

DENTON COUNTY ELECTRIC COOPERATIVE, INC. D/B/A COSERV ELECTRIC

COOPERATIVE STAFF'S REPORT  
IN THE MATTER OF THE CONSIDERATION OF THE PURPA STANDARDS  
IN THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

This report has been developed by C. H. Guernsey & Company on behalf of the executive management staff of Denton County Electric Cooperative, Inc., d/b/a CoServ Electric ("COSERV") for the following purposes:

- Provide background and summary of the federal Public Utility Regulatory Policies Act (PURPA) standards
- Provide a discussion and explanation of the new PURPA standards found in the Energy Independence and Security Act of 2007
- Discussion in support of the cooperative staff's position with regard to the possible adoption of the new PURPA standards

The report is in a question and answer format for readability.

- 1 Q. Please provide the background and summary of the original PURPA standards.
- 2 A. Title 1 of PURPA (1978) originally contained six "standards" outlining federal policy  
3 related to rate determination and design. Those standards were: (1) cost of service, (2)  
4 declining block rates, (3) time-of-day rates, (4) seasonal rates, (5) interruptible rates and  
5 (6) load management rates. The Energy Policy Act of 1992 added four more standards to  
6 be considered. Those standards were (7) integrated resource planning, (8) investments in  
7 conservation and demand management, (9) energy efficiency investment in power  
8 generation and supply and (10) effect of wholesale power purchases on utility cost of  
9 capital; effect of leveraged capital structures on the reliability of wholesale power sellers;  
10 and assurance of adequate power supplies. The Energy Policy Act (EPAAct) of 2005  
11 added five more standards to be considered. Those standards were (11) Net Metering;

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1 (12) Fuel Diversity; (13) Fossil Fuel Generation Efficiency; (14) Smart Metering; and  
2 (15) Interconnection (Standards for Distributed Generation Resources).

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4 PURPA required that “each state regulatory authority (with respect to each electric utility  
5 for which it has ratemaking authority) and each non-regulated electric utility consider  
6 each standard” and then “make a determination concerning whether or not it is  
7 appropriate to implement such standard”. It is important to note that while PURPA  
8 required *consideration* of the standards, they were not required to be adopted. PURPA  
9 states that the consideration requirements under PURPA Title 1 apply only to state  
10 commissions and non-regulated utilities with annual retail sales of 500 million kWh or  
11 more during the year two years prior to the year when the standards are being considered.

12 Q. What were the original stated purposes of the PURPA Title 1 standards?

13 A. The three stated purposes of the PURPA Title 1 standards are to encourage (1) the  
14 conservation of energy supplied by electric utilities, (2) the optimal efficiency of electric  
15 utility facilities and resources, and (3) equitable rates for electric consumers. The  
16 consideration of the standards is intended to focus on how the implementation would  
17 affect each utility and its consumers in terms of the three Title 1 purposes.

18 Q. Please describe the procedural requirements for consideration and determination.

19 A. The process of consideration included in PURPA requires an evidentiary hearing which  
20 must adhere to the following: (1) be open to the public; (2) include notice to participants  
21 and an opportunity for participants to present direct and rebuttal evidence and to cross-  
22 examine witnesses; (3) include a written decision, based on the evidence in the written  
23 record of the proceeding; and (4) be subject to judicial review.

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1 Q. Does the consideration and determination process utilized by COSERV satisfy these  
2 requirements?

3 A. Yes.

4 Q. What is the required timetable for consideration of the new standards?

5 A. The timetable for completion of the consideration process is not the same for all of the  
6 four standards. For two new standards (17 and 19), the state commissions and utilities  
7 have until December 19, 2008 to begin consideration and until December 19, 2009 to  
8 complete the process and make a determination whether or not to adopt the new  
9 standards. With the passing of American Recovery and Reinvestment Act of 2009  
10 (Stimulus Bill) the other two new standards (16 and 18) have a similar deadline for  
11 consideration or completion. COSERV's timetable will result in consideration and a final  
12 determination of all four standards by December 19, 2009. The Stimulus Bill also  
13 eliminated the duplicate numbering of the standards which is also reflected in this  
14 analysis.

