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May 8, 2014

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MAY 8 - 2014

PUBLIC SERVICE  
COMMISSION

## HAND DELIVERED

Jeff R. Derouen  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

RECEIVED

MAY 8 - 2014

PUBLIC SERVICE  
COMMISSION

**RE: Case No. 2013-00487**

Dear Mr. Derouen:

Enclosed please find and accept for filing the original and eight copies of Kentucky Power Company's response to the comments provided by Sierra Club in this proceeding.

In accordance with their request, a copy of this letter and the response is being served this day on counsel for Sierra Club and Mr. Sawmiller by e-mail transmission in lieu depositing a copy of the response in the United States mail.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Mark R. Overstreet

MRO

cc: Jill Tauber  
S. Laurie Williams  
Joe Childers  
Daniel Sawmiller

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED  
MAY 8 - 2014  
PUBLIC SERVICE  
COMMISSION

In the Matter of:

The Application Of Kentucky Power  
Company To Amend Its Demand-Side )  
Management Program And For Authority )  
To Implement A Tariff To Recover Costs )  
And Net Lost Revenues, And To Receive )  
Incentives Associated With The )  
Implementation Of The Programs )

Case No. 2013-00487

\* \* \* \* \*

**Kentucky Power Company's Comments In Response To The Comments Of  
Sierra Club And Alexander Desha**

Kentucky Power appreciates Sierra Club's encouragement as the Company pursues implementation of a significantly increased and proportionately large demand-side management program. In addition, Kentucky Power looks forward to working with Sierra Club through the Company's DSM Collaborative.

It nevertheless is important that some of the information quoted or referenced in Sierra Club's comments be placed in proper context to dispel misunderstandings.

**1. Kentucky Power's administrative costs are in line with industry averages.**

Sierra Club expresses concern with Kentucky Power's overall administrative costs of operating energy efficiency programs, and, suggests based upon a publication examining energy efficiency programs in five states, that Kentucky Power's administrative costs are above<sup>1</sup> the

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<sup>1</sup> Sierra Club Comments at 5-6.

norms for the five states examined in the report.<sup>2</sup> As with any comparison it is important to ensure apples are being compared with apples. In particular, the definition of “administrative cost” varies from jurisdiction to jurisdiction. Thus, although Kentucky Power has allocated energy efficiency program costs in the same fashion for years, there is no way to know whether they were similarly defined in the Friedrich review relied upon by Sierra Club. Indeed, the Friedrich review nowhere defines “administrative costs,” nor represents that the term was identically defined with respect to the five states used in this portion of the review.

For example, the Arkansas Public Service Commission defines Administrative Costs for all Arkansas utilities as “costs incurred to manage and/or support EE programs.”<sup>3</sup> Examples of such costs include “utility company personnel training costs, utility company EE personnel salary and benefits not charged elsewhere, and overhead costs (office space, vehicles, etc.)” However, under the Arkansas guidelines, not all internal company labor associated with energy efficiency programs is charged to administrative costs. Thus, some costs can be charged to Planning and Design, which are costs to develop and plan EE Programs, rather than “administrative” costs. Kentucky Power, by contrast, assigns all such costs to administrative costs when reporting to the Kentucky Commission.

Using the Arkansas methodology as a template, and *without* allocating any internal company labor costs to the Planning and Design category, Kentucky Power’s administrative expenses were 9.7% of the total program costs. This is at the bottom range of what Sierra Club

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<sup>2</sup> See Katherine Friedrich, *et al.*, “Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved Through Utility-Sector Energy Efficiency Programs” at 12 (ACEEE September 2009), available at <http://aceee.org/research-report/u092> (“Friedrich”). Although data from 14 states were examined in other sections of the review, only five states – California, Vermont, Connecticut, Massachusetts, and Texas, were reviewed in the section addressing administrative costs. *Id.* (Table 7).

