISION OF INVESTIGATIONS

WASHINGTON, D.C.
DECEMBER 18, 1996

AMEREN CORPORATION
UNION ELECTRIC COMPANY & CENTRAL ILLINOIS PUBLIC SERVICE COMPANY
DOCKET NOS. EC96-007-000, ER96-677-000, AND ER96-679-000

1994 FIRM TRANSMISSION LOAD PROFILE OF AMEREN
(Ratio of Monthly Peak to Annual Peak)
Union & CIPS Loads not Coincident
(MW)

| | CIPS 1994 | Union 1994 | Ameren 1994 |
|---|---|---|---|
| January | 2182 | 5831 | 8013 |
| | 0.84 | 0.81 | 0.82 |
| February | 1962 | 5429 | 7391 |
| | 0.76 | 0.75 | 0.76 |
| March | 1763 | 4841 | 6604 |
| | 0.68 | 0.67 | 0.68 |
| April | 1651 | 4614 | 6265 |
| | 0.64 | 0.64 | 0.64 |
| May | 1709 | 5034 | 6743 |
| | 0.66 | 0.70 | 0.69 |
| June | 2585 | 6945 | 9530 |
| | 1.00 | 0.96 | 0.97 |
| July | 2574 | 7203 | 9777 |
| | 1.00 | 1.00 | 1.00 |
| August | 2332 | 6692 | 9024 |
| | 0.90 | 0.93 | 0.92 |
| September | 2092 | 6363 | 8455 |
| | 0.81 | 0.88 | 0.86 |
| October | 1653 | 4407 | 6060 |
| | 0.64 | 0.61 | 0.62 |
| November | 1793 | 4686 | 6479 |
| | 0.69 | 0.65 | 0.66 |
| December | 1887 | 5099 | 6986 |
| | 0.73 | 0.71 | 0.71 |
| Annual Peak | 2,574.00 | 7,203.00 | 9,777.00 |
| Avg. of 4 Monthly Summer Peaks | 2,395.75 | 6,800.75 | 9,196.50 |
| Avg. of 12 Monthly Peaks | 2,015.25 | 5,595.33 | 7,610.58 |

Sources:

Union - Staff-Union-16
CIPS - Staff/APP-8
See Exhibit ___, CED-3 for above data responses.

am94cp.wk3

AMEREN CORPORATION
UNION ELECTRIC COMPANY & CENTRAL ILLINOIS PUBLIC SERVICE COMPANY
DOCKET NOS. EC96-007-000, ER96-677-000, AND ER96-679-000

1995 FIRM TRANSMISSION LOAD PROFILE OF AMEREN
(Ratio of Monthly Peak to Annual Peak)
Union & CIPS Loads not Coincident
(MW)

| | CIPS 1995 | Union 1995 | Ameren 1995 |
|---|---|---|---|
| January | 1977 | 5755 | 7732 |
| | 0.81 | 0.75 | 0.76 |
| February | 1952 | 5551 | 7503 |
| | 0.80 | 0.72 | 0.74 |
| March | 1822 | 5177 | 6999 |
| | 0.74 | 0.67 | 0.69 |
| April | 1611 | 4393 | 6004 |
| | 0.66 | 0.57 | 0.59 |
| May | 1554 | 4939 | 6493 |
| | 0.63 | 0.64 | 0.64 |
| June | 2223 | 6689 | 8912 |
| | 0.91 | 0.87 | 0.88 |
| July | 2452 | 7708 | 10160 |
| | 1.00 | 0.999 | 0.999 |
| August | 2454 | 7713 | 10167 |
| | 1.00 | 1.00 | 1.00 |
| September | 1991 | 6244 | 8235 |
| | 0.81 | 0.81 | 0.81 |
| October | 1573 | 4445 | 6018 |
| | 0.64 | 0.58 | 0.59 |
| November | 1769 | 5028 | 6797 |
| | 0.72 | 0.65 | 0.67 |
| December | 1948 | 5602 | 7550 |
| | 0.79 | 0.73 | 0.74 |
| Annual Peak | 2,454.00 | 7,713.00 | 10,167.00 |
| Avg. of 4 Monthly Summer Peaks | 2,280.00 | 7,088.50 | 9,368.50 |
| Avg. of 12 Monthly Peaks | 1,943.83 | 5,770.33 | 7,714.17 |

Sources:

Union - Staff-Union-16
CIPS - OEPR/CIPSCO-14
See Exhibit ___, CED-3 for above data requests.

am95cp.wk3

Exhibit _____, CED-3

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

| | | |
|---|---|---|
| Union Electric Company and Central Illinois Public Service Company | ) | Docket Nos. EC96-007-000, ER96-677-000 and ER96-679-000 |

**SUPPORTING DOCUMENTS**
**OF**
**CRAIG E. DETERS**

WITNESS FOR THE STAFF
OF THE
FEDERAL ENERGY REGULATORY COMMISSION

OFFICE OF ELECTRIC POWER REGULATION
DIVISION OF INVESTIGATIONS

WASHINGTON, D.C.
DECEMBER 18, 1996

**<u>Union Electric Company</u>**
**Docket No. OA96-50-000**

**Commission Trial Staff's First Set of Data Requests
to Union Electric Company**

Staff-Union-16

Please provide Union's 12 monthly peak transmission system loads for both 1994 and 1995, including a breakdown of the amount of firm and non-firm transmission service at the peaks.

