

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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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

**Data Requests to LG&E and KU from  
Midwest Independent Transmission System Operator, Inc.**

Midwest Independent Transmission System Operator, Inc. ("Midwest ISO"), pursuant to the Commission's March 28, 2005 scheduling order, hereby submits the attached data requests to Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU"). For the purpose of these requests, the Midwest ISO refers LG&E and KU to the instructions accompanying its previous initial and supplemental data requests. The acronyms and capitalized words used in the attached set of data requests are as defined or used in the testimony filed previously by the Midwest ISO and LG&E and KU. In addition, counsel for LG&E and KU provided electronic (.pdf) copies of LG&E and KU's Additional Supplemental Rebuttal Testimony to the parties via e-mail on April 4, 2005, and notified the parties that the page numbering in the paper copies of David Sinclair's testimony was erroneous due to a formatting error. As a result, any cross-references to page numbers in LG&E and KU's Additional Supplemental Rebuttal Testimony contained in the attached data requests refer to pages in the electronic files sent to the parties via e-mail on April 4, 2005.

Respectfully submitted,

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By: 

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CERTIFICATE OF FILING AND SERVICE

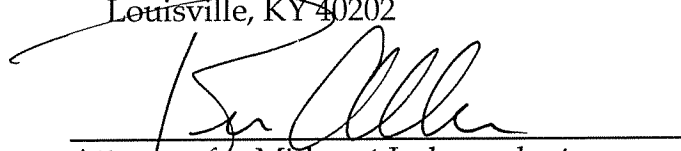
I hereby certify that on this the 12th day of April, 2005, the original and five (5) copies of these Data Requests to LG&E and KU were hand-delivered to the Commission for filing, and a copy was sent via first-class U.S. Mail to:

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Michael S. Beer, Additional Supplemental Rebuttal Testimony:

1. In his Additional Supplemental Rebuttal Testimony, Mr. Beer refers to various alleged statements by FERC officials. Please provide a copy of all transcripts, notes, articles, or other documents in the Companies' possession related to, identify the preparer or author of each such document, and identify each officer, employee, or agent of LG&E or KU who personally heard:
  - a. The remarks attributed to FERC Commissioner Kelliher (at p. 2, *l.* 22 – p. 3, *l.* 3);
  - b. The statement attributed to FERC Commissioner Brownell (at p. 3, *ll.* 3-7);
  - c. The statement attributed to FERC Chairman Wood (at p. 3, *ll.* 8-12);
  - d. The statement attributed to FERC Chairman Wood (at p. 6, *ll.* 9-15); and
  - e. The exchange with Mr. Richard O'Neill (described at p. 8, *l.* 21 – p. 9, *l.* 2).
2. Michael S. Beer states (at p. 5, *ll.* 5-9) that FERC could be flexible in dealing with LG&E/KU outside of the Midwest ISO by allowing it to “purchase’ certain services from RTOs on a menu basis” and that such an ability “could make ISO start-up costs lower.” Please provide all studies, derivations, and workpapers supporting this statement.
3. Provide all documents supporting Mr. Beer’s assertion (at pp. 2-6) that FERC has recently indicated that it is going to take a flexible approach toward “RTO development and requirements.”
4. Provide all documents supporting Mr. Beer’s assertion (at p. 5, *l.* 21-p. 6, *l.* 1) that “FERC has shown a propensity to modify stringent RTO requirements in areas that enjoy low cost electricity.” Provide the citation for any order or FERC-issued document supporting this assertion.
5. With respect to the market power analysis referenced by Mr. Beer (at p. 7, *ll.* 14-18):

