LG&E KU.

PPL companies

Mr. Jeff DeRouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
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June 28, 2013

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RE: *Louisville Gas and Electric Company and Kentucky Utilities Company*
Comments on Consideration Given to Price Elasticity
Administrative Case No. 2000-387

Dear Mr. DeRouen:

In response to your letter dated May 31, 2013, which requested a discussion regarding the consideration given to price elasticity in the forecasted demand, energy, and reserve margin information provided with the annual Administrative Case No. 2000-387 resource assessments, Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively "the Companies") provide the following statements.

Price elasticity of demand is a direct input into the Companies Residential and General Service (small commercial) forecast models. These models use Itron's Statistically Adjusted End Use ("SAE") Models. The elasticity coefficients used in the SAE models are applicable to shorter-term forecasting (up to 10 years). Over the longer-term, the implied elasticity estimate increases (in absolute value) in the SAE models due to improvements in the efficiencies and saturations of appliances and other equipment to appropriately adjust demand.

In developing the elasticity coefficients, the Companies have consulted multiple sources to better understand how customers respond to electricity prices. These sources include ITRON, available studies[1], and our small commercial

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[1] "Regional Differences in the Price-Elasticity of Demand for Energy" by M.A. Bernstein and J. Griffin, RAND Corporation for NREL (2006); "Price Responsiveness in the AEO2003 NEMS Residential and Commercial Buildings Sector Models" by S. Wade, Energy Information Administration (2005); "Price Elasticity of Demand for Electricity: A Primer and Synthesis" by B. Neenan, EPRI (2007); "A Global Survey of Electricity Demand Elasticities" by C. Dahl was presented at the 34th IAEE International Conference: Institutions, Efficiency, and Evolving Energy Technologies in June 2011 at the Stockholm School of Economics in Sweden.

customers. The Companies' price elasticity of demand coefficients are consistent with the ranges cited in the studies.

Currently, the Companies use an elasticity coefficient of -0.1 for the Residential forecast. Below, the residential price elasticity of demand is applied in a simple example to determine the impact on customer usage for a hypothetical customer, price, and price increase.

Inputs
Electricity Price: $0.08/kWh
Monthly customer usage: 1,000 kWh
Price increase: 5%
Price Elasticity of demand: -0.1

Formula
(price elasticity of demand) = (% change in quantity demanded) / (% change in price)
Restated as:
(% change in quantity demanded) = (% change in price) x (price elasticity of demand)

Results
Completing the equation based on the inputs above:
(% change in quantity demanded) = (.05) x (-0.1) = -0.005 = -0.5%
Therefore, the revised monthly customer usage is 0.5% less than 1,000 kWh, or 995 kWh per month.

For small commercial customers, the Companies currently use a price elasticity of demand of -0.05. The Companies' discussions with small commercial customers indicate that these customers will attempt to pass along higher costs for electricity in the price of their goods and services. These customers typically noted that they have few options for changing their use of energy after upgrading lighting and climate control to increase efficiency.

The Companies' forecasts for Large Commercial and Industrial customers also consider how customers respond to energy prices, but these forecasts do not use the SAE models to incorporate explicit price elasticity of demand coefficients. Instead, the Companies' forecast the largest customers' energy and demand on an individual basis and use specific industry indices for others. Recognizing that customers may respond to price through efficiency measures or other operational changes, these individual forecasts and indices inherently reflect the expected changes in customers' energy use due to economic inputs, including

the price of electricity. The Companies recognize that larger commercial and industrial customers may not display a smooth reduction in usage as prices rise. Over the longer-term, in extreme cases, some large energy intensive customers may even cease operations or relocate upon reaching certain energy price points.

Should you have any questions regarding these statements, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp