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PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Investigation into the Membership of Louisville Gas and Electric Company and Kentucky Utilities Company in the Midwest Independent Transmission System Operator, Inc.

Case No. 2003-00266

Responses of
Midwest Independent Transmission System Operator, Inc.
to the LG&E/KU 3/11/05 Supplemental Data Requests

Midwest Independent Transmission System Operator, Inc. ("Midwest ISO") hereby responds to the data requests propounded by Louisville Gas and Electric Company and Kentucky Utilities Company (collectively, "LG&E/KU") on March 11, 2005. The Midwest ISO's response consists of one bound volume of text responses.

Counsel for the Midwest ISO, rather than a witness, are responsible for any objection interposed to a data request. In most instances, in a spirit of cooperation and without waiving the objection(s), a response has nonetheless been provided. Any response provided does not indicate agreement with or acquiescence in the premises, interpretations, or comments that may be contained in the request.

Respectfully submitted,

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ATTORNEYS FOR MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR, INC.

CERTIFICATE OF FILING AND SERVICE

I hereby certify that on this the 21st day of March, 2005, one original and six (6) copies of the foregoing were hand-delivered to the Commission for filing and a copy of was served, via U.P.S., upon:

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ATTORNEY FOR THE MIDWEST ISO

REQUEST:

1. Please provide the following PROMOD IV and Powerbase files used for this cost/benefit study.
   a. All Powerbase ".XML" files
   b. The "Event" File
   c. The ".RAW" power flow file

OBJECTION:

The requested information contains data that is proprietary information of New Energy Associates. The Midwest ISO is not free to provide this information to parties that are not New Energy Associates licensees or have not otherwise obtained an appropriate waiver from New Energy Associates. Without waiving this objection, the Midwest ISO can provide the requested information to Louisville Gas & Electric and Kentucky Utilities (LG&E / KU) as a licensee of New Energy Associates.

RESPONSE:

The requested files are being provided as confidential information to LG&E / KU.

Witness: (not applicable)

REQUEST:

2. On page 1, line 22, of his March 3, 2005, testimony, Dr. McNamara uses the phrase "essentially the same portfolio."

   a. Please define what Dr. McNamara means by use of the word "essentially": is the portfolio the same as the Companies or not, and if not, what is different about the portfolio in his analysis?

   b. Please identify the exact resources that are different by generator and/or contract.

   c. Please explain why Dr. McNamara used a different portfolio.

RESPONSE:

2.

a. The use of the word "essentially" refers to the fact that all necessary and important elements of the portfolios are identical. The only resource included in Dr. McNamara's resource portfolio that was not used in the resource portfolio in the Company's study is the Paris Diesel unit, as described at p. 4 of Dr. McNamara's Additional Supplemental Testimony. It is our understanding that there are no resources included in the Companies' LG&E / KU resource portfolio which are not also in Dr. McNamara's LG&E / KU resource portfolio. The characteristics of specific generating stations and the EEI contract are identical to the representations used in Dr. McNamara's prior testimony, based on information provided by the Companies, and to which the Companies have not objected. The contract volumes and costs for the OVEC contract are based on information provided in the Supplemental Rebuttal Testimony of Dr. Mathew J. Morey and responses to discovery requests

and are identical in all model runs presented in Dr. McNamara's March 3, 2005 testimony.

b. See the Midwest ISO's answer to Supplemental Request 2(a) above.

c. See Dr. McNamara's Additional Supplemental Testimony of March 3, 2005 at p. 4.

REQUEST:

3. In its February 18, 2005, pleading at pages 3 and 5 filed with the Commission in this investigation, MISO stated:

> [T]he Midwest ISO did not retain or specially employ Dr. McNamara for this investigation or to provide expert opinion testimony in the investigation. Dr. McNamara's testimony before this Commission is [as] an officer of the Midwest ISO and presents the position of the Midwest ISO on the issues under investigation. The Midwest ISO designated Dr. McNamara to present that position because of his economics expertise and his first-hand knowledge of the development and implementation of the Day 2 Markets as set out in the Midwest ISO's Energy Markets Tariff.
>
> ...
>
> [M]uch of Dr. McNamara's testimony is not opinion at all, but reports facts and the Midwest ISO's positions.

