VERIFICATION

STATE OF GEORGIA
COUNTY OF COBB

Personally appeared before me, the undersigned attesting officer, duly authorized by law to administer oaths, Steve Shurbutt, who after first being duly sworn, deposes and states on oath that:

1. The Direct Testimony to which this verification is attached is being filed on behalf of Jackson Electric Membership Corporation's ("Jackson EMC") staff.

2. My address is:
   Suite 800
   1850 Parkway Place
   Marietta, Georgia 30067

3. I am not a Jackson EMC member and do not have a Jackson EMC account number.

4. The PURPA Identification Number assigned to Jackson EMC's staff is 1.

5. My signature appears below.

6. The information supplied in the attached Direct Testimony is true and correct to the best of my knowledge. However, the Direct Testimony is not based solely on my knowledge, but includes information obtained by and through my agents, representatives and members of Jackson EMC's staff.

7. The foregoing verification is provided in accordance with Rule 3(f) of Jackson EMC's PURPA Manual.

This 24th day of February, 2009.

J. Steven Shurbutt

Sworn to and subscribed
before me, this the 24th
day of February, 2009.

Notary Public
My Commission Expires: January 6, 2012
(S E A L)

JERI S. HANNULA NOTARY PUBLIC FULTON COUNTY GEORGIA MY COMMISSION EXPIRES JANUARY 6 2012

BEFORE THE
BOARD OF DIRECTORS OF THE
JACKSON ELECTRIC MEMBERSHIP CORPORATION

In The Matter Of:

Jackson Electric Membership Corporation	**)**
Compliance With	**)**
Energy Independence and Security Act of 2007 – PURPA Standards	**)**

DIRECT TESTIMONY

OF

J. STEVEN SHURBUTT, P.E.

ON BEHALF OF THE

MANAGEMENT AND STAFF OF

JACKSON ELECTRIC MEMBERSHIP CORPORATION

February 24, 2009

Q PLEASE STATE YOUR NAME AND ADDRESS.

A My name is J. Steven Shurbutt. My business address is GDS Associates, Inc., Suite 800, 1850 Parkway Place, Marietta, Georgia 30067.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A I am a founding principal and the Executive Vice President in the firm of GDS Associates, Inc.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of the management and staff of Jackson Electric Membership Corporation headquartered in Jefferson, Georgia.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A I received a Bachelor of Industrial Engineering Degree from the Georgia Institute of Technology in 1975. I received a Master of Business Administration Degree with a major in Finance from Georgia State University in 1979.

Q DO YOU HOLD ANY PROFESSIONAL LICENSES OR REGISTRATIONS?

A Yes. I am a registered professional engineer in the State of Georgia.

Q TO WHAT PROFESSIONAL ORGANIZATIONS DO YOU BELONG?

A I am a Senior Member of the Institute of Industrial Engineers. Also, I am a member of the National Society of Professional Engineers.

Q PLEASE STATE YOUR PROFESSIONAL EXPERIENCE AS IT RELATES TO THE UTILITY INDUSTRY.

A While attending the Georgia Institute of Technology, I was employed in 1971 by Southern Engineering Company to work in its Rate Department and upon graduation in March 1975, was hired as a Rate Analyst in that company's Retail Rate Department. I later became the Manager of that department and in June 1985 I became an Assistant Vice President. During my employment with Southern Engineering Company, I prepared or assisted in the preparation of rate studies, cost of service analyses, financial forecasts and other financial analyses for electric cooperative and municipal utilities in many states, including Alabama, Florida, Georgia, Texas, Michigan, Kentucky, Vermont, Delaware, North Carolina, South Carolina, Ohio, Virginia, West Virginia, Alaska and Indiana.

In February 1986, I was one of six individuals who founded GDS Associates, Inc., a firm providing consulting services to public utilities. Since that time, I have continued to provide electric utility financial and rate consulting services. During the past 35 years, I have worked with more than 150 electric utility clients.

Q HAVE YOU PREVIOUSLY TESTIFIED BEFORE REGULATORY COMMISSIONS?

A Yes. I have testified before the Regulatory Commission of Alaska, the Delaware Public Service Commission, the Georgia Public Service Commission, the Florida Public Service Commission, the Indiana Utility Regulatory Commission, the Kentucky Public Service Commission, the Louisiana Public Service Commission, the Michigan Public Service Commission, the New Mexico Public Regulation Commission, the Public Utility Commission of Texas, the Virginia State Corporation Commission, and the Public Service Commission of West Virginia.

Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A The purpose of my direct testimony is to provide comments on behalf of the management and staff of Jackson Electric Membership Corporation ("Jackson EMC" or the "Cooperative") pertaining to the Cooperative's consideration of the four new PURPA standards set forth in the Energy Independence and Security Act of 2007 ("ESIA 2007"), enacted December 19, 2007.

Q WHAT ARE THE FOUR NEW PURPA STANDARDS?

A The Energy Independence and Security Act of 2007 ("EISA 2007") contains four new federal standards that must be considered for implementation by all electric utilities with annual retail sales greater than 500 million kilowatt-hours. Those new standards are in

addition to the six standards set forth in the Public Utility Regulatory Policies Act of 1978 ("PURPA"), the four standards contained in the Energy Policy Act of 1992 ("EPAct 1992") and the five standards contained in the Energy Policy Act of 2005 ("EPAct 2005"). The relevant sections of ESIA 2007 are shown in Appendix A hereto. The four new federal standards added by EISA 2007 to PURPA Section 111(d) are as follows:

1) Integrated Resource Planning - EISA 2007 Sec. 532(a)(16);

2) Rate Design Modifications to Promote Energy Efficiency Investments - EISA 2007 Sec. 532(a)(17);

3) Consideration of Smart Grid Investments- EISA 2007 Sec. 1307(a)(16); and

4) Smart Grid Information - EISA 2007 Sec. 1307(a)(17).

Q IS JACKSON EMC REQUIRED TO IMPLEMENT EACH NEW PURPA STANDARD?

A No. The requirements of EISA 2007 do not mandate that the affected electric utilities implement those new standards. Instead, PURPA states that "each state regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall consider each standard" and then "make a determination concerning whether or not it is appropriate to implement such standard" (PURPA Section 111 (a)). PURPA further states that "nothing in this subsection prohibits any state regulatory authority or nonregulated electric utility from making any determination that it is not appropriate to implement any such standard" (PURPA Section

111(a)). Jackson EMC has annual retail sales well in excess of 500 million kWh and is a nonregulated electric utility, which PURPA defines as "any electric utility other than a state regulated electric utility." Thus, it is the responsibility of the Cooperative's Board of Directors to make its own independent determination regarding whether or not to implement each of the new PURPA standards. That determination must follow an appropriate consideration of the standards that includes evidence presented during the course of a public hearing.

My testimony will contribute to the body of evidence used by the Board of Directors to make its determination on each standard based upon findings that are appropriate for the member-consumers of the Cooperative. My testimony addresses not only general considerations regarding each of the four standards, but also identifies specific issues and circumstances applicable to the Cooperative that should be a part of the Board of Directors' deliberations. The federal legislation anticipates that state regulatory authorities and nonregulated electric utilities would need to consider utility-specific conditions and circumstances during their evaluation of the PURPA standards and determine the ability of each utility to accomplish the goals of PURPA via the implementation of the four new PURPA standards. For that reason, with respect to each of the four PURPA standards, the Board of Directors may decide to implement the standard as stated in EISA 2007, implement a modification of the standard, or decline to implement the standard.

Q WHAT ARE THE GOALS OF PURPA IN EISA 2007?

A The goals of PURPA continue to be the same as those stated in the original Public Utilities Regulatory Policy Act of 1978, that is: to encourage (1) conservation of energy supplied by electric utilities, (2) optimal efficiency of electric utility facilities and resources, and (3) equitable rates for electric consumers. The first goal focuses on retail energy users and promotes conservation by end-use consumers. The second goal applies to electric utilities, their use of energy, and the facilities they utilize to deliver energy. The third goal recognizes the need for proper development and administration of retail rates, providing a check and balance relative to the other two goals, so that the programs, policies and rates employed by electric utilities to achieve the first two goals reflect their associated costs and are not arbitrary, unfair or unduly discriminatory.

The Cooperative's Board of Directors should make its determination regarding each PURPA standard based on whether or not, given the Cooperative's particular circumstances, that standard will accomplish any one of those three purposes, without harming the Cooperative's ability to accomplish the other(s). Thus, if implementation of a standard adversely impacts even one of the three goals, the Board of Directors can decline to implement that standard.

Q WHAT ARE SOME OF THE COOPERATIVE'S CHARACTERISTICS AND PARTICULAR CIRCUMSTANCES THAT THE BOARD SHOULD CONSIDER?

A The Cooperative has several organizational and operational characteristics that should materially influence the Board of Directors' consideration of the PURPA standards. First, the Cooperative is member-owned and thus self-regulated. The Cooperative's member-consumers elect the Board of Directors that establishes and oversees the Cooperative's policies, rates, and service rules and regulations. Unlike investor-owned electric utilities, the Cooperative has no third party investors to satisfy. Thus, there is no conflict of interest between the utility's owners and consumers regarding profitability. In fact, the Cooperative is a not-for-profit organization. Revenues collected in excess of operating expenses (such difference referred to as "margins") are assigned back to the Cooperative's member-consumers in the form of capital credits. Under this form of organization, all costs associated with the programs, policies and rates adopted to implement the PURPA standards will be born in full by the Cooperative's member-consumers.