- a. Provide copies thereof and of all revisions and other versions (filed or not filed) of that analysis and a copy of all workpapers related to the referenced analysis;
  - b. Did any of these analyses include any analysis of transmission constraints or possible load pockets? If so, please identify each such section of the analyses and related workpapers that addresses the likelihood or effects of transmission constraints or load pockets.
6. Mr. Beer states (at p. 10, *ll.* 15-17) that “[t]he Companies can only begin to proceed to seek exit at FERC if and when the Commission issues an order in this proceeding allowing the Companies to do so.” Cite the specific state or federal law or regulation that prohibits the Companies from simultaneously petitioning FERC and the Commission for permission to withdraw from the Midwest ISO.
7. Provide all supporting studies, derivations, and workpapers supporting Mr. Beer’s assertion (at p. 10, *ll.* 17-20) that the Companies and their customers “would endure real financial harm should the Commission decide not to issue an order in this case until it reviews the Companies’ actual Day 2 market results.”
8. Mr. Beer (at p. 12, *ll.* 9-12) refers to a set of sequential operational goals.
- a. Is it the LG&E/KU position that the most appropriate way of operating its system is to first dispatch its resources in the manner that minimizes the direct costs to serve only native load customers, then freeze that portion of the dispatch regardless of its consequences for off-system sale opportunities, and only after that goal is achieved consider how to maximize customer benefits from off-system sales?

- b. If that is a correct characterization of the LG&E/KU position, explain fully the basis for maintaining such an operating practice in circumstances where such a practice would be less beneficial to consumers than an integrated dispatch that sought to minimize net costs to consumers after considering both direct costs to serve native load and customer benefits from off-system sales.
- c. If LG&E/KU employ an integrated dispatch designed to minimize the net costs to consumers after consideration of both direct costs and customer benefits from off-system sales, explain why consideration of the market value of power at particular locations on the grid is “contrary to the Companies’ traditional obligations” to provide reliable service on a least cost basis?

David S. Sinclair, Additional Supplemental Rebuttal Testimony:

9. Please refer to the Rebuttal Testimony of David S. Sinclair at p. 2, *ll.* 20-22:
  - a. Provide a copy of all studies prepared or reviewed by Mr. Sinclair that support his understanding that internal transmission constraints are not likely to materially affect the cost of serving native load.
  - b. Describe in detail how each such study analyzed transmission constraints and the effects of regional power flows moving through the Companies’ transmission system?
10. Please refer to the Rebuttal Testimony of David S. Sinclair at p. 6, *ll.* 2-5:
  - a. Is it LG&E/KU’s position that it would sell generation in the wholesale market at a price below its marginal generation cost, provided that the loss on the generation side of its business was less than the transmission payments made to LG&E/KU associated with such an off-system sale?

- b. If so, explain fully how such a practice would be non-discriminatory in comparison to the transmission costs faced by independent generators located on the LG&E/KU transmission system?
11. Mr. Sinclair (at p. 6, *ll.* 21-23) refers to a projected increase in emission control installations.
  - a. Explain how the projected increase was taken into consideration in the Companies' study.
  - b. Provide all source documents that are the basis for Mr. Sinclair's projections of emission control equipment installations.
  - c. Provide Mr. Sinclair's estimates of the number of installations expected — by year — for each year from now through 2010.
12. With respect to his testimony at p. 8, *ll.* 3 - 20, has Mr. Sinclair prepared any analysis of how the failure to back down the Mill Creek station would have affected the price at which LG&E/KU would have had to purchase energy given the likely transmission constraints? If so, please provide a copy of that analysis. If no such study has been performed, please so state.
13. Provide all supporting studies, derivations, and workpapers used by the Companies in producing the new electricity price forecast for both the RTO and TORC cases referenced by Mr. Sinclair (at p. 11, *ll.* 11-17).
14. Provide all studies, derivations, and workpapers supporting Mr. Sinclair's assertion (at p. 13, *ll.* 5-10) that, based on a review of the historical relationship between forward and subsequent spot prices, forward prices over the last three years were slightly higher than spot prices and that the average size of the forward premium ranged from \$1.54/MWh for

three-month forward prices, \$1.05/MWh for two-month forward prices, and \$0.36/MWh for all monthly forward prices with a contract length of up to twelve months.