a. Is Dr. McNamara a competent and qualified witness to testify on behalf of MISO on all matters discussed in all his testimony and the data responses he has sponsored in this investigation?

b. Is Dr. McNamara presenting any testimony as an expert witness on any issues in this investigation? If so, please state the specific issues on which Dr. McNamara is testifying as an expert, and provide a description of his qualifications to offer such expert testimony on each issue separately.

c. In particular, is Dr. McNamara an expert on transmission reliability?

   i. If so, please provide a detailed description of his qualifications to offer opinions on the reliability of the transmission system.

d. If there are any issues addressed in Dr. McNamara's testimony or the data responses he has sponsored which Mr. McNamara will not be willing or qualified to address under cross-examination, please:

   i. Identify those issues;
   ii. State the names of all other witnesses MISO will produce to testify on those issues at the hearing; and
   iii. Identify the issues on which such witnesses will offer testimony.

Witness: (not applicable)

OBJECTION:

This request is not related to the additional rebuttal testimony filed and served March 3, 2005; furthermore, the request does not seek data about the statements quoted. Instead, the request seeks the Midwest ISO position on issues related to the Kentucky Rules of Evidence or Federal Rules of Evidence; however, in the conduct of hearings and investigations the Commission is not bound by the technical rules of legal evidence. *See* KRS 278.310. It is for the Commission to decide the competency of the witnesses before it and to determine what weight to accord to the evidence presented. Without waiving this objection, the Midwest ISO provides the following response.

RESPONSE:

a. Yes.

b. Dr. McNamara's testimony includes facts and other matters of which he has personal knowledge. The opinions he offers would be admissible under the technical rules of legal evidence as either opinion testimony by a lay witness or testimony by an expert. Dr. McNamara is qualified as an expert by knowledge, skill, experience, training, and education as an economist and as a Midwest ISO executive with responsibility for market management, including the development and implementation of the Day 2 Markets. To the extent that his opinions or inferences are based on facts or data made known to him, those facts or data are of a type reasonably relied upon by economists or executives with responsibility for market management.

c. No. The Midwest ISO has earlier presented testimony --- prefiled and at hearing — from experts on transmission reliability: Jonathan Falk, who was retained or specially employed to provide expert opinion testimony in this investigation; and Roger C. Harszy, the Midwest ISO Executive Director of Planning and Engineer-

ing. To the extent that Dr. McNamara discusses issues related to transmission reliability in his testimony, he is doing so with respect to the importance of transmission reliability within the market design construct.

i. (not applicable)

d. (not applicable)

Witness: (not applicable)

REQUEST:

4. The cost-benefit study submitted on November 14, 2004 estimates purchased power costs for the In MISO option of $1.5 million (rounded). The cost-benefit study submitted on January 20, 2005 estimates purchased power costs for the In MISO option of $4.1 million (rounded), and the cost-benefit study submitted February 21, 2005, estimates purchased power costs for the In MISO option of $89.1 million (rounded). The cost-benefit study submitted on March 3, 2005 estimates purchased power costs for the In MISO option of $103.4 million (rounded). The inclusion of the EEI/OVEC contracts accounts for about $73 million of the $89.1 million reported in the February 21, 2005, cost-benefit study and of the $103.4 million in the March 3, 2005, cost-benefit study; however, the purchase power costs absent EEI/OVEC contracts are $16 million in the February 21, 2005, cost-benefit study and $30.3 million in the March 3, 2005, cost-benefit study. Similarly divergent estimates for purchased power costs were obtained as well for the TORC option in the three studies.

   a. Please provide a spreadsheet that breaks out the purchased power costs and in particular explains, notwithstanding the EEI/OVEC contract amounts, how the purchased power costs in the cost-benefit study submitted February 21, 2005 can be 10.6 times the purchase power costs in the November 2004 study and 4 times the purchase power costs in the January 20, 2005, study.