The Cooperative owns and operates an electric distribution utility. Unlike a vertically integrated electric utility such as Georgia Power Company, the Cooperative does not make decisions independently regarding the generation and transmission functions and the related costs incurred to furnish electric energy to the Cooperative's member-consumers. Instead, such bulk power services are purchased under long-term agreements with affiliated organizations and other service providers.

The Cooperative is one of thirty-eight "member" electric distribution cooperatives of Oglethorpe Power Corporation ("Oglethorpe"), a not-for-profit power supply cooperative that manages electric generation assets and contracts to help its members meet their long-term capacity and energy needs. The Cooperative also has a long-term contract with Constellation Energy Commodities Group, ("Constellation") for power generation services. Generated power is delivered to Jackson EMC via a statewide network called the Integrated Transmission System ("ITS") that is owned, planned and operated jointly by the Georgia Transmission Corporation ("GTC"), Georgia Power Company, MEAG Power, and Dalton Utilities. Jackson EMC is one of thirty-nine electric distribution cooperatives in Georgia that receive transmission service from GTC, another not-for-profit cooperative formed for such purpose in 1997. Jackson EMC is also a member of and receives system operations services from a third not-for-profit organization called the Georgia System Operations Corporation ("GSOC"). The services provided by GSOC include monitoring and controlling the generation and transmission assets of Oglethorpe's members to ensure their reliable, cost-effective operation. As later discussed herein, the Cooperative's relationship with these affiliated organizations and service providers, and the provisions of the bulk power service agreements must be given due consideration in the Cooperative's determination of whether to implement the new PURPA standards.

Q WHAT IS THE FIRST OF THE FOUR NEW PURPA STANDARDS?

A The first of the four new PURPA standards that the Cooperative's Board must decide whether or not to implement is the Integrated Resource Planning standard, which states:

> ''(16) INTEGRATED RESOURCE PLANNING.—Each electric utility shall—
> ''(A) integrate energy efficiency resources into utility, State, and regional plans; and
> ''(B) adopt policies establishing cost-effective energy efficiency as a priority resource.

Q WHAT IS INTEGRATED RESOURCE PLANNING?

A The *Reference Manual and Procedures for Implementation of the "PURPA Standards" in the Energy Independence and Security Act of 2007* broadly defines Integrated Resource Planning (IRP), as "a comprehensive planning process intended to systematically consider appropriate supply and demand resources to meet current and future load requirements within the context of local, state, and federal policy goals and objectives." (see Section 3.1.2, page 35-36)

The Integrated Resource Planning process consists of several steps, starting with identification of basic objectives such as reliability of service, quality of service, and meeting peak demand requirements. Next, historical and current data are collected to examine the electric system's load patterns and trends. Based on that information and other data such as econometrics, demographics, and appliance saturation, a demand forecast (also called a "load forecast") is prepared to determine the Cooperative's current

and future power requirements. To meet those forecasted power requirements, the IRP process considers and evaluates the utilization of two types of resources generally categorized as supply-side and demand-side.

Supply-side resources include central station generating plants, contracts to purchase power from the wholesale market, customer-owned dispersed generation, and renewable resources. Demand-side resources include active load management of customer appliances, passive load management via time-of-use rates and critical peak period pricing, and energy efficiency and conservation programs. The "integrated" aspect of the IRP process is that both supply-side and demand-side resource options are given, as far as is practicable, equal consideration in meeting the power requirements.

Typically, several combinations of supply-side and demand-side resource options are evaluated in light of the IRP's stated objectives, with the result being a final plan that incorporates selection of the best combination. The plan is then implemented and its results monitored to evaluate its progress and the need for possible corrective action. Within the context of the IRP process just described, the Integrated Resource Planning standard in EISA 2007 focuses on the role that cost-effective energy efficiency resources can play in the utility's plans and policies.

Q WHAT DOES THE TERM "ENERGY EFFICIENCY RESOURCES" INCLUDE?

A First, though energy efficiency may sometimes be used interchangeably with conservation, there are some distinctions between the two. The reduction in energy usage achieved by conservation usually is accompanied by a change in the consumer's behavior or lifestyle. Energy efficiency, however, reduces the consumer's energy usage without requiring a behavioral change or diminished lifestyle. For example, conservation is turning off a light bulb, whereas energy efficiency is replacing an incandescent light bulb with a compact-fluorescent light bulb.

Secondly, energy efficiency plans and programs include operational applications to utilities' electric distribution systems as well as the more commonly regarded consumer-oriented applications. As described later herein, the Cooperative has already implemented several such energy efficient operational measures that have lowered the distribution system energy losses (also called "line losses") and thus significantly reduced the amount of generated energy that the Cooperative must purchase to meet its consumers' power requirements.

Q DOES JACKSON EMC CURRENTLY UTIIZE INTEGRATED RESOURCE PLANNING?

A The Cooperative's ability to practice the typical comprehensive IRP process previously described and as set forth in the PURPA standard is significantly influenced by its organizational structure. The Integrated Resource Planning standard specifies integrating

energy efficiency resources into three scopes of plans: utility, State, and regional. As an electric distribution utility that purchases its power under wholesale power contracts with Oglethorpe and Constellation, the Cooperative has limited ability to make an independent determination regarding the complete implementation of this standard. However, the Cooperative can address the adoption of this standard from a "utility" perspective. Further, as a member of Oglethorpe, the Cooperative can and should encourage Oglethorpe to engage in planning activities and developing policies that are consistent with the implementation of that standard on behalf of all Oglethorpe members located throughout most of Georgia, thereby having some degree of influence from a "State" perspective and, albeit to a much lesser extent, on a regional basis.

Q HAS JACKSON EMC INCLUDED ENERGY EFFICIENCY RESOURCES IN ITS INTEGRATED RESOURCE PLANNING?

A Yes. The Cooperative has incorporated energy efficiency plans in its IRP mainly through the load forecasting process, which is strongly driven by the historical trends and projections related to consumers' patterns of usage. The load forecast developed by the Cooperative is based on actual aggregated load information. No adjustments are made to add back either the peak demand reductions realized by the Cooperative's load management program or the reduced energy sales resulting from the Cooperative's energy efficiency programs. As such, the load forecast implicitly includes the impacts of the demand-side management and energy efficiency programs, and furthermore, assumes that these programs will grow proportionately with the Cooperative's projected load.

Also, the Cooperative utilizes results from Oglethorpe's appliance saturation surveys to determine the replacement rate of old appliances with more energy efficient appliances in its service territory, thus projecting a lower energy use per consumer relative to historical data. Therefore, the effects of the Cooperative's demand-side management and energy efficiency programs are contained in the future year's power requirements projections and thereby are incorporated into their IRP process.

In regards to future supply-side generation planning, the Cooperative contracts with expert consultants to utilize optimization software to evaluate options and make integrated resource planning decisions. The majority of such options are joint venture projects with other members of Oglethorpe which, once again indicates the Cooperative's limited ability to make IRP decisions independently.

Q WHAT PLANS AND POLICIES HAS JACKSON EMC UNDERTAKEN TO PROMOTE ENERGY EFFICIENCY AS A PRIORITY RESOURCE?

A From the utility perspective, the Cooperative has already implemented many operational and consumer-oriented programs and plans to promote energy efficiency. Operational efficiencies result in lower line losses in the Cooperative's electric distribution system, thereby reducing the energy that is generated and transmitted to the Cooperative, and promoting more efficient use of the Cooperative's facilities. For example, a Geographic Information System ("GIS") for mapping the Cooperative's electric distribution system

has already been deployed throughout the Cooperative's entire service area. This system facilitates optimization of facilities through the use of system modeling and load profiles.

In addition to the GIS, the Cooperative has taken aggressive steps since the early 1980's to make the distribution system more operationally efficient through reduction of system losses. First, the Cooperative began a program to convert the entire distribution system to 25 kV and to date, eighty-seven percent (87%) of the distribution system circuits have been converted. This conversion allows the system to support more load, experience much less voltage drop, and significantly lower line losses. Secondly, in regards to transformers, the Cooperative has for many years purchased highly efficient transformers, based on a total-life cycle costing process that balances expected operative cost with expected efficiencies. In tandem with the conversion to 25 kV, this practice has resulted in the replacement of a large number of older, less efficient 12 kV transformers. Third, conductors are evaluated using a process similar to transformers, where the installed cost plus the total life cycle cost of the line losses and maintenance are examined when the Cooperative plans major distribution system projects. The Cooperative also uses this approach to determine the most cost effective facilities for specific projects regarding re-conductors, new tie lines and road relocation rebuilds. Decisions regarding construction of new substations, new circuits and analyses of circuit configurations all incorporate an evaluation of the cost of system losses. Altogether, these operational measures combine to create a much more energy efficient distribution

system and help promote better energy efficiency throughput from the generation source to the end-use customer.

Q IN ADDITION TO THOSE OPERATIONAL PROGRAMS, HAS JACKSON EMC ADOPTED POLICIES TO ESTABISH ENERGY EFFICIENCY AS A GOAL FOR THEIR CONSUMERS?