15. With respect to the Rebuttal Testimony of David S. Sinclair at p. 13, *ll.* 12-15: provide all documents and other information in the possession of LG&E/KU related to the actual trading volumes and liquidity of the Cinergy hub during the period July 2004 through March 2005, inclusive.

Matthew J. Morey, Additional Supplemental Rebuttal Testimony:

16. What portion of the Additional Supplemental Rebuttal Testimony and exhibits were prepared exclusively by Dr. Morey, and what part was prepared under his supervision? (*See* Additional Supplemental Rebuttal Testimony of Matthew J. Morey at p. 3 *ll.* 5-6.) Who prepared those parts that were prepared under his supervision, and how did Dr. Morey supervise that preparation?
17. Provide all supporting studies, derivations, and workpapers for the additional supplemental rebuttal testimony and any analyses presented by Dr. Morey.
18. Provide a copy of the testimony submitted by Dr. Morey on behalf of the NCUC Public Staff in Case No. E-22 Sub 418, filed September 30, 2004 (referenced and described at p. 2 *l.* 17 – p. 3 *l.* 4), and any of that testimony's exhibits, supporting studies, derivations, and workpapers filed in that proceeding. If not otherwise provided as an exhibit to the testimony Dr. Morey filed, provide a copy of the benefit-cost study prepared by Charles River Associates, Inc., which was the object of Dr. Morey's critique.
19. Refer to the Additional Supplemental Rebuttal Testimony of Mathew J. Morey at p. 5, *ll.* 6 -13:



- a. Dr. Morey indicates that the use of generation weighted average LMPs including losses “inappropriately lowers OSS revenues, and hence margins, for MISO’s TORC case.” Identify any differences that witness Morey believes exist in the manner in which OSS revenues have been calculated in the In MISO case compared to the manner in which OSS revenues were calculated in the TORC case presented in Dr. McNamara’s testimony, and identify specific worksheet, column, and row references in Dr. McNamara’s workpapers that form the basis of this belief. If witness Morey has not identified any such differences, please so state.
- b. Identify any differences that witness Morey believes exist in the manner in which the cost of off-system purchases have been calculated in the In MISO case compared to the manner in which the cost of off-system purchases were calculated in the TORC case presented in Dr. McNamara’s testimony, and identify specific worksheet, column, and row references in Dr. McNamara’s workpapers that form the basis of this belief. If witness Morey has not identified any such differences, please so state.
- c. Provide all data (or worksheet, column, and row references to data available to MISO) and calculations that support the conclusion of Company witness Morey that the use of Generation LMPs that include losses lowered OSS revenues and any quantification of the effect(s) of such a change for both the In MISO and TORC cases. If witness Morey produced no such data or calculations, please so state.

- d. Is it witness Morey's recommendation that OSS revenues in both the In MISO and TORC cases should have been calculated using LMPs which averaged the LMPs including marginal losses and without losses? If so, please provide any calculations the Companies have performed of what would be the effect of doing so on OSS revenues in the In MISO and TORC cases.
  - e. Is it witness Morey's opinion that the use of full generator node LMPs is an unrepresentative indicator of the market value of LG&E generation? If so, provide a complete explanation of the basis for this belief. If not, please so state.
  - f. Is it witness Morey's opinion that the use of load LMPs that reflect average loss factors is unrepresentative of the net impacts of the MISO Transmission and Energy Management Tariff including the transitional treatment of losses? If so, please provide a complete explanation of the basis for this belief? If not, please so state.
20. Refer to Dr. Morey's Additional Supplemental Rebuttal Testimony at p. 9 *l.* 19 – p. 10 *l.* 3. With respect to predicted allocations of FTRs to LG&E/KU:
- a. What allocation of FTRs to LG&E/KU does the LG&E/KU analysis use for
    - i. the first six months of the Day 2 market?
    - ii. the months of April through September 2005, inclusive?
  - b. What support does Dr. Morey have for concluding that the LG&E/KU allocation will decrease after the first six months of Day 2 market start-up?
21. Dr. Morey concludes (at p. 10, *l.* 4-6) that the "excess FTR revenue does not represent an efficiency gain" related to the negative congestion costs that LG&E/KU experience in

many hours as a result of the locations of their load and generators facilitating greater use of the transmission system by other entities.

