

**PROJECT NO. 2008-TX050-0001**

**PROCEEDING TO CONSIDER AND DETERMINE** §  
**WHETHER TO IMPLEMENT THE FEDERAL** §  
**RATEMAKING STANDARDS FOR INTEGRATED** §  
**RESOURCE PLANNING, RATE DESIGN** § **GRAYSON-COLLIN ELECTRIC COOPERATIVE, INC.**  
**MODIFICATIONS TO PROMOTE ENERGY** §  
**EFFICIENCY INVESTMENTS, CONSIDERATION OF** § **GRAYSON COUNTY, TEXAS**  
**SMART GRID INVESTMENTS, AND SMART GRID** §  
**INFORMATION PURSUANT TO 16 U.S.C.** §  
**§2621(D)(16), (17), (16) AND (17) AS AMENDED** §  
**BY PUB. L. NO. 110-140, 121 STAT. 1492 (2007).** §  
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**PROPOSAL FOR IMPLEMENTING PURPA RATEMAKING STANDARDS RELATING TO  
INTEGRATED ENERGY EFFICIENCY RESOURCE PLANNING,  
RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS,  
SMART GRID INVESTMENTS, AND SMART GRID INFORMATION**

Grayson-Collin Electric Cooperative, Inc. (GCEC or Cooperative) proposes four new policies to address: 1) integrating energy efficiency resources into resource planning and making cost-effective energy efficiency a priority resource; 2) modifying rate designs to promote energy efficiency investments; 3) assessing investments in smart grid technologies before investing in non-advanced technologies; and 4) making smart grid information available to members. These proposed policies implement modified versions of the four new ratemaking standards federal law requires the Cooperative to consider pursuant to the Public Utility Regulatory Policies Act of 1978 (PURPA), as amended by the Energy Independence and Security Act of 2007 (EISA), 16 U.S.C. §2621(d)(16), (17), (16) and (17), Public Law No. 110-140, 121 Stat. 1492 (2007) (hereinafter, PURPA EISA).

**1. FIRST PURPA STANDARD 16 - INTEGRATED RESOURCE PLANNING**

Under First PURPA EISA Standard 16,<sup>1</sup> the Cooperative must decide whether to: 1) integrate energy efficiency resources into its integrated resource planning; and 2) adopt policies establishing cost-effective energy efficiency as a priority resource. The term “integrated resource planning” generally refers to a comprehensive planning process intended to systematically consider appropriate supply and

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<sup>1</sup> 16 U.S.C. § 2621(d)(16), 121 Stat. 1665.

demand resources to meet current and future load requirements within the context of the Cooperative's policy goals and objectives.<sup>2</sup> The term "energy efficiency" refers to efforts that allow consumers to use less energy without changing their behavior or that replace existing energy-consuming devices with newer models that consume less energy.

The Cooperative does not conduct integrated resource planning directly because it neither owns nor operates any generation facilities. However, the Cooperative participates in the integrated resource planning conducted by its power supplier, Rayburn Country Electric Cooperative, Inc. (Rayburn). Rayburn does not own generation itself, but it provides GCEC with all of its resource and planning needs through power purchase agreements. Rayburn periodically conducts a power requirements study or load forecast to determine current and future capacity and energy needs. Rayburn's power requirements study already integrates energy efficiency resources into the resource planning process. The study was last updated in 2007 and incorporated the Cooperative's energy efficiency activities. Those activities include the following direct assistance and educational programs:

- a) home energy audits at no cost to all Cooperative members;
- b) the Energy Efficiency Pledge Program, which provides energy efficiency kits to participating members;
- c) the transitioning of the Cooperative's outdoor rental lighting to higher efficiency fixtures;
- d) the installation of high efficiency lighting in the Cooperative's most recently constructed facility and a commitment to the installation of high efficiency lighting and HVAC equipment in its own facilities as they are constructed or replaced;
- e) the encouragement of renewable resource development, including a policy that offers net metering and purchases the output to allow the development of small renewable distributed generation resources;
- f) taking steps to reduce system losses (the difference between kilowatt hours (KWh) purchased by the Cooperative and kilowatt hours (kWh) sold by the Cooperative to end-use customers) which improves the Cooperative's energy efficiency by reducing the amount of purchased energy. Those steps include designing the Cooperative's