RESPONSE:

   a. Purchased power costs exclusive of the EEI and OVEC contracts are presented in the workpapers for individual runs in the worksheets labeled "Total Net Cost Summary" and "Purch-Sale." The reason purchased power costs are higher in the February 21, 2005 and March 3, 2005 studies are that these studies exclude from the LG&E / KU resource portfolio generating resources that had been included in the LG&E / KU resource portfolio in earlier studies. Comparing the purchased power costs between studies is a potentially misleading comparison because purchased power comprises a small percent of the Companies' total costs. In the November 2004 study for the In MISO case, purchased power costs comprised

0.12% of Total Generation and Purchased Power Costs. While purchased power costs are higher in later studies, the comparison is to such a small initial number that, taken out of context, almost any increase could appear deceptively large by comparison.

REQUEST:

5. The cost-benefit analysis MISO produced on March 3, 2005, indicates that the Companies' volume-weighted average market prices for generation will increase from Day 1 to Day 2 (see Exh. RRM Table 4C). Yet in MISO's June 25, 2004, FERC compliance filing (*see* FERC docket numbers ER04-691-000 and EL04-104-000) containing testimony and work papers concerning a "detailed production costing and power flow analysis ... conducted using the PROMOD IV model," Dr. McNamara stated that "[t]he average load zone market clearing price of power in the Midwest ISO footprint is forecast to be lower under the Midwest ISO TEMT by $1.18 per MWH" and "the average price paid for power imports would fall by an average of $2.74 per MWH or 9.1% (pp. 50-51).

   a. Please explain the apparent discrepancy between what MISO is reporting in this case and what it reported to FERC regarding the effect on average market prices of moving from Day 1 to Day 2.

   b. Please provide the following PROMOD IV and Powerbase files used in MISO's above-referenced FERC study:

      i. All Powerbase ".XML" files

      ii. The "Event" File

      iii. The ".RAW" power flow file

   c. Please state and describe in detail any and all methodological differences between the PROMOD study MISO conducted for this proceeding and the PROMOD study MISO conducted for FERC.

OBJECTION:

The information requested in part (b) of this request contains data that is proprietary information of New Energy Associates. The Midwest ISO is not free to provide this information to parties that are not New Energy Associates licensees or have not otherwise obtained an appropriate waiver from New Energy Associates. Without waiving this objection, the Midwest ISO can provide the requested information to Louisville Gas &

Electric and Kentucky Utilities (LG&E / KU) because it is a licensee of New Energy Associates.

RESPONSE:

a. The Midwest ISO's June 25, 2004, FERC compliance filing reported average load zone market prices for the Midwest ISO footprint as a whole. The implementation of the MISO Transmission and Energy Markets Tariff (TEMT) will result in a more efficient economic dispatch for the footprint as a whole and, as low cost generators produce more and some higher cost generators no longer have to be dispatched, regional dispatch will tend to reduce average marginal prices within the footprint. LG&E / KU are significant net sellers of power. Our analysis indicates that participation in Midwest ISO regional dispatch and energy markets will increase their off-system sales. This will tend to increase generation prices for LG&E / KU with the transition from Day 1 operations to implementation of the TEMT.

b. The requested files are being provided as confidential information to LG&E / KU.

c. The two studies are not directly comparable in that the June 25, 2004 study responded to a specific FERC order requesting quantification of the impacts of different approaches to congestion management, was not designed to quantify the benefits and costs of LG&E / KU participation in Midwest ISO, and did not include any model runs indicating the costs to LG&E / KU of withdrawal and separate operations adjacent to Midwest ISO energy markets. The study filed in this proceeding addresses the near-term costs, including but not limited to costs related to congestion management, for LG&E / KU to withdraw from the Midwest ISO and operate under their proposed Transmission Operations – Reliability Coordinator model adjacent to the Midwest ISO energy markets. For a

specific description of the methodology utilized in the Midwest ISO's June 25, 2004 filing, please see Appendix A of that filing in FERC dockets: *Midwest Independent Transmission System Operator, Inc.*, Docket No. ER04-691-000, and *Public Utilities With Grandfathered Agreements in the Midwest ISO Region,* Docket No. EL04-104-000.

