CITY UTILITIES

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October 19, 2010

U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability
1000 Independence Avenue, SW.
Room 8H033
Washington, DC 20585

SUBJECT: Smart Grid RFI: Addressing Policy and Logistical Challenges

City Utilities of Springfield, Missouri is pleased to provide comments in response to the *"Smart Grid RFI: Addressing Policy and Logistical Challenges."* City Utilities of Springfield (CU) is a progressive, community-owned utility serving southwest Missouri with electricity, natural gas, water, broadband and transit services. City Utilities provides these essential services to over 110,000 electric, 82,000 natural gas and 80,000 drinking water customers.

City Utilities agrees that the integration of a truly smart grid has the potential to enhance the way our customers use energy. These enhancements should serve to meet the energy needs of our customers in a way that is efficient, environmentally responsible and affordable. We have not attempted to provide input on every question raised in the RFI, rather to provide our thoughts on how the smart grid may benefit our consumers.

Smart Grid Definition:

CU believes that the definition of the Smart Grid contained in EISA section 1301 should be expanded from a Smart *Electric* Grid to a Smart *Energy* Grid. Central to the Smart Energy Grid appeal is the ability to increase customer involvement, integrate clean energy and enhance reliability and energy security. It is essential to this idea that consumers have information on their total energy usage so that they can make decisions to lower their overall carbon impact. Smart Grid policies and incentives should include consideration of other common consumer energy sources such as natural gas.

Geographic Standardization and interconnection of smart grid technologies:

CU feels it should be recognized that the way in which consumers take advantages of Smart Energy Grid options may vary significantly from one are of the country to another. What makes sense in California may not make sense in Missouri. However, we strongly feel that there is a need for standardization in the communication protocols and

technology for both utility and consumer facing technologies. This standardization is especially important in customer acceptance of technologies as consumers move from one area to another.

Interactions with and Implications for Consumers:

CU feels that the most important Smart Energy Grid applications can be divided into two categories. The first category is Generation, Transmission and Distribution Smart Energy Grid enhancements that improve the reliability and security of the consumers energy needs. These applications while not typically seen by the consumer are arguably the most important benefits that the consumer would receive. Making sure that the most efficient and least cost energy flows to the customer and that interruptions are detected and responded to as quickly as possible is the most important service an Utility can provide.

The second category would be consumer facing applications such as energy usage portals and demand response programs. CU feels that these applications are important and can help consumers better manage their energy usage. However, it is also recognized that not all customers will take advantage of this information or would desire to participate in demand response or alternative pricing options. Smart Energy Grid Policy should allow for programs such as theses to be voluntary to consumers and should allow Utilities to develop options that make sense for their customers.

Interaction with Large Commercial and Industrial Customers:

Large Commercial and Industrial Customers already have access to more sophisticated Smart Energy Grid applications. Many of these customers are already closely monitoring and controlling their energy usage. They often participate in alternative pricing structures and are actively controlling their peak energy usage. Polices for these customers should continues to provide incentives for encouraging energy efficiency.

Assessing and Allocating Costs and Benefits:

The benefits of Smart Energy Grid technology to the consumer will come in a reduction in the frequency and duration of energy interruptions as well as maintaining a low cost sustainable source of energy. Grid improvements can be quantified by measuring each utility System Average Interruption Frequency Index and the System Average Interruption Duration Index and monitoring improvements. Unfortunately there are a number of factors that influence the cost of energy that are outside the scope of the Smart Grid making this measure harder to quantify. Environmental benefits while being an important facet of the Smart Energy Grid are also harder to quantify.

While educated consumers can manage their energy usage today without the benefit of Smart Energy Grid technology, it would be expected that more consumers would take an active role with the implementation of such technology. These consumers would get the direct benefits associated with the efforts that they make.

Utilities, Device Manufacturers and Energy Management Firms:

CU believes that both federal and state governments should continue to support policies that encourage the implementation of Smart Energy Grid technologies. These entities should recognize that there are differences in energy providers based on geographic location as well as whether or not they are investor-owned or a public entity. As such government policies regarding Smart Energy Grid programs and energy pricing mechanisms should be flexible to allow for what makes sense to the individual provider and their consumers.

Grant programs and financing mechanisms should be encouraged to fund the implementation of Smart Energy Grid Technologies.

CU believes that there is sufficient competition among and incentives to companies developing Smart Energy Grid Technologies. As long as these products are developed in conjunction with NIST Smart Grid Interoperability efforts the market will decide which technologies and programs win and which lose. However, interoperability standards should be robust enough so that an energy provider is not stranded with a Smart Energy Grid investment that needs to be replaced pre-maturely.

Long Term Issues: Managing a Grid with High Penetration of New Technologies:

Even with the advantages of real time system information and control that Smart Energy Grid technologies can bring, it should be recognized that a high penetration of new technologies such as Plug-in Electric Vehicles and Distributed Generation will place a strain on existing Distribution Facilities. Implementation of new technologies should be performed at a measured pace with proper planning to ensure the reliability of the Electric Distribution grid. Policies should include consideration of the cost of upgrading Distribution equipment including conductors and transformers.

Reliability and Cyber Security:

Information provided by Smart Energy Grid technologies should allow energy providers to anticipate and avoid load related outages and should allow a quicker response to unforeseen outages. Standards and Policies should be developed that allow for utilities to protect the information that is collected. Certain information regarding individual customer usage patterns should be deemed confidential and exempt from mandated sharing requirements through public sunshine laws and other policies.

Managing Transitions and Overall Questions:

It should be recognized that taking a measured approach to Smart Energy Grid improvements would best serve our consumers. Customers should be part of the discussion on what value the Smart Energy Grid can provide to them. While all customers will benefit from improved reliability and decrease restoration times, not all customers will desire to take advantage of customer-facing smart grid programs such as time of use rates, demand response or active energy management. Customers must gain confidence in this technology and fears regarding security and use of data collected by the Smart Energy Grid should be addressed.

Smart Energy Grid Technologies should not have to be replaced every 7 to 10 years. Equipment and technologies should be capable of field upgrades and should be flexible enough to integrate with both legacy technology and to evolve with new technology.

Thank you for the opportunity to provide comments.

Respectfully Submitted,

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