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MAY 30 2008

**PUBLIC SERVICE
COMMISSION**

Via Overnight Mail

May 29, 2008

Ms. Stephanie L. Stumbo, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

Re: Administrative Case No. 2007-00477

Dear Ms. Stumbo:

Please find enclosed the original and twelve (12) copies of POST-HEARING BRIEF OF THE KENTUCKY INDUSTRIAL UTILITY CUSTOMERS filed in the above-referenced matter.

By copy of this letter, all parties listed on the attached Certificate of Service been served. Please place these documents of file.

Very Truly Yours,



Michael L. Kurtz, Esq.
Kurt J. Boehm, Esq.

BOEHM, KURTZ & LOWRY

MLKkew
Attachment
cc: Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served by mailing a true and correct copy, by regular U.S. mail (unless otherwise noted) to all parties on the 29th day of May, 2008.

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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COMMISSION

AN INVESTIGATION OF THE ENERGY AND
REGULATORY ISSUES IN SECTION 50 OF
KENTUCKY'S 2007 ENERGY ACT

)
) ADMINISTRATIVE CASE
) NO. 2007-00477

POST-HEARING BRIEF OF
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

I. INTRODUCTION

On November 27, 2007 the Kentucky Public Service Commission (“the Commission”) initiated the above-captioned case in order to investigate the energy and regulatory issues enumerated by the General Assembly in Section 50 of House Bill 1, enacted during the 2007 Second Extraordinary Session (“2007 Energy Act”). The General Assembly directed the Commission to examine its statutes and make recommendations on or before July 1, 2008 to the Legislative Research Commission (“LRC”) regarding four energy and regulatory issues. The issues set forth in Section 50 of the 2007 Energy Act are as follows:

1. Eliminating impediments to the consideration and adoption by utilities of cost-effective demand-management strategies for addressing future demand prior to Commission consideration of any proposal for increasing generating capacity;
2. Encouraging diversification of utility energy portfolios through the use of renewables and distributed generation;
3. Incorporating full-cost accounting that considers and requires comparison of life-cycle energy, economic, public health, and environmental costs of various strategies for meeting future energy demand; and

4. Modifying rate structures and cost recovery to better align the financial interests of the utility with the goals of achieving energy efficiency and lowest life-cycle energy costs to all classes of ratepayers.

In determining how best to analyze the technical issues enumerated in above, the Commission employed Overland Consulting to prepare a report in this investigation. The Commission also invited interested parties to intervene and file comments and testimony.

Kentucky Industrial Utility Customers, Inc. (“KIUC”) intervened in this docket and submitted testimony of its expert witness commenting on the four issues listed above and the Overland Report. Through its testimony KIUC argued that 1) “*eliminating impediments to the consideration and adoption by utilities of cost-effective demand-management strategies*” (Issue 1) is unnecessary because KRS 278.285 already provides a number of strong policy tools for the Commission to utilize in encouraging cost effective DSM; 2) the industrial customers “opt-out” provided by KRS 278.285 (3) should be continued because energy intensive industrial customers already have a strong financial interest in reducing energy costs and early-adopters of energy efficiency technologies should not have to pay for their competitors to do the same; 3) the diversification of utility energy portfolios through the use of renewable generation is reasonable if it is cost-effective; 4) “Revenue decoupling” is as much a “revenue assurance” mechanism as it is a “conservation enabling” mechanism and generally results in an unwarranted transfer of risk from utilities to its customers; and 5) the environmental policy goals of “revenue decoupling” are better achieved by eliminating inter-class cost subsidies and encouraging rate designs that reflect time-of-use energy cost differentials.

KIUC submits this Post-Hearing Brief containing further recommendations on issues discussed in testimony and at hearing.