REQUEST:

6. The cost-benefit analysis MISO produced on March 3, 2005, indicates that he Companies will enjoy over $22 million annually in FTR revenues (net of congestion costs) should they remain MISO members. Yet in a PROMOD study MISO preformed for Wisconsin MISO stakeholders dated March 26, 2004, MISO reported that the Wisconsin stakeholders will also enjoy over $3.5 million annually in FTR revenues (net of congestion costs) (see p. iv, Table 1).

   a. Please state whether MISO agrees that, ideally, total FTR revenues should equal total congestion costs across the MISO footprint. Please explain your answer in detail.

   b. If MISO agrees that total FTR revenues and total congestion costs should be equal in the aggregate, does MISO further agree that, if the Companies and the Wisconsin stakeholders are to receive more in FTR revenues than they will pay to MISO in congestion costs, it must be true that other market participants will receive less in FTR revenues than they will pay in congestion costs?

      i. If MISO agrees, please list which states or market participants will receive less FTR revenue than they will pay in congestion costs.

      ii. If MISO does not agree, please explain in detail why MISO disagrees.

   c. Please provide the following PROMOD IV and Powerbase files used in MISO's above-referenced Wisconsin study:

      i. All Powerbase ".XML" files

      ii. The "Event" File

      iii. The ".RAW" power flow file

   d. Please state and describe in detail any and all methodological differences between the PROMOD study MISO conducted for this proceeding and the PROMOD study MISO conducted for the Wisconsin stakeholders.

Witness: Ronald R. McNamara

OBJECTION:

The information requested in part (c) of this request contains data that is proprietary information of New Energy Associates. The Midwest ISO is not free to provide this information to parties that are not New Energy Associates licensees or have not otherwise obtained an appropriate waiver from New Energy Associates. Without waiving this objection, the Midwest ISO can provide the requested information to LG&E/KU as a licensee of New Energy Associates.

RESPONSE:

a. The decision to nominate candidate FTRs is a voluntary business decision made by each market participant. The Midwest ISO as market operator does not take a position as to what might be the "ideal" nomination strategy of any market participant.

The Midwest ISO performs a simultaneous feasibility test ("SFT") when allocating FTRs. The SFT is designed to insure that FTRs in excess of the transmission system are not allocated. Provided that the conditions assumed in the SFT do not change (e.g., no line outages, no unaccounted for loop flow), the Midwest ISO will be revenue adequate; that is, the Midwest ISO will collect at least enough congestion revenue to fully fund the FTRs allocated. The SFT is intended to reduce those instances in which FTRs will be underfunded. If changes in the state of the transmission system result in an underfunding of allocated FTRs in a specific hour, any congestion revenues in excess of FTR payments in other hours would be used to offset the underfunding.

b. See the response to part (a).

c. The requested files are being provided as confidential information to LG&E/KU.

Witness: Ronald R. McNamara

d. The study conducted at the request of the Wisconsin Public Service Commission and Wisconsin Stakeholders was done at a different part of the Midwest ISO footprint and prior to the Federal Energy Regulatory Commission's approval of and modifications to the Midwest ISO TEMT. As a result, there are differences between the Wisconsin study and the studies filed in this proceeding. The primary differences are that the current study reflects the effects of:

- Actual FTR allocations;
- A more complete analysis of the impacts of Transmission Loading Relief on congestion management;
- Grandfathered Transmission Agreements (GFAs);
- The treatment of losses adopted in the FERC's order approving the TEMT;
- Uplifts for Option B GFAs and additional hedges provided to Narrow Constrained Areas under the FERC's orders;
- Updates to fuel and emission costs; and
- Updates to transmission constraints, pool definitions, and individual data elements.

Please see also the Midwest ISO's response to LG&E / KU supplemental request number 18.

REQUEST:

7. The following table compiles the transmission revenue estimates for the TRC scenario from the four most recent MISO cost-benefit analyses.

Nov 19, 2004 testimony Table 2	$19,580,566
Jan 20, 2005 testimony Table 2A	$17,425,058
Feb 21, 2005 testimony Table 2B	$11,174,434
Mar. 3, 2005 testimony Table 2C	$6,449,557

Please provide details and justification for the reduction in Transmission revenues for the TORC option in the March 3, 2005, study relative to the Transmission Revenues for the TORC option in the study filed on November 19, 2004. Please also provide any supporting information, calculations, and work papers necessary to reproduce the justification.

