BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the matter of the Commission's Review of Time-Differentiated and Dynamic Pricing Options for Retail Electric Services.	))))	Case No. 12-150-EL-COI

COMMENTS OF THE GRIDWISE ALLIANCE TO THE PUBLIC UTILITIES COMMISSION OF OHIO REGARDING THE COMMISSION'S REVIEW OF TIME-DIFFERENTIATED AND DYNAMIC PRICING OPTIONS FOR RETAIL ELECTRIC SERVICES.
Dated: April 11, 2012

Background

The GridWise Alliance would like to provide the following comments in response to the Public Utilities Commission of Ohio's January 11, 2012 request regarding the Commission's review of time-differentiated and dynamic pricing options for retail electric services. The GridWise Alliance is the industry-leading coalition advocating for the modernization of the electric system to achieve a sustainable energy future for the public good.

Founded in 2003, the GridWise Alliance represents a broad range of energy stakeholders including electric utilities, emerging and large technology companies, equipment manufacturers, telecommunications companies, academia and the venture capital community. Through this diverse membership, the GridWise Alliance promotes the modernization of the electric system through thought leadership, production of white papers and reports, and legislative advocacy. Members of the Alliance share a holistic view of the need to modernize the electric system in the United States to optimize our energy resources, energy delivery systems, and energy consumption.

Comments

The GridWise Alliance supports dynamic pricing or time differentiated pricing as an avenue to provide consumers with an opportunity to save money by changing their energy use patterns. GridWise Alliance believes that there are two major benefits to implementing a dynamic or time of use pricing structure. Namely 1) customers will shift electric demand in order to save money and 2) electric system asset utilization will improve as a result of the electric

demand shift. Given the opportunity for customers to change their usage patterns and save money, as well as the opportunity to better utilize electric system assets, the GridWise Alliance encourages the use of dynamic pricing or time differentiated pricing mechanisms.

Although widespread implementation of dynamic pricing has yet to occur, an analysis of the data that does exist indicates that when consumers are provided with pricing information that will allow them to manage their energy costs, they will respond accordingly. The results are lower energy costs and in many cases, increased energy conservation.[1] Time-differentiated pricing principles can be applied in multiple forms, and a variety of options may be explored to maximize up-front and long-term customer engagement. Customer rewards structures that provide incentives for load-shifting and conservation and eliminate the risk that dynamic pricing is perceived by some customers as punitive, may be attractive if they are underpinned by sound time-differentiated pricing fundamentals.

A recent study by the Smart Grid Consumer Collaborative (SGCC) found that 84% of respondents noted the importance of variable rate plans as a tool to manage energy usage and cost.[2] In addition, an extensive review of dynamic pricing pilots indicate that consumers can learn to shift at least a portion of their energy consumption to times of the day when energy prices are more favorable to them.[3]

Most electricity customers do not understand the complex balancing of electricity supply and demand that can cause energy costs to vary based on seasonal or daily supply and usage changes. Furthermore, few customers appreciate that prices change as a result of increased demand and therefore, require an increased supply of electric energy. Providing customers with data on the real cost of electricity gives them better insight into the varying nature of electricity costs throughout the day, based upon the economics of supply and demand and other factors. Currently, consumers are not incented to reduce their energy consumption at times when the cost

---

[1] Sanem Sergici, Ph.D.; Ahmad Faruqui, Ph.D., "Dyanamic Pricing Past, Present and Future" The Brattle Group, June 14, 2011. The full report can be downloaded from http:///www.brattle.com/_documents/UploadLibrary/Upload956.pdf

[2] "Consumer Pulse Research Program - Wave 2: SGCC Member Survey." SmartGrid Consumer Collaborative, March 7, 2012. The full report can be downloaded from http://smartgridcc.org/sgccs-consumer-pulse-wave-2-study-summary.

