

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of an Investigation into the )  
Coordination of State and Federal Regulatory )  
Policies for Facilitating the Deployment of all )  
Cost-Effective Demand-Side Savings to )  
Electric Customers of All Classes Consistent )  
With the Public Interest )

**File No. EW-2010-0187**

**RESPONSE OF KANSAS CITY POWER & LIGHT COMPANY AND KCP&L  
GREATER MISSOURI OPERATIONS COMPANY  
TO ORDER OPENING CASE**

**COMES NOW** Kansas City Power & Light Company (“KCP&L”), and KCP&L Greater Missouri Operations Company (“GMO”) and hereby responds to the Commission’s Order Opening Case To Investigate Various Demand Side Programs which was issued on January 6, 2010. For its Response, the Companies state as follows:

1. On January 6, 2010, the Commission issued its Order Opening Case To Investigate Various Demand Side Programs which included twenty-six (26) questions on which the Commission indicated it was seeking public comment. On January 27, 2010, the Staff filed its Staff Report in which it encouraged “all participants to review the questions and submit electronically written responses to as many questions as possible by February 17, 2010, so that the responses may be reviewed in advance of the February 22, 2010 workshop.” (Staff Report, p. 4)

2. The Commission listed the following questions regarding the Missouri Energy Efficiency Investment Act (“MEEIA”) and Aggregators of Retail Customers (“ARCs”) that it asked participants to address:

1. Does the term “energy efficiency” include shifting demand to off-peak periods? See Section 393.1124.2(4). Does “modify net consumption” as used in Section 393.1124.2(3) include shifting demand to off peak periods? See Section 393.1124.2(2).

Yes to both questions. The Missouri Energy Efficiency Investment Act (“MEEIA,” “Senate Bill 376,” or “SB 376”) in Section 393.1124.2(4) defines Energy efficiency as “measures that reduce the amount of electricity required to achieve a given end use”. This includes at any time, including times of peak demand (through demand response and curtailment programs).

Senate Bill 376 in Section 393.1124.2(3) defines a demand-side program as “any program conducted by the utility to modify the net consumption of electricity on the retail customer’s side of the electric meter, including, but not limited to energy efficiency measures, load management, demand response, and interruptible or curtailable load.” Note the language is to modify and not reduce.

2. What does “load management” as used in Section 393.1124.2(3) mean?

Load management means the process of balancing the supply of electricity with the electrical load by adjusting or controlling the end-use load. Customer equipment, utility intervention, and the use of pricing to influence customer behavior are the means of adjusting or controlling the end-use load.

3. What is “demand savings”? How should “demand savings” be determined? See Section 393.1124.4

Demand savings means the reduction in the rate of energy use. Demand savings are initially based on program projections for the end-use measure. If the measure is not weather-sensitive, an engineering calculation determines the estimated savings. If the measure is weather-sensitive, a computer simulation is used to establish the base-line and the expected demand savings. After program implementation, demand savings are verified by the Evaluation, Measurement and Verification process (EM&V) for each program.

4. How should “energy savings” be determined? See Section 393.1124.4. Should there be a regular, standard process for determining whether a utility program achieves “cost-effective measurable and verifiable efficiency savings”? See Section 393.1124.3(3). If “yes,” what should be that regular, standard process?

Energy savings are initially based on program projections for the end-use measure. If the measure is not weather-sensitive, an engineering calculation determines the estimated savings. If the measure is weather-sensitive, a computer simulation is used to establish the base-line and the expected energy savings. After program implementation, energy savings are verified by the Evaluation, Measurement and Verification process (EM&V) for each program.

The EM&V process should be the regular, standard process for validating whether a utility program has achieved “cost-effective measurable and verifiable efficiency savings.”

5. What is meant by the term(s) “rate design modifications” / “rate design modification” as it appears in Section 393.1124.5?

A rate design modification would be something that alters the current pricing structure to an alternative pricing structure

6. How does a “customer” “notify” the “electric corporation” that the customer elects not to participate in demand-side measures offered by an “electrical corporation”? See Section 393.1124.7.

The customer would notify the utility in writing and provide documentation that the customer meets one or more of the criteria of 393.1124.7

7. Is there any significance to the fact that the term “electric corporation” appears in SB 376 in addition to the term “electrical corporation,” and the term “electric corporation” is not a defined term in Section 386.020?

There is no significance to the slightly different terminology.

8. What is the definition of the term “customer” as that term is used in SB 376?

Customer means any person or entity that is supplied electric service through a retail rate tariff approved by the Commission.