RESPONSE:

Transmission revenues for the TORC option are lower in the March 3, 2005 study because the March 3, 2005 study excludes generating resources from the LG&E / KU resource portfolio that were included in the LG&E / KU resource portfolio in earlier studies and, as a result, the March 3, 2005 study forecasts a lower volume of off-system sales than had been forecasted in earlier studies. For detailed calculations see the electronic files listed below:

Nov 19, 2004 study	Transmission Revenue.xls
Jan 20, 2005 study	Transmission Revenue 1-10-05.xls
Feb 21, 2005 study	"Total Net Cost Summary" worksheet in the Workpapers for each Out of MISO Case
Mar. 3, 2005 study	"Total Net Cost Summary" worksheet in the Workpapers for each Out of MISO Case

Witness: Ronald R. McNamara

REQUEST:

8. Referring to Table 2C, please identify the "Transmission Charges" that are referenced in the "Off System Sales Revenue net of Transmission Charges." Describe the transmission charges that are being "netted" in this revenue. Is the netting of these "Transmission Charges" consistent with the treatment of Transmission revenues shown in Table 2C and referenced in question no. 7?

RESPONSE:

Off system sales revenues are recorded at generator LMPs, not the necessarily higher LMPs at the point of delivery for sales made outside of LG&E/KU. Therefore, they are net of any transmission charges associated with such transactions. This netting of transmission charges is consistent with our treatment of transmission revenues. The treatment of transmission revenues recognizes the portion of the difference between revenues at generator and point of delivery prices that will be paid to LG&E / KU under the TORC option in LG&E/KU transmission charges.

Witness: Ronald R. McNamara

REQUEST:

9. The MISO administrative cost has stayed constant at $14,150,839 in all four of the MISO cost benefit studies completed since and including the Nov 19, 2004 study.

   a. Please provide the 5 year projections for Schedules 10, 16 and 17 rates that were used in the calculation.

   b. Was the calculation of Schedule 16 charges revised to reflect the actual quantity of FTRs allocated to LG&E and assumed in the calculation of FTR revenue by the MISO in the March 3, 2005 cost benefit study? If not, why not?

RESPONSE:

a. See the Midwest ISO's response to LG&E / KU 8/18/04 Data Request 8.

b. The Midwest ISO has not yet completed a revised forecast of Schedule 16 charges based on the FTR allocations that have been made to market participants.

Witness: Ronald R. McNamara

REQUEST:

10. Please supply details describing the PROMOD IV pool structure and hurdle rates used for the MISO Day 1, MISO Day 2, and TORC cases.

RESPONSE:

See the electronic file "Pool Structure + Hurdle Rates.xls" provided in conjunction with Dr. McNamara's November 2004 testimony. With the exception of shifting out of the LG&E/KU control area of resources excluded from the LG&E/KU control area as described in Dr. McNamara's March 3, 2005 testimony at p. 11, the pool structure and hurdle rates used for Dr. McNamara's March 3, 2005 testimony are unchanged from what was provided for his November 2004 testimony.

Witness: Ronald R. McNamara

REQUEST:

11. Please supply details describing any differences in flowgate capacity between the MISO Day 1, MISO Day 2, and TORC cases.

RESPONSE:

See the Midwest ISO's response to LG&E/KU's supplemental request number 10.

Witness: Ronald R. McNamara

REQUEST:

12. Please provide details on how each item under the Generation and Purchased Power Cost on Exhibit RRM – Table 2C are allocated between Native Load and Off-System Sales.

RESPONSE:

Separate model runs were completed for In MISO Cost to Serve Control Area and Out of MISO Cost to Serve Control Area cases in which LG&E / KU makes no off-system sales. The Native Load costs in Table 2C reflect the results of these "Cost to Serve Control Area" cases. The costs associated with Off-System Sales represent total company costs including costs associated with off-system sales from the In MISO and Out of MISO cases, less the costs from the "Cost to Serve Control Area" cases.

Witness: Ronald R. McNamara

REQUEST:

13. Please describe how and what components are included in the Fixed O&M costs in Exhibit RRM – Table 2C.

    a. If these items are fixed, why are the values in the MISO and TORC cases different?

RESPONSE:

13. The item labeled Fixed O&M costs in Table 2C includes generation start-up costs that appear in the "Generation Cost" worksheet for the individual run workpapers under the column heading "StartUpCostPlusParticEnergyCost."

    a. When these respective generation start-up costs are deducted from Fixed O&M, the remaining Fixed O&M costs are not different.