[3] Ahmad Faruqui, Ph.D. "Dynamic Pricing & Customer Behavior." The Brattle Group, March 9, 2010. The full report can be downloaded from http://www.ece.cmu.edu/~electricityconference/2010/Faruqui_Dynamic%20pricing%20and%20customer%20behavior%20(03-08-10).pdf.

to produce electricity is the highest.[4] Nor are they incented to shift their usage to times when the cost to produce electricity is lower.

The GridWise Alliance believes there are many similarities in regard to electricity prices vis-a-vis other items purchased by consumers. Consumers modify their behavior based on the cost of gasoline, clothing, entertainment, etc., purchasing more when prices are lower and less when prices are higher. The same rationale holds with regard to time differentiated electricity prices and the consumption of electricity.

As a 2011 review of dynamic pricing pilots asserts, customers' energy use behaviors can change in response to changing electricity prices[5]. Further, examples of dynamic pricing programs or pilots in California[6], Maryland[7], Ontario, Canada[8], and Washington, D.C[9] demonstrate that customers modify their consumption when given the choice to do so, thereby saving energy and money.

Analysis of the pricing pilot program administered in California shows that peak energy use decreased 5.9% in summer as a result of dynamic rates[10]. In Washington, D.C., peak reduction in summer was as much as 34% with the introduction of dynamic rates[11]. Also, customers in Maryland contributed to a 20.1% reduction in peak load demand by following

---

[4] Ahmad Faruqui, Ph.D and Sanem Sergici, Ph.D. "Moving Toward Utility-Scale Deployment of Dynamic Pricing in Mass Markets." The Brattle Group, June 2009. The full report can be downloaded at http://www.electric-efficiency.com/reports/IEE_Utility-ScaleDynamicPricing_0609.pdf.

[5] Ahmad Faruqui, Ph.D. "Dynamic Pricing: The Top 10 Myths." The Brattle Group, April 7, 2011. The full report can be downloaded from http://www.brattle.com/_documents/UploadLibrary/Upload936.pdf.

[6] California Statewide Pricing Pilot (SPP). Pacific Gas & Electric (PG&E), Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E), "Impact Evaluation of the California Statewide Pricing Pilot." Charles River Associates (2005). The full report can be downloaded from http://sites.energetics.com/madri/toolbox/pdfs/pricing/cra_2005_impact_eval_ca_pricing_pilot.pdf.

[7] Baltimore Gas & Electric Company's Smart Energy Pricing Pilot. Baltimore Gas & Electric Company. "BGE's Smart Energy Pricing Pilot Summer 2008 Impact Evaluation" The Brattle Group (2009). The full report can be downloaded from http://www.brattle.com/_documents/uploadlibrary/upload768.pdf.

[8] Alex Bettencourt. "Report on Canadian Smart Grid: Global Smart Grid Federation." Smart Grid Canada (2012). The full report can be downloaded from http://www.ontla.on.ca/library/repository/mon/18000/275459.pdf.

[9] Smart Meter Pilot Project, Inc. (SMPPI), Pepco, "PowerCentsDC™ Program Final Report." eMeter Strategic Consulting (2010). The full report can be downloaded from http://www.powercentsdc.org/ESC%2010-09-08%20PCDC%20Final%20Report%20-%20FINAL.pdf.

[10] California Statewide Pricing Pilot (SPP). Pacific Gas & Electric (PG&E), Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E), "Impact Evaluation of the California Statewide Pricing Pilot." Charles River Associates (2005). The full report can be downloaded from http://sites.energetics.com/madri/toolbox/pdfs/pricing/cra_2005_impact_eval_ca_pricing_pilot.pdf.

[11] Smart Meter Pilot Project, Inc. (SMPPI), Pepco, "PowerCentsDC™ Program Final Report." eMeter Strategic Consulting (2010). The full report can be downloaded from http://www.powercentsdc.org/ESC%2010-09-08%20PCDC%20Final%20Report%20-%20FINAL.pdf.

dynamic price signals[12]. Each of these examples illustrates an interest from consumers to manage energy usage by responding to dynamic rates.