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<sup>2</sup> PURPA defines integrated resource planning as a planning and selection process for new energy resources that evaluates the full range of alternatives, including new generating capacity, power purchases, energy conservation and efficiency, cogeneration and district heating and cooling applications and renewable energy resources in order to provide adequate and reliable service to electric customers at the lowest system cost. PURPA requires that the process take into account necessary features for system operation, such as diversity, reliability, dispatchability, and other risk factors; consider the ability to verify energy savings achieved through energy conservation and efficiency and the projected durability of such savings measured over time; and treat demand and supply resources on a consistent and integrated basis.

distribution system to achieve a minimal level of losses, including sizing conductors on the distribution system to minimize line losses, evaluating transformers to minimize life cycle costs, and working with customers to encourage them to correct their power factor. GCEC has a four-year work plan for distribution projects that reduce line losses and energy efficiency. In 2011, the engineering department of the Cooperative will develop and seek approval for a new 2012-2016 four-year plan;

- g) actively monitoring and evaluating the wide variety of energy efficiency and demand response programs, information management and telecommunications, and renewable and distributed energy programs offered by National Rural Electric Cooperative Association (NRECA) and NRECA's research arm Cooperative Research Network (CRN);
- h) providing information on conservation and energy efficiency to all members remodeling or building new facilities and to others on request;
- i) supporting and promoting Energy Star appliance and building programs;
- j) providing information about appliance usage and energy savings through the Cooperative's Energy Management Guide: "*You Have the Power*";
- k) providing on its website a *Glossary of Terms* section for its members, which gives members a quick reference of power industry words/terms used on the Cooperative website; and
- l) distributing Texas Co-Op Power Magazine, published by Texas Electric Cooperatives, Inc., the statewide association of electric cooperatives, which contains numerous articles and energy efficiency tips monthly to its members.

The Cooperative measures the effectiveness of its energy efficiency programs through the pricing signal from its wholesale power supplier. The wholesale rate the Cooperative pays includes capacity and energy charges. As the Cooperative improves its energy efficiency, average and total purchased power costs decline.

Although GCEC'S current practices meet the federal standards for integrated resource planning, the Cooperative proposes adopting the following modified standard:

**Policy No. 1 for Integrated Resource Planning**

**Grayson-Collin Electric Cooperative, Inc. will collaborate with its power supplier to develop specific energy efficiency promotional programs, such as load control or management programs, which the Cooperative will incorporate into its menu of energy efficiency and conservation programs offered to members. GCEC will also continue to provide information to Rayburn so that Rayburn can include GCEC'S energy efficiency programs as a priority resource in its resource planning and continue to consider cost-effective programs designed to increase energy efficiency.**

This policy is necessary to reduce the future need for increased capacity and purchased power costs related to additional capacity and to reduce current power costs paid by Cooperative members.

The Cooperative's existing energy efficiency programs were included in its expenses at the time of its most recent rate design and cost of service evaluation. As a result, any program costs are being recovered from members under existing rates. But any decrease in the cost of purchased power or the average cost per kilowatt hour (kWh) of purchased power does not increase the Cooperative's margins. The cost of purchased power is passed directly to member-owners through the Cooperative's power cost recovery factor (PCRF). This means that any future energy efficiency programs adopted by the Cooperative will entail expenses that will not be offset by reduced costs until the next time the Cooperative revises its retail rate structure.

## **2. RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS**

Under First PURPA EISA Standard 17,<sup>3</sup> the Cooperative must decide whether the rates it charges will align utility incentives with the delivery of cost-effective energy efficiency and will promote energy efficiency investments. In making that decision, the Cooperative must consider six policy options, which are:

- 1) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;
- 2) providing utility incentives for the successful management of energy efficiency programs;
- 3) including the impact on adoption of energy efficiency as one of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;
- 4) adopting rate designs that encourage energy efficiency for each customer class;
- 5) allowing timely recovery of energy efficiency related costs; and
- 6) 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.

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<sup>3</sup> 16 U.S.C. § 2621(d)(17), 121 Stat. 1666.

The Cooperative's existing tariffs for the large power and small commercial customers over 10kW classes promote energy efficiency through a demand-based rate design that provides a price signal to improve load factor, which results in more efficient use of energy resources. However, the existing tariffs for the residential customer class do not align utility incentives with the delivery of cost-effective energy efficiency and do not promote energy efficiency investments because only part of the fixed distribution costs of providing service are recovered in the customer charge component of the residential rate. The costs that are not recovered in the customer charge are instead recovered in the energy component of the rate. As the amount of energy sold is reduced, the recovery of those costs is reduced as are the Cooperative's margins. This creates a disincentive for promoting and participating in energy efficiency or conservation programs, which are intended to reduce the amount of energy sold.

