

PROJECT NO. 2008-TX162-0001

PROCEEDING TO CONSIDER AND DETERMINE	§	
WHETHER TO IMPLEMENT THE FEDERAL	§	
RATEMAKING STANDARDS FOR INTEGRATED	§	
RESOURCE PLANNING, RATE DESIGN	§	TRINITY VALLEY ELECTRIC COOPERATIVE, INC.
MODIFICATIONS TO PROMOTE ENERGY	§	KAUFMAN COUNTY, TEXAS
EFFICIENCY INVESTMENTS, CONSIDERATION OF	§	
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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**FINAL DETERMINATION TO IMPLEMENT  
MODIFIED PURPA EISA RATEMAKING STANDARDS**

Trinity Valley Electric Cooperative, Inc. (TVEC or Cooperative) adopts Cooperative Staff's recommendations to approve four new policies that 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. (See Appendix for Approved Policies). These policies implement modified versions of the four new ratemaking standards federal law required 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), (18) and (19), Public Law No. 110-140, 121 Stat. 1492 (2007) (hereinafter, PURPA EISA).<sup>1</sup>

The Public Utility Regulatory Policies Act, as amended, required TVEC to consider the EISA Standards and determine whether to implement them at the Cooperative. In making this determination, TVEC examined the effect that implementing the standards will have on the members, and examined whether implementing the standards will fulfill one or more of PURPA's three purposes,

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<sup>1</sup> Due to a drafting error, PURPA EISA 2007 contained two standards assigned the number 16 and two standards assigned number 17. In the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, §408, Congress corrected those errors by re-designating PURPA EISA Standard 16, relating to consideration of smart grid investments, as Standard 18, and re-designating PURPA EISA Standard 17, relating to consideration of smart grid information, as Standard 19. The style of this proceeding will not be changed because notice has already been given, but the corrections have been made in the body of this determination.

which are to encourage: a) the conservation of energy supplied by the cooperative; b) the optimal efficiency of cooperative facilities and resources; and c) equitable rates for cooperative members (the PURPA purposes). Under PURPA, the Cooperative had the option of declining to implement one or more of the EISA standards if it determined that implementation would not be in the best interest of the Cooperative's members, even if implementation would fulfill one or more of the PURPA purposes. TVEC has determined that implementing modified versions of the four ratemaking standards is an appropriate course of action for the Cooperative and fulfills one or more of the PURPA purposes.

On September 23, 2008, TVEC's Board of Directors (Board) adopted a resolution initiating this rulemaking project to consider and determine whether to implement the PURPA EISA Standards. The resolution set forth the procedures and a timeline for the project. Cooperative Staff published notice of the project in newspapers of general circulation in the Cooperative's service territory between October 1, and October 19, 2008.<sup>2</sup> Notice was also published in the October 2008 issue of the *TVEC News*, a newsletter mailed to all Cooperative members. TVEC gave the Department of Energy timely notice of the project by mail on October 1, 2008. TVEC also posted notice of the project on its Internet web site beginning October 1, 2008. The notice requested that members and interested persons submit initial written comments on the project by December 5, 2008. TVEC received no comments from any members or interested participants.

On June 16, 2009, TVEC gave notice of Cooperative Staff's draft Proposal for Implementation of the PURPA EISA Ratemaking Standards by posting it on the Cooperative's web site. The Board approved the draft on June 23, 2009, and requested that comments on the proposal be submitted to the Cooperative by July 6, 2009. The Cooperative received no comments.

At 1:00 p.m. on July 9, 2009, TVEC convened a public hearing on the proposal at the Cooperative's Headquarters located at 1800 Highway 243 East in Kaufman, Texas. Notice of the date, time, and location of the hearing was posted on the Cooperative's web site on June 16, 2009. Present at the

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<sup>2</sup> Notice of the proceeding was published in the Kaufman Herald on October 16; the Terrell Tribune on October 13; the Chandler Brownsboro Statesman on October 16; the Van Zandt News on October 19; The Monitor on October 19; the Forney messenger on October 16; the Athens Daily Review & Cedar Creek Pilot on October 19; and the Palestine Herald Press on October 13.

hearing were the Staff members of the Cooperative's Project Team and the Procedural Officer. No TVEC members or other interested persons appeared at the hearing to comment on the proposal.

