

PROJECT NO. 2008-TX101-0001

PROCEEDING TO CONSIDER AND
DETERMINE WHETHER TO IMPLEMENT THE
FEDERAL RATEMAKING STANDARDS FOR
INTEGRATED RESOURCE PLANNING, RATE
DESIGN MODIFICATIONS TO PROMOTE
ENERGY 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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TRI-COUNTY ELECTRIC COOPERATIVE, INC.

PARKER COUNTY, TEXAS

(STAFF RECOMMENDATION)
**FINAL DETERMINATION FOR CONSIDERATION AT MAY 19, 2009 BOARD MEETING
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**

Tri-County Electric Cooperative, Inc. (Tri-County or Cooperative) adopts 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 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). These policies are adopted under Project No. 2008-TX101-0001.

Jurisdiction

Tri-County Electric Cooperative, Inc. is a non-profit rural electric distribution cooperative located in Parker County, Texas, which provides retail electric service in the Texas counties of Archer, Baylor, Denton, Foard, Haskell, Hood, Jack, King, Knox,

Palo Pinto, Parker, Stonewall, Tarrant, Throckmorton, Wilbarger and Wise. The Cooperative is governed by an elected Board of Directors (Board). Each consumer who receives electric service from Tri-County is a member-owner of the Cooperative and has the right to vote in elections to select directors for Tri-County's Board. Tri-County's annual retail sales exceeded 500 million kilowatt hours (kWh) in 2007. No state regulatory authority sets Tri-County's retail electric rates. Tri-County's Board sets the retail rates its member-owners pay for retail electric service.

Notice and Procedural History

Notice of this Proceeding was published in the November issue of Tri-County's newsletter, posted on the Cooperative's web site and published in one or more newspapers of general circulation in the Cooperative's service territory. Notice was also provided to Tri-County's power supplier, Brazos Electric Power Cooperative, Inc., and to the Secretary of Energy.

On April 14, 2009, Cooperative Staff posted the Proposed Determination on its web site and submitted the proposal to the Cooperative Board for consideration. On April 21, 2009, the Tri-County Board voted and approved the proposal for publication on its web site with notice of hearing and opportunity to comment on the proposed policies. A public hearing on the policies was held at the Azle Public Library on Monday, May 4, 2009 at 5:30 p.m. Tri-County received no public comments on the proposed policies from any interested participants prior to the hearing, nor were any interested participants present at the hearing.

1. INTEGRATED RESOURCE PLANNING

Under First PURPA EISA Standard 16,¹ 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 demand resources

¹ 16 U.S.C. § 2621(d)(16), 121 Stat. 1665.

to meet current and future load requirements within the context of the Cooperative's policy goals and objectives.² The term "energy efficiency" refers to efforts that allow consumers to use less energy without changing their behavior or to 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, Brazos Electric Power Cooperative, Inc. (Brazos). Brazos conducts a load forecast (previously called a Power Requirements Study) periodically to determine current and future capacity and energy needs. Brazos and its member cooperatives adhere to the load forecast work plan, approved by the Brazos Board and the Rural Utilities Service prior to the start of each new load forecast. An approved load forecast work plan establishes the process for the preparation and maintenance of the member system's retail customer data and economic statistics, the forecasting methodology, the evaluation of demand-side and supply-side resources, and the coordination between the power supplier and its member cooperatives for the development of a load forecast that will meet the power requirement needs of Tri-County.

Brazos' study already integrates energy efficiency resources into the resource planning process. The study is a joint effort between Tri-County and Brazos and is currently in progress with a completion date of early 2009. It will be reviewed periodically for any significant changes and will include the Cooperative's energy efficiency activities. Those activities include the following direct assistance and educational programs:

² 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 distinct 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.

- a) home energy audits to all Cooperative members at no cost;
- b) the transitioning of the Cooperative's outdoor rental lighting to higher efficiency fixtures;
- c) a commitment to the installation of high efficiency lighting and HVAC equipment in its own facilities as they are constructed or replaced;
- d) offering rebates to members installing high efficiency water heaters based on several criteria including an Energy Rating Factor of .90 or higher;
- e) 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 improve the Cooperative's energy efficiency by reducing the amount of purchased energy. Those steps include designing the Cooperative's 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. Tri-County's two-year work plan for 2009-2010 includes four voltage conversion projects that will reduce line losses and increase energy efficiency;
- f) 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);
- g) supporting the Energy Star appliance and building program;
- h) providing information about Energy Savings Tips for different cost ranges (zero, low, medium and high) on the Cooperative's web site.

In addition, Brazos has implemented a Load Curtailment Program in which Tri-County participates. This program permits qualifying Tri-County members to sign up to make available load shedding capacity on thirty minutes notice. The member receives a payment from Brazos through Tri-County based upon the member's curtailment performance at the time of the notice. Tri-County has been involved in the program for one year and will continue to make this program available to its members who qualify. Brazos includes these curtailable loads in its resource planning.

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 Tri-County's current practices meet the federal standards for integrated resource planning, the Cooperative adopts the following modified standard:

Policy No. 1 for Integrated Resource Planning

Tri-County Electric Cooperative, Inc. will incorporate energy efficiency and conservation programs into the programs it offers its members, as well as load control or management programs offered by its power supplier. Tri-County will also continue to provide information to Brazos so that Brazos can include Tri-County'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 17,³ 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.

The Cooperative's existing tariffs for the large power class promote energy efficiency through a demand 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

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

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 will implement 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. Tri-County does not have any declining block rates. During the next cost of service study and rate design consideration, the Cooperative may consider a lost revenue adjustment mechanism, similar to the Cooperative's existing power cost recovery mechanism, which would be designed to recover from members any lost revenue from energy efficiency programs.

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 will consider, as a part of each cost of service study and rate design process, 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. Tri-County'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, Tri-County will review its rate structure in detail to ensure that promoting energy efficiency continues to be included in its rate design balanced 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 not currently offered such a rate design option, 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 demand response and other programs. The Cooperative will continue its current policy of offering these types of programs.

Policy No. 2 for Rate Design Modifications to Promote Energy Efficiency Investments⁴

Tri-County'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 such as declining block rates 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;
- 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

⁴16 U.S.C. § 2621(d)(16), 121 Stat. 1665.

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 16,⁵ 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. For example, Tri-County has recently completed the deployment of solid state metering with Itron radio transmitters. These low-power radio transmitters are handheld and truck mounted meter reading devices that remotely receive radio transmissions from the meter, up to one quarter of a mile from the meter. The Itron transmitter significantly increases the efficiency of the meter-reading process by increasing the number of meters that can be read daily and by lowering the number of employees needed to read the meters. Automated transmission of the meter readings also significantly reduces the number of reading mistakes, resulting in increased customer satisfaction and fewer complaints. This option was selected over meter reading technologies that utilize a power line carrier to transmit the readings from the meter to the main office, such as TWACS and Turtles, based on lower up-front cost and better return on investment.

In addition, Tri-County uses a Supervisory Control and Data Acquisition ("SCADA") system to monitor feeder devices at the substation on a real-time basis. The SCADA system, in cooperation with Brazos, not only monitors transmission and substations, but is extended to in-the-field devices, such as critical reclosers and

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

switches. This system has contributed to an improved response time during large outages. It has also enabled the Cooperative to take preemptive measures to reduce or eliminate future outage or capacity issues. During outages, Tri-County uses the remote control capability to reduce outage times over manually operating the device in the substation. The SCADA system will be upgraded in 2009, which will include expansion of the in-the-field or down-line capabilities. The upgrade will increase the speed of the computing device and provide more communication capability to reach those devices not located at the substation.

Tri-County continually evaluates the development of distribution products and facilities as it develops its two-year work plan. As a part of this process, the rate of return, the best interests of the membership, economic impact and other qualitative considerations of the smart grid technology versus non-advanced grid technology are weighed and evaluated prior to considering any investment.

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. Tri-County 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 Tri-County 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, Tri-County 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.**

Tri-County 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 capital expenditures for the deployment of the qualified smart grid system. Tri-County 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 17,⁶ 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;
- f) access by other interested persons to information not specific to any purchaser through the Internet. Information specific to any purchaser will be provided solely to that purchaser.

The Cooperative will implement a modified version of the smart grid standard for the following reasons:

Time-based electricity prices at wholesale and retail prices. As a distribution cooperative, Tri-County's cost of power supply capacity and energy is determined, not by cost of service, but by the wholesale rate structure. Since Tri-County's wholesale rate

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

is not time-based, and it does not operate generation resources, its ability to provide such information to members is limited. Should Tri-County's wholesale rate change in the future to provide time based pricing, Tri-County will provide additional information to members.

Usage. Tri-county provides members with monthly price and kWh usage. In addition, monthly KW demand is provided for those rates that measure kW demand. There is also annual kWh usage data for each metered location printed on the customer's monthly billing. This information is not only mailed to the member but also available from its Web site.

Intervals and projections. This information is not provided to the member. Because Brazos' wholesale rates do not include such information and Tri-County's power cost is the monthly billing from Brazos, this information would not send pricing information to end-use customers that would encourage energy efficiency. Should Brazos revise its wholesale rates to include power cost intervals and projections, Tri-County 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. The Cooperative does not own generation resources. Should Tri-County's power supplier provide information about annual generation resources and 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. Implementing internet access for members and/or non-members will require additional study related to computer equipment and programming, information security, staffing availability and other issues. 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, Tri-County 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 Brazos's wholesale rate structure and Tri-County'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 Brazos's wholesale rate structure and Tri-County'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 Brazos provide Tri-County with written information on the sources of the power provided by Brazos to Tri-County, 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 Tri-County 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.

These policies are adopted 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 AZLE, TEXAS ON THE ____ DAY OF _____ 2009
BY TRI-COUNTY ELECTRIC COOPERATIVE
TODD SMITH
SECRETARY-TREASURER