The Cooperative has considered the six policy options in First PURPA Standard 17 and proposes implementing them.

**Throughput incentives.** Throughput incentives, such as declining block rates, provide incentives for consumers to use more energy which is contrary to the energy efficiency and conservation initiatives. GCEC has a modified declining block rate design for its residential rate class in winter months (November through April). During these months, rates decline by one cent per kWh for usage over 1,000 kWh per month. The Cooperative does not have declining block rates for its residential rate class in summer months. All energy in those months is billed at the same rate.

Rayburn's wholesale rates include demand charges, which may include ratchet charges established in summer months and applied in other months. Residential members with high usage in summer months followed by low winter usage, therefore, potentially cause higher wholesale demand costs and higher average power cost for the remainder of the year without the winter energy billing units to recover fully those costs. For customers with usage levels greater than 1,000 kWh year round, therefore, Grayson-Collin's residential rate results in higher average total energy cost in summer months than in winter months. So the rate design does provide a pricing signal that reflects the wholesale rate structure. In addition, as contemplated by the standards, the Cooperative must consider other issues

when designing rates, including the impact on existing residential customers caused by eliminating the existing declining block rate design.

As is contemplated in the standards, a variety of goals and objectives are balanced by Grayson-Collin when rate designs are developed. Included in this list of goals and objectives, along with improving energy efficiency, are providing a proper pricing signal and minimizing customer impact when changing existing rate designs. As part of this on-going balancing process, Grayson-Collin will consider whether to phase out the existing residential declining block rate design at the time of its next cost of service study and rate design.

As mentioned elsewhere, Grayson-Collin's Small Commercial and Large Power rates are structured as demand rates. These rates provide a clear signal to customers to improve energy efficiency by improving load factor. Improvements in load factor result in lower average billing for these customers and in lower average power cost for Grayson-Collin members.

**Incentives for the successful management of energy efficiency programs.** This policy option is aimed at providing a financial incentive for managing energy efficiency programs and removing any disincentive a utility might have for investing in and managing programs, such as a negative effect on margins. To eliminate the disincentives to energy efficiency and conservation, the Cooperative proposes increasing over time the customer or demand charge components of the retail rate. As the customer or demand charges are increased, less of the distribution cost recovery is dependent on the sale of energy. As the fixed cost component becomes a larger component of the rate, energy efficiency and conservation efforts have a lesser impact on the Cooperative's margins. In addition, as discussed above, the Cooperative may also consider a lost revenue adjustment mechanism.

**Including the impact of energy efficiency as a goal of retail rate design.** GCEC'S existing rates were designed to balance many considerations. Those considerations included: establishing fair and non-discriminatory rates, minimizing the impact of rates on member-consumers, providing a proper pricing signal through rates, and adopting understandable rates that encourage proper usage of electricity. "Proper usage" included the consideration of energy efficiency. When the Cooperative conducts its next cost of service and rate design, GCEC will review its rate structure in detail to ensure that promoting energy efficiency continues to be included in its rate design balance, with other factors.

**Adopting rate designs that encourage energy efficiency for each customer class.** As a part of the Cooperative's next cost of service study and rate design procedure, the Cooperative will consider adopting standard rate designs or optional rate designs available for each of its customer rate classes that encourage efficiency. The Cooperative may adopt such rates, based on the results of the consideration process.

**Allowing timely recovery of energy efficiency related costs.** Any costs incurred by a given rate class or customer for energy efficiency programs or investments should be recoverable from the same rate class or customer. The Cooperative will continue to carefully consider the costs of implementation and operation of energy efficiency programs in comparison to the benefits that are produced by such programs. During the next cost of service study and rate design process following the implementation of any new costs related to energy efficiency programs, the Cooperative will include the costs of any such investments and will design rates in such a way as to recover costs for the appropriate rate classes. As discussed, the Cooperative may also consider a lost revenue adjustment mechanism, which would make cost recovery more timely than if it is considered at the time of the next rate review.

**Offering home energy audits, demand response and other programs.** The Cooperative proposes continuing its current policy of offering these types of programs.

**Policy No. 2 for Rate Design Modifications to Promote Energy Efficiency Investments<sup>4</sup>**

**GCEC'S retail rates will align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments through**

- a) removing the throughput incentive and other regulatory and management disincentives to energy efficiency by phasing out rate designs that encourage non-efficient energy consumption;**
- b) providing incentives for the successful management of energy efficiency programs by adopting rates over time that more closely align charges such as customer charges, demand charges and energy charges, with how the costs of providing those services are incurred;**

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<sup>4</sup> 16 U.S.C. § 2621(d)(16), 121 Stat. 1665.