For the reasons discussed below, the board approves the modified versions of the PURPA EISA ratemaking standards for implementation by Staff.

**A. PURPA EISA STANDARD 16 - INTEGRATED RESOURCE PLANNING**

Under PURPA EISA Standard 16,<sup>3</sup> the Cooperative was required to decide whether to: a) integrate energy efficiency resources into its integrated resource planning, and b) 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 demand resources to meet current and future load requirements within the context of the Cooperative's policy goals and objectives.<sup>4</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.

Regarding the integration of energy efficiency resources into the Cooperative's integrated resource planning, TVEC is a distribution cooperative and neither owns nor operates any generation facilities. Instead, the Cooperative purchases 100% of its power needs from Rayburn Country Electric Cooperative (Rayburn). Therefore, TVEC does not directly conduct resource planning. By contract, Rayburn is responsible for providing TVEC's resource needs and for performing all related planning. Rayburn is a generation and transmission cooperative that serves TVEC and four other distribution

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<sup>3</sup> The Standard 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. 16 U.S.C. § 2621(d)(16), 121 Stat. 1665.

<sup>4</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.

cooperatives. Rayburn's resource planning is essentially the sum of the resource needs of each of its member cooperatives.

The Cooperative participates in the integrated resource planning conducted by Rayburn. In 2007, Rayburn commissioned a power requirement study to determine current and future capacity and energy needs. The study examined all aspects of projected future need, including the regional economy, customer growth, business cycles, and other relevant information. TVEC's current and proposed energy efficiency activities were included in Rayburn's study and incorporated into its resource planning, which helped moderate Rayburn's future resource requirements. Factoring those activities into the study has the effect of reducing TVEC's future energy and capacity requirements. When combined with similar studies conducted by Rayburn, Rayburn could see an over-all reduction in the rate of growth in the future capacity or energy requirement needs of the cooperatives it serves

Regarding the implementation of policies that establish cost-effective energy efficiency as a priority resource, TVEC does not currently have specific energy efficiency objectives. However, the Cooperative has direct assistance and informational programs specifically designed to improve energy efficiency and conservation. TVEC currently offers or participates in the following direct assistance programs:

1. Offering home energy audits at no cost to all Cooperative members, which include checking insulation levels, water heater settings, thermostat settings, double and single pane windows, weather stripping around doors and windows, heat pump or electric resistance heating equipment, radiant barriers, major appliances, freezers and refrigerators in unconditioned spaces, and number of kilowatt hours (kwh) on member's bill;
2. Transitioning outdoor rental lighting to higher efficiency fixtures;
3. Installing high efficiency lighting and HVAC equipment in Cooperative-owned facilities as they are constructed or replaced;
4. Providing net metering capabilities to allow members to develop small renewable resources;
5. Participating with Rayburn in the National Rural Electric Cooperative Association (NRECA), and NRECA's research arm, Cooperative Research Network (CRN), which have a wide variety of energy efficiency and demand response programs, information management and telecommunications programs, and renewable and distributed energy programs;

6. Participating with Rayburn in the National Renewables Cooperative Organization (NRCO), which facilitates the development and deployment of renewable energy resources; and
7. Instituting a two-year work plan for electrical distribution projects which includes voltage conversion projects and reconductoring projects that will reduce line losses and increase operational efficiency. TVEC installs higher efficiency distribution transformers on its system as replacement is required.

TVEC provides educational materials, customer feed-back, and information request options through an extensive web interface, such as:

1. A web link to "Our Energy, Our Future" web site sponsored by NRECA, which supports and promotes information concerning energy conservation issues; and
2. Information about appliance usage and energy savings on its "Energy Management" web page.