The pilot program administered in Ontario, Canada to test the impact of time of use rates found that 76% of participants achieved a reduction in monthly energy cost through in-home real time monitoring[13]. The results of the pilot were so compelling that the provincial government made time-of-use pricing mandatory throughout Ontario. This information, provided by Smart Grid Canada, was shared with the GridWise Alliance through the Global Smart Grid Federation (GSGF), an organization of which the GridWise Alliance is a founding member. Within the same organization, GSGF member Smart Grid Australia shared the results from a time of use pricing pilot program done by Energy Australia in which participants reduced their dynamic peak consumption by 24%.

We recognize that the examples from Canada and Australia come from countries with utility regulations that are unique to the jurisdictions they serve; however it is important to note that the end results are the same. When customers are given the opportunity to manage their energy consumption using the information provided by dynamic pricing options, they will modify their behavior. The results will be lower energy costs for the customer and more efficient energy usage.

The GridWise Alliance believes the results from these various pilots and programs are compelling; however, a key component to an effective dynamic pricing mechanism is customer education. The success of a dynamic pricing mechanism, as measured by customers' ability to shift usage and thereby save money, as well as utility system asset utilization improvement, is largely dependent on the up-front customer education. After decades of paying average electric rates, customers will need to think and act differently under a dynamic pricing mechanism. Customer education and outreach is a critical task when implementing a dynamic pricing mechanism. GridWise Alliance believes that the ability of customers to save money by shifting their electricity consumption to lower cost times of the day is improved with clear, consistent information and education that can give customers more control over their energy bills.

---

[12] Baltimore Gas & Electric Company's Smart Energy Pricing Pilot. Baltimore Gas & Electric Company. "BGE's Smart Energy Pricing Pilot Summer 2008 Impact Evaluation" The Brattle Group (2009). The full report can be downloaded from http://www.brattle.com/_documents/uploadlibrary/upload768.pdf.

[13] Alex Bettencourt. "Report on Canadian Smart Grid: Global Smart Grid Federation." Smart Grid Canada (2012). The full report can be downloaded from http://www.ontla.on.ca/library/repository/mon/18000/275459.pdf.

While some customers may choose to continually monitor prices and their usage in real time, others will not have the time or inclination to do this. Straightforward "set and forget" controls and devices allow customers to make preference choices and manage their usage based on criteria that is important to them. To most effectively empower consumers, the GridWise Alliance supports communicating information related to time based rates in a standardized format that enables consumers to utilize controllable devices to automatically respond to changing energy prices.

Summary

The aforementioned reviews of dynamic pricing pilot programs summarize some of the impacts that can be realized by providing customers with the opportunity to directly manage their energy consumption based on changing electricity prices. The GridWise Alliance supports dynamic pricing mechanisms as way to encourage customers to shift their electricity usage and thereby save money, as well as a strategy to improve the asset utilization of the electric system providers. Customers' usage behavior can change in response to clear price signals and consistent information and education.

The GridWise Alliance respectfully requests that the Public Utilities Commission of Ohio consider the foregoing comments and the data outlined therein. The Alliance appreciates the opportunity to offer comments regarding this matter and the leadership of the Public Utilities Commission of Ohio. The GridWise Alliance stands ready to work with the Commission in the technical conferences or other procedural interactions which may be initiated by its request for comments on this matter.

Respectfully submitted,

JAMES W. MOROZZI
GRIDWISE ALLIANCE

/s/ James W. Morozzi
James W. Morozzi, President and CEO
GridWise Alliance

GridWise Alliance
1155 15th Street, NW, Suite 500
Washington, DC, 20005
Telephone: (202)-530-9740
jmorozzi@gridwise.org

Summary: Comments Comments of the GridWise Alliance to the Public Utilities Commission of Ohio regarding the Commission's review of time-differentiated and dynamic pricing options for retail electric services.
electronically filed by Mr. Bryan D. Nicholson on behalf of GridWise Alliance and Mr. James W. Morozzi