II. ARGUMENT

1. **KIUC Supports A Self-Certification Process For Large Industrial Customers That Wish To “Opt-Out” Of Utility-Sponsored DSM Programs As Provided By KRS 278.285.**

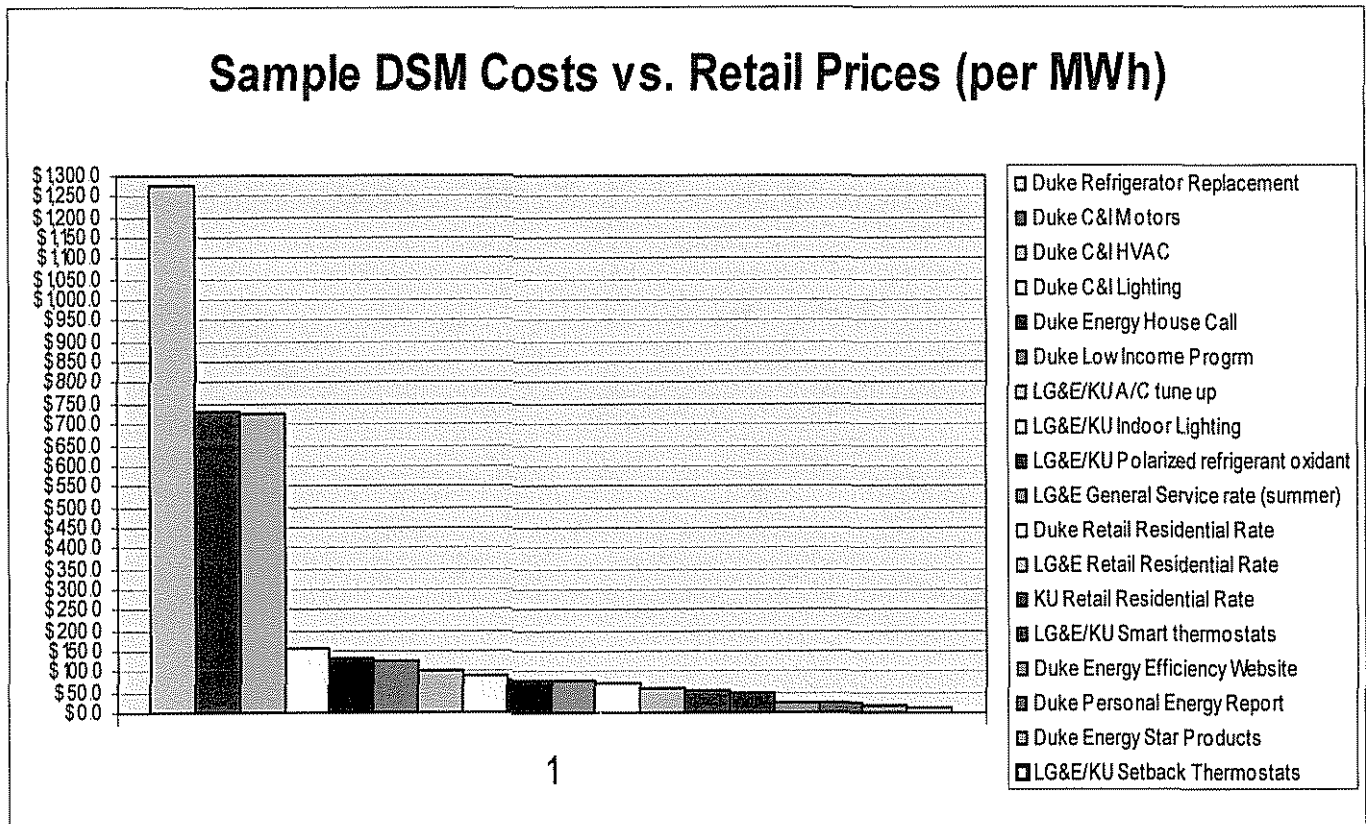
The Kentucky Revised Code provides that industrial customers with energy intensive processes may “opt-out” of utility-sponsored DSM programs in order to implement energy efficiency programs that are not subsidized by other customer classes. KRS 278.285(3) states:

“The commission shall assign the cost of demand-side management programs only to the class or classes of customers which benefit from the programs. The commission shall allow individual industrial customers with energy intensive processes to implement cost-effective energy efficiency measures in lieu of measures approved as part of the utility's demand-side management programs if the alternative measures by these customers are not subsidized by other customer classes. Such individual industrial customers shall not be assigned the cost of demand-side management programs.”