Energy efficiency information is also provided directly to members and published in the Cooperative's bi-monthly member publications. TVEC further addresses energy efficiency in trainings, handouts, and materials sent to local groups and schools.

TVEC members benefit from these programs in three ways. First, although Rayburn relies on market-based power contracts that mitigate the cost-saving impact of energy efficiency programs, as TVEC's energy efficiency programs mitigate Rayburn's need for future increased capacity in the long term, TVEC members may see the rate of increase in future cost of power moderate in relation to additional capacity. Second, as TVEC continues to promote energy efficiency, current total and average power costs that TVEC members pay are reduced. Third, TVEC members will benefit from any accompanying environmental improvements.

Currently, TVEC's Staff provides these programs to Cooperative members, and the program costs were included in TVEC's expenses when the most recent rates were developed. Therefore, program costs are being recovered from members under existing rates. It should be noted, however, that any resulting decrease in the cost of purchased power or the average cost per kWh of purchased power, does not increase the Cooperative's margins. The cost of purchased power is passed directly to members through TVEC's power cost recovery factor (PCRF). Therefore, the cost of any future energy

efficiency programs adopted by the Cooperative will not be recovered from members through rates until the Cooperative again revises its retail rate structure.

Rayburn does not have any specific energy efficiency promotional programs, such as load control or management programs. Rayburn does, however, encourage TVEC to adopt energy efficiency programs. Rayburn will work with TVEC in the future to determine how to incorporate energy efficiency and load management programs.

In addition, Rayburn provides a pricing signal to TVEC to encourage the Cooperative to reduce capacity requirements. The pricing signal indicates how the Cooperative can benefit financially through increased energy efficiency. The wholesale rate TVEC pays Rayburn includes a capacity and an energy charge. As TVEC improves its energy efficiency, both its total purchased power cost and its average purchased power cost decline, which—though it will not improve TVEC's margins—will lower the average retail power cost paid by members as lower power costs are passed to members through TVEC's power cost recovery factor (PCRF).

Including TVEC's energy efficiency programs in Rayburn's resource planning encourages the conservation of energy supplied by the Cooperative and the optimal use of the Cooperative's facilities and resources, which are two of the PURPA purposes. Implementing a modified version of the integrated resource planning standard alongside TVEC's existing efficiency programs will further encourage those two purposes. For the reasons discussed above, TVEC approves for implementation a modified version of PURPA EISA Standard 16 through the following policy:

**Policy 401-1. Integrated Resource Planning**

Trinity Valley Electric Cooperative, Inc. will cooperate with its power supplier so that its power supplier can integrate energy efficiency resources into its resource plans, and will adopt policies establishing cost-effective energy efficiency as a priority resource.

TVEC has procedures in place to implement this policy. The Cooperative will continue to work with its power supplier so that Rayburn can integrate the impact of energy efficiency initiatives into its resource planning.

**B. PURPA EISA STANDARD 17 – RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS**

Under PURPA EISA Standard 17,<sup>5</sup> the Cooperative was required to 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 considered six policy options to:

1. remove the throughput incentive and other regulatory and management disincentives to energy efficiency;
2. provide utility incentives for the successful management of energy efficiency programs;
3. include the impact of adoption of energy efficiency as one of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;
4. adopt rate designs that encourage energy efficiency for each customer class;
5. allow timely recovery of energy efficiency related costs; and
6. offer home energy audits, offer demand response programs, publicize the financial and environmental benefits associated with making home energy efficiency improvements, and educate homeowners about all existing federal and state incentives, including the availability of low-cost loans that make energy efficiency improvements more affordable.

Regarding the alignment of utility incentives with the delivery of cost-effective energy efficiency, for many years the primary design objective in the Cooperative's tariffs has been the recovery of the costs of providing service to each rate class. Rates have generally been designed to reflect the

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<sup>5</sup> The Standard 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.  
16 U.S.C. § 2621(d)(17), 121 Stat. 1666.

wholesale demand and energy costs as well as to recover the distribution demand and customer-related costs necessary to provide service. The design of electric rates based on the cost of providing service normally promotes the use of energy in an efficient manner since rates tend to be in line with how costs are incurred. For example, the Large Power rate is a demand design that provides a price signal which promotes the improvement of load factor. Improved load factor leads to a more efficient use of energy resources.

