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April 26, 2006

HAND DELIVERED

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Ms. Beth O'Donnell
Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602-0615

RE: P.S.C. Case No. 2006-00045

Dear Ms. O'Donnell:

Enclosed please find an original and seven copies of Kentucky Power Company's Responses to the data requests propounded by the Staff and by the Metro Human Needs Alliance.

By copy of this letter I am serving a copy of both responses on all parties of record. Please contact me if you have any questions.

Sincerely yours,

STITES & HARBISON, PLLC


Mark R. Overstreet

Enclosures

cc: Counsel of Record (with enclosures)

KE057:00KE4:14006:1:FRANKFORT

COMMONWEALTH OF KENTUCKY
BEFORE THE
PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF

**CONSIDERATION OF THE REQUIREMENTS)
FOR THE FEDERAL ENERGY POLICY ACT OF)
2005 REGARDING TIME-BASED METERING,) CASE NO. 2006-00045
DEMAND RESPONSE AND INTERCONNECTION)
SERVICE)**

**KENTUCKY POWER COMPANY RESPONSES TO
COMMISSION STAFF SECOND SET DATA REQUEST**

April 27, 2006

Kentucky Power Company

REQUEST

Refer to Kentucky Power's response to Item No. 1, which responds to Item 1 of the "Smart Metering" requests in Appendix C of the Commission's February 24, 2006 Order. Explain why Residential Tariff RS, Storage Water Heating is frozen and only available to currently served customers.

RESPONSE

Kentucky Power Company's Residential Service Tariff RS, Storage Water Heating Provision was replaced with the Load Management Water Heating Provision effective in April 1997 in the Company's PSC Case No. 95-427. All customers served under the Storage Water Heating Provision were grandfathered as of April 1, 1997. The newer Load Management Water Heating Provision gave customers a reduced energy charge for a smaller fixed block of monthly kWh than did the previous provision. The smaller kWh block was more in line with the actual shift in usage achieved with the water heating devices being installed at that time.

Please note that the table provided in the Company's Response to Staff's First Set, Item No. 1, should have indicated that the residential load management water heating provision was approved in Case No. 95-427 with an effective date of April 1, 1997.

WITNESS: David M Roush

Kentucky Power Company

REQUEST

Refer to the March 23, 2006 response A-2 of LG&E and KU to Item 2 of the "Smart Metering" requests, which refers to simple seasonal rates, and to the first bullet under Residential and Small Commercial of the same response. Does Kentucky Power share the same view regarding simple seasonal rates? Explain the response.

RESPONSE

Kentucky Power agrees with LG&E and KU that offering different rates in summer and winter is a very simple form of time-based pricing. The Company would also expect that time-of-use pricing would be more effective, that is, would have greater customer participation, in states with higher rates than those in Kentucky. The Company believes that the most effective way to offer time-based tariff services in a low cost state such as Kentucky, is to make such services available to customers on an optional basis, allowing customers to decide for themselves if participation in such programs makes economic sense.

WITNESS: David M Roush

Kentucky Power Company

REQUEST

Provide a brief discussion relative to Kentucky Power's DSM programs and explain if and how potential demand response resources are considered in your integrated resource planning process.

RESPONSE

The KPCo demand forecast includes the impact of DSM programs already embedded in its historical load data. In addition, one megawatt of incremental DSM impact from existing programs is projected.

Over the past decade or more, low price levels of market energy and capacity have limited the opportunities for the successful establishment of cost-effective DSM programs. It is anticipated that avoided capacity prices will begin to rise in coming years as reserve margins tighten. Under these conditions, additional DSM measures applicable to KPCo customers could prove cost-effective. Given this possibility, the Company recognizes the need to establish or enhance its DSM planning process, and has begun initial steps to do so.