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ANSWER:

See Attached.

Prepared by David C. Linton
Engineer
10/28/96

| Name of Respondent | This Report Is: | Date of Report | Year of Report |
|---|---|---|---|
| UNION ELECTRIC COMPANY | (1) [x] An Original<br>(2) [ ] A Resubmission | (Mo, Da, Yr) | Dec. 31, 1995 |

## ELECTRIC ENERGY ACCOUNT

Report below the information called for concerning the disposition of electric energy generated, purchased, exchanged and wheeled during the year.

| Line No. | Item (a) | Megawatt Hours (b) | Line No. | Item (a) | Megawatt Hours (b) |
|---|---|---|---|---|---|
| 1 | SOURCES OF ENERGY | | 21 | DISPOSITION OF ENERGY | |
| 2 | Generation (Excluding Station Use): | | 22 | Sales to Ultimate Consumers (Including Interdepartmental Sales) | 31,608,861 |
| 3 | Steam | 23,794,204 | 23 | Requirements Sales for Resale (See instruction 4, page 311.) | 1,725,922 |
| 4 | Nuclear | 8,241,833 | 24 | Non-Requirements Sales For Resale (See instruction 4, page 311.) | 6,533,931 |
| 5 | Hydro--Conventional | 1,691,293 | 25 | Energy Furnished Without Charge | 0 |
| 6 | Hydro--Pumped Storage | 44,446 | 26 | Energy Used by the Company (Electric Department Only, Excluding Station Use) | 0 |
| 7 | Other | 27,974 | 27 | Total Energy Losses | 2,383,701 |
| 8 | (Less) Energy for Pumping | 109,425 | 28 | TOTAL (Enter Total of Lines 22 thru 27) (MUST EQUAL LINE 20) | 42,252,415 |
| 9 | Net Generation (Enter Total of lines 3 thru 8) | 33,690,325 | | | |
| 10 | Purchases | 8,556,617 | | | |
| 11 | Power Exchanges: | | | | |
| 12 | Received | 0 | | | |
| 13 | Delivered | 0 | | | |
| 14 | Net Exchanges (Line 12 minus line 13) | 0 | | | |
| 15 | Transmission For Other (Wheeling) | | | | |
| 16 | Received | 641,963 | | | |
| 17 | Delivered | 636,490 | | | |
| 18 | Net Transmission for Other (Line 16 minus Line 17) | 5,473 | | | |
| 19 | Transmission By Other Losses | 0 | | | |
| 20 | TOTAL (Enter Total of Lines 9, 10, 14, 18 and 19) | 42,252,415 | | | |

## MONTHLY PEAKS AND OUTPUT

1. If the respondent has two or more power systems which are not physically integrated, furnish the required information for each non-integrated system.
2. Report in column (b) the system's energy output for each month such that the total on line 41 matches the total on line 20.
3. Report in column (c) a monthly breakdown of the Non-Requirements Sales For Resale reported on line 24. Include in the monthly amounts any energy losses associated with the sales so that the total on line 41 exceeds the amount on line 24 by the amount of losses incurred (or estimated) in making the Non-Requirements Sales For Resale.
4. Report in column (d) the system's monthly maximum megawatt load (60-minute integration) associated with the net energy for the system defined as the difference between columns (b) and (c).
5. Report in columns(e) and (f) the specified information for each monthly peak load reported in column (d).

NAME OF SYSTEM: UNION ELECTRIC COMPANY

| Line No. | Month (a) | Total Monthly Energy (b) | Monthly Non-Requirements Sales For Resale & Associated Losses (c) | MONTHLY PEAK: Megawatts (See Instr. 4) (d) | MONTHLY PEAK: Day of Month (e) | MONTHLY PEAK: Hour (f) |
|---|---|---|---|---|---|---|
| 29 | January | 3,598,932 | 417,062 | 5,664 | 5 | 7-8AM |
| 30 | February | 3,204,105 | 468,868 | 5,466 | 7 | 6-7PM |
| 31 | March | 3,120,791 | 418,326 | 5,099 | 8 | 7-8AM |
| 32 | April | 2,793,887 | 345,529 | 4,338 | 5 | 7-8AM |
| 33 | May | 3,355,077 | 731,265 | 4,861 | 23 | 4-5PM |
| 34 | June | 3,675,128 | 596,614 | 6,611 | 20 | 4-5PM |
| 35 | July | 4,387,132 | 690,457 | 7,611 | 13 | 4-5PM |
| 36 | August | 4,567,703 | 518,597 | 7,603 | 18 | 3-4PM |
| 37 | September | 3,392,983 | 664,656 | 6,162 | 5 | 4-5PM |
| 38 | October | 3,071,331 | 476,791 | 4,377 | 13 | 2-3PM |
| 39 | November | 3,139,218 | 387,751 | 4,956 | 28 | 6-7PM |
| 40 | December | 3,946,128 | 818,015 | 5,495 | 9 | 6-7PM |
| 41 | TOTAL | 42,252,415 | 6,533,931 | | | |

| Name of Respondent | This Report Is: | Date of Report | Year of Report |
|---|---|---|---|
| Union Electric Company | (1) X An Original<br>(2) __ A Resubmission | (Mo,Da,Yr) | Dec. 31,1994 |