<sup>3</sup> “Instructions Arkansas Energy Efficiency Program Portfolio Annual Report,” <http://www.apscservices.info/EEInfo/SARP3.0Instructions.pdf> at 3 (Ark. P.S.C. September 27, 2013)

cites, based upon the five-state review of utility energy efficiency programs, as the typical range of 8-38% for such costs:

Kentucky Power Company 2013 Program Year	
Internal Labor Costs	\$280,854
Direct Program Expense	<u>\$2,601,951</u>
Labor + Direct Program Expense	\$2,882,805
Percent Admin to Total Portfolio	9.7%

Sierra Club also notes, relying upon the same five-state review, that program incentives range from 60-90% of total costs.<sup>4</sup> Employing the Arkansas methodology again, as an example, incentive costs (referred to as “Incentive/Direct Install Costs” in the Arkansas rules) are defined as “amounts paid to program participants, contractors or other third parties for energy efficient equipment, products and/or services. Incentive costs include rebates, direct install costs, and upstream payments.”<sup>5</sup> In Arkansas, payments made to third party program implementation contractors also are included in the “Incentive/Direct Install Cost.” Yet, under the methodology employed by Kentucky Power, these costs, which are a significant portion of costs of the program portfolio, are categorized as administrative. In short, without using standard cost categorization methodology, it is difficult to draw firm conclusions about the levels of true “overhead.”

Kentucky Power’s “administrative costs” remain at an appropriate level and its programs provide a reasonable level of incentives. These differences aside, Kentucky Power agrees with

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<sup>4</sup> Friedrich at 5-6.

<sup>5</sup> *Id.* at 2.

Sierra Club that “administrative costs” should be minimized and the Company has done so in the past and will continue to do so in the future.

**2. Kentucky Power’s program savings constitute a reasonable percentage of relevant retail sales.**

Sierra Club also claims that Kentucky Power’s DSM/EE program “lags significantly behind other utilities in the region and the rest of the country in terms of energy savings.”<sup>6</sup> In support, Sierra Club contrasts Kentucky Power’s 2009-2011 energy efficiency savings to those from AEP Ohio (2009-2011), other Ohio utilities (2009-2011), and thirteen other states (2011).<sup>7</sup>

The problems with this analysis are significant:

- a. Under Kentucky law, KRS 278.285(3), industrial customers in Kentucky may “opt out” of utility-sponsored energy efficiency programs. By contrast, Ohio and many other states prohibit *carte blanche* “opt-out.” Because the industrial sector is a relatively large part of Kentucky Power’s load (approximately 44%), including industrial customers in the denominator (total energy sales) as Sierra Club does, when they do not contribute to the numerator (energy savings), skews the result and unfairly diminishes the contribution made by Kentucky Power’s DSM/EE programs in the sectors in which they are deployed.
- b. The comparison of 2009-2011 and 2011 *historical* results from Ohio and other jurisdictions and the Company’s projected *future* results can be misleading. The 2009-2011 and 2011 results for programs in Ohio and the other states relied almost entirely on lighting measures. Much of this “low-hanging fruit” has been gathered, and as a result the prospective impact of such programs has been greatly diminished through the phase-in of lighting standards nationwide (discussed in greater depth below). As a result, historical and future results are not directly comparable.
- c. The Ohio results include credits for legislatively authorized mercantile projects. These are projects that were completed prior to 2009 and should not be considered reoccurring or indicative of savings that occurred during the 2009-2011 time period. In the case of AEP Ohio, these projects accounted for 262 GWh during that period or 23% of the total savings claimed.

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<sup>6</sup> Sierra Club Comments at 7-8.

<sup>7</sup> *Id.* at 8.

- d. Kentucky Power’s annual savings included in the statistics used by Sierra Club are effectively “partial year” calendar savings that reflect the timing of when measures are installed. This reporting methodology, which may very well be unique in the industry, is an artifact of how Kentucky Power has traditionally reported energy efficiency program impacts to the Commission semiannually. More typical of the industry is to report “annualized” savings, or the impact an energy efficiency measure or program will have over 12 months, independent of the month of installation. Kentucky Power’s full-year 2013 and 2014 annualized savings were provided to Sierra Club in Sierra Club 1-3, but were not used by Sierra Club in its calculations.