The Company performed a series of preliminary, high-level economic screenings of various DSM measures involving customer premise intervention. Based on estimated implementation costs, the measures' potential year-round demand impacts, and potential customer saturation and sign-up percentages, it was determined that there was negligible cost-effective opportunity to initiate such DSM measures over the next several years. By later in this decade, however, the Company believes there will be greater opportunity for certain of these measures to achieve a Rate Impact Measure (RIM) (or benefit-to-cost ratio) greater than or equal to 1.0.

KPCo's enhanced DSM planning process within future IRP cycles will involve:

- 1) continual review of the preliminary assumptions made regarding those DSM measures that have been identified as potentially cost effective;
- 2) inclusion of such DSM measures in combined supply- and demand-side resource optimization studies;
- 3) inclusion of jurisdiction-specific DSM information and a "roadmap" of AEP's enhanced DSM planning process in regulatory IRP reports and receiving feedback thereon; and
- 4) addition of a DSM participant analysis to assure that a reasonable sharing of DSM benefits can be arranged between participating customers and the system, looking at customer-specific tariffs, etc.

WITNESS: Errol K Wagner

Kentucky Power Company

REQUEST

Refer to Kentucky Power's response to Item 2 of the "interconnection" requests in Appendix C of the Commission's February 24, 2006 Order.

- a. Describe the interconnect process and procedures Kentucky Power references in its response.
- b. Do the current process and procedures differentiate between small generators of 10 MVA and below, and those generators above 10 MVA? Explain the response.

RESPONSE

a. Customers interested in interconnecting generators can learn about customer owned generation from our www.aep.com website. At this same website they can download a brochure on generator interconnection, send an e-mail to the Distributed Generation Coordinator (Coordinator) requesting more information and obtain the mailing address and phone number of the Coordinator.

Customers can also call our Customer Solutions Center at a toll free number to request information about customer owned generation and interconnection. For Kentucky Power the number is 1-800-572-1113. This number is listed in local phone books and also available on our website and on customer bills. The Customer Solution Center will connect the customer call to the Coordinator.

If the customer is interested in interconnection, the Coordinator will discuss the interconnection process with the customer and forward the customer the appropriate application form, interconnection agreement and technical requirements documentation. A customer desiring to interconnect a customer owned generator submits a completed application to the Coordinator on the form provided by the Coordinator along with an application fee. For 25 kW and below capacity single-phase generators the application fee is \$100. For larger than 25 kW single phase and for three phase generators the application fee is \$500. The Coordinator reviews the application to make sure it is filled out completely with all the pertinent information required to evaluate the proposed generator. If the Coordinator determines that the application is incomplete, the Coordinator returns the application to the customer with an explanation of what information is needed to complete the application.

The customer can re-submit the completed application after providing the needed information necessary for review.

Once an interconnection application has been received with the applicable application fee and the application is deemed to be complete by the Coordinator, the application is sent to the Distribution Asset Planning Department (Planning) for evaluation. Planning evaluates the proposed generator and the proposed interconnection system to determine if they meet the technical requirements. If the generator and the proposed interconnection system meets the technical requirements, Planning then uses a screening process to determine if the generator needs a more detailed study to determine its impact on the distribution system or if it can be interconnected to the distribution system with no significant negative impact. After completing the technical requirements review and screening process evaluation, Planning will inform the Coordinator of the results.

If the proposed generator met the technical requirements and passed the screening process, the Coordinator will execute the interconnection agreement and forward a copy to the customer along with notification of approval of the interconnection. Experience has shown that the majority of customer requests for interconnection are very small generators of 1-2 kW capacity that pass the screening process and do not require further study.

If the proposed generator did not meet the technical requirements or pass the screening process, the Coordinator will notify the interconnection customer.

