

**Before the  
Department of Energy  
Washington, D.C. 20585**

In the Matter of

Implementing the National Broadband  
Plan by Empowering Consumer and the  
Smart Grid: Data Access, Third Party  
Use and Privacy

**NBP RFI: Data Access, Third Party Use and Privacy**

**COMMENTS OF BALTIMORE GAS & ELECTRIC COMPANY**

**I. Introduction**

BGE is the nation's oldest and most experienced utility company. It has met the energy needs of Central Maryland for nearly 200 years. Today, it serves more than 1.2 million business and residential electric customers and approximately 650,000 gas customers in an economically diverse, 2,300-square-mile area encompassing Baltimore City and all or part of ten central Maryland counties.

BGE already has many systems that it considers to be "smart." For example:

- One hundred percent of BGE's substations are remotely monitored and controlled and real-time data is supplied to PJM to support markets and grid reliability.
- Approximately 40% of BGE's distribution circuits are remotely monitored and controlled with automatic restoration functionality on many of those circuits.
- Using a 1-way VHF paging system, line capacitors are automatically controlled in order to better manage system voltage and VAR reduction.
- BGE's demand response program (PeakRewards<sup>SM</sup>) is underway and has installed over 260,000 thermostats and AC load control switches with a target of 450,000 through 2011 (including replacement of legacy devices).
- Sixty percent of BGE's customers' meters are read via drive-by vans (Automatic Meter Reading technology).
- Large commercial and industrial customers currently have access to interval consumption data.

**Overview of smart grid deployment plans**

BGE submitted a Smart Grid proposal to the Maryland Public Service Commission

(PSC) on July 13, 2009. The proposal outlined BGE's plan to deploy 2.1M gas and electric AMI meters by 2014. BGE also submitted a DOE grant application for up to \$200M to offset the costs of the Smart Grid Initiative. BGE was one of six utilities to receive the full \$200M grant; however, on June 21, 2010 the Maryland PSC rejected BGE's proposal to proceed with the initiative. BGE is currently evaluating its options.

## **II. Response to Questions**

### **1. Who owns energy consumption data?**

BGE believes that both the utility and the customer should have unfettered access to energy consumption data. BGE also believes that, in general, the customer should determine which additional parties should have access to the data. Utilities must ensure that there are robust security systems, policies and practices in place to limit access points and protect customer data, similar to the way the online banking industry has evolved and assuaged fears of privacy invasion.

### **2. Who should be entitled to privacy protections relating to energy information?**

All customers should be entitled to privacy protections.

### **3. What, if any, privacy practices should be implemented in protecting energy information?**

Utilities should be required to implement robust security systems, policies, practices and access controls to protect the flow and dissemination of customer consumption data. Policies and procedures should be developed to control the release of data. Generally, data should only be released under authorized conditions, with informed customer consent, and only to the appropriate entities.

### **4. Should consumers be able to opt in/opt out of smart meter deployment or have control over what information is shared with utilities or third parties?**

There should not be an opt-out option for the deployment of a smart meter at the customer's service endpoint. The utility owns the meter and has a legal right to access, perform maintenance and replace/upgrade it as necessary as per the terms of service to which each customer agrees.

Customers should, however, have control over what information is shared with third parties. Today, BGE is required to supply energy providers with customer data as requested by the customer. Energy consumption data should be released at the customer's request in the future as well. For example, customers should be able to release their consumption data to third party vendors such as alternative

energy providers, energy management or conservation service providers, equipment installation companies, web-hosted energy management product providers and any other third-party entity they choose.

**5. What mechanisms should be made available to consumers to report concerns or problems with the smart meters?**

Customers should have access to the same problem reporting and service mechanisms that exist today, including access to AMI-trained and dedicated call center representatives.

Once customers begin to utilize networked devices on the customer's side of the electric meter, utilities will have to decide what level of support to provide for that type of equipment. Energy management systems and in-home displays will be manufactured and supported by companies other than the utility; however, for the sake of providing seamless customer service, utilities may choose to preselect a set of devices that they are willing to test and support on their network.

Telecommunications companies have recently addressed a similar situation as their customers began to connect in-home devices (e.g., routers) to their networks. Many of those companies now sponsor or support certain types of devices because they recognized a gap in technical support for products using their telecommunication network within customers' homes.

BGE supports standards organizations, such as NIST, playing an active role in facilitating cooperation between in-home energy management device providers, network vendors and utilities in order to ensure compatibility and interoperability as the markets evolve.

AMI network vendors will designate which devices are compatible with their networks. Utilities could then choose to preselect and support those in order to both provide better customer service and maintain the integrity and reliability of the communication infrastructure.

**6. How do policies and practices address the needs of different communities, especially low-income rate payers or consumers with low literacy or limited access to broadband technologies?**

At BGE, we envision a variety of energy management solutions that could be provided to customers without broadband access. For example, information about energy usage could be obtained via a phone call to our customer service representative, monthly bill, paper reports, e-mails and SMS text message. The communication methods are extremely varied and it is expected that everyone will have the capability to request or have delivered to them detailed energy usage data.

Additionally, without broadband, customers may invest in a simple in-home display to obtain access to near-real-time interval consumption data. BGE is piloting in-home displays this summer to determine their impact. If it is significant, BGE could elect to subsidize IHDs for some or all customers. Options still need to be researched.