A Yes. The Cooperative has four main consumer-oriented programs, marketed under the "Right Choice" brand umbrella, that directly promote energy efficiency to its consumers. The first is Right Choice and Energy Star new home construction program. This program promotes construction of energy efficient homes through education and training of builders and realtors regarding the Right Choice New Home Certification standards and requirements. To achieve this certification, new homes must undergo extensive assessment including pre-insulation visual and duct blaster inspection, and final blower door and E-scan air flow inspections. These inspections are performed by Home Energy Rating System ("HERS") energy technicians and the load calculation results are analyzed by a contracted mechanical engineering firm. Rebates are offered to builders and developers to encourage energy efficient investments by building Right Choice homes. Also, an extensive realtor training program provides information on marketing and selling Right Choice homes. The program allows realtors to receive continuing education credits certified by the Georgia Real Estate Commission. Right Choice New Home qualified homeowners receive a one-year comfort warranty and a three-year energy usage warranty for heating and cooling. Rebates and incentives, totaling over

$267,000, were given to 427 homeowner and builders in calendar 2008 alone. Additionally, these homeowners are eligible for the Energy Advantage Rate Schedule AEA-06, which provides a reduced per kilowatt-hour energy charge compared to the standard Residential Service Rate Schedule A-06. It is estimated that homes certified through the Right Choice New Home program achieve a savings of approximately 35% on expenses related to central heating and air conditioning expenses.

The Cooperative's second major program is the Right Choice™ Home Performance with ENERGY STAR® Audit which is applicable to existing homes. This program involves an on-site audit from an Energy Efficiency Technician, who is both HERS rated and trained by the National Comfort Institute for combustion safety and for indoor air quality. The consumer is provided with a "Right Choice Home Performance Energy Star Audit" report that summarizes the findings and recommendations of the technician. The audit seeks to balance homeowner concerns over health, building durability, comfort and energy efficiency by providing practical ideas regarding how to reduce energy loss in the home. The Cooperative has developed a large contractor network to help homeowners make specified changes. In addition, low interest loans for heating and air conditioning equipment replacement and home weatherization are available from the Cooperative. After the changes are made, a "Test-Out" is performed to ensure that the suggested improvement reduced energy usage as predicted. If an existing home has electric heat and has met the requirements of the Right Choice program, then the homeowner will be eligible for the Energy Advantage Rate discussed above. In addition to the audit report,

consumers are also provided with an Energy Efficiency Box Kit that contains compact florescent light bulbs (CFLs), draft stoppers, an air-filter air-flow whistle, and brochures with practical tips to use energy more efficiently. The Cooperative distributed 180 of these Energy Efficiency Box Kits in 2008, at a cost of over $10,400.

The Right Choice Home Check-up Service is the Cooperative's third major program. It offers several energy education and rebate programs to encourage consumers to use energy more efficiently. An On-Line Home Analyzer can be accessed from the Cooperative's website that provides personalized reports regarding a consumer's home energy use. Suggestions to reduce energy bills and a bill comparison with similar homes are available on this website. A Do-It-Yourself Audit Kit is also available to consumers. This kit comes with literature and a DVD to help walk consumers through a self-audit process to examine their home energy characteristics and identify potential problems. The information provides suggestions to improve consumers' home energy efficiency and reduce energy bills. For consumers concerned about high bills or needing additional help with the Do-It-Yourself Audit, a Residential Marketing representative will conduct a Right Choice In-Home Energy Audit for no charge. If that audit finds a problem with air infiltration or a more complex heating and cooling problem, the representative may recommend a more in-depth analysis with the Right Choice™ Home Performance with ENERGY STAR® Audit.

The Cooperative's fourth Right Choice program is Right Choice Sun Power Rebate Program, which encourages consumers to adopt solar power as a viable alternative for their home energy needs. The technology for the Right Choice Sun Power Rebate Program uses photovoltaic (PV) cells to convert light from the sun directly into electricity, or solar collectors to heat water using sunlight. The benefits of this program include: 1) providing a clean, safe and renewable energy source; 2) building a modular system that can grow with demand.; 3) conservation of natural resources; and 4) reduced environmental impact from other sources of energy production. For solar water heating, an energy impact projection is made prior to system installation, and then energy monitors are used to track the consumer's energy savings and carbon dioxide environmental impacts. Solar powered home installations can receive a one-time rebate of $450.00 per kilowatt (kW) installed, up to 10 kW. For solar water heaters, a one-time rebate of $450.00 is offered.

Besides the four Right Choice programs just described, the Cooperative has for many years provided billing credits to consumers who participate in the Cooperative's Switch to Savings load management program. More than $750,000 each year is credited to consumers for their efforts to improve energy efficiency through the load management program. The program currently has over 45,000 load control switches located on consumer's water heaters or air conditioners. These installations enable the Cooperative to shave 2.5% off the summer peak demand, reduce energy consumption by nearly 1 million kilowatt-hours each summer, and allow for more efficient use of utility facilities.

In addition to the many utility-specific energy efficiency programs and activities offered by the Cooperative, Jackson EMC is currently participating with other members of Oglethorpe in a working group to determine the feasibility of engaging in joint efforts to develop and implement energy efficiency measures.

Q ARE JACKSON EMC'S PROGRAMS AND POLICIES THAT YOU HAVE DESCRIBED WITH RESPECT TO THE INTEGRATED RESOURCE PLANNING STANDARD CONSISTENT WITH THE THREE STATED GOALS OF PURPA?

A The operational and consumer-oriented energy efficiency programs already implemented by the Cooperative are definitely consistent with promoting conservation of energy supplied by the Cooperative and in most cases do enhance the efficient use of the Cooperative's facilities and resources. The furthering of the equitable rates goal is more difficult to assess and may depend on the method(s) used to quantify the results. Moreover, attainment of the equitable rates goal will be affected by the Cooperative's power supply cost structure, which may change over time. Thus, the Cooperative should evaluate this aspect of their energy efficiency programs on an ongoing basis.

Q WHAT IS YOUR RECOMMENDATION TO THE COOPERATIVE'S BOARD REGARDING THE INTEGRATED RESOURCE PLANNING STANDARD?

A The Board should find in its determination of the Integrated Resource Planning standard that the Cooperative, to the extent it is able to do so as an electric distribution utility, has already integrated energy efficiency resources into its IRP process, and has adopted policies establishing cost-effective energy efficiency as a priority resource. Moreover the Cooperative has done these things in a manner that meets all three of the stated purposes of PURPA.

Q WHAT IS THE SECOND NEW PURPA STANDARD?

A The second of the four new PURPA standards that the Cooperative's Board must decide whether or not to implement is the Rate Design Modifications to Promote Energy Efficiency Investments standard, which states:

> ''(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY
> EFFICIENCY INVESTMENTS.—
> ''(A) IN GENERAL.—The rates allowed to be charged by any electric utility shall—
> ''(i) align utility incentives with the delivery of cost-effective energy efficiency; and
> ''(ii) promote energy efficiency investments.
> ''(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each non-regulated utility shall consider—
> ''(i) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;
> ''(ii) providing utility incentives for the successful management of energy efficiency programs;

''(iii) including the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;
''(iv) adopting rate designs that encourage energy efficiency for each customer class;
''(v) allowing timely recovery of energy efficiency related costs; and
''(vi) offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing Federal and State incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.''.

Q WHAT IS THE INTENT OF SECTION (17)(A)(i) OF THIS STANDARD?

A The intent of Section (17)(A)(i) of this standard is for utilities to consider the alignment of their retail rates and incentives relative to their costs, and to address the inherent management disincentives that traditionally exist with respect to promoting energy efficiency investments. The cause for such disincentives is the fact that a decrease in a utility's energy sales (i.e., due to energy efficiency) usually results in a greater reduction in the utility's revenues than its costs, thus decreasing the utility's profits. For investor-owned utilities, such a reduction in profits means less value to the shareholders, which is a direct conflict with the major financial goal of that utility's management to maximize the shareholders' wealth. Although Jackson EMC, as a not-for-profit organization, does not have that same financial goal, decreased energy sales do typically have the same detrimental effect on the Cooperative's margins, which adversely impacts the Cooperative's cash flow and financial ratios.

The reduction in margins is due to the structure of most retail rates, which rely in part on charges applied to consumers' energy usage to produce those margins, as well as to recover a portion of the utility's fixed costs. Various methods of "decoupling" revenues from margins have been suggested to deal with this issue and such methods may be effective for investor-owned utilities. However, the Cooperative's member-owner-consumer organizational structure makes such methods inapplicable, since all revenues are furnished by the members as consumers and all financial impacts are experienced by those same members as owners. Thus, it is prudent for the Cooperative's Board to maintain awareness of this condition when setting both the Cooperative's retail rates and promoting energy efficiency investments.

Q WHAT RETAIL RATES DESIGN STRUCTURES ARE CURRENTLY EMPLOYED BY JACKSON EMC?