- c) including the impact on adoption of energy efficiency as one of the goals of retail rate design by reviewing its rate structure in detail to ensure that promoting energy efficiency continues to be included in its rate design, but balanced with other factors; and considering whether to adopt a lost revenue adjustment mechanism;
- d) considering adopting rate designs that encourage energy efficiency for each customer class at the time of its next cost of service study and rate design procedure;
- e) allowing timely recovery of energy efficiency related costs by allocating those costs to each rate class and recovering those costs through rate designs and by considering adoption of a lost revenue adjustment mechanism or other similar mechanism; and
- f) continuing its existing programs offering home energy audits, demand response programs where appropriate, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about existing Federal and State incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.

### **3. CONSIDERATION OF SMART GRID INVESTMENTS**

Under Second PURPA EISA Standard 16,<sup>5</sup> each State must consider whether to require an electric utility to demonstrate that it has considered an investment in a qualified smart grid system before investing in non-advanced grid technologies. Although the Cooperative cannot direct state action or implement this standard for other utilities, the Cooperative can itself consider investing in a qualified smart grid system before making further investments in non-advanced grid technologies. GCEC's investment decision-making currently assesses investment in smart grid technologies before non-advanced grid technologies. For example, GCEC has completed installation of approximately eighty percent (80%) of automated metering and when it made that investment, the Cooperative conducted

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<sup>5</sup> 16 U.S.C. § 2621(d)(17), 121 Stat. 1791.

careful and exhaustive analysis to determine what technology best met the needs of its members. GCEC is committed to conducting similar analysis as it adds or improves technology, and therefore proposes adopting a modified version of this standard to ensure that it considers total costs, cost effectiveness, improved reliability, security, system performance, and societal benefits in all of these decisions.

Applications of smart grid technology beyond meter reading now being considered across the electric utility industry include remote connection and disconnection of service; remote monitoring of power quality; prepaid billing and metering; automatic outage reporting; ability to implement energy efficiency; time of use, real time pricing and load management rate data collection for all rate classes; preventive maintenance on cooperative equipment; greatly improved load forecasting; and enhanced security and safety. Other possible functions include communicating with customer appliances and equipment. GCEC will consider the advantages and costs of these and other technologies over time.

**Rate recovery.** Like any other plant investment made by the Cooperative, smart grid equipment must be considered as a part of the cost of service and rate design procedure. Plant investment is allocated to each rate class along with associated expenses, included operations, maintenance, depreciation and interest expense. Once those costs have been allocated to each rate class, recovery of those costs will be included in each rate class's individual rate designs. Between the time of any investment in smart grid technology and the cooperative's next rate design process, recovery of such costs would not be included in rate designs.

**Obsolete equipment.** Should GCEC replace existing technology such as meter reading equipment with new smart grid equipment, the Cooperative will make appropriate adjustments to its financial statements, and include these adjustments in its next cost of service study, to recover any stranded costs through its rate designs. The most common example would be an adjustment to the Cooperative's depreciation expense to account for equipment rendered obsolete by new smart grid technology.

### **Policy No. 3 for Smart Grid Investments**

**Before undertaking investments in non-advanced grid technologies, GCEC will consider an investment in a qualified smart grid system based on:**

- a) **total costs;**
- b) **cost-effectiveness;**

- c) **improved reliability;**
- d) **security;**
- e) **system performance; and**
- f) **societal benefit.**

GCEC also will consider recovering from members any capital, operating expenditure, or other costs to the Cooperative relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures for the deployment of the qualified smart grid system. GCEC will consider deploying 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.

#### **4. CONSIDERATION OF SMART GRID INFORMATION**

Under Second PURPA EISA Standard 17,<sup>6</sup> the Cooperative must decide whether to provide its members with direct access, in written or electronic machine-readable form as appropriate, to information from the Cooperative that includes, to the extent practicable:

- a) time-based electricity prices in the wholesale electricity market and time-based electricity retail prices or rates that are available to the purchasers;
- b) the number of electricity units, expressed in kWh, purchased by them (Usage);
- c) updates of information on prices and usage offered on not less than a daily basis, including hourly price and use information, where available, and a day-ahead projection of such price information to the extent available (Intervals and Projections);
- d) written information annually to both members and interested persons 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 (Sources);
- e) access to a member's own information at any time through the Internet and on other means of communication elected by the Cooperative for Smart Grid applications; and
- f) access by other interested persons to information not specific to any purchaser through the Internet. Information specific to any purchaser shall be provided solely to that purchaser.