- a. Provide the basis for this conclusion.
- b. Provide copies of all studies and calculations that witness Morey has performed that support his conclusion. If he has performed no such studies, please so indicate.

22. Dr. Morey concludes (at p. 11, *ll.* 3 -12) that the “generation fleet would be economically dispatched in both the In MISO and TORC cases in almost identical patterns to serve native load, with nearly identical costs.”

- a. Provide copies of all studies that witness Morey has performed that support this conclusion. If there are no such studies, please so state.
- b. With respect to each such study, describe how regional power flows, including but not limited to loop flows through the Companies’ transmission system, and transmission congestion were taken into account in determining the dispatch patterns.
- c. Provide copies of all power flow studies relied upon by Dr. Morey in reaching his conclusion that the dispatch patterns would be “almost identical” under the In MISO and TORC options. If there are no such studies, please so indicate.

23. Refer to the Additional Supplemental Rebuttal Testimony of Mathew J. Morey at p.13,

*ll.* 7-9:

- a. Explain why Dr. Morey believes that prices at the Companies’ generating plant locations should necessarily “decrease in MISO’s Day 2 markets relative to Day 1 markets, or at the very least not increase,” given Dr. McNamara’s projection that

the Companies' volume of off-system sales would increase from 3,727,300 MWh under Day 1 operations to 5,248,119 MWh in the Day 2 market? Given an increase in demand for generation at the location of the Companies' generators why does Dr. Morey believe the price at those locations should necessarily fall? Please fully explain the answer(s) given.

- b. On what basis does witness Morey conclude that a projected increase in the price at which the Companies can make off-system sales into a larger and more efficient Day 2 market is inconsistent with a fall in the average price of power across the entire Midwest ISO footprint?
- c. Provide copies of any workpapers, studies, or other documents that support Dr. Morey's conclusion that an increase in the prices the Companies may receive for off-system sales in the Day 2 market is inconsistent with a decline in average prices across the Midwest ISO footprint. If there are no such workpapers, studies, or other documents, please so state.

24. There is an assumption in the Additional Supplemental Rebuttal Testimony of Mathew J. Morey (at p. 15, *ll.* 19 – p. 16, *l.* 5) of a difference between the actual average load-weighted load LMPs and the actual average load-weighted generation LMPs in 2005 of \$1.74.

- a. Completely describe the basis for this assumption, and provide copies of all documentation supporting this assumption.
- b. Provide copies of all studies performed by or for LG&E/KU supporting the belief that such an assumption is a reasonable forecast for the Companies for 2005. If no such studies exist, please so indicate.

- c. Provide a copy of all calculations and workpapers that form the basis of the conclusion that the assumed price differential would result in congestion costs of \$62.5 million.
- d. Is it Dr. Morey's position that if LMPs were different in the manner that he proposes such that congestion costs were increased, that the LMPs which form the basis of the value of contemporaneous FTRs would not change? Given that the Companies' FTRs source at the Companies' major generating stations and sink at the Companies' load, explain how witness Morey believes that congestion costs would increase without changing the value of the Companies' FTRs.
- e. Provide a copy of all calculations and workpapers showing how FTR revenues would change in the event that the differential between generation and load LMPs change from what was forecasted in Dr. McNamara's testimony.