Dividing Kentucky Power’s annualized savings by its residential and commercial sales only, as would be appropriate, a different picture emerges:

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Kentucky Annualized Savings (MWh)	3,963	6,310	14,492	17,198	21,435	26,128
Residential and Commercial Sales (MWh)	3,891,593	3,940,026	3,755,439	3,678,978	3,631,403	3,613,572
Achievement (2014 forecast)	0.10%	0.16%	0.39%	0.47%	0.59%	0.72%

Kentucky Power will build on these significant savings to maximize the opportunity for further savings in the future.

**3. Retrospective, aggregated efficiency cost statistics have little prospective value.**

The Sierra Club points to a recent Lawrence Berkeley National Laboratory study, “The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs” (“LBL Report”) that puts the cost of energy efficiency at \$0.021/kWh, but fails to examine the cost calculated in the LBL Report with analytical rigor, or to place in the appropriate context. In particular, the LBL Report includes the following disclaimer, “[t]he CSE (cost of saved energy) values presented in this study are retrospective and may not necessarily

reflect future CSE for specific programs, particularly given updated appliance and lighting standards.”<sup>8</sup> This disclaimer is important when examining *prospective* CSEs.

The LBL Report relies upon historical data from the years (2009-2011). This historical period predates the completion of the phase-in of significant residential and commercial lighting standards. Because lighting programs, or lighting measures within more comprehensive programs, constituted the vast majority of energy savings from utility efficiency programs in that time period, using the average CSE from that period, \$0.021/KWh, as a cost benchmark to justify aggressively pushing EE programs, or to judge the success or failure of an EE program is valid only if such measures are likely to be replicated. The present evidence suggests they will not.

For example, commercial lighting programs during that era primarily consisted of replacing the magnetic ballast with an electronic one, and substituting T8 light bulbs for T12 bulbs. The savings for one of these retrofits was approximately 50% and were inexpensive. They are not likely to be replicated through future lighting programs because the magnetic ballast has not been manufactured since 2010 and the T-12 bulb has not been made since 2012. The next alternative is to move to a T-5 bulb (with electronic ballast). This, however, would yield an incremental savings of 7% relative to the T-12 to T-8 retrofit and at significantly higher cost.

Similarly, standard screw-in light bulbs are now required to be 25% more efficient and CFL bulbs use approximately 75% less energy than incandescent bulbs and are relatively inexpensive. The only other bulbs that meet the new standard, which was fully phased-in at the

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<sup>8</sup> The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs, LBL 2014 at xi.

end of 2013, are halogen bulbs that cost at least as much as CFLs. By 2020, CFL devices will become the standard, greatly limiting future efficiency improvements from residential lighting. Thus, in the short-term, some limited opportunity may still exist, but it will diminish with each successive year. Kentucky Power intends to take advantage of this opportunity, but results from the phase-in of lighting standards are not indicative of what is likely to be achieved prospectively.

More representative likely costs are set out in Table E3 and Table E4 in the LBL Report Appendix. For example, “Whole Home Retrofit” at \$0.116/kWh, “Residential New Construction” at \$0.058/kWh, “Residential HVAC” at \$0.081/kWh; and “Commercial HVAC” at \$0.034/kWh are more indicative of the costs that will likely be encountered without the benefit of low-cost lighting programs.

Further, not only will the loss of inexpensive lighting measures likely result in the average cost increasing, it is unclear whether other EE programs will be as readily accepted by consumers as lighting measures were. Utility energy efficiency programs have not yet shifted to non-lighting measures because it has been much easier to continue lighting programs than it is to effect significant incremental savings in the non-lighting sectors.

The comparison of results from Ohio’s 2009-2011 program years is also problematic.<sup>9</sup> Not only do lighting measures constitute over 90% of the energy savings from the Ohio utility programs, but significant savings are attributed to “mercantile savings.”<sup>10</sup> “Mercantile savings,”

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<sup>9</sup> Sierra Club Comments at 8.