4 CSR 240-3.010 General Definitions (7) define customer as “any person, firm, partnership, corporation, municipality, cooperative, organization, governmental agency, etc., that accepts financial and other responsibilities in exchange for services provided by one (1) or more public utilities.”

9. What is meant by the term “corporation-specific settlements” which appears in Section 393.1124.11?

Examples of corporation-specific settlements are Accounting Authority Orders, Stipulation and Agreements, or the KCP&L Comprehensive Energy Plan that affect only one electric utility, or some subset of electric utilities rather than all electric utilities under the MoPSC’s jurisdiction.

10. How does, or how should, an electrical corporation propose a demand-side program pursuant to Section 393.1124? See Section 393.1124.4. How does, or how should, the Commission approve demand-side programs proposed pursuant to Section 393.1124? See Section 393.1124.4.

The current process for proposing a demand-side program is to propose a demand-side tariff. For KCP&L and KCP&L GMO, generally the process consists of:

- 1) Advisory group discussions that include members of Missouri Staff and the Office of Public Counsel.
- 2) Discussions with Missouri Staff responsible for tariff recommendation to the Commission.
- 3) Filing the tariff as a promotional practice in compliance with the requirements of 4 CSR 240-14 Utility Promotional Practices and 4 CSR 240-3.150 Filing Requirements for Electric Utility Promotional Practices. Evaluation information submitted with the proposed tariff filing includes the standard cost/benefit tests (Total Resource Cost; Utility Cost; Ratepayer Impact Measure; Participant; and Societal) submitted on a projected basis.

The current process for approval of a demand-side tariff is:

- 1) Review and recommendation by the Missouri Staff.
- 2) Approval by the Commission. SB 376 Section 393.1124.4 states “The commission shall consider the total resource cost test a preferred cost-effectiveness test;” however, all tests are provided and should be considered in the evaluation.

The current process works and can continue to work for future demand-side programs.

11. How should the determination be made whether a demand-side program is beneficial to all customers in a customer class regardless of whether the program is utilized by all customers? See Section 393.1124.4.

This should not be the narrow interpretation of Customer A utilizes the program and both Customer A and Customer B must get a specific benefit. The issue that should be considered is whether or not the program in question produces long-run benefits that greater than the alternative (i.e. not doing the program). Customers benefit as a class through lower long-run avoided cost.

The Total Resource Cost test provides a determination that a program is cost effective.

12. Does any Missouri statute, case law, or regulation prohibit or restrict electric utility customers from participating directly or indirectly through aggregator of retail customers (ARCs) in demand response bidding programs, as discussed in FERC’s Order Nos. 719 and 719(A)?

Missouri law or regulation does not prohibit retail customers from participating in demand response bidding programs as envisioned under the proposed modifications of the SPP OATT and market protocols.

If the MoPSC permits retail demand response to participate in RTO markets, an issue could arise if a customer that has its own generation and that is participating in the RTO's demand response program was to produce more power than the amount of the customer's own internal load. The MoPSC may need to clarify that such a situation does not fall within the scope of retail demand response because the customer would no longer be modifying its own demand, but rather would be pushing power onto the distribution or transmission electrical grid. In that case, the customer would be required to qualify and operate under the existing state and federal regulatory framework for non-utility generators, such as those that pertain to Qualifying Facilities or independent power producers.

13. Does a single retail customer or an ARC act as a public utility subject to MoPSC regulation under Missouri statute, case law, or regulation if it bids demand response into SPP's or MISO's organized energy market?

No. Neither a single retail customer nor an ARC would be considered a "public utility" under Section 386.020(43) and relevant case law, as the ARC would not own, operate, control, or manage any electric plant or generating facilities, and neither type of entity would be producing, generating, or selling any power for public use. Following is a discussion of specific statutes and case law applicable to this question.

Section 386.020 defines the term "public utility" as follows:

(43) "Public utility" includes every pipeline corporation, gas corporation, electrical corporation, telecommunications company, water corporation, heat or refrigerating corporation, and sewer corporation, as these terms are defined in this section, and each thereof is hereby declared to be a public utility and to be subject to the jurisdiction, control and regulation of the commission and to the provisions of this chapter. (emphasis added).