Regarding the establishment of rates that promote energy efficiency investments, certain provisions of the Cooperative's tariffs do not promote energy efficiency initiatives and investments. TVEC's residential customer class represents the majority of the load on the Cooperative's system. Effective energy efficiency programs would have to include this customer class. Only a portion 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. This creates a disincentive with respect to the Cooperative's promotion and participation in energy efficiency or conservation programs, which by their nature are intended to reduce the amount of energy sold. As energy efficiency and conservation efforts reduce the number of kWh sold, TVEC's ability to recover costs is reduced and, its margins are then also reduced. A good example of this result is the distribution of Compact Florescent Light bulbs (CFLs).

Replacing standard incandescent light bulbs with CFLs directly reduces the amount of energy consumed. When consumption goes down, the Cooperative's purchased power energy costs are reduced. In its most recent cost of service study, the Cooperative's energy-related power costs (excluding purchased power demand costs) averaged approximately \$0.065613 per kWh sold. But CFLs do nothing to reduce the Cooperative's costs of providing distribution service. Therefore, the only cost reduction associated with the promotion of CFLs is the reduction in energy-related power costs. CFLs result in a loss of revenue because less kWhs are sold. The loss of revenue is equal to the energy charge of \$0.104848 in the residential rate per kWh sold. The decrease in revenue is greater than the decrease in cost; therefore the margins of the Cooperative go down.

Notwithstanding this negative impact on the Cooperative's margins, CFLs are promoted because they reduce the amount of energy consumed, and therefore reduce the amount of fossil fuels needed to

generate power. An energy efficiency benefit is realized at the wholesale generation level even though there is a cost issue at the distribution level. To eliminate the disincentives to energy efficiency and conservation, the main change TVEC could make to its rate structure would be to increase the customer charge or the demand charge component of its retail rate. As the customer or demand charge is increased, less of the distribution cost recovery is dependent on the sale of energy. This would have the effect of reducing the disincentive of promoting energy efficiency. As the fixed cost component becomes a larger component of the rate, energy efficiency and conservation efforts would have a smaller impact on the Cooperative's margins.

Regarding Policy Option 1, a throughput incentive is another customer disincentive to energy efficiency and conservation. An example of a throughput incentive would be a declining block energy rate, which provides a lower energy charge for consumption over a certain level. A typical declining block rate design might have the first 1,000 kWh at a rate of \$0.10 per kWh and all excess kWh at \$0.075 per kWh. The lower cost over 1,000 kWh provides an incentive for the consumer to use more energy, which is counter to the energy efficiency and conservation initiative. In its most recent cost of service study, TVEC eliminated its declining block rates. TVEC has a Commercial Three Phase rate with energy blocks, but those blocks are designed based on kWh per kW. This is known as an hours-use rate design and is intended to be similar to a demand rate sending an efficiency pricing signal as opposed to a declining block rate.

Regarding Policy Option 2, the Cooperative does not currently provide utility incentives for the successful management of energy efficiency programs. TVEC will continue to review possible incentives and weigh the potential advantages of implementing energy efficiency programs against the cost of the program and the impact on its members.

Regarding Policy Option 3, the primary impact of adopting energy efficiency programs is in the structure of the rate design itself. Promoting energy efficiency requires that the fixed component of the rates be increased and any throughput incentives be removed. Adopting energy efficiency as a priority requires that a high degree of attention be placed on rate design to ensure that the Cooperative's margins are not adversely affected.