This Section was enacted in recognition of the fact that 1) energy-intensive industrial customers already have a strong financial incentive to reduce their energy expenses; 2) individual industrial customers are in a better position to evaluate the energy savings potential from their specific industrial processes than an electric utility or the Commission; and 3) industrial customers that are early-adopters of energy efficiency technologies and techniques should not be asked to subsidize investments for competitors or firms in other industries.

The evidence presented in this case reinforces the Legislature’s determination that industrial customers, not utilities or the Commission, are in a best position to evaluate and implement the energy savings potential from their specific industrial processes. Utility-sponsored DSM programs have not been cost-effective when applied to industrial customers. The Overland Report contains a graph that shows the relative cost of various Kentucky utility-sponsored DSM programs. According to this Figure

Duke-Kentucky's¹ commercial and industrial "Motors" and "HVAC" programs cost \$732 and \$726 per MWh saved respectively. This is roughly 10 times Duke-Kentucky's retail Residential rate. Duke's commercial and industrial "Lighting" program fared better, but still costs roughly twice as much as the Residential retail rate per MWh saved. Figure 4-3 from the Overland Report is reproduced below:²



As seen in the figure above, the cost per-MWh-saved of the three commercial and industrial utility-sponsored DSM programs is significantly higher than any other DSM program conducted in the Commonwealth other than the "Duke Refrigerator Replacement" program. The high expense of Duke's industrial DSM programs is not surprising and is likely a reason that other utilities in Kentucky do not

¹ Duke is the only Kentucky utility that is currently offering an industrial DSM program.

² KIUC has reformatted Figure 4-3 from page 46 of the Overland Report in order to show the relative scale of the costs of the various utility-sponsored DSM programs. None of the numbers have been changed.

sponsor DSM programs for industrial customers. Energy savings in the industrial sector are most effectively implemented by the customer, not by the utility or the Commission.

It would be very difficult for a utility or the Commission to design a cost-effective DSM program for the benefit of large industrial customers. Industrial manufacturing operations vary widely, from the production of automobiles, steel, chemicals, industrial gasses, aluminum and paper. Industrial customers are in the best position to implement cost effective energy saving upgrades at their own facilities. It is unreasonable to think that an outside party could enter an industrial facility and effectively identify methods to reduce energy consumption in complicated manufacturing processes better than the managers and engineers of that facility. It is unlikely that an electric utility or the Commission has greater expertise in how to minimize energy consumption in the production of automobiles than Toyota, or how to minimize energy consumption in the production of chemicals than Dow Corning, etc.

When asked or cross-examination about the results of the Figure above Staff witness and co-author of the Overland Report, Howard Lebow agreed that the Duke commercial and industrial DSM programs are “*a lot to pay for electricity.*”³ Mr. Lebow clarified that he is not opposed to the industrial opt-out contained in KRS 278.285(c)⁴ and that he instead recommends that a higher degree of scrutiny be applied to only small industrial customers that wish to opt-out of utility-sponsored programs. Through cross-examination by KIUC counsel, Mr. Lebow outlined a proposal in which large industrial customers would opt-out of utility sponsored DSM programs through a “self-certification” procedure similar to the procedure already implemented by the Commission, while small industrial customers would be subject to a “higher level of scrutiny” in order to opt-out:

³ TR p. 209 lines 15-18.

⁴ TR p. 210 lines 3-8.

Q. Okay. So you're not against the opt-out; you're just indicating there ought to be more documentation, evidence, and so forth?

A. Yes, and I've listened to other people talk about this and I believe one of the company witnesses indicated that they believe that there should be a self-certification process and, with respect to when you read the statute, and I believe the intent of the statute, it addresses specifically large industrial customers who have an energy-intensive process, words to that effect.

Q. When you emphasize the synonym "large," do you think that – right now, we have sort of a one size fits all for all industrial customers. There's a 4,000 industrial customers throughout the state. Would it be reasonable to draw some sort of line of distinction between industrial customers of one size versus another?