<sup>10</sup> Max Neubauer, *et al.*, “Ohio’s Energy Efficiency Resource Standard: Impacts on the Ohio Wholesale Electricity Market and Benefits to the State” at 14 (ACEEE April 2013), available at <http://www.aceee.org/sites/default/files/publications/researchreports/e138.pdf> (“Neubauer”). Neubauer includes



a unique provision of Ohio law, are credits for efficiency measures already installed and achieved at little or no cost to the utility. This further distorts the cost of reported savings. For example, of the 1,049 GWh FirstEnergy reported as savings in 2009-2011, fully 815 GWh are attributed to “mercantile” projects (with another 168 GWh of lighting).<sup>11</sup> In fact, Sierra Club recognized the fact in its comments in an Ohio proceeding where it described the savings reported by FirstEnergy as “pre-existing” and “suspect.”<sup>12</sup> In sum, not only does the inclusion of “mercantile savings” greatly distort the cost, but it provides an incorrect picture of what was actually “achieved” during the period.

Finally, although Sierra Club calls for additional savings from Kentucky Power,<sup>13</sup> in response to a data request from Commission Staff, Sierra Club was unable to identify with any specificity any DSM/EE programs not currently in Kentucky Power’s DSM/EE portfolio that the Company might implement to achieve additional savings.<sup>14</sup> Over the next three years, Kentucky Power is dramatically increasing the scope of its DSM program. In order to ensure that this expansion is cost-effective and properly targeted, Kentucky Power will conduct a market potential study. The purpose of this study is to evaluate all reasonable opportunities available for Kentucky Power to increase savings from its DSM programs. This study is particularly

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Ohio’s utilities, not just Kentucky Power’s affiliate AEP Ohio. Neubauer also confirms the importance of lighting programs to the results in Ohio: “Our estimate of the first-year cost for Ohio’s energy efficiency programs (2009-2011) is lower than those of mature, comprehensive programs in other states. This is likely due to a variety of factors, but largely because Ohio’s IOU’s have been fairly dependent upon savings from lighting programs to meet their annual targets.” *Id.* at 4.

<sup>11</sup> Energy Efficiency and Peak Demand Reduction Program Portfolio Status Report to the Public Utility Commission of Ohio, Dockets No 12-1533 EL-EEC, 12-1534 EL-EEC, 12-1535 EL-EEC

<sup>12</sup> Comments by Sierra Club, Dockets No 12-1533 EL-EEC, 12-1534 EL-EEC, 12-1535 EL-EEC, page 8.

<sup>13</sup> Sierra Club Comments at 7-9.

<sup>14</sup> Sierra Club Response to Data Request Staff 1-1(b).

important for Kentucky Power. Due to the size and nature of its customer base, including the prevalence of manufactured homes and industrial customers that can, under KRS 278.285, opt out of the DSM program, Kentucky Power is faced with unique challenges to implementing effective DSM programs. The market potential study – which like Kentucky Power Sierra Club strongly supports<sup>15</sup> – will consider these challenges as part of its analysis of Kentucky Power’s DSM opportunities. This study will allow Kentucky Power to best allocate resources as it continues to expand its program.

**4. Because Industrial Customers Constitute A Larger Proportion Of Kentucky Power’s Company’s Load Than Exists Nationally, Comparisons To National Benchmarks Can Be Misleading.**

In addition to citing the “Kentucky Action Plan for Energy Efficiency” in its comments, Sierra Club attaches a copy of the report to its submission to the Commission. The report in turn includes statements such as, “Kentucky’s energy intensity is, per capita, is among the highest in the nation”<sup>16</sup> that imply there is something inherently wasteful in the manner in which Kentucky consumes energy. It is important to remember that Kentucky is a heavily industrialized state. As pointed out in the same report, Kentucky’s industrial sector consumes more than 49% of Kentucky’s total electricity generation. Wyoming is the only state whose per capita consumption is greater than Kentucky’s. Because nationally the industrial sector consumes not quite 27% of all electric generation, it is not surprising that Kentucky’s relative per capita consumption is so high. It is also important to note that heavy industries located in Kentucky because of access to inexpensive energy and are a major economic driver for the state’s economy. They compete in national if not global markets, and are keenly aware of the need to produce goods efficiently.

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<sup>15</sup> Sierra Club Comments at 10.

<sup>16</sup> Kentucky Action Plan for Energy Efficiency at 9.