The customer can then decide if they would like to proceed with further evaluation of the proposed generator or withdraw the application. If the proposed generator or interconnection system failed to meet the technical requirements, the customer may modify their proposal to meet the technical requirements. If a system impact study is needed to determine the system impact of the proposed generator, the customer may pay a deposit to cover the estimated cost of the impact study. For single-phase generators up to 25 kW the deposit is \$500. For single-phase generators from 26 kW to 100 kW and three-phase installation up to 100 kW the deposit is \$1,000. For single phase and three phase generators from 101 kW to 500 kW the deposit is \$3,000. For single phase and three phase generators greater than 500 kW the deposit is \$5,000. Once the study is completed the customer will be refunded or billed the difference between the deposit amount paid and the actual cost of the impact study. If the impact study determines the proposed generator will not have a negative impact on the distribution system, the Coordinator will inform the customer of Kentucky Power's approval of the interconnection upon receipt of the executed interconnection agreement. If the impact study determines the proposed generator will have a negative impact on the distribution system, the Coordinator will inform the customer of the system improvements or system modifications necessary to accommodate the proposed generator and the estimated cost of such improvements or modifications.

If the customer wishes to proceed with the interconnection, the customer will pay the estimated cost of the improvements or modifications. Once the improvements or modifications are completed the customer is informed of their approval to interconnect the proposed generator upon receipt of the executed interconnection agreement. Once the system improvements or modifications are completed the customer will be refunded or billed the difference between the estimate amount paid and the actual cost of the system improvements or modifications. Prior to the first paralleling of the proposed generator Kentucky Power, at its option, may inspect the generator and its interconnection system to verify the equipment installed and witness the commissioning tests.

b. Yes, the current process described in the answer to a. above is for generators 10 MVA and below proposing to interconnect with the Distribution System (typically voltages 34.5 kV and below). For generators larger than 10 MVA or generators proposing to interconnection to the Transmission System (typically voltages 46 kV and above) the interconnection process and procedures of the PJM Interconnection are to be followed. The PJM Interconnection process and procedures may be obtained from the PJM website (www.pjm.com).

WITNESS: Stephen E Early

Kentucky Power Company

REQUEST

Refer to Item 3 of the "interconnection" requests in Appendix C of the Commission's February 24, 2006 Order. Refer also to the March 23, 2006 response of LG&E and KU to the same Commission request, which refers to customers with "open transition" switched generation that operates separately from the distribution grid.

- a. Does Kentucky Power requires customers to obtain its authorization to have such "open transition" switched generation arrangements for operational purposes? Explain the response.
- b. How many customers and what amount of such generation do Kentucky Power customers operate and to what extent has Kentucky Power inquired about and/or pursued the potential for having access to this generation at times of peak demand or extreme emergency on its system? Explain the response. If you do not have full knowledge in this area, provide whatever information you have.
- c. Would Kentucky Power see any value in a program encouraging such customers (through the provision of bill credits, for example) to utilize this generation voluntarily to meet their needs and free up utility resources during periods of peak demand or extreme emergency? Explain the response. If yes, describe what actions would need to be taken to allow for such a program.

RESPONSE

- a. Yes. In Kentucky Power's Terms and Conditions of Service it states "The Customer shall not be permitted to operate generating equipment in parallel with the Company's service except with express written consent of the Company." Therefore, customers who propose to permanently install a generator are required to submit their plans to the Company for review to ensure that their generator switching arrangement is "open transition". In this circumstance, the Company's role is simply to ensure that the generator does not operate in parallel.

b. Kentucky Power knows the location of most customers with permanently installed "open transition" generators. However, we do not know the exact amount of such generation. The Company is aware of several hospitals and other commercial, industrial and governmental facilities with emergency generators. In aggregate, the Company estimates the total generation to be less than 10 MW. In an emergency, under the Company's Capacity and Energy Control Program, the Company has requested voluntary curtailments from customers in the past. Some customers with generators have voluntarily curtailed their usage by transferring some of their loads to their generators in response to the Company's request.

c. Yes. As discussed above, a voluntary load curtailment program is in place and has been used in the past. Due to the infrequent nature of such requests, the Company does not see the need for bill credits for such a voluntary program. However, the Company does have Rider E.C.S., whereby customers can receive payments for emergency curtailments by committing to curtail at the request of the Company. To date, customers have expressed little interest in Rider E.C.S.