Regarding Policy Option 4, TVEC believes that its existing rate designs provide an appropriate pricing signal to each rate class to promote energy efficiency. The Board considered the promotion of energy efficiency to be a key factor in the Cooperative's most recent rate design process, and the existing rates were designed accordingly. For example, as mentioned earlier, TVEC eliminated block rates, which had the impact of promoting increased energy sales. TVEC will continue to include this type of consideration as a part of each future rate analysis and cost of service study.

Regarding Policy Option 5, any costs incurred for energy efficiency programs or investments should be recoverable from the appropriate rate class. The Cooperative will carefully consider the costs of implementing and operating energy efficiency programs in comparison to the benefits that are produced by such programs before recovering the costs from the Cooperative's rate classes.

Regarding Policy Option 6, TVEC has several programs that promote energy efficiency, such as providing home energy audits to its members. TVEC will continue to consider new programs over time as part of their on-going energy efficiency efforts, and TVEC will analyze all costs and benefits when considering any additional programs.

Adopting a modified version of this standard will promote the conservation of energy by removing disincentives to energy efficiency in the rate design. Removing disincentives also encourages the optimal efficiency of the Cooperative's facilities and resources. Recovering energy efficiency costs from the appropriate members and increasing the customer component of the retail rates will promote equity in the rate design.

For the reasons discussed above, TVEC approves for implementation a modified version of PURPA EISA Standard 17 through the following policy:

**Policy 401-2. Rate Design Modifications to Promote Energy Efficiency Investments**

Trinity Valley Electric Cooperative, Inc.'s retail rates will, in general, align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments.

To accomplish that general approach, TVEC will consider:

- (i) removing any throughput incentive and other regulatory and management disincentives to energy efficiency;
- (ii) providing incentives for the successful management of energy efficiency programs;
- (iii) 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;
- (iv) adopting rate designs that encourage energy efficiency for each customer class;
- (v) allowing timely recovery of energy efficiency related costs; and
- (vi) continuing to offer home energy audits, participating in any available 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.

The Cooperative has existing procedures in place to implement this standard. Its current rates were designed using a process that carefully allocated costs to the rate classes and included the importance of providing a proper pricing signal and promoting energy efficiency along with other key considerations. TVEC will continue to consider each item included in this standard as a part of any future cost of service study and rate design procedure.

### **C. PURPA EISA STANDARD 18 – CONSIDERATION OF SMART GRID INVESTMENTS STANDARD**

Under PURPA EISA Standard 18,<sup>6</sup> each State was required to consider whether to require a regulated electric utility to demonstrate that it has considered an investment in a qualified smart grid

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<sup>6</sup> This Standard states: (18) 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. 16 U.S.C. § 2621(d)(18), 121 Stat. 1791.

system before investing in non-advanced grid technologies. Although this standard is not specifically directed to non-regulated utilities, and TVEC cannot direct state action or implement this standard for other utilities, the Cooperative nonetheless decided to consider similar investment strategies because the factors in the standard are prudent and applicable to its business.

The Smart Grid Investments Standard identifies factors that TVEC considers prudent and relevant to grid investment decisions. TVEC currently considers factors such as total costs, cost-effectiveness, improved reliability, security, system performance, and societal benefit when determining whether to invest in approved smart grid technologies as opposed to making investments in non-advanced grid technologies. TVEC has Automatic Metering Infrastructure (AMI) for meter reading installed on approximately 10% its system. The Cooperative AMI system currently includes has 5% TS1 technology (one-way communication) and 5% Cannon technology (two-way communications).

TVEC is carefully considering the advantages of smart technology as opposed to nonadvanced technology in selecting which devices to install. Consistent with this standard, TVEC will consider additional smart technology applications for its AMI, along with other smart technology as it endeavors to meet its members' needs. Implementing the overall goals of this standard reinforces the Cooperative's support for smart grid technology while recognizing that such investments must be appropriate for TVEC and its members. TVEC, therefore, approves for implementation a modified version of PURPA EISA Standard 18 through the following policy:

**Policy 401-3. Smart Grid Investments**

Prior to undertaking investments in non-advanced grid technologies, Trinity Valley Electric Cooperative, Inc. (TVEC) will generally consider 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.