A The Cooperative has several major customer classes in its retail electric rate tariff, including residential, general service, large general service, school load management, and outdoor lighting service. The current retail rate design structures applied to those customer classes use one or more of the following charges typically found in retail electric rates: a fixed dollar amount per month, a fixed amount per kWh applied to all energy usage in varying blocks depending on rate class, and an amount per kW applied to all or a portion of the consumer's monthly peak kW demand. Retail rates available to customers in those classes of service also include time-based charges, critical peak

pricing or demand response price signals that comply with the intent of the Time-Based Metering and Communications PURPA standard in the Energy Policy Act of 2005. A wholesale power cost adjustment is billed as a per kilowatt-hour charge applicable to the energy provided to most customer classes.

Q DO JACKSON EMC'S CURRENT RATE SCHEDULES CONTAIN DESIGN FEATURES THAT REMOVE THE "THROUGHPUT INCENTIVE" AND "MANAGEMENT DISINCENTIVES" REFERENCED IN THE STANDARD?

A As previously mentioned, the Cooperative does not have the same profit-driven motivation that investor-owned utilities possess, nor does it have the interests of third-party investors to balance with the interests of its members. Instead, the Cooperative's primary objective is to provide reliable electric service to its member-consumers at the lowest cost, consistent with sound business practice. To that end, the Cooperative periodically performs cost of service analyses to examine their costs and evaluate the appropriateness of their retail rate design to recover those costs. Though no utility's rates are perfectly aligned to match their costs, the Cooperative's retail rates do contain design features that recover fixed and variable costs in ways that reduce (but do not entirely remove) the adverse impact on margins resulting from lower energy sales due to energy efficiency.

One such rate design feature is the fixed monthly Service Charge in the retail rate schedules, which the Cooperative has been increasing so that recovery of Jackson EMC's

fixed costs is less dependent on energy-based charges. As future rate revisions are considered, subsequent increases to the Cooperative's Service Charges should be implemented to track costs better and further diminish the adverse impact on margins regarding energy efficiency.

One of the Cooperative's retail rates includes a segregated Facilities Charge that effectively decouples recovery of fixed costs associated with the Cooperative's electric distribution system facilities from the recovery of usage-driven demand and energy costs.

Two features of the Cooperative's wholesale power cost adjustment provision address this issue. First, it enables the Cooperative to track and recover changes in the average cost of purchased power, including such cost changes resulting from energy efficiency impacts. Secondly, the credits paid to participants in the Cooperative's load management program are included in the costs recovered by the wholesale power cost provision. Those features lessen the adverse impacts of energy efficiency programs on the Cooperative's margins.

Q DO JACKSON EMC'S CURRENT RATES CONTAIN DESIGN FEATURES THAT PROMOTE ENERGY EFFICIENCY INVESTMENTS?

A Yes. For example, the Cooperative has already incorporated seasonal and inverted energy block designs into their residential rate structure. The inverted energy block design increases the charge per kilowatt-hour once a specified level of monthly energy consumption has been exceeded. The Cooperative's Schedule A-06 — Residential

Service, Schedule AEA-06 — Residential Energy Advantage Service, and Schedule AM-06 — Residential Multi-Family Service all have such inverted blocks for the summer usage months of May through September, inclusive. This inverted energy block rate design gives the consumer a greater price incentive to use energy more efficiently, particularly during the time of year when the Cooperative's annual system peak demands occur.

Q DOES JACKSON EMC HAVE ANY SPECIFIC RATE SCHEDULES DESIGNED TO PROMOTE ENERGY EFFICIENCY BY THEIR CONSUMERS?

A Yes. The Cooperative has several specific retail rate schedules that seek to promote energy efficiency. As mentioned earlier, the Cooperative offers the Residential Energy Advantage Service — Schedule AEA-06 to consumers whose homes meet the Right Choice certification requirements. Under Schedule AEA-06, consumers are billed a lower energy charge relative to the standard residential rate (except for monthly usage in excess of 1,000 kWh in the summer months) as an incentive to make more energy efficient investments.

Additionally, the Cooperative offers optional time-of-use rates for all its customer classes. The Cooperative began offering those time-based pricing alternatives many years ago. Even though the Cooperative's wholesale power costs have become somewhat less time sensitive in recent years, the Cooperative has maintained the position that it is appropriate to sustain a degree of time-based pricing in their retail rate schedules to

promote cost-effective energy efficiency and energy efficiency investments by their consumers.

Q DOES JACKSON EMC OFFER HOME ENERGY AUDITS AND DEMAND RESPONSE PROGRAMS TO CONSUMERS, AND ALSO PROVIDE CONSUMERS WITH INFORMATION INDICATING THE BENEFITS OF ENERGY EFFICIENCY IMPROVEMENTS, AS SET FORTH IN THIS STANDARD?

A Yes, the Cooperative's programs and activities in that regard were described in detail in my earlier testimony concerning the IRP standard.

Q WHAT IS YOUR RECOMMENDATION TO THE COOPERATIVE'S BOARD REGARDING THE RATE DESIGN STANDARD?

A The Board should find that the Cooperative, to the extent it is currently able to do so, has already taken steps to charge retail rates that reasonably align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments pursuant to the six stated policy options. I also believe that these rates and policies, as implemented by the Cooperative, serve the three purposes of PURPA.

Q WHAT IS THE THIRD NEW PURPA STANDARD?

A The third of the four new PURPA standards that the Cooperative's Board must decide whether or not to implement is the Smart Grid Investments standard, which states:

''(16) CONSIDERATION OF SMART GRID INVESTMENTS.—

''(A) IN GENERAL.—Each State shall consider requiring that, prior to undertaking investments in non-advanced grid technologies, an electric utility of the State demonstrate to the State that the electric utility considered an investment in a qualified smart grid system based on appropriate factors, including—

''(i) total costs;

''(ii) cost-effectiveness;

''(iii) improved reliability;

''(iv) security;

''(v) system performance; and

''(vi) societal benefit.

''(B) RATE RECOVERY.—Each State shall consider authorizing each electric utility of the State to recover from ratepayers any capital, operating expenditure, or other costs of the electric utility relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of the electric utility for the deployment of the qualified smart grid system.

''(C) OBSOLETE EQUIPMENT.—Each State shall consider authorizing any electric utility or other party of the State to deploy a qualified smart grid system to recover in a timely manner the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system, based on the remaining depreciable life of the obsolete equipment.

Q CAN JACKSON EMC IMPLEMENT THIS STANDARD?

A Notwithstanding the specific wording that directs each "State" rather than each utility to consider the standard, the Cooperative is including this standard in its EISA 2007 PURPA compliance process, with the caveat that the Cooperative's ability to implement this standard is limited to its own electric distribution system grid. Furthermore, the Cooperative's consideration of this standard is restricted to Section

(16)(A), since Sections (16)(B) and (16)(C) are not relevant due to the organizational structure of the Cooperative.

Q WHAT IS A SMART GRID?

A Descriptions of the "smart grid" can be found in all forms of media, from technical papers and industry journals to newspapers and national advertising. While it seems that all interested parties have their own concept of the smart grid, EISA 2007 itself provides no definition. However, Section 1301 of EISA 2007 does contain a list of the following, "which together characterize a Smart Grid."

(1) Increased use of digital information and control technology to improve reliability, security, and efficiency of the electric grid.
(2) Dynamic optimization of grid operations and resources, with full cyber-security.
(3) Deployment and integration of distributed resources and generation, including renewable resources.
(4) Development and incorporation of demand response, demand-side resources and energy-efficiency resources.
(5) Deployment of "smart" technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.
(6) Integration of "smart" appliances and consumer devices.
(7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.
(8) Provision to consumers of timely information and control options.
(9) Development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.

(10) Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.

The National Rural Electric Cooperative Association (NRECA) has defined a smart grid as follows:

"A collection of technologies including Advanced Metering Infrastructure (AMI) and distribution automation, integrated through an effective communications infrastructure and software tools to provide enhanced value and services to members."

Q DOES JACKSON EMC'S ELECTRIC DISTRIBUTION SYSTEM CURRENTLY EXHIBIT ANY OF THOSE SMART GRID CHARACTERISTICS?

A Based on the above definition and the smart grid characteristics listed in Section 1301 of EISA 2007, it is apparent that the Cooperative's electric distribution system has, for many years, demonstrated many of the technologies and functionalities of a smart grid. Generally speaking, electric cooperatives' low customer density, self-regulated rate structure and member ownership have contributed to the deployment of smart grid technologies in many service areas. NRECA, in comments presented to the Federal Energy Regulatory Commission (FERC) and National Association of Regulatory Utility Commissioners (NARUC) Smart Grid Collaborative, stated:

"Cooperatives have taken the lead in integrating advanced grid technologies where and to the extent they help them provide their consumer-owners with safe and reliable power at the lowest reasonable cost."

Jackson EMC, like those electric cooperatives referenced by NRECA, has already made extensive investments in smart grid technologies. In fact, over $20.8 million dollars is

currently invested in a Supervisory Control and Data Acquisition ("SCADA") system, GIS mapping, Outage Management System, smart meters, smart sensors and other advanced system communication capabilities.

Q DOES JACKSON EMC HAVE ANY PLANS FOR FUTURE SMART GRID INVESTMENTS?