## ELECTRIC ENERGY ACCOUNT

Report below the information called for concerning the disposition of electric energy generated, purchased, exchanged and wheeled during the year.

| Line No. | Item (a) | Megawatthours (b) | Line No. | Item (b) | Megawatthours (b) |
|---|---|---|---|---|---|
| 1 | SOURCES OF ENERGY | | 21 | DISPOSITION OF ENERGY | |
| 2 | Generation (Excluding Station Use): | | 22 | Sales to Ultimate Consumers (Including Interdepartmental Sales) | 30,351,915 |
| 3 | Steam | 21,920,659 | | | |
| 4 | Nuclear | 10,006,491 | 23 | Requirements Sales for Resale (See instruction 4, page 311.) | 1,623,374 |
| 5 | Hydro-Conventional | 1,786,541 | | | |
| 6 | Hydro-Pumped Storage | 43,814 | 24 | Non-Requirements Sales for Resale (See instruction 4, page 311.) | 7,712,726 |
| 7 | Other | 20,116 | | | |
| 8 | Less Energy for Pumping | (115,993) | 25 | Energy Furnished Without Charge | 0 |
| 9 | Net Generation (Enter Total of lines 3 thru 8) | 33,661,628 | 26 | Energy Used by the Company (Electric Department Only (Excluding Station Use) | 0 |
| 10 | Purchases | 8,318,739 | 27 | Total Energy Losses | 2,296,868 |
| 11 | Power Exchanges: | | 28 | TOTAL (Enter Total of lines 21, 22, 23, 25, and 30) | 41,984,883 |
| 12 | Received | 0 | | | |
| 13 | Delivered | 0 | | | |
| 14 | Net Exchanges (Line 12 minus line 13) | 0 | | | |
| 15 | Transmission For Others (Wheeling) | | | | |
| 16 | Received | 520,890 | | | |
| 17 | Delivered | 516,374 | | | |
| 18 | Net Transmission for Others (Line 16 minus line 17) | 4,516 | | | |
| 19 | Transmission By Others losses | 0 | | | |
| 20 | TOTAL (Enter Total of lines 9, 10, 14, 18 and 19) | 41,984,883 | | | |

## MONTHLY PEAKS AND OUTPUT

1. If the respondent has two or more power systems which are not physically integrated, furnish the information for each integrated system.
2. Report in column (b) the systems's energy output for each month such that the total on line 41 matches the total on line 20.
3. Report in column (c) a monthly breakdown on the Non-Requirements Sales For Resale reported on line 24. Include in the monthly amounts any energy losses associated with the sales so that the total on line 41 exceeds the amount on line 24 by the amount of losses incurred (or estimated) in making the Non-Requirement Sales For Resale.
4. Report in column (d) the system's monthly maximum megawatt load (60-minute integration) associated with the net energy for the system defined as the difference between columns (b) and (c).
5. Report in columns (e) and (f) the specified information for each monthly peak load reported in column (d).

Name of System: UNION ELECTRIC COMPANY

| Line No. | Month (a) | Total Monthly Energy (b) | Monthly Non-Requirements Sales For Resale & Associated Losses (c) | MONTHLY PEAK: Megawatts (See Instruction 4) (d) | MONTHLY PEAK: Day of Month (e) | MONTHLY PEAK: Hour (f) |
|---|---|---|---|---|---|---|
| 29 | January | 3,789,383 | 596,087 | 5,739 | 18 | 6-7 PM |
| 30 | February | 3,413,933 | 714,561 | 5,345 | 09 | 6-7 PM |
| 31 | March | 3,574,521 | 928,510 | 4,770 | 01 | 6-7 PM |
| 32 | April | 3,185,372 | 749,240 | 4,569 | 26 | 4-5 PM |
| 33 | May | 3,074,625 | 527,841 | 4,964 | 31 | 4-5 PM |
| 34 | June | 3,685,013 | 402,524 | 6,856 | 21 | 4-5 PM |
| 35 | July | 4,026,913 | 574,645 | 7,109 | 05 | 4-5 PM |
| 36 | August | 4,200,979 | 889,332 | 6,608 | 25 | 4-5 PM |
| 37 | September | 3,290,605 | 575,493 | 6,273 | 14 | 4-5 PM |
| 38 | October | 3,263,310 | 710,978 | 4,371 | 01 | 4-5 PM |
| 39 | November | 3,062,969 | 509,898 | 4,629 | 22 | 6-7 PM |
| 40 | December | 3,417,260 | 533,617 | 5,042 | 12 | 6-7 PM |
| 41 | TOTAL | 41,984,883 | 7,712,726 | | | |