15 Q. What exactly does it mean to consider the new standards?

16 A. Consideration means to conduct a review of the standards and examine the consequences  
17 that adopting or not adopting those standards would have on the cooperative. There are  
18 three stated purposes of the Title 1 PURPA standards: (1) the conservation of energy  
19 supplied by electric utilities, (2) optimal efficiency of electric utility facilities and  
20 resources and (3) equitable rates for electric consumers. The consideration process should  
21 include how each cooperative and its consumers are affected by the implementation of  
22 the standards in terms of these purposes. Other circumstances, purposes, state laws and  
23 prior actions also can and should be included in the analysis.

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1 Q. What are the new standards and requirements of the Energy Independence and Security  
2 Act of 2007?

3 A. The Energy Independence and Security Act of 2007 (EISA), signed into law on  
4 December 19, 2007, is complex legislation covering a wide range of topics. Subtitle D,  
5 “Energy Efficiency of Public Institutions,” of Title V and Subsection 13, “State  
6 Consideration of Smart Grid” of Title 13 contains four new standards for consideration  
7 by state commissions and qualifying large utilities. A copy of the EISA of 2007 is  
8 attached as Exhibit 1. These four standards are (16) Integrated Resource Planning, (17)  
9 Rate Design Modification to Promote Energy Efficiency Investments, (18) Consideration  
10 of Smart Grid Investments, and (19) Smart Grid Information.

11 Q. What is the new “Integrated Resource Planning” standard in the Energy Independence  
12 and Security Act of 2007?

13 A. The new Integrated Resource Planning standard reads as follows:  
14 *“(16) INTEGRATED RESOURCE PLANNING.—Each electric utility shall—*  
15 *(A) integrate energy efficiency resources into utility, State, and regional plans; and*  
16 *(B) adopt policies establishing cost-effective energy efficiency as a priority resource.”*

17 Q. What responsibility does COSERV have in the integrated resource planning process?

18 A. COSERV is a distribution cooperative. This means that it neither owns nor operates any  
19 generation facilities. COSERV instead purchases all of its power needs from Brazos  
20 Electric Power Cooperative, Inc. (Brazos), except for small amounts of power purchased  
21 by COSERV from distributed generation interconnected to COSERV’s distribution  
22 system. As a result, COSERV does not directly conduct resource planning. By contract,  
23 Brazos is fully responsible for providing COSERV’s resource needs and for all planning

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1 related thereto.

2 Q. Does COSERV participate indirectly in Brazos's resource planning?

3 A. Yes. Brazos is a generation and transmission cooperative. It provides wholesale power to  
4 its sixteen (16) member distribution cooperatives, including COSERV, and two (2) cities.  
5 Brazos serves no retail load directly. As a result, Brazos' resource planning is,  
6 essentially, the sum of the resource needs of each of the member cooperatives and two  
7 cities. In addition, Brazos provides a pricing signal to COSERV and the other member  
8 cooperatives through its wholesale rates, indicating how the member cooperatives can  
9 benefit financially through increased energy efficiency.

10 Q. Please explain more about the resource planning process.

11 A. Each of Brazos' member cooperatives periodically develops, or has developed on their  
12 behalf, a Load Forecast (previously called a Power Requirement Study). Brazos Electric  
13 and its member cooperatives adhere to the Load Forecast Work Plan, approved by Brazos  
14 Electric's Board of Directors and Rural Utilities Service (RUS) prior to the start of every  
15 new Load Forecast. An approved Load Forecast Work Plan establishes the process for  
16 the preparation and maintenance of the members' retail customer data and economic  
17 statistics, the forecasting methodology, the evaluation of demand-side and supply-side  
18 resources, and the coordination between the power supplier and its member cooperatives  
19 for the development of a Load Forecast that will meet the power requirement needs of  
20 Brazos Electric and its member cooperatives. COSERV's latest load forecast is currently  
21 in progress with an expected completion date in early 2009 in a joint effort between  
22 COSERV and Brazos. Brazos and COSERV will review load forecast periodically for  
23 any significant changes. Brazos Electric aggregates its member cooperatives' load

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1 forecast to determine Brazos Electric's current and future capacity and energy needs and  
2 includes all aspects of projected future needs, including the regional economy, customer  
3 growth, business cycles and other information. Included in this analysis are COSERV's  
4 energy efficiency activities. So, while COSERV does not directly control resource  
5 planning, its energy efficiency measures and programs are implicitly included in Brazos'  
6 resource planning and are very much a part of moderating Brazos' future resource  
7 requirements.