Section 386.020(15) defines the term "electrical corporation" as follows:

(15) "Electrical corporation" includes every corporation, company, association, joint stock company or association, partnership and person, their lessees, trustees or receivers appointed by any court whatsoever, other than a railroad, light rail or street railroad corporation generating electricity solely for railroad, light rail or street railroad purposes or for the use of its tenants and not for sale to others, owning, operating, controlling or managing any electric plant except where electricity is generated or distributed by the producer solely on or through private property for railroad, light rail or street railroad purposes or for its own use or the use of its tenants and not for sale to others; (emphasis added)

Section 386.020(14) defines the term "electric plant" as follows:

(14) "Electric plant" includes all real estate, fixtures and personal property operated, controlled, owned, used or to be used for or in connection with or to facilitate the generation, transmission, distribution, sale or furnishing of electricity for light, heat or power; and any conduits, ducts or other devices, materials, apparatus or property for

containing, holding or carrying conductors used or to be used for the transmission of electricity for light, heat or power;

Section 393.170 prohibits an electric corporation from beginning “construction of a . . . electric plant. . . without first having obtained the permission and approval of the commission.” A typical retail customer that does not own any generation or other electrical plant would participate in the demand response program by selling into the SPP market its right to withdraw power from the transmission grid. Consequently, such a customer would not meet the definition of a public utility because the customer would not own, control, operate, or manage any electric plant or other generating facilities nor would it be producing, generating, or selling any power.

Missouri case law has also imposed the further requirement that such service must be offered “for public use”. See *State ex rel. Danciger and Co. v. Public Service Commission of Missouri*, 275 Mo. 4832, 205 S.W. 36 (1918). Relying on *Danciger*, the federal court in *City of St. Louis v. Mississippi River Fuel Corporation*, 97 F.2d 726 (8th Circ. 1938) states that the public use of a service is the deciding factor in determining whether an operation is a “public utility” under Missouri law. It concluded that under Missouri law the term ‘for public use’ . . . means the sale . . . to the public generally and indiscriminately, not to particular persons upon special contract.” *Id.* at 730. The City of St. Louis court cited with favor the following definition:

“To constitute a public use all persons must have an equal right to the use, and it must be in common, upon the same terms, however few the number who avail themselves of it.” *Id.*

Additionally, a retail customer with its own behind-the-meter generation that is generating power to self-supply when it bids demand response into the market would not be a public utility. A customer that owns generation and is generating only to self-supply is different from a customer that is generating power excess to its needs and selling it into the market. Given that the constitutional basis for regulation of public utilities is the fact that those utilities are affecting the public interest, it would be difficult to argue that customers generating electricity solely for self-supply should be subject to Commission regulation as a public utility. See, e.g., *Munn v. Illinois*, 94 U.S. 113, 126 (1876).

Such a customer would be generating power only for private use and, as a result, would not qualify as a public utility under the statute.

14. Does the right to furnish retail electric service under Section 393.170 give a certificated utility an exclusive right to “benefit” from demand response activities of its retail customers either directly or indirectly through an ARC?

No. Chapters 386 and 393 would not extend to a certificated public utility an exclusive right to “benefit” from demand response activities. A customer bidding demand response into the SPP market is not serving at retail but instead is restricting its withdrawals from the transmission grid and selling its right to withdraw power from the transmission grid at wholesale. This process would not be a violation of Missouri statutes. Allowing the

customer to receive the benefit of its demand response is the best incentive for customers to provide demand response.

15. How would a certificated utility and its other retail customers be affected if a single retail customer or an ARC bid demand response directly into SPP's or MISO's organized energy market?

In order to answer this question, it is first necessary to explain briefly how demand response by a retail customer (or an ARC) can be implemented in the context of the SPP energy market. For this explanation, it is simply assumed that problems of measurement and verification of demand response can be addressed. Given this assumption, the customer's retail electric billing would include both the customer's actual energy usage and demand during the response period as well as the estimated amount of energy and demand response during that period. In addition, the demand response amounts for each market settlement interval would be provided to SPP for payment to the customer for the energy at SPP market prices. The benefit the customer could obtain from participation under such a mechanism is the extent to which the market prices exceed the retail prices for the amount of demand reduction. Of course, the customer would be accepting the risk that the SPP market prices do not exceed the retail prices.

In regard to the effects of this arrangement on the utility and the other retail customers, the demand response bids could make it difficult for the certificated utility to predict and schedule actual hourly loads, meet NERC real-time regulation requirements, and ensure proper annual capacity requirements to meet load obligations. Revenue and energy accounting also would become more complicated because differences would be introduced between market settlement load of the system and actual load of the system and between billed energy and demand for customers and actual energy and demand for customers. Technical review would be necessary to determine if the processing and storing of this additional information would impose significant additional requirements for information or accounting systems. SPP systems also would be affected by additional accounting requirements and by implementation and administration of the demand response settlement processes, with resulting costs passed through to the utility and then to its customers. Various retail tariff provisions would be required to provide for the inclusion of estimated demand reduction in customer billed amounts. Also, retail tariffs and riders that provide for utility-administered demand response programs may have to be modified. One example of an impact on the utility's existing demand-side management programs is the potential for customers to participate in both the retail program and the SPP program at the same time. Provisions would have to be implemented to either prohibit such a practice or clearly state the rules applicable to such a situation, such as whether the utility or SPP has first right to the demand response provided by the customer. The additional costs created by utility and SPP implementation and administration of these multiple processes ultimately would be borne by retail customers of the utility. Furthermore, the participation of retail demand response in the SPP market, especially if conducted through an ARC, would make it more difficult for the certificated utility to maintain customer relations with the retail



customers. This would be particularly problematic in connection with load management and demand response programs.