Witness: Ronald R. McNamara

REQUEST:

14. Dr. McNamara's testimony (March 3, 2005 submission, page 23, lines 14-15) states: "When adjusting the resource portfolio, we placed loads that were tied to specific generating units with those units."

    a. Is Dr. McNamara's phrase "resource portfolio" in reference to the Companies' resource portfolio or some other portfolio? If it is another portfolio, please explain exactly what resources are included and how many MWs of each resource are included.

    b. If the answer to (a) is the Companies' resource portfolio, then please identify specifically what loads were tied to specific generating units in the adjusted resource portfolio. Also, please describe the load and generating units in detail, including but not limited to the MW of such loads and the specific generating units to which they were tied, and other operating characteristics of each.

RESPONSE:

a. The loads referenced at the cited passage include the 470 MW of load served directly by the Coleman plant and the 447.8 MW of load served directly by the Reid plant that are described in Dr. McNamara's testimony at p. 21. At the time these loads were identified, there was also identified an additional 585 MW of load served directly by Southern Indiana Gas and Electric Company's (SIGE's) Warrick plant that does not appear to have been included in SIGE's forecasted loads; that load was also included in the analysis filed on March 3, 2005.

b. See response to part (a).

Witness: Ronald R. McNamara

REQUEST:

15. Please provide a list of the specific buses that are used to calculate the average LG&E/KU generation LMP as labeled as column heading "LG&EGEN-NL" in worksheet "Congestion Costs" in spreadsheet "In MISO total Cost – Co Resources 03-02-05.xls" included on the CD delivered to the Companies on March 3, 2005.

    a. Was this average generation LMP calculation weighted by the total generation output of each unit or only by output going to native load?

    b. How is the impact of the OVEC purchase included in this simplified calculation of congestion cost to serve native load? Please provide a detailed response.

RESPONSE:

See the attached spreadsheet providing a list of the buses used to calculate the LG&E/KU generation LMP.

a. The electric power system operates as an integrated machine such that it is not possible to determine either within the context of any one model run or in the real world how much of any particular generating unit's output serves LG&E/KU native load. To calculate the average system generation LMP for any given hour in a manner that is consistent with prices that would be observed and are being used in the calculation it is necessary to calculate the system average LMP based on total generation output.

b. The calculation presented is a detailed calculation of forecasted congestion costs associated with serving control area loads. The actual attribution of generators and allocation of congestion costs to such loads will be determined by state regulators. OVEC contract volumes were included in the calculation of LG&E/KU control area congestion costs. The congestion cost calculation was based on the hourly average LG&E/KU Load LMPs without losses less average hourly LG&E/KU Generation LMPs without losses times the volume of LG&E/KU

hourly load minus economy purchases in that hour. These products were summed for each month and the year and then adjusted to take into consideration the forecasted benefit of the Companies' Grandfathered Transmission Agreement for the transfer of power from EEI, GFA # 220, which permits power transfers without the payment of congestion costs.

LGE Generation LMP Bus Numbers

27009

27010

27011

27047

27048

27076

27138

27139

27144

27145

27155

27253

27287

27293

27300

27307

27332

27333

27379

27409

27413

27433

REQUEST:

16. Refer to Dr. McNamara's testimony of March 3, 2005, at page 6 lines 6-7. Dr. McNamara states "The Midwest ISO runs more complex models that reflect actual bus level loads and generation throughout its footprint." Please explain how MISO's model, as applied to conduct the cost-benefit study submitted on March 3, 2005, reflected "actual" bus level loads and generation. Does this model purport to show exactly what the unit commitment and dispatch and redispatch would be under the Day 2 operations? If so, please explain how this modeling program accomplishes "actual" bus level generation and bus level loads. If not, explain what is referred to by "actual" bus level loads and generation.

RESPONSE:

The full passage cited in this request reads: "The Midwest ISO runs more complex models that reflect actual bus level loads and generation throughout the footprint. They are among the tools we are using to implement regional security constrained economic dispatch and efficiently manage transmission congestion." This passage refers to the Midwest ISO's Security Constrained Economic Dispatch and Network models.