8 Q. Explain how Brazos' wholesale rates provide a pricing signal to COSERV to improve its  
9 energy efficiency.

10 A. The wholesale rate paid to Brazos by COSERV and the other member cooperatives  
11 includes capacity and energy charges. As COSERV improves its energy efficiency, it not  
12 only sees its total purchased power cost decline, but it should also see its average cost of  
13 purchased power decline.

14 Q. Does the cooperative currently have specific energy efficiency objectives?

15 A. COSERV does not have specific energy efficiency policy objectives. However, it does  
16 fund and has implemented a number of projects and programs with the specific goal of  
17 improving energy efficiency and conservation.

18 Q. Does the cooperative currently have specific energy efficiency programs?

19 A. Yes. COSERV has a full menu of specific energy efficiency programs, including both  
20 direct assistance and informational programs.

21 Q. Please list some of these direct assistance programs and briefly describe them.

22 A. a) COSERV offers home energy audits to all cooperative members, at no cost to the  
23 member.

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1 b) COSERV is transitioning its outdoor rental lighting to higher efficiency fixtures.

2 c) COSERV works with its members in connection with installation wind, solar, and  
3 other renewable resources through its “Distributed Generation Procedures and Guidelines  
4 Manual for Members” available on COSERV’s Website page “Interconnecting Your  
5 Own Power”. These renewable resources will become a part of COSERV’s load forecast,  
6 and therefore a part of Brazos’ resource planning.

7 d) COSERV is committed to installing high efficiency lighting and HVAC equipment in  
8 its own facilities as they are constructed or replaced.

9 e) COSERV’s capital work plan for electrical distribution projects include voltage  
10 conversion and re-conducting projects that will reduce line losses and increase  
11 operational efficiency. COSERV installs higher efficiency distribution transformers on its  
12 system as replacement is required

13 f) COSERV has in place and available for all members time of use rates. These rates  
14 include a strong pricing signal to members to remove load during time of peak Brazos  
15 usage. The effect is to lower the need for additional generation capacity.

16 Q. Please list some of COSERV’s educational programs.

17 A. a) COSERV provides “Energy Calculators” for Home Energy, Appliance, Lighting,  
18 Residential Energy Systems, and Commercial Energy on its Website.

19 b) COSERV provides information about Conservation Tips for residential and  
20 commercial members on its Web site.

21 Q. How does COSERV provide this educational material to members?

22 A. COSERV provides information through an extensive web interface, including educational  
23 material, self-help energy audits, and customer feed-back and information request

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1 options. In addition, COSERV provides energy efficiency information to commercial and  
2 industrial members through its monthly publications “ENERGYLINE NEWSLETTER”.

3 Q. How are these programs considered in the resource planning process?

4 A. As discussed earlier, as COSERV’s load forecast is prepared, that study includes  
5 COSERV’s energy efficiency measures. Factoring these measures into the load forecast  
6 has the effect of reducing COSERV’s future energy and capacity requirements. When  
7 combined with similar studies conducted in similar ways that have been completed by the  
8 other Brazos member cooperatives, Brazos will see an over-all reduction in future  
9 capacity and/or energy requirement needs.

10 Q. Does the cooperative’s power supplier have specific energy efficiency objectives or  
11 programs?

12 A. COSERV is currently evaluating energy efficiency and demand response program  
13 options in conjunction with its power supplier for its members. The programs being  
14 studied include:

- 15 a) cost effective methods for members to upgrade energy efficiency of their homes;
- 16 b) promotion for the purchasing of higher efficiency air conditioning;
- 17 c) promotion for energy efficient maintenance of existing air conditioning;
- 18 d) marketing incentives for residential builders and designers to build more energy  
19 efficient single and multifamily homes;
- 20 e) promotion for homebuilders to go beyond ENERGY STAR New Home criteria;
- 21 f) promotion for the use of compact florescent lighting