Positive effects of demand response participation in the SPP market include the potential reduction of SPP energy market prices due to the increased competition resulting from demand bidding. The resulting lower wholesale power prices could benefit retail customers if the utility is a net buyer, but also could negatively impact retail customers if the utility is a net seller. There also may be positive environmental effects of retail customer participation in the SPP market through demand response, but only to the extent that the retail customer would not otherwise be participating in the utility's demand reduction programs.

16. What would be the effect on utility rate design if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

Incorporating retail demand response in the SPP energy market does not appear to have a direct impact on retail rate design for the generally available tariffs, provided that the provisions for estimating and validating the amount of demand response are reasonably accurate and unbiased. However, it would require mechanisms to adjust the retail billing units, as previously discussed. Also, the demand response tariffs and riders may need to be modified based upon the framework and rules for demand response that the MoPSC ultimately may adopt. Additionally, it should be noted that the participation in and effectiveness of the utility's demand response programs likely would be negatively impacted if retail customers were able to participate directly in the SPP energy market.

17. What would be the effect on utility revenue collection if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

If a single retail customer or an ARC offered demand response directly into SPP's organized energy market, a certificated utility may not necessarily experience an impact on retail revenue, provided that the retail tariffs are appropriately modified to allow the demand response amount to be added onto the hourly usage value. In the case of an ARC, there would be a significant settlement challenge for the meter agent calculating the meter adjustments because the aggregated amount of demand reduction dispatched in the SPP market would have to be distributed on an hourly basis among each and every customer in the aggregation in order to allow the retail billing to take place. However, if participation in this program were to cause a shift in the utility's costs and/or revenues, the utility may consider a rate proceeding to accommodate the change, unless the Commission granted recovery in a special rider or other similar recovery mechanism.

18. How would utility's long-term load forecasting process change if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

This would present analytical challenges somewhat similar to those resulting from the utility's own demand management programs, particularly if retail participation in SPP's energy market were to become substantial. Historical correlations between energy use



and forecast driver variables likely would be more difficult to estimate and multiple price elasticity effects would simultaneously affect energy use. At this time, it is not clear what specific forecasting methodologies would most effectively address those issues. However, it is apparent that the load forecasting process would become more complex.

19. How would utility's budgeting process change if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

Issues such as those discussed in response to Question 18 would have to be addressed in development of the energy sales and revenue forecasts for the budget. In addition, the budgeting process may need additional detail to account for the demand response energy that is included in revenue but not actually supplied through generation or traditional power purchases. Interchange accounting practices and the related budgeting information also would need to be reviewed and revised to accommodate these effects.

20. Are there any other consequences of allowing participation in demand response programs by a single retail customer or an ARC?

In the discussion above, the difficulties of estimating and validating the amount of demand response have been assumed to be manageable. However, this is a major analytical challenge. Errors in the process are unavoidable. To the extent that these errors are randomly distributed, there will be a measure of rough justice in the process. On the other hand, if the estimation and validation processes contain systematic and significant bias, there can be harmful financial consequences to those retail customers who participate in the SPP energy market, to the utility, or to the non-participating retail customers. This issue needs to be kept in view as the Commission considers whether, and if so, how, to allow Missouri retail demand response participation in the SPP energy market.

21. How would customers' demand rates be estimated if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

The term "demand rate" could be interpreted to have a variety of meanings, including (1) the demand rate as shown on a specific rate schedule, (2) the demand portion of a customer's bill, or (3) the demand units expressed in kW for a customer during a billing period. The first item is established by the Commission-approved rate schedules. The second item is simply a mathematical calculation—the demand rate from the rate schedule times the demand units in kW. The third item—the demand units in kW for a customer in a specific billing period—is determined by looking at the customer's monthly peak demand. When a customer is bidding demand response into the SPP market, the customer's usage information provided to the utility is grossed up and the customer is billed as though no reduction in usage occurred. If the grossed-up usage information provided to the utility establishes a monthly peak for the customer, that peak will be used in calculating the customer's monthly demand charge. Assuming that accurate estimates of the demand reductions are made, there would not be any effect on

the demand rates paid by the customers participating in the market or by other retail customers.