**Rate Recovery.** TVEC will consider the factors to recover from members any capital, operating expenditure, or other costs of TVEC relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of TVEC for the deployment of the qualified smart grid system.

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**Obsolete Equipment.** TVEC 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.

The Cooperative has existing procedures in place to implement this standard. TVEC will continue to consider the advantages and costs associated with smart grid technology before making investments and should deploy smart grid technology where appropriate.

#### **D. PURPA EISA STANDARD 19 – CONSIDERATION OF SMART GRID INFORMATION STANDARD**

Under PURPA EISA Standard 19,<sup>7</sup> the Cooperative was required to 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:

1. time-based electricity prices in the wholesale electricity market and time-based electricity retail prices or rates that are available to the purchasers;
2. the number of electricity units, expressed in kWh, purchased by them (Usage);
3. 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);

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<sup>7</sup> The Standard states: (19) 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. 16 U.S.C. § 2621(d)(19), 121 Stat. 1792.

4. 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); and
5. 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;
6. 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.

TVEC provides its members with the following information:

- Monthly kWh usage data and a 13 month usage graph for each metered location printed on the customer's monthly bill.
- In 2008, TVEC provided its members with information about the blend of generation resources from its power supplier. This information is available upon request.

Implementing the Smart Grid Information Standard would require TVEC to make available to its members information concerning energy rates, members' energy usage, sources of power, and other energy-related information. This information would be readily available to members to enable them to evaluate energy conservation practices.

TVEC faces challenges in providing this type of information to its members. As a distribution cooperative, TVEC's cost of power supply capacity and energy is determined, not by cost of service, but indirectly through the wholesale rate structure. The Cooperative's ability to provide the information identified in this standard is, therefore, limited by its ability to readily obtain such data from its power supplier or the extent to which the wholesale power rate provides correct pricing information. Since Rayburn's wholesale rate is not real-time based, the Cooperative's ability to provide such information to members is limited. As Rayburn provides this information to TVEC in the future or structures its wholesale rate to provide such a pricing signal, additional information can be provided to members. Should Rayburn provide TVEC with information about the greenhouse gas emissions associated with each type of generation for the purpose of dissemination to the public, the Cooperative will provide this information to its members.

Technology exists to permit TVEC to provide its members with the information. But the Cooperative must weigh the potential advantages of such technology against the potential costs to the members. Moving to more advanced technology, such as home digital displays or computer interface access, adds additional costs. In addition to personnel and installation costs, operation and maintenance upkeep, and other costs, the installation of pre-paid metering or other such technologies is prohibitively expensive for a cooperative. Nevertheless, as discussed in other sections, TVEC will continue to review the advantages of installing such technology.

A modified version of the Smart Grid Information Standard should be implemented because residential members are currently billed on a flat energy rate. Since the energy charges for residential customers do not vary by usage, giving the member hourly information on pricing will not assist them in making conservation decisions. Should Rayburn move to wholesale rates that reflect more discrete daily information, TVEC could in turn develop retail rates that would also be time-based. Then, TVEC would provide information to members to allow them to take full and effective advantage of any retail rates so developed. Until time-based wholesale rates are available, providing time-based information to members would not be useful. Moreover, the schedule for deploying technology will dictate the availability of the information. As TVEC continues to deploy technology which collects information that would assist the members' conservation efforts, and as the Cooperative develops the interface technology to allow members to access that data, such information will be made available to extent practicable.

For the reasons discussed above, TVEC approves for implementation a modified version of PURPA EISA Standard 19 through the following policy:

**Policy 401-4. Smart Grid Information**

Trinity Valley Electric Cooperative, Inc. will provide to its members direct access, in written or electronic machine-readable form as appropriate, to the following information to the extent practicable and applicable to the member:

**Prices.** Members and other interested persons will be provided, to the extent practicable and applicable, with information on time-based electricity prices in the wholesale electricity market, and time-based electricity retail prices or rates that are available to the purchasers.