A The Cooperative engaged in extensive research regarding deployment of Advance Metering Infrastructures (AMI), and now plans a multi-million dollar project to install AMI to include complete replacement of all its existing meters with advanced meters, scheduled to begin this spring and be completed over a three year period. The AMI system will be capable of reporting hourly data on every meter connected to the Cooperative's system. The meter will also provide outage notification, which indicates when power to the meter is disconnected or restored. The meter has the capability to store time-of-use, energy, reactive energy, apparent energy, voltage, power quality information, blink counts, outage and restoration times, and tamper flags. The AMI system allows for the meter to be read remotely when a customer moves in or out of a location. Disconnect switch add-on modules are available so that the power at selected locations can be remotely connected or disconnected at the meter. The AMI system also allows a meter to be programmed remotely over the radio system. All these features enable the Cooperative to monitor and collect data without sending personnel to the site.

The AMI has the capability for in-home displays, programmable thermostats, and load management switches that will enable communication throughout the entire system. The Cooperative already plans to deploy the load management switches after the AMI system is installed.

These enhancements, as well as other smart grid investments will be deployed by the Cooperative at, as phrased by NRECA, "the pace of value." In other words, the Cooperative will evaluate smart grid options based on appropriate factors, including the ones listed in this PURPA standard (particularly cost and cost effectiveness), and deploy such investments when the Cooperative determines that the member-consumers will receive sufficient value therefrom, and the Board should adopt a finding to that effect.

Q HOW DO JACKSON EMC'S CURRENT AND PLANNED SMART GRID INVESTMENTS ADDRESS THE FACTORS OF IMPROVED RELIABILITY, SECURITY AND SYSTEM PERFORMCE?

A The Cooperative's AMI, combined with other smart grid elements already in service, will provide improved system reliability, security, system performance, and societal benefit as referenced in the PURPA standard. AMI and the Outage Management System will improve system reliability by allowing quicker detection and repair of system outages. Additionally, the new system will provide improved capabilities for remote fault location. The anti-theft capabilities improve security while the linkage of the AMI, GIS mapping system and Outage Management System will improve outage response performance.

Q WHAT IS YOUR RECOMMENDATION TO THE COOPERATIVE'S BOARD REGARDING THE SMART GRID INVESTMENT STANDARD?

A Regarding Section (16)(A) of this standard, the Board should find that the Cooperative will evaluate smart grid options based on appropriate factors, including the ones listed in this PURPA standard, and deploy such investments when the Cooperative determines that the member-consumers will receive sufficient value therefrom. Section (16) (B) and (C) should not be implemented, since they are not relevant to the organizational structure of the Cooperative.

Q WHAT IS THE FOURTH NEW PURPA STANDARD?

A The fourth new PURPA standard that the Cooperative's Board must decide whether or not to implement is the Smart Grid Information standard, which states:

> ''(17) SMART GRID INFORMATION.—
> ''(A) STANDARD.—All electricity purchasers shall be provided direct access, in written or electronic machine-readable form as appropriate, to information from their electricity provider as provided in subparagraph (B).
> ''(B) INFORMATION.—Information provided under this section, to the extent practicable, shall include:
> ''(i) PRICES.—Purchasers and other interested persons shall be provided with information on—
> ''(I) time-based electricity prices in the wholesale electricity market; and
> ''(II) time-based electricity retail prices or rates that are available to the purchasers.
> ''(ii) USAGE.—Purchasers shall be provided with the number of electricity units, expressed in kwh, purchased by them.
> ''(iii) INTERVALS AND PROJECTIONS.—Updates of information on prices and usage shall be offered on not less than a daily basis, shall include hourly price

and use information, where available, and shall include a day-ahead projection of such price information to the extent available.

''(iv) SOURCES.—Purchasers and other interested persons shall be provided annually with written information on the sources of the power provided by the utility, to the extent it can be determined, by type of generation, including greenhouse gas emissions associated with each type of generation, for intervals during which such information is available on a cost effective basis.

''(C) ACCESS.—Purchasers shall be able to access their own information at any time through the Internet and on other means of communication elected by that utility for Smart Grid applications. Other interested persons shall be able to access information not specific to any purchaser through the Internet. Information specific to any purchaser shall be provided solely to that purchaser.''

Q WHAT IS THE OVERALL INTENT OF THIS NEW PURPA STANDARD?

A This standard attempts to empower consumers with more detailed and timely information regarding the cost and amount of their electric energy usage. As worded, however, most of the information set forth in the standard (except for the "Sources" information described in Section (17)(A)(iv)) is simply not currently available.

Q WHY IS IT CURRENTLY NOT POSSIBLE TO PROVIDE TIME-BASED ELECTRICITY PRICES IN A WHOLESALE MARKET?

A At the present time there is no applicable wholesale market from which real-time prices can be provided to the Cooperative's consumers and others. As previously stated, Jackson EMC purchases power from several suppliers based upon long-term power supply contracts. The contractual arrangements of these agreements do not allow the

price of purchased electricity to be disclosed. Therefore, it is not currently possible for the Cooperative to provide "time-based electricity prices in the wholesale electricity market."

Q CAN JACKSON EMC PROVIDE TIME-BASED RETAIL ELECTRICITY PRICES OR RATES?

A The Cooperative currently cannot do so in conformance with this standard's "intervals and projections" requirement. That is, such retail pricing information is not available on a daily basis, nor is day-ahead retail pricing available under the Cooperative's present retail rates. The Cooperative's current wholesale power cost structure does not render such retail pricing feasible.

Q IS ENERGY USAGE INFORMATION EXPRESSED IN KWH CURRENTLY AVAILABLE TO JACKSON EMC CONSUMERS?

A The standard's required information regarding usage "on not less than a daily basis" is not currently available with the Cooperative's existing metering and communications system. However, the new AMI has the capability to measure and store interval, energy, other data. After deployment, it may be possible for the Cooperative to provide consumers with the daily (and perhaps hourly) usage information described in the standard.

Q CAN JACKSON EMC PROVIDE INFORMATION IN REGARDS TO THE SOURCES OF GENERATION AND THE ASSOCIATED GREENHOUSE EMISSIONS?

A In regards to providing consumers and other interested persons with information on the sources of generation and the associated greenhouse emissions, Oglethorpe Power Corporation ("OPC") has a link to the reference information on their website. It will therefore be possible for the Cooperative, through a link to OPC's website, to provide that information to its member-consumers and other interested persons.

Q WHAT IS YOUR RECOMMENDATION TO THE COOPERATIVE'S BOARD REGARDING THE SMART GRID INFORMATION STANDARD?

A The Board should find that the only portion of this standard that the Cooperative is able to implement at this time is Section (17)(B)(iv), pertaining to providing consumers and other interested persons with information on the sources of generation provided by the Cooperative and the associated greenhouse emissions, subject to its wholesale power suppler committing to provide such information to the Cooperative.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

APPENDICES

APPENDIX A

Excerpts from The Energy Independence and Security Act of 2007

Excerpt Of The

ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Table of Contents

Public Law 110–140
110th Congress

An Act

To move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes.

Dec. 19, 2007
[H.R. 6]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Energy Independence and Security Act of 2007.
42 USC 17001 note.

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Energy Independence and Security Act of 2007".

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

42 USC 17001.

SEC. 2. DEFINITIONS.

In this Act:

(1) DEPARTMENT.—The term "Department" means the Department of Energy.

(2) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(3) SECRETARY.—The term "Secretary" means the Secretary of Energy.

42 USC 17002.

SEC. 3. RELATIONSHIP TO OTHER LAW.

Except to the extent expressly provided in this Act or an amendment made by this Act, nothing in this Act or an amendment made by this Act supersedes, limits the authority provided or responsibility conferred by, or authorizes any violation of any provision of law (including a regulation), including any energy or environmental law or regulation.

Excerpt Of The

ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Utility Energy Efficiency Programs
Section 532

Subtitle D—Energy Efficiency of Public Institutions

SEC. 531. REAUTHORIZATION OF STATE ENERGY PROGRAMS.

Section 365(f) of the Energy Policy and Conservation Act (42 U.S.C. 6325(f)) is amended by striking "$100,000,000 for each of the fiscal years 2006 and 2007 and $125,000,000 for fiscal year 2008" and inserting "$125,000,000 for each of fiscal years 2007 through 2012".

SEC. 532. UTILITY ENERGY EFFICIENCY PROGRAMS.

(a) ELECTRIC UTILITIES.—Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is amended by adding at the end the following:

"(16) INTEGRATED RESOURCE PLANNING.—Each electric utility shall—

"(A) integrate energy efficiency resources into utility, State, and regional plans; and

"(B) adopt policies establishing cost-effective energy efficiency as a priority resource.

"(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS.—

"(A) IN GENERAL.—The rates allowed to be charged by any electric utility shall—

"(i) align utility incentives with the delivery of cost-effective energy efficiency; and

"(ii) promote energy efficiency investments.

"(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each nonregulated utility shall consider—

"(i) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;

"(ii) providing utility incentives for the successful management of energy efficiency programs;

"(iii) including the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;

"(iv) adopting rate designs that encourage energy efficiency for each customer class;

"(v) allowing timely recovery of energy efficiency-related costs; and

"(vi) offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing Federal and State incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.".

(b) NATURAL GAS UTILITIES.—Section 303(b) of the Public Utility Regulatory Policies Act of 1978 (15 U.S.C. 3203(b)) is amended by adding at the end the following:

"(5) ENERGY EFFICIENCY.—Each natural gas utility shall—

"(A) integrate energy efficiency resources into the plans and planning processes of the natural gas utility; and

"(B) adopt policies that establish energy efficiency as a priority resource in the plans and planning processes of the natural gas utility.