A. I think it would, and that's implicit in the recommendation and maybe I didn't do a very good job. I could have amplified on this a little bit more, but certainly large customers who are taking power at transmission or primary level who have energy-intensive use for industrial purposes that can also be defined, I'm sure, within a group of large customers, you can develop homogenous criteria among that group, and, in my opinion, that customer group should self-certify. It should represent what it's been doing for the last few years in terms of energy efficiency or energy conservation and it can talk about what it intends to do over the next few years, similar to what you would go through on a more public basis in a DSM kind of filing. Other customers below that demarcation point, I believe, should be subject to greater scrutiny before they are allowed to opt out of the DSM surcharge.

Q. So the larger customers perhaps would have the self-certification and the smaller ones would have the protocol you just described?

A. Some undefined protocol that would be much more restrictive.

Q. Okay. Just a little bit more. So, for example, an aluminum smelter that's 480 megawatts of transmission voltage at a 98 percent load factor would be treated under a self-certification whereas a 1 megawatt secondary voltage machine shop at a 50 percent load factor would have a different set of standards?

A. Much higher level of scrutiny.⁵

If the Commission believes that the energy-efficiency efforts of industrial customers should be verified in order for such customers to continue to opt-out of utility sponsored programs, KIUC supports the proposal outlined by Mr. Lebow above. It would be a waste of administrative resources for the

⁵ TR pp 210-212.

Commission to undertake an extensive analysis of the energy efficiency efforts of large industrial customers. As explained above, such customers already have an enormous competitive incentive to undertake cost-effective energy saving efforts on their own and it is highly unlikely that a utility or the Commission could implement cost-effective energy saving techniques in the complicated manufacturing processes of large industrial customers. On the other hand, small industrial customers that utilize relatively simple manufacturing processes may benefit from a utility sponsored program. It may be reasonable to subject such customers to a greater degree of scrutiny in order for these customers to continue to opt out of utility-sponsored DSM programs.

2. There Is No Evidence In The Record That Industrial Customers That Have Opted-Out Of DSM Programs Are Not Implementing Cost-Effective Energy Efficiency Measures.

The Overland Report contained a reference to a study prepared by employees of the University of Louisville that concluded that under “*minimally aggressive*” energy efficiency techniques 63.4 million MWh, and under “*moderately aggressive*” energy efficiency techniques 91.8 million MWh, could be saved over the next ten years by industrial customers.⁶ However, that study has been shown to be extremely unreliable. Moreover, the study contains strong disclaimers stating that it makes no warranty with respect to its “accuracy”, “completeness” and “usefulness.”⁷

Staff witness and Overland Report co-author Julia Frayer stated on cross-examination that Overland Consulting “*did not do any calculations to produce [the 63.4 and 91.8 million MWh] figure. This is effectively an excerpt from [the study].*”⁸ In other words, Overland Consulting did not make any attempt to independently verify the conclusions of the study. As was established through the cross-

⁶ Overland Report pp. 48-49.

⁷ KIUC Cross-Examination Ex I. “*An Overview of Kentucky’s Energy Consumption and Energy Efficiency Potential*,” prepared for Governor’s Office of Energy Policy, August 2007. See Cover Page 2.

⁸ TR p. 220, lines 22-25.

examination of Ms. Frayer,⁹ the study is completely unreliable because its conclusions are based on the unsupported assumption that Kentucky's industrial end-use composition is identical to that of New York State.

The study imports the industrial usage data from a New York State Energy Research and Development Authority ("NYSERDA") study for the purposes of calculating potential industrial savings in Kentucky,¹⁰ despite the fact that New York State's end-usage profile is vastly different from that of Kentucky. This makes any conclusions concerning potential energy savings useless when applied to Kentucky.