**7. Which, if any, international, Federal, or State data-privacy standards are most relevant to Smart-Grid development, deployment, and implementation?**

BGE does not have any standards to add to those listed by the Department of Energy in the RFI. If specific standards are recommended by the DOE, we would appreciate the opportunity to comment. We are supportive of a standard approach to handle data-privacy, but are interested in ensuring that normal business practices (e.g., sharing consumption information with retail electric suppliers) are clearly handled.

**8. Which of the potentially relevant data privacy standards are best suited to provide a framework that will provide opportunities to experiment, rewards for successful innovators, and flexible protections that can accommodate widely varying reasonable consumer expectations?**

BGE does not have a comment on this item.

**9. Because access and privacy are complementary goods, consumers are likely to have widely varying preferences about how closely they want to control and monitor third-party access to their energy information: what mechanisms exist that would empower consumers to make a range of reasonable choices when balancing the potential benefits and detriments of both privacy and access?**

For third-parties that require integrations between their systems and the utility's back office systems, BGE expects to preselect suppliers that have been identified as legitimate third-party operations. Automatic feeds/integrations would be prioritized and deployed as utility-sponsored projects.

General consumption data will be available through BGE's web portal. Customers would be free to distribute this data to anyone to whom they wanted to provide the information.

**10. What security architecture provisions should be built into Smart Grid technologies to protect consumer privacy?**

- Encryption
- Authentication

- Access and policy control mechanisms

**11. How can DOE best implement its mission and duties in the Smart Grid while respecting the jurisdiction and expertise of other Federal entities, states and localities?**

The DOE is recognized as a source for best practice information and guidance. As an influential federal organization, the DOE should also seek to support utilities and smart grid innovators financially via grants, with stakeholder (customer, legislator and regulator) education activities, and with building general awareness of Smart Grid benefits.

BGE is also very interested in the Smart Grid Information Clearinghouse that the DOE is developing with Virginia Tech. BGE encourages the DOE to include detailed project statistics in the clearinghouse's project database that would be accessible to all industry participants. A significant number of utilities, energy consulting companies and Smart Grid technology vendors are attempting to do this today; however, there is no single, reliable source and the effort required to maintain actual Smart Grid deployment numbers is considerable. A federally-supported, open access library of Smart Grid data – for all projects, not just those that received DOE/ARRA grants – could encourage information-sharing among peers and across industries to more quickly identify lessons learned and spur innovation.

Lastly, and perhaps most importantly, the DOE can educate and influence regulators about the benefits of Smart Grid so that utility sponsored project are approved with appropriate cost recovery methods.

**12. When, and through what mechanisms, should authorized agents of Federal, State, or local governments gain access to energy consumption data?**

If requested in aggregate and if the data is sanitized or blinded, it is reasonable to collect and disseminate consumption data for research purposes.

**13. What third parties, if any, should have access to energy information? How should interested third-parties be able to gain access to energy consumption data, and what standards, guidelines, or practices might best assist third parties in handling and protecting this data?**

In all cases, information should only be released through an authorized, controlled process. Please see responses to questions #3 and #9.

Of note, consumption data that is presented to the customer on the portal (BGE.com) will be available to anyone with whom that customer, once signed in, wishes to share it.

**14. What forms of energy information should consumers or third parties have access to?**

- Interval, consumption data (consumers, retail electric suppliers, alternative energy suppliers, etc.)
- Bill determinants and rate plan information (consumers)
- Voltage information (required to be submitted to PSC today)
- Outage data (consumers and possible emergency response organizations)

**15. What types of personal energy information should consumers have access to in real-time, or near real-time?**

Day-old data is likely what utilities will present to customers in the near future due to the current technology limitations and the need for the utility to perform validations and edits on the data that is transmitted across the network (and used for billing) prior to presenting it to customers.

Near real-time data is currently only available with in-home displays. Potentially, consumers could have web-portal access to near-real-time outage notifications, alerts and updates. For example, a customer at work or on vacation could sign on to the portal and see that the power is out at their house, when it went out and the moment when it is restored.

**16. What steps have the states taken to implement Smart Grid privacy, data collection, and third party use of information policies?**

BGE does not have a comment on this item.

**17. What steps have investor owned utilities, municipalities, public power entities, and electric cooperatives taken to implement Smart Grid privacy, data collection and third party use of information policies?**

Authentication, encryption, access policies and controls have been considered carefully in our initial designs.

Texas, as an example, established a central database owned by ERCOT.

**18. Should DOE consider consumer data accessibility policies when evaluating future Smart Grid grant applications?**

Security and privacy controls should always be considered. When applying for grant applications, utilities should be able to provide a detailed security plan, including network and system penetration testing and the metrics by which success will be measured.

### **III. Conclusion**

The Department of Energy is in a unique position to provide informed guidance and best practice information for the benefit of energy utilities and their customers, regulators and legislators. The challenges surrounding Smart Grid with respect to customer data access and data privacy are significant and evolving. If BGE can provide additional information or detail with respect to this Request for Information, please let us know. Thank you for the opportunity to provide our perspective and input on this most important topic.

Respectfully submitted,

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