"(6) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS.—

"(A) IN GENERAL.—The rates allowed to be charged by a natural gas utility shall align utility incentives with the deployment of cost-effective energy efficiency.

"(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each nonregulated utility shall consider—

"(i) separating fixed-cost revenue recovery from the volume of transportation or sales service provided to the customer;

"(ii) providing to utilities incentives for the successful management of energy efficiency programs, such

as allowing utilities to retain a portion of the cost-reducing benefits accruing from the programs;

"(iii) promoting the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives; and

"(iv) adopting rate designs that encourage energy efficiency for each customer class.

For purposes of applying the provisions of this subtitle to this paragraph, any reference in this subtitle to the date of enactment of this Act shall be treated as a reference to the date of enactment of this paragraph.".

(c) CONFORMING AMENDMENT.—Section 303(a) of the Public Utility Regulatory Policies Act of 1978 (15 U.S.C. 3203(a)) is amended by striking "and (4)" inserting "(4), (5), and (6)".

EXCERPT OF THE

ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Smart Grid
Sections 1301 to 1309

TITLE XIII—SMART GRID

SEC. 1301. STATEMENT OF POLICY ON MODERNIZATION OF ELECTRICITY GRID. 15 USC 17381.

It is the policy of the United States to support the modernization of the Nation's electricity transmission and distribution system

to maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve each of the following, which together characterize a Smart Grid:

(1) Increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid.

(2) Dynamic optimization of grid operations and resources, with full cyber-security.

(3) Deployment and integration of distributed resources and generation, including renewable resources.

(4) Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.

(5) Deployment of "smart" technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.

(6) Integration of "smart" appliances and consumer devices.

(7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.

(8) Provision to consumers of timely information and control options.

(9) Development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.

(10) Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.

15 USC 17382.

SEC. 1302. SMART GRID SYSTEM REPORT.

The Secretary, acting through the Assistant Secretary of the Office of Electricity Delivery and Energy Reliability (referred to in this section as the "OEDER") and through the Smart Grid Task Force established in section 1303, shall, after consulting with any interested individual or entity as appropriate, no later than 1 year after enactment, and every 2 years thereafter, report to Congress concerning the status of smart grid deployments nationwide and any regulatory or government barriers to continued deployment. The report shall provide the current status and prospects of smart grid development, including information on technology penetration, communications network capabilities, costs, and obstacles. It may include recommendations for State and Federal policies or actions helpful to facilitate the transition to a smart grid. To the extent appropriate, it should take a regional perspective. In preparing this report, the Secretary shall solicit advice and contributions from the Smart Grid Advisory Committee created in section 1303; from other involved Federal agencies including but not limited to the Federal Energy Regulatory Commission ("Commission"), the National Institute of Standards and Technology ("Institute"), and the Department of Homeland Security; and from other stakeholder groups not already represented on the Smart Grid Advisory Committee.

15 USC 17383.

SEC. 1303. SMART GRID ADVISORY COMMITTEE AND SMART GRID TASK FORCE.

(a) SMART GRID ADVISORY COMMITTEE.—

(1) ESTABLISHMENT.—The Secretary shall establish, within 90 days of enactment of this Part, a Smart Grid Advisory Committee (either as an independent entity or as a designated sub-part of a larger advisory committee on electricity matters). The Smart Grid Advisory Committee shall include eight or more members appointed by the Secretary who have sufficient experience and expertise to represent the full range of smart grid technologies and services, to represent both private and non-Federal public sector stakeholders. One member shall be appointed by the Secretary to Chair the Smart Grid Advisory Committee. Deadline.

(2) MISSION.—The mission of the Smart Grid Advisory Committee shall be to advise the Secretary, the Assistant Secretary, and other relevant Federal officials concerning the development of smart grid technologies, the progress of a national transition to the use of smart-grid technologies and services, the evolution of widely-accepted technical and practical standards and protocols to allow interoperability and inter-communication among smart-grid capable devices, and the optimum means of using Federal incentive authority to encourage such progress.

(3) APPLICABILITY OF FEDERAL ADVISORY COMMITTEE ACT.—The Federal Advisory Committee Act (5 U.S.C. App.) shall apply to the Smart Grid Advisory Committee.

(b) SMART GRID TASK FORCE.—

(1) ESTABLISHMENT.—The Assistant Secretary of the Office of Electricity Delivery and Energy Reliability shall establish, within 90 days of enactment of this Part, a Smart Grid Task Force composed of designated employees from the various divisions of that office who have responsibilities related to the transition to smart-grid technologies and practices. The Assistant Secretary or his designee shall be identified as the Director of the Smart Grid Task Force. The Chairman of the Federal Energy Regulatory Commission and the Director of the National Institute of Standards and Technology shall each designate at least one employee to participate on the Smart Grid Task Force. Other members may come from other agencies at the invitation of the Assistant Secretary or the nomination of the head of such other agency. The Smart Grid Task Force shall, without disrupting the work of the Divisions or Offices from which its members are drawn, provide an identifiable Federal entity to embody the Federal role in the national transition toward development and use of smart grid technologies. Deadline.

(2) MISSION.—The mission of the Smart Grid Task Force shall be to insure awareness, coordination and integration of the diverse activities of the Office and elsewhere in the Federal Government related to smart-grid technologies and practices, including but not limited to: smart grid research and development; development of widely accepted smart-grid standards and protocols; the relationship of smart-grid technologies and practices to electric utility regulation; the relationship of smart-grid technologies and practices to infrastructure development, system reliability and security; and the relationship of smart-grid technologies and practices to other facets of electricity supply, demand, transmission, distribution, and policy. The Smart Grid Task Force shall collaborate with the Smart Grid Advisory Committee and other Federal agencies and offices.

The Smart Grid Task Force shall meet at the call of its Director as necessary to accomplish its mission.

(c) AUTHORIZATION.—There are authorized to be appropriated for the purposes of this section such sums as are necessary to the Secretary to support the operations of the Smart Grid Advisory Committee and Smart Grid Task Force for each of fiscal years 2008 through 2020.

42 USC 17384.

SEC. 1304. SMART GRID TECHNOLOGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION.

(a) POWER GRID DIGITAL INFORMATION TECHNOLOGY.—The Secretary, in consultation with the Federal Energy Regulatory Commission and other appropriate agencies, electric utilities, the States, and other stakeholders, shall carry out a program—

(1) to develop advanced techniques for measuring peak load reductions and energy-efficiency savings from smart metering, demand response, distributed generation, and electricity storage systems;

(2) to investigate means for demand response, distributed generation, and storage to provide ancillary services;

(3) to conduct research to advance the use of wide-area measurement and control networks, including data mining, visualization, advanced computing, and secure and dependable communications in a highly-distributed environment;

(4) to test new reliability technologies, including those concerning communications network capabilities, in a grid control room environment against a representative set of local outage and wide area blackout scenarios;

(5) to identify communications network capacity needed to implement advanced technologies.

(6) to investigate the feasibility of a transition to time-of-use and real-time electricity pricing;

(7) to develop algorithms for use in electric transmission system software applications;

(8) to promote the use of underutilized electricity generation capacity in any substitution of electricity for liquid fuels in the transportation system of the United States; and

(9) in consultation with the Federal Energy Regulatory Commission, to propose interconnection protocols to enable electric utilities to access electricity stored in vehicles to help meet peak demand loads.

(b) SMART GRID REGIONAL DEMONSTRATION INITIATIVE.—

(1) IN GENERAL.—The Secretary shall establish a smart grid regional demonstration initiative (referred to in this subsection as the "Initiative") composed of demonstration projects specifically focused on advanced technologies for use in power grid sensing, communications, analysis, and power flow control. The Secretary shall seek to leverage existing smart grid deployments.

(2) GOALS.—The goals of the Initiative shall be—

(A) to demonstrate the potential benefits of concentrated investments in advanced grid technologies on a regional grid;

(B) to facilitate the commercial transition from the current power transmission and distribution system technologies to advanced technologies;

(C) to facilitate the integration of advanced technologies in existing electric networks to improve system performance, power flow control, and reliability;

(D) to demonstrate protocols and standards that allow for the measurement and validation of the energy savings and fossil fuel emission reductions associated with the installation and use of energy efficiency and demand response technologies and practices; and

(E) to investigate differences in each region and regulatory environment regarding best practices in implementing smart grid technologies.

(3) DEMONSTRATION PROJECTS.—

(A) IN GENERAL.—In carrying out the initiative, the Secretary shall carry out smart grid demonstration projects in up to 5 electricity control areas, including rural areas and at least 1 area in which the majority of generation and transmission assets are controlled by a tax-exempt entity.

(B) COOPERATION.—A demonstration project under subparagraph (A) shall be carried out in cooperation with the electric utility that owns the grid facilities in the electricity control area in which the demonstration project is carried out.

(C) FEDERAL SHARE OF COST OF TECHNOLOGY INVESTMENTS.—The Secretary shall provide to an electric utility described in subparagraph (B) financial assistance for use in paying an amount equal to not more than 50 percent of the cost of qualifying advanced grid technology investments made by the electric utility to carry out a demonstration project.