For example, despite the study's finding that 36% of industrial load in Kentucky is attributed to "*primary metal manufacturing*", the study bases its conclusion on the assumption that "melting and casting" end-use makes up a mere 4% of all industrial end-uses.¹¹ It is impossible for primary metal manufacturing to make up 36% of all industrial load, and for "melting and casting" operations to only make up 4% of total end use. This discrepancy is the result of the study importing the 4% "melting and casting" figure from New York's industrial usage data. In other words, the study uses New York's end-use profile, rather than Kentucky's, to estimate potential energy savings. Although you may be able to draw the conclusion that New York State would be able to significantly reduce industrial energy consumption using "minimally" or "moderately" aggressive techniques, you certainly cannot draw the same conclusion for Kentucky.

On cross-examination by KIUC counsel, Ms. Frayer conceded that the study, is inaccurate to the extent that it simply imported the industrial end-usage data from New York State to Kentucky:

⁹ TR pp. 224-234.

¹⁰ Id. pp. 16-17.

¹¹ Id. Figure 9 on page 18.

Q. *“If the industry in Kentucky does not have the same composition as industry in New York, then the study that these people did would be inaccurate: would it not?”*

A. *“It would be inaccurate to the extent they made no adjustments for that, and I’m not confident to tell you what adjustments they had made exactly.”*

Ms. Frayer’s unwillingness to vouch for the accuracy or reliability of the estimates of energy savings contained in the study on the witness stand mirrors a similar unwillingness by the authors of the study to stand behind their own conclusions. The study contains a strong disclaimer of its own accuracy and usefulness:

“The Kentucky Governor’s Office of Energy Policy, the University of Louisville, the Kentucky Pollution Prevention Center, their employees, subcontractors, sponsors, and all technical sources referenced in this report do not: (a) make any warranty or representation, expressed or implied, with respect to the accuracy, completeness, or usefulness of the information contained in this report; or (b) assume any liabilities with respect to the use of or for damages resulting from the use of any information, apparatus, method or process disclosed in this report. This report does not reflect official views or policies of the previously mentioned parties.”¹²

The Commission should likewise not rely on the calculations contained in the study.

3. KIUC Opposes The Adoption Of Revenue Decoupling Mechanisms In Kentucky.

The Commission has asked parties to comment on the reasonableness of *“modifying rate structures and cost recovery to better align the financial interests of the utility with the goals of achieving energy efficiency and lowest life-cycle energy costs to all classes of ratepayers.”*¹³ This rate recovery mechanism is often referred to as “revenue decoupling.”

Although supporters of revenue decoupling may have good intentions, KIUC believes that revenue decoupling inevitably leads to excessive and unreasonable rates that are not justified by the mere hypothesis that revenue decoupling produces energy savings. Revenue decoupling is a rate design

¹² KIUC Cross-Examination Ex 1. “An Overview of Kentucky’s Energy Consumption and Energy Efficiency Potential,” prepared for Governor’s Office of Energy Policy, August 2007. See page 2 of Cover Page.

¹³ KPSC Order of November 27, 2007, p. 1.

approach that allows a utility's revenues for fixed-cost recovery to be insulated from reductions in per-customer usage. It is most commonly proposed for gas utilities, but is also sometimes proposed for electric utilities. By separating, or "decoupling", revenues for fixed-cost recovery from usage per customer a utility's fixed-cost recovery can be "held harmless" from changes in customer usage patterns. In the broadest application of decoupling, if per-customer usage were to decline for any reason, such as customer price-responsiveness, energy conservation, weather, general economic conditions, or change in customer composition, etc., the utility's target monthly fixed-cost recovery per customer would be restored via a compensating rate increase.¹⁴

The primary rationale advanced for the adoption of a revenue decoupling program is that it would remove the economic disincentive that utilities are purported to have with respect to supporting energy conservation programs. This disincentive is alleged to occur because traditional rate designs may not allow utilities to collect all of their fixed costs when there is a decline in per-customer usage. (This perceived disincentive is mitigated in Kentucky because the Commission allows utilities to recover lost revenues from utility-sponsored DSM programs.) Because decoupling mechanisms would raise rates in response to per-customer usage reductions, it is advanced by its proponents as having conservation-enabling properties, by virtue of the removal of utility disincentives to support conservation programs.¹⁵

KIUC strongly opposes the adoption of revenue decoupling mechanisms. Revenue decoupling is as much a "revenue assurance" mechanism as it is a "conservation enabling" mechanism. Such proposals generally result in an unwarranted transfer of risk from utilities to its customers. Under traditional ratemaking practice, the risk associated with declining usage per customer is generally borne by the utility, although as stated above, this risk is mitigated somewhat in Kentucky by allowing utilities to recover lost revenues from utility-sponsored DSM programs. Under typical decoupling proposals, this

¹⁴ Direct Testimony of Kevin Higgins p. 13-14.

