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December 28, 2007

RECEIVED
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PUBLIC SERVICE
COMMISSION

Howard Lubow
President
Overland Consulting
10801 Mastin Building 84, Suite 420
Overland Park, Kansas 66210

Re: Kentucky Public Service Commission
Case No. 2007-00477

Dear Mr. Lubow:

Enclosed on behalf of Big Rivers Electric Corporation are two (2) documents that were discussed in your interview with Big Rivers at the Public Service Commission last week regarding the above-referenced matter. The documents are a white paper on energy efficient lighting and a chart showing the demand reduction achieved by Big Rivers for several energy efficiency and other initiatives.

Please let me know if you have any questions.

Sincerely,



Tyson A. Kamuf

TAK/mh

Enclosures

cc: John A. Rogness, III, Ph.D. (w/encl)
David Spainhoward (w/o encl)

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Energy Efficient Lighting Impact on Customer and Utility Cost

Technological advances in ballast and lamp design and manufacturing have resulted in a four-fold increase in energy efficiency relative to today's common incandescent light bulb.

Each compact fluorescent lamp (CFL) installed in a household provides significant savings to the energy consumer—nearly ten times the life and \$5 per year savings over a standard 60 watt incandescent lamp—even with the low cost of electricity in Kentucky. An additional benefit to the consumer is the air conditioning cost savings, resulting from the lower level of waste heat given off by the CFL.

Utilities must build or purchase enough generating capacity to provide for all customers at any one time, and then provide maintenance and fuel to ensure reliability and safety 24 hours 365 days per year with little or no exception. As electric generating capacity tightens around the nation, many utilities are moving toward power plant construction projects to meet the need for increased capacity, which will result in increased cost of electricity.

The potential to offset the need for future power plants exists primarily in more efficient use of the electricity already available to customers. For example, if 50,000 residential customers were to replace one 60 watt incandescent lamp with a 14 watt CFL the following could be achieved:

- Electric demand would be reduced by 2,350 kilowatts
- 3,891,600 kilowatt-hours would be saved every year (not including AC savings)
- Customers would save more than \$240,000 annually in lighting energy costs

A coal-fired, base-load power plant costs an estimated \$2500 per kilowatt of generating capacity. Annually, the cost of owning that power plant is about 10% of the original construction cost. The yearly savings to the utility in the example above, by not having to construct the additional 2,350 kilowatt capacity, is roughly \$587,000. This is a savings of more than \$10 for every customer who installed that one light bulb.

An individual 14 watt CFL, at an average cost of \$2, provides the utility customer about \$5 per year savings and the added benefit of only having to change that bulb once every 6 years on average. The benefit to the utility is that, with reduction of demand and energy, additional customers can be served.

While the potential benefits are obvious, the transition from incandescent to compact fluorescent lamps is an educational process. In June 2006, the U.S. Environmental Defense initiated a campaign called Make the Switch

(<http://www.environmentaldefense.org/page.cfm?tagid=483&campaign=mts>) to encourage the public to switch from incandescent bulbs to CFLs. It asked every household in the U.S. to replace three 60-watt incandescent bulbs with CFLs. In addition, Wal-Mart announced in September 2006 that it was starting a campaign to endorse CFLs. Kentucky should build on these education programs to encourage energy efficiency.

Peak Summer Demand Impact of Programs and Education	Kw Demand Reduction
Energy Efficiency Incentives	
1990 through 2001	4,416
2005 through Aug 2007	335
CFL Distribution	2,739
Renewable Resource Deveopment	51,000
Commerial/Industrial	3,393
Total	61,884