(D) INELIGIBILITY FOR GRANTS.—No person or entity participating in any demonstration project conducted under this subsection shall be eligible for grants under section 1306 for otherwise qualifying investments made as part of that demonstration project.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated—

(1) to carry out subsection (a), such sums as are necessary for each of fiscal years 2008 through 2012; and

(2) to carry out subsection (b), $100,000,000 for each of fiscal years 2008 through 2012.

SEC. 1305. SMART GRID INTEROPERABILITY FRAMEWORK. 15 USC 17385.

(a) INTEROPERABILITY FRAMEWORK.—The Director of the National Institute of Standards and Technology shall have primary responsibility to coordinate the development of a framework that includes protocols and model standards for information management to achieve interoperability of smart grid devices and systems. Such protocols and standards shall further align policy, business, and technology approaches in a manner that would enable all electric resources, including demand-side resources, to contribute to an efficient, reliable electricity network. In developing such protocols and standards—

(1) the Director shall seek input and cooperation from the Commission, OEDER and its Smart Grid Task Force, the Smart Grid Advisory Committee, other relevant Federal and State agencies; and

(2) the Director shall also solicit input and cooperation from private entities interested in such protocols and standards, including but not limited to the Gridwise Architecture Council, the International Electrical and Electronics Engineers, the National Electric Reliability Organization recognized by the Federal Energy Regulatory Commission, and National Electrical Manufacturer's Association.

(b) SCOPE OF FRAMEWORK.—The framework developed under subsection (a) shall be flexible, uniform and technology neutral, including but not limited to technologies for managing smart grid information, and designed—

(1) to accommodate traditional, centralized generation and transmission resources and consumer distributed resources, including distributed generation, renewable generation, energy storage, energy efficiency, and demand response and enabling devices and systems;

(2) to be flexible to incorporate—

(A) regional and organizational differences; and

(B) technological innovations;

(3) to consider the use of voluntary uniform standards for certain classes of mass-produced electric appliances and equipment for homes and businesses that enable customers, at their election and consistent with applicable State and Federal laws, and are manufactured with the ability to respond to electric grid emergencies and demand response signals by curtailing all, or a portion of, the electrical power consumed by the appliances or equipment in response to an emergency or demand response signal, including through—

(A) load reduction to reduce total electrical demand;

(B) adjustment of load to provide grid ancillary services; and

(C) in the event of a reliability crisis that threatens an outage, short-term load shedding to help preserve the stability of the grid; and

(4) such voluntary standards should incorporate appropriate manufacturer lead time.

(c) TIMING OF FRAMEWORK DEVELOPMENT.—The Institute shall begin work pursuant to this section within 60 days of enactment. The Institute shall provide and publish an initial report on progress toward recommended or consensus standards and protocols within 1 year after enactment, further reports at such times as developments warrant in the judgment of the Institute, and a final report when the Institute determines that the work is completed or that a Federal role is no longer necessary.

(d) STANDARDS FOR INTEROPERABILITY IN FEDERAL JURISDICTION.—At any time after the Institute's work has led to sufficient consensus in the Commission's judgment, the Commission shall institute a rulemaking proceeding to adopt such standards and protocols as may be necessary to insure smart-grid functionality and interoperability in interstate transmission of electric power, and regional and wholesale electricity markets.

(e) AUTHORIZATION.—There are authorized to be appropriated for the purposes of this section $5,000,000 to the Institute to support the activities required by this subsection for each of fiscal years 2008 through 2012.

SEC. 1306. FEDERAL MATCHING FUND FOR SMART GRID INVESTMENT COSTS. 42 USC 17386.

(a) MATCHING FUND.—The Secretary shall establish a Smart Grid Investment Matching Grant Program to provide reimbursement of one-fifth (20 percent) of qualifying Smart Grid investments.

(b) QUALIFYING INVESTMENTS.—Qualifying Smart Grid investments may include any of the following made on or after the date of enactment of this Act:

(1) In the case of appliances covered for purposes of establishing energy conservation standards under part B of title III of the Energy Policy and Conservation Act of 1975 (42 U.S.C. 6291 et seq.), the documented expenditures incurred by a manufacturer of such appliances associated with purchasing or designing, creating the ability to manufacture, and manufacturing and installing for one calendar year, internal devices that allow the appliance to engage in Smart Grid functions.

(2) In the case of specialized electricity-using equipment, including motors and drivers, installed in industrial or commercial applications, the documented expenditures incurred by its owner or its manufacturer of installing devices or modifying that equipment to engage in Smart Grid functions.

(3) In the case of transmission and distribution equipment fitted with monitoring and communications devices to enable smart grid functions, the documented expenditures incurred by the electric utility to purchase and install such monitoring and communications devices.

(4) In the case of metering devices, sensors, control devices, and other devices integrated with and attached to an electric utility system or retail distributor or marketer of electricity that are capable of engaging in Smart Grid functions, the documented expenditures incurred by the electric utility, distributor, or marketer and its customers to purchase and install such devices.

(5) In the case of software that enables devices or computers to engage in Smart Grid functions, the documented purchase costs of the software.

(6) In the case of entities that operate or coordinate operations of regional electric grids, the documented expenditures for purchasing and installing such equipment that allows Smart Grid functions to operate and be combined or coordinated among multiple electric utilities and between that region and other regions.

(7) In the case of persons or entities other than electric utilities owning and operating a distributed electricity generator, the documented expenditures of enabling that generator to be monitored, controlled, or otherwise integrated into grid operations and electricity flows on the grid utilizing Smart Grid functions.

(8) In the case of electric or hybrid-electric vehicles, the documented expenses for devices that allow the vehicle to engage in Smart Grid functions (but not the costs of electricity storage for the vehicle).

(9) The documented expenditures related to purchasing and implementing Smart Grid functions in such other cases as the Secretary shall identify. In making such grants, the Secretary shall seek to reward innovation and early adaptation,

even if success is not complete, rather than deployment of proven and commercially viable technologies.

(c) INVESTMENTS NOT INCLUDED.—Qualifying Smart Grid investments do not include any of the following:

(1) Investments or expenditures for Smart Grid technologies, devices, or equipment that are eligible for specific tax credits or deductions under the Internal Revenue Code, as amended.

(2) Expenditures for electricity generation, transmission, or distribution infrastructure or equipment not directly related to enabling Smart Grid functions.

(3) After the final date for State consideration of the Smart Grid Information Standard under section 1307 (paragraph (17) of section 111(d) of the Public Utility Regulatory Policies Act of 1978), an investment that is not in compliance with such standard.

(4) After the development and publication by the Institute of protocols and model standards for interoperability of smart grid devices and technologies, an investment that fails to incorporate any of such protocols or model standards.

(5) Expenditures for physical interconnection of generators or other devices to the grid except those that are directly related to enabling Smart Grid functions.

(6) Expenditures for ongoing salaries, benefits, or personnel costs not incurred in the initial installation, training, or start up of smart grid functions.

(7) Expenditures for travel, lodging, meals or other personal costs.

(8) Ongoing or routine operation, billing, customer relations, security, and maintenance expenditures.

(9) Such other expenditures that the Secretary determines not to be Qualifying Smart Grid Investments by reason of the lack of the ability to perform Smart Grid functions or lack of direct relationship to Smart Grid functions.

(d) SMART GRID FUNCTIONS.—The term "smart grid functions" means any of the following:

(1) The ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage, or other information relevant to device, grid, or utility operations, to or from or by means of the electric utility system, through one or a combination of devices and technologies.

(2) The ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage, or other information relevant to device, grid, or utility operations to or from a computer or other control device.

(3) The ability to measure or monitor electricity use as a function of time of day, power quality characteristics such as voltage level, current, cycles per second, or source or type of generation and to store, synthesize or report that information by digital means.

(4) The ability to sense and localize disruptions or changes in power flows on the grid and communicate such information instantaneously and automatically for purposes of enabling automatic protective responses to sustain reliability and security of grid operations.

(5) The ability to detect, prevent, communicate with regard to, respond to, or recover from system security threats, including cyber-security threats and terrorism, using digital information, media, and devices.

(6) The ability of any appliance or machine to respond to such signals, measurements, or communications automatically or in a manner programmed by its owner or operator without independent human intervention.

(7) The ability to use digital information to operate functionalities on the electric utility grid that were previously electro-mechanical or manual.

(8) The ability to use digital controls to manage and modify electricity demand, enable congestion management, assist in voltage control, provide operating reserves, and provide frequency regulation.

(9) Such other functions as the Secretary may identify as being necessary or useful to the operation of a Smart Grid.

(e) The Secretary shall— Procedures.

(1) establish and publish in the Federal Register, within 1 year after the enactment of this Act procedures by which applicants who have made qualifying Smart Grid investments can seek and obtain reimbursement of one-fifth of their documented expenditures; Federal Register, publication. Deadline.

(2) establish procedures to ensure that there is no duplication or multiple reimbursement for the same investment or costs, that the reimbursement goes to the party making the actual expenditures for Qualifying Smart Grid Investments, and that the grants made have significant effect in encouraging and facilitating the development of a smart grid;

(3) maintain public records of reimbursements made, recipients, and qualifying Smart Grid investments which have received reimbursements; Records.