25. Refer to the Additional Supplemental Rebuttal Testimony of Mathew J. Morey at p.19,

*l. 3 – p. 20, l. 8:*

- a. Given Dr. McNamara's use of a model in which off-system sales occur only when the buyer's price in the sink pool exceeds the seller's price at the generator location by an amount that exceeds a hurdle rate (which equals or exceeds the per MWh cost of transmission payments), does witness Morey believe that locational prices at the location of generators making off-system sales include the value of transmission payments for off-system sales? If so, explain the basis for that belief.
- b. At what price does witness Morey believe that Dr. McNamara calculating the value of off-system sales revenues — the generator locational price or the sink

locational price? Please provide the basis for this belief, including reference(s) to specific columns and rows.

- c. Assuming that Dr. McNamara is calculating the value to LG&E/KU of off-system sales at generator prices, would witness Morey believe that it would nonetheless be appropriate and not double count of transmission payments to deduct the value of transmission payments on off-system sales from off-system sales revenue net of transmission charges? Fully explain the answer given.
- d. Do the higher prices for Off-system Sales utilized by witness Morey and witness Sinclair include transmission payments for off-system sales?

26. Please refer to the Additional Supplemental Rebuttal Testimony of Mathew J. Morey at p. 25, ll. 10 -20:

- a. Provide a full explanation as to why it is appropriate in the TORC case to treat transmission payments associated with off-system sales as revenues one time under the category of transmission revenues and also to add them to revenues a second time by increasing the amount of OSS revenues.
- b. Why does witness Morey propose this treatment only for the TORC case and not in the In MISO case? Please fully explain.
- c. Is it witness Morey's belief that OSS margins in the Midwest ISO's TORC case were reduced by subtracting such revenues from OSS revenues (as opposed to Dr. McNamara's use of generator prices that do not include transmission payments to calculate OSS revenues)? If so, identify any column and row reference(s) in Dr. McNamara's workpapers where witness Morey believes such a subtraction calculation has been made.

27. With respect to Dr. Morey's apparent conclusion (at p. 35, *ll.* 4-6) that transmission constraints and power flows through the Companies' transmission system could not account for the differences in the cost to serve load between the Midwest ISO's and the Companies' studies:
- a. Provide all studies performed by or for the Companies that form the basis of the referenced testimony of Dr. Morey.
  - b. Explain how each such study took into consideration the effects of transmission constraints within the Companies' and adjacent control areas' transmission systems.
28. Provide copies of any analysis performed by witness Morey that demonstrates that changes in generation by LG&E/KU units with a net dispatch cost between \$30 and \$100 per MWh could not have contributed to "any of the \$11.3 million in increased cost to serve native load" (see p. 36, *ll.* 8-15). If no such analysis exists, please so state.
29. Refer to the Additional Supplemental Rebuttal Testimony of Mathew J. Morey at p. 36, *ll.* 19 – p. 37, *l.* 1:
- a. Provide copies of all studies and analyses on which the stated redispatch costs are based.
  - b. Provide copies of any analysis performed by or for the Companies that indicates that the pre-redispatch dispatch order from which the redispatch costs were calculated were equivalent to:
    - i. An optimal regional dispatch of the Companies' generation and/or
    - ii. An optimal dispatch without any transmission constraints within the Companies' or other transmission systems.

30. Refer to Dr. Morey's Additional Supplemental Rebuttal Testimony at p. 35 *ll.* 4-6.

Identify the factors in addition to generation portfolio and load forecast that affect estimates of generation costs to serve native load and to make off-system sales.

31. Identify the basis for Dr. Morey's statement (at p. 41 *ll.* 19-20) that the Midwest ISO agrees with LG&E/KU "that native load customers will be subject to congestion costs that far exceed any costs of congestion that have been borne by them heretofore."

32. Refer to Dr. Morey's Additional Supplemental Rebuttal Testimony at p. 47 *ll.* 6-8. Does Dr. Morey contend that LMP and FTR price signals will not provide incentives to market participants to invest in generation at the right locations and transmission upgrades to reduce congestion to economic levels. If so, provide his basis for that contention.