**Usage.** Members will be provided, to the extent practicable and applicable to the member, with the number of electricity units, expressed in kWh, purchased by them.

**Intervals and Projections.** Updates of information on prices and usage will be offered, to the extent practicable and applicable to the member, on not less than a daily basis; will include hourly price and use information, where available; and will include a day-ahead projection of such price information to the extent available.

**Sources.** Members and other interested persons will be provided, to the extent practicable and applicable, 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.

**Access.** 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 able to access information not specific to any purchaser through the Internet. Information specific to any purchaser will be provided solely to that purchaser.

To implement this standard, TVEC will continue to provide existing information to members. As additional information becomes available from the Cooperative's power supplier—that is, as wholesale and retail rates are developed that would allow members to take advantage of time-based rates, and when such information can be provided on a cost-effective basis—TVEC will provide such information to members so they may take full advantage of those rates.

## CONCLUSION

TVEC has exclusive jurisdiction and authority to approve these policies 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). The Board of the Cooperative hereby approves Policies No. 401-1, 401-2, 401-3, and 401-4, and directs Staff to implement the policies as part of the Cooperative's 400 Series policies relating to Rates, Service Rules and Regulations, Pole Attachments, Energy Conservation, and Procurement of Materials and Equipment.

ISSUED IN KAUFMAN, TEXAS ON THE 28<sup>th</sup> DAY OF JULY, 2009

BY TRINITY VALLEY ELECTRIC COOPERATIVE, INC.

CAROLYN MINOR

SECRETARY-TREASURER

**400 SERIES POLICIES APPROVED IN  
PROJECT NO. 2008-TX162-0001  
(July 28, 2009)**

**Policy 401-1. Integrated Resource Planning**

Trinity Valley Electric Cooperative, Inc. will cooperate with its power supplier so that its power supplier can integrate energy efficiency resources into its resource plans, and will adopt policies establishing cost-effective energy efficiency as a priority resource.

**Policy 401-2. Rate Design Modifications to Promote Energy Efficiency Investments**

Trinity Valley Electric Cooperative, Inc.'s retail rates will, in general, align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments.

To accomplish that general approach, TVEC will consider:

- (i) removing any throughput incentive and other regulatory and management disincentives to energy efficiency;
- (ii) providing incentives for the successful management of energy efficiency programs;
- (iii) 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;
- (iv) adopting rate designs that encourage energy efficiency for each customer class;
- (v) allowing timely recovery of energy efficiency related costs; and
- (vi) continuing to offer home energy audits, participating in any available 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.

**Policy 401-3. Smart Grid Investments**

Prior to undertaking investments in non-advanced grid technologies, Trinity Valley Electric Cooperative, Inc. (TVEC) will generally consider 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.

**Rate Recovery.** TVEC will consider the factors to recover from members any capital, operating expenditure, or other costs of TVEC relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of TVEC for the deployment of the qualified smart grid system.

**Obsolete Equipment.** TVEC 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.

#### **Policy 401-4. Smart Grid Information**

Trinity Valley Electric Cooperative, Inc. will provide to its members direct access, in written or electronic machine-readable form as appropriate, to the following information to the extent practicable and applicable to the member:

**Prices.** Members and other interested persons will be provided, to the extent practicable and applicable, with information on time-based electricity prices in the wholesale electricity market, and time-based electricity retail prices or rates that are available to the purchasers.

**Usage.** Members will be provided, to the extent practicable and applicable to the member, with the number of electricity units, expressed in kWh, purchased by them.

**Intervals and Projections.** Updates of information on prices and usage will be offered, to the extent practicable and applicable to the member, on not less than a daily basis; will include hourly price and use information, where available; and will include a day-ahead projection of such price information to the extent available.

**Sources.** Members and other interested persons will be provided, to the extent practicable and applicable, 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.

**Access.** 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 able to access information not specific to any purchaser through the Internet. Information specific to any purchaser will be provided solely to that purchaser.