The report continues to state further that, “Kentucky [ranks] 6<sup>th</sup> nationally in terms of residential electrical consumption per capita.”<sup>17</sup> This statistic must be viewed in context. A better comparison would be to examine total household energy consumption from all fuels. Focusing on electricity consumption only masks important differences in regional energy consumption patterns.

Household energy consumption is not comprised of only electricity, but a multitude of different fuels including natural gas, propane, and fuel oil, the consumption of which can vary significantly by region. For example, Kentucky consumes 52 MMBtu of electricity per household annually, compared to the national annual average of 38.6 MMBtu/yr and an annual average of 27.6 MMBtu/yr in the Northeast.<sup>18</sup> However, when all fuels are counted, Kentucky households consume energy at an average rate of 80.2 MMBtu annually. This is less than the national average of 89.6 MMBtu/year and far less than the average annual 107.6 MMBtu consumed in the Northeast.<sup>19</sup> Moreover, many Northeastern states have long-standing and sizable energy efficiency programs.

Another factor is the manner in which electricity is used. When heating and cooling loads are excluded, Kentucky households consume 47.1 MMBtu/yr; the national average is 46.9 MMBtu/yr, and the Northeast region 47 MMBtu/yr. These are small differences and can result from regional preferences for things like swimming pools (and their pumps), line-drying clothing, water temperatures, well-water pumps and many other things. The primary difference then is that Kentucky has both cooling and heating loads, and its heating loads are met

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<sup>17</sup> Ibid pg. 21.

<sup>18</sup> EIA Residential Energy Consumption Survey (2009); see tables CE2.1 and CE2.4.

<sup>19</sup> EIA Residential Energy Consumption Survey (2009); see Tables CE1.1, CE1.4 and CE1.2.

disproportionately with electricity given lower population density, which makes electricity the most convenient fuel. This has nothing to do with end-use efficiency.

Although overall rankings and statistics can be informative, for the purposes of designing EE policies and programs it also is necessary to develop a firm understanding of the underlying regional and local conditions. Broad generalizations about any particular state's position in national rankings without such an understanding can lead to inaccurate conclusions.

**5. Kentucky Power's levelized cost of annualized energy savings for energy efficiency programs are in line with the Lawrence Berkeley National Laboratory (LBL) and the American Council for an Energy-Efficiency Economy (ACEEE) studies cited in Sierra Club's comments.**

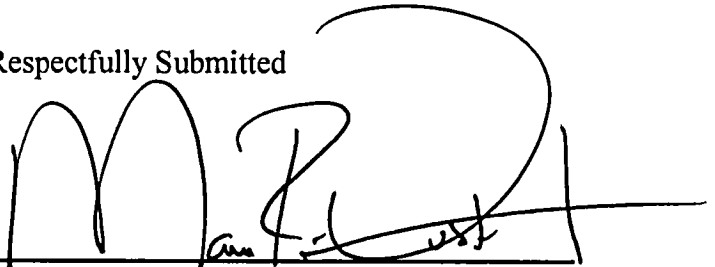
Finally, Sierra Club states that two recent studies by LBL and ACEEE found that the national levelized cost of energy savings for electric utilities administering efficiency programs was 2.1 cents per kWh and 2.8 cents per kWh, respectively. Although these studies used data from past years, a similar analysis of Kentucky Power's program performance illustrates a positive trend. Since 2011, Kentucky Power's levelized cost of energy savings has been below the national averages quoted by the ACEEE study and, in 2013, below those quoted in the LBL study.

<b>Year</b>	<b>Cents/kWh</b>
2009	3.4
2010	3.2
2011	2.3
2012	2.6
2013	1.9

In summary, Kentucky Power has a sizable and growing DSM program with costs that are in-line with national benchmarks. However, it is unrealistic to expect the low costs and high energy savings realized in the past to continue apace in light of the current lighting standards. The road

forward will be much more challenging and cannot be navigated by looking through the rear view mirror.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'Mark R. Overstreet', written over a horizontal line.

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COUNSEL FOR KENTUCKY POWER  
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**CERTIFICATE OF SERVICE**


I hereby certify that a true and accurate copy of the foregoing was served on the e-mail transmission on:

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on this the 8<sup>th</sup> day of May, 2014.



Counsel for Kentucky Power