The results of actual market operations that employ these models will start to become available following TEMT implementation on April 1, 2005. As indicated on p. 6 of Dr. McNamara's March 3, 2005 Testimony, the Midwest ISO is prepared to assist the Commission in evaluating the impacts of the TEMT on Kentucky consumers as actual data become available on the cost impacts of regional economic dispatch, the Companies' actual operating behavior, and how those results compare to historical performance.

The PROMOD IV model used in Dr. McNamara's testimony provides a forecast based on detailed bus level mapping of generators and loads to specific buses in the study area, which includes most of the Eastern interconnect. This bus level mapping of generators and loads reflects detailed North American Electric Reliability Council power flow cases

and additional research regarding the location of loads and generators undertaken by and for the Midwest ISO.

REQUEST:

17. Refer to Dr. McNamara's testimony of March 3, 2005, at page 7 lines 17-18. Dr. McNamara states: "This scenario combined low fuel prices with lower than anticipated flowgate utilization after market implementation." Please explain the basis upon which "lower than anticipated flowgate utilization" was developed and describe and quantify the impact of this assumption on the results of the cost/benefit study submitted March 3, 2005 in contrast to the cost-benefit studies submitted on February 21, 2005, January 20, 2005, and November 14, 2004.

RESPONSE:

The scenario that combined low fuel prices with lower than anticipated flowgate utilization after market implementation represents a combination of two comparatively unfavorable scenarios from the earlier studies: the low fuel cost sensitivity and the "Sensitivity for MISO Transmission Utilization" in which maximum MISO Transmission utilization is limited to 97% of flowgate capacity. This combination was selected to test the results in the current study because the low fuel cost and reduced flowgate utilization scenarios were the least favorable to continued MISO participation in the November 14, 2004 analysis. There was no separate reduced flowgate utilization scenario analyzed for the March 3, 2005 testimony.

Witness: Ronald R. McNamara

REQUEST:

18. The March 3, 2005, submission by MISO of testimony and exhibits supporting the cost-benefit study represents the fifth study submitted by MISO in the current proceeding, and the fourth since and including MISO's November 19, 2004, Study, January 20, 2005, Study, February 21, 2005, Study and March 3, 2005, Study. Table A summarizes the four studies in terms of the In MISO option. Table B summarizes the four studies in terms of the TORC option.

    a. Please provide a detailed explanation of the changes that occur in each row (i.e., cost or revenue category) across the four studies from November to March. For each of the last three studies (January 20, 2005, Study, February 21, 2005, Study, and March 3, 2005 Study), list all the changes with respect to assumptions, data inputs and other aspects of modeling in each study relative to the study immediately preceding it.

    b. Explain in detail, or a row by row basis (i.e., by reference to Tables A and B), how the changes in assumptions, data or other aspect of modeling in each study relative to the study immediately preceding it are evidenced in the study.

    [Tables A and B not replicated here.]

RESPONSE:

The principal changes from study to study are the result of changes in modeling results based on changes in model inputs. The following costs and revenues change based on the PROMOD modeling results for specific cases:

Table A:

a. All Generation and Purchased Power Costs

b. Transmission Congestion Costs

c. Uplift Charges

d. Total Costs

Witness: Ronald R. McNamara

e. Off-system Sales

f. Allocation of Financial Transmission Rights

g. Total Revenues

h. Total Annual Cost to Serve Load

Table B:

a. All Generation and Purchased Power Costs

b. Total Costs

c. Off-System Sales

d. Transmission Revenues from Off-system Sales

e. Total Revenues

f. Total Annual Cost to Serve Load

The specific changes to model inputs are described in detail in Dr. McNamara's testimony of November 19, 2004, January 20, 2005, February 21, 2005 and March 3, 2005. The changes implemented in January 2005 were updates for information available on actual Tier 1 and Tier 2 FTR allocations, updates to fuel and emission costs, and other data changes described in Dr. McNamara's testimony. These changes affected each of the Table A and Table B items noted above. The primary changes in the February and March testimony were to revise the LG&E/KU resource portfolio and update to the full actual FTR allocations for LG&E/KU. The February and March updates also reflected the lower than anticipated levels of NCA uplift and other data changes identified in Dr. McNamara's testimony. These changes affected each of the Table A and Table B items indicated above.