(4) establish procedures to provide, in cases deemed by the Secretary to be warranted, advance payment of moneys up to the full amount of the projected eventual reimbursement, to creditworthy applicants whose ability to make Qualifying Smart Grid Investments may be hindered by lack of initial capital, in lieu of any later reimbursement for which that applicant qualifies, and subject to full return of the advance payment in the event that the Qualifying Smart Grid investment is not made; and

(5) have and exercise the discretion to deny grants for investments that do not qualify in the reasonable judgment of the Secretary.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary such sums as are necessary for the administration of this section and the grants to be made pursuant to this section for fiscal years 2008 through 2012.

SEC. 1307. STATE CONSIDERATION OF SMART GRID.

(a) Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is amended by adding at the end the following:

"(16) CONSIDERATION OF SMART GRID INVESTMENTS.—

"(A) IN GENERAL.—Each State shall consider requiring that, prior to undertaking investments in nonadvanced grid technologies, an electric utility of the State demonstrate

to the State that the electric utility considered an investment in a qualified smart grid system based on appropriate factors, including—

"(i) total costs;

"(ii) cost-effectiveness;

"(iii) improved reliability;

"(iv) security;

"(v) system performance; and

"(vi) societal benefit.

"(B) RATE RECOVERY.—Each State shall consider authorizing each electric utility of the State to recover from ratepayers any capital, operating expenditure, or other costs of the electric utility relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of the electric utility for the deployment of the qualified smart grid system.

"(C) OBSOLETE EQUIPMENT.—Each State shall consider authorizing any electric utility or other party of the State to deploy a qualified smart grid system to recover in a timely manner the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system, based on the remaining depreciable life of the obsolete equipment.

"(17) SMART GRID INFORMATION.—

"(A) STANDARD.—All electricity purchasers shall be provided direct access, in written or electronic machine-readable form as appropriate, to information from their electricity provider as provided in subparagraph (B).

"(B) INFORMATION.—Information provided under this section, to the extent practicable, shall include:

"(i) PRICES.—Purchasers and other interested persons shall be provided with information on—

"(I) time-based electricity prices in the wholesale electricity market; and

"(II) time-based electricity retail prices or rates that are available to the purchasers.

"(ii) USAGE.—Purchasers shall be provided with the number of electricity units, expressed in kwh, purchased by them.

"(iii) INTERVALS AND PROJECTIONS.—Updates of information on prices and usage shall be offered on not less than a daily basis, shall include hourly price and use information, where available, and shall include a day-ahead projection of such price information to the extent available.

"(iv) SOURCES.—Purchasers and other interested persons shall be provided annually with written information on the sources of the power provided by the utility, to the extent it can be determined, by type of generation, including greenhouse gas emissions associated with each type of generation, for intervals during which such information is available on a cost-effective basis.

"(C) ACCESS.—Purchasers shall be able to access their own information at any time through the Internet and on other means of communication elected by that utility

for Smart Grid applications. Other interested persons shall be able to access information not specific to any purchaser through the Internet. Information specific to any purchaser shall be provided solely to that purchaser.".

(b) COMPLIANCE.—

(1) TIME LIMITATIONS.—Section 112(b) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(b)) is amended by adding the following at the end thereof:

Deadlines.

"(6)(A) Not later than 1 year after the enactment of this paragraph, each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated utility shall commence the consideration referred to in section 111, or set a hearing date for consideration, with respect to the standards established by paragraphs (17) through (18) of section 111(d).

"(B) Not later than 2 years after the date of the enactment of this paragraph, each State regulatory authority (with respect to each electric utility for which it has ratemaking authority), and each nonregulated electric utility, shall complete the consideration, and shall make the determination, referred to in section 111 with respect to each standard established by paragraphs (17) through (18) of section 111(d).".

(2) FAILURE TO COMPLY.—Section 112(c) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(c)) is amended by adding the following at the end:

"In the case of the standards established by paragraphs (16) through (19) of section 111(d), the reference contained in this subsection to the date of enactment of this Act shall be deemed to be a reference to the date of enactment of such paragraphs.".

(3) PRIOR STATE ACTIONS.—Section 112(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(d)) is amended by inserting "and paragraphs (17) through (18)" before "of section 111(d)".

SEC. 1308. STUDY OF THE EFFECT OF PRIVATE WIRE LAWS ON THE DEVELOPMENT OF COMBINED HEAT AND POWER FACILITIES.

(a) STUDY.—

(1) IN GENERAL.—The Secretary, in consultation with the States and other appropriate entities, shall conduct a study of the laws (including regulations) affecting the siting of privately owned electric distribution wires on and across public rights-of-way.

(2) REQUIREMENTS.—The study under paragraph (1) shall include—

(A) an evaluation of—

(i) the purposes of the laws; and

(ii) the effect the laws have on the development of combined heat and power facilities;

(B) a determination of whether a change in the laws would have any operating, reliability, cost, or other impacts on electric utilities and the customers of the electric utilities; and

(C) an assessment of—

(i) whether privately owned electric distribution wires would result in duplicative facilities; and

(ii) whether duplicative facilities are necessary or desirable.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a report that describes the results of the study conducted under subsection (a).

SEC. 1309. DOE STUDY OF SECURITY ATTRIBUTES OF SMART GRID SYSTEMS.

Deadline. Reports.

(a) DOE STUDY.—The Secretary shall, within 18 months after the date of enactment of this Act, submit a report to Congress that provides a quantitative assessment and determination of the existing and potential impacts of the deployment of Smart Grid systems on improving the security of the Nation's electricity infrastructure and operating capability. The report shall include but not be limited to specific recommendations on each of the following:

(1) How smart grid systems can help in making the Nation's electricity system less vulnerable to disruptions due to intentional acts against the system.

(2) How smart grid systems can help in restoring the integrity of the Nation's electricity system subsequent to disruptions.

(3) How smart grid systems can facilitate nationwide, interoperable emergency communications and control of the Nation's electricity system during times of localized, regional, or nationwide emergency.

(4) What risks must be taken into account that smart grid systems may, if not carefully created and managed, create vulnerability to security threats of any sort, and how such risks may be mitigated.

(b) CONSULTATION.—The Secretary shall consult with other Federal agencies in the development of the report under this section, including but not limited to the Secretary of Homeland Security, the Federal Energy Regulatory Commission, and the Electric Reliability Organization certified by the Commission under section 215(c) of the Federal Power Act (16 U.S.C. 824o) as added by section 1211 of the Energy Policy Act of 2005 (Public Law 109–58; 119 Stat. 941).

Excerpt Of The

ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Effective Date
Section 1601

TITLE XVI—EFFECTIVE DATE

SEC. 1601. EFFECTIVE DATE. 2 USC 1824 note.

This Act and the amendments made by this Act take effect on the date that is 1 day after the date of enactment of this Act.

Approved December 19, 2007.

LEGISLATIVE HISTORY—H.R. 6:

CONGRESSIONAL RECORD, Vol. 153 (2007):
Jan. 18, considered and passed House.
June 12–15, 18–21, considered and passed Senate, amended.
Dec. 6, House concurred in Senate amendments with amendments.
Dec. 12, 13, Senate considered and concurred in House amendments with an amendment.
Dec. 18, House concurred in Senate amendment.
WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 43 (2007):
Dec. 19, Presidential remarks.

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APPENDIX B

GDS Associates, Inc. Qualifications and Experience

STATEMENT OF QUALIFICATIONS

GDS Associates, Inc. is a multi-service consulting and engineering firm with extensive engineering, project management, and consulting experience. The firm was formed in 1986 and employs a staff of approximately 150 professionals and support personnel. GDS Associates' broad range of expertise focuses on clients associated with, or affected by, electric, gas, water and wastewater utilities. In addition, services regarding electric distribution and transmission design, information technology, market research, and statistical analyses are provided to a diverse client base. GDS Associates is headquartered in Marietta, Georgia, with offices in Austin, Texas; Auburn, Alabama; Manchester, New Hampshire; and Madison, Wisconsin, and serves clients throughout the United States.

J. Steven Shurbutt is a founding Principal of GDS Associates. As Vice-President for Distribution Services, Mr. Shurbutt oversees most of the financial services performed by GDS Associates on behalf of electric distribution utilities. During the past 35 years, he has conducted retail rate studies, cost allocation studies, financial forecasts, and other financial and rate design services for more than 150 electric utility clients. He has appeared as an expert witness before regulatory authorities in 12 states and has also been involved in technical analyses associated with wholesale rate cases before the Federal Energy Regulatory Commission. Mr. Shurbutt has participated in member/pooling rate studies and rate design on behalf of generation and transmission electric cooperative utilities. He has advised wholesale rate customers on issues regarding interpretation of wholesale rate provisions and price signals, and the incorporation of same into retail rates. His retail rate assignments have included developing innovative rates for various classes of utility service customers and numerous successful power supply contract negotiations with large industrial customers on behalf of utility clients. He assisted more than 20 electric utilities in Florida, Georgia, Texas, South Carolina and Virginia with evaluating the PURPA Standards set forth in the Energy Policy Act of 2005 ("EPAct 2005"). Mr. Shurbutt holds an MBA in Finance from Georgia State University and a Bachelor of Industrial Engineering from the Georgia Institute of Technology. He is a registered Professional Engineer and Senior Member of the Institute of Industrial Engineers.