22. How would demand sales be transacted from an operation standpoint if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

Assuming that this question is directed at demand response sales in the RTO's wholesale market, the retail customer or ARC would have to register the demand response resource with the RTO and participate under essentially the same rules as other RTO energy market participants. In the case of an ARC, some type of documentation would be necessary to verify that the ARC has proper authorization from the retail customers it is representing. Also, a methodology for quantifying the amount of demand response would have to be established. The retail customer would receive compensation directly from the RTO for actual demand response activity while the certificated utility would continue to bill the retail rates based on billing units that include the amount of demand response added on top of the metered quantity.

23. Would existing or planned demand response programs, and the costs associated with implementation of these programs, be undermined or cause a loss in benefits to retail ratepayers if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

Many customers (primarily large customers) are participating in the current retail demand response programs. A potential negative impact to the current demand response programs is anticipated if customers participate directly in demand response through the SPP energy market. This would most likely increase the cost per kW acquired under the current program as a result of fewer large customers participating. It also could diminish the capacity value of the current program in that customers now providing demand response that can be treated as a capacity resource might move to the SPP market where their demand response could produce only energy savings but no capacity value to the local utility. In addition to the loss of potential capacity, the loss of the benefits of local utility control and customer operational flexibility that exist in the current programs could negatively impact the current effectiveness of retail demand response programs. Finally, clear rules would have to be established due to the risk of customers attempting to participate in both the local utility demand response program and the SPP market simultaneously. Consideration should be given as to whether customers should be prohibited from doing so. At a minimum, it should be clarified that the utility rather than SPP has first rights to the demand response resource if the customer attempts to participate in both. Such a clarification would help protect the utility's ability to manage its power portfolio, and particularly to protect its capacity resources.

24. If the MoPSC has the authority to do so, what conditions would the MoPSC place on a single retail customer or an ARC if it bids demand response directly into SPP's or MISO's organized energy market?

A critical element is that retail tariff language would be needed to provide clear authorization for the energy and demand response to be added to the customers' actual energy and demand for the purpose of billing retail rates. This would insulate non-participating customers from bearing additional costs due to those customers that do participate in the SPP market.

Also, provision should be made for the costs associated with administering the program to be passed through to those retail customers receiving the benefits of SPP market participation.

Finally, as discussed above, the MoPSC should address the possibility of a customer attempting to participate simultaneously with demand response in both the utility's program and the SPP energy market. If this practice is not prohibited, a rule should be established that gives the utility priority in receiving the customer's demand response. In the event that the customer attempts to participate simultaneously in both, such a rule would allow the utility to meet its needs from the demand reduction and the customer then would pay SPP for the energy it could not provide to the market, including any associated market penalties.

25. How are efforts to encourage demand response by MoPSC jurisdictional electric utilities implicated if a single retail customer or an ARC bids demand response directly in SPP's or MISO's organized energy market?

Potential negative outcomes from having two different demand response programs could include confusion among customers on the benefits of demand response programs, customers switching between programs to "game" programs for the best price and operational flexibility, and customers potentially not participating in demand response at all if they are not benefiting "their utility", as opposed to the region. Utilities have experienced a tremendous loyalty among their customers to help manage the local system. This may be lost if an ARC is providing this benefit to other utilities.

Perhaps most importantly, there is potentially substantial detriment if demand response that serves as a capacity resource should move to the SPP energy market where it is not able to provide the same value to the local utility.

26. How are efforts to encourage energy efficiency programs by MoPSC jurisdictional electric utilities implicated if a single retail customer or an ARC bids demand response directly into SPP's or MISO's organized energy market?

Presently, demand response and energy efficiency opportunities are marketed to customers. Utilities can demonstrate how a customer can utilize demand response payments to fund energy efficiency measures. Not having this tie could impede progress toward the objective to advance energy efficiency.

WHEREFORE, KCP&L and GMO respectfully request that the Commission accept for filing this pleading as its Response to the Commission's Order Opening Case To Investigate Various Demand Side Programs which was issued on January 6, 2010.

Respectfully submitted,

*/s/ James M. Fischer*

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ATTORNEYS FOR KANSAS CITY POWER &  
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### **CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing document was served either by electronic mail or by first class mail, postage prepaid, on this 17th day of February 2010 to counsel for all parties who have submitted comments in this docket.

*/s/ James M. Fischer*

James M. Fischer