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<sup>6</sup> 16 U.S.C. § 2621(d)(17), 121 Stat. 1792.

The Cooperative proposes implementing a modified version of the smart grid information standard for the following reasons:

**Time-based electricity prices at wholesale and retail prices.** As a distribution cooperative, GCEC'S cost of power supply capacity and energy is determined, not by cost of service, but by the wholesale rate structure. Since GCEC'S wholesale rate is not time-based, and it does not operate generation resources, the Cooperative's ability to provide such information to members is limited. Should GCEC'S wholesale rate change in the future to provide time based pricing, GCEC will provide additional information to members.

**Usage.** GCEC provides members with an online bill payment option. Monthly kWh usage information is currently included on the monthly electric bill. In addition, the Cooperative provides near-daily meter reading and usage information from its AMI system, upon request by members.

**Intervals and projections.** This information is not provided to the member. Because Rayburn's wholesale rates do not include such information, and GCEC'S power cost is the monthly billing from Rayburn, this information would not send pricing information to end-use customers that would encourage energy efficiency. Should Rayburn revise its wholesale rates to include power cost intervals and projections, GCEC will consider modifying its retail rates to allow end-use customers to take advantages of such intervals and projections, and will provide such information to members.

**Sources.** GCEC provides information showing the blend of generation resources from its power supplier at least annually through its newsletter. The Cooperative does not own generation resources and therefore, it does not control the blend of resources for generation or the level of greenhouse gas emissions from those resources. Should GCEC'S power supplier provide information about the greenhouse gas emissions associated with each type of generation for the purpose of dissemination to the public, the Cooperative may provide this information to its members.

**Internet or smart grid access to Member's own information and aggregate information.** As contemplated in the standards, the Cooperative must continue to weigh the potential costs and advantages of installing technology to provide such information against the potential costs for the

customer. The Cooperative continues to review the advantages of installing such technology, but is not able at the current time to identify a specific method or technology or to identify a date at which this material will be made available.

**Policy No. 4 for Smart Grid Information**

**To the extent practicable, GCEC will provide its members with direct access, in written or electronic machine-readable form as appropriate, to information that will include:**

- a) Pricing Information: Should Rayburn's wholesale rate structure and GCEC'S retail rate structure permit customers to take advantage of time-based electricity prices in the wholesale electricity market, such information will be available to the purchasers.**
- b) Usage Information: The number of electricity units, expressed in kWh, purchased by them will be provided to members through the monthly bill and on line for members taking advantage of the cooperative's on-line payment option.**
- c) Intervals and Projections: Should Rayburn's wholesale rate structure and GCEC'S retail rate structure permit customers to take advantage of updates of information on prices and usage, on not less than a daily basis and including hourly price and use information, where available, and day-ahead projections of such price information to the extent available, will be offered, to the extent practicable and applicable to the member.**
- d) Sources: Should Rayburn have access to and provide GCEC with written information on the sources of the power provided by Rayburn to GCEC, 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, members and other interested persons will be provided, to the extent practicable and applicable, with such information on at least an annual basis, through the Cooperative newsletter.**

- e) **Access:** Should GCEC determine that it is cost effective to do so, members will be able to access, to the extent practicable and applicable to the member, 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 will be granted access to information not specific to any purchaser through the Internet. Information specific to any purchaser will be provided solely to that purchaser.

Cooperative Staff will conduct a public hearing on this proposal on **April 28, 2009**, at 12:00 p.m. Written comments on the proposal should be sent to David McGinnis at P.O. Box 548, Van Alstyne, Texas 75495-0548 no later than April 24, 2009.

These policies are proposed pursuant to Section 2621(d) of the Public Utility Regulatory Policies Act of 1978 and Sections 41.055 and 41.061 of the Public Utility Regulatory Act, TEX. UTIL. CODE ANN. §§ 41.055 and 41.061 (Vernon 1998 & Supp. 2005), which gives the Cooperative exclusive jurisdiction and authority to consider the PURPA EISA standards and implement any policies or tariffs appropriate for the Cooperative members.

**ISSUED IN VAN ALSTYNE, TEXAS ON THE 14<sup>th</sup> DAY OF APRIL 2009  
BY GRAYSON-COLLIN ELECTRIC COOPERATIVE  
STEVE ROBINSON  
SECRETARY-TREASURER**