¹⁵ Direct Testimony of Kevin Higgins p. 14.

risk is fully shifted to customers. For example, if customers respond to high energy prices by lowering their thermostats in winter, their rates are increased to compensate the utility for any resultant reduction in per-customer usage. The transfer of this risk is a clear benefit to the utility.¹⁶

It is also necessary to consider the regulatory treatment of off-system sales and purchases in the context of this argument. When a utility experiences a reduction in retail sales due to DSM that results in surplus generating capacity, a likely outcome is an increase in off-system sales, increasing the margins earned from these sales. This could result in an increase in utility profits attributable to retail customer conservation, not a decrease. In other words, it could produce “increased revenue” not “lost revenue.” Because profits from off-system sales are generally retained by Kentucky’s electric utilities in between base rate cases, there is already a built-in incentive for utilities to promote DSM. For a utility that does not have surplus capacity, the likely result of DSM is a reduction in purchased power. Since purchased power costs are generally recoverable in the fuel adjustment clause, DSM in this circumstance would largely be revenue neutral to the utility.¹⁷

Further, adoption of decoupling mechanisms typically entails a fundamental and unwarranted change in ratemaking philosophy. Traditional ratemaking establishes fixed base rates in a general rate proceeding and presumes it is the responsibility of utility management to cope with normal business hazards and the operation of economic forces. Decoupling proposals introduce a fundamental change in ratemaking philosophy in which the non-fuel portion of base rates becomes variable, and is adjusted on a regular basis to absolve utility management of a portion of the risk associated with its normal business operations. This burden is unreasonably shifted to customers.¹⁸

¹⁶ Direct Testimony of Kevin Higgins p. 14-15.

¹⁷ Direct Testimony of Kevin Higgins p. 15.

¹⁸ Direct Testimony of Kevin Higgins p. 15-16.

KIUC believes that the same objective that revenue decoupling attempts to solve is best addressed by using tools that are already at the Commission's disposal in a general rate proceeding. The Commission creates the disincentive to overuse energy and demand resources by sending proper price signals through elimination of inter-class cost subsidies and encouraging rate designs that reflect time-of-use ("TOU") energy cost differentials.¹⁹

If a customer class is being subsidized by other classes, its rates are set artificially low, which encourages wasteful consumption due to a distorted price signal. Removing inter-class subsidies is a fundamental step in sending proper price signals encouraging energy efficiency through proper rate design.

The adoption of well-structured TOU rates also improves energy efficiency. Energy costs vary across the hours of the day, with the most expensive hours typically occurring from the late morning to early evening in summer, and during the morning and evening in winter. Designing the energy price to end-use customers to reflect these variations in energy costs sends the proper signal to customers regarding the relative cost to operate the system during peak and off-peak hours. Customers are then able to use this pricing information to alter their discretionary patterns of usage, increasing efficiency and lowering the overall cost of energy to the system. TOU rates are available in each of the major retail service territories in Kentucky, but participation is generally concentrated among larger customers. KIUC recognizes that metering costs present a barrier to universal application of TOU rates, but nevertheless believes that it would be beneficial if TOU rates were more widely available.

¹⁹ Direct Testimony of Kevin Higgins p. 12.

III. CONCLUSION

In conclusion, 1) KIUC supports a self-certification process for large industrial customers that wish to “opt-out” of utility-sponsored DSM programs as provided by KRS 278.285; 2) there is no evidence in the record that industrial customers that have opted-out of DSM programs are not implementing cost-effective energy efficiency measures; and 3) KIUC opposes the adoption of revenue decoupling mechanisms in Kentucky.

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May 29, 2008