WITNESS: David M Roush

Kentucky Power Company

REQUEST

The settlement approved by the Commission in Case No. 2005-00341 allows Kentucky Power's industrial customers to participate in the PJM Economic Demand Response Program under certain conditions.

- a. Describe the PJM Economic Demand Response Program.
- b. Assume that Kentucky Power has an industrial customer participating in the program. Describe the potential financial and operational impact to Kentucky Power.
- c. Explain how the PJM Economic Demand Response Program should be considered in this current proceeding.

RESPONSE

- a. The PJM Economic Demand Response program pays customers that are PJM members directly, or non-members indirectly through a Curtailment Service Provider, when they curtail their usage. The curtailment is strictly voluntary and the customer decides when and for how long they are able to curtail. The payment made by PJM to the customer is based on the locational marginal price (LMP). When the LMP is less than \$75, the payment is the LMP less the generation and transmission component of the retail rate (the customer's avoided cost). When the LMP is greater than \$75, the customer receives the entire LMP as an additional incentive to curtail. The cost of this incentive is socialized to all Load Serving Entities and ultimately to the rest of the customers in that zone.
- b. Attached is a table that shows the potential financial impacts of the PJM program on various parties as it is designed. As part of Kentucky Power's settlement in its rate case, the negative financial impact that is shown in the chart for Kentucky Power was to be mitigated. There is little operational impact for Kentucky Power since Kentucky Power will not know that a customer is participating until after the fact.
- c. The PJM Economic Demand Response Program should be considered a temporary experimental program since it will be available to customers for only one year. Kentucky Power currently offers interruptible services to customers under Tariff C.S.-I.R.P. and Riders E.C.S. and P.C.S. Rider P.C.S. has many similarities to, and certain differences from, the PJM Economic Demand Response Program.

WITNESS: Larry C Foust

PJM Demand Response Program Potential Financial Impact upon Various Entities

LMP < \$75 (use: \$70)

LMP >= \$75 (use: \$200)

Kentucky Power is Customer's LSE

	<u>LMP < \$75 (use: \$70)</u>						<u>LMP >= \$75 (use: \$200)</u>					
	<u>PJM</u>	<u>CSP</u>	<u>KPCo LSE</u>	<u>Customer</u>	<u>Other Zonal LSEs</u>	<u>Generator at Margin</u>	<u>PJM</u>	<u>CSP</u>	<u>KPCo LSE</u>	<u>Customer</u>	<u>Other Zonal LSEs</u>	<u>Generator at Margin</u>
PJM pays the CSP [LMP (- Energy)] ^{1/}	(\$50)	\$50					(\$200)	\$200				
CSP pays the customer		(\$40)		\$40				(\$160)	\$160			
LSE pays PJM (LMP - Energy)	\$50		(\$50)				\$180		(\$180)			
All zonal LSEs pay PJM (Energy)							\$20		(\$17)		(\$3)	
LSE loses sale to customer			\$(20)	\$ 20					\$(20)	\$ 20		
LSE doesn't have to buy at LMP			\$70			(\$70)			\$200			(\$200)
Total	\$0	\$10	\$0	\$60	\$0	(\$70)	\$0	\$40	(\$17)	\$180	(\$3)	(\$200)

KPCo Impact

\$0

(\$17)

Assumptions:

In all scenarios, KPCo would lose any distribution revenues collected through charges per kwh.

CSP/Customer Sharing Ratio 80%

MWH Curtailed 1

LSE Energy Charge \$20 /MWH

^{1/} Payment is full LMP when over \$75, LMP - Energy when less than \$75.

LSE Load Percentages

AEP LSE 85%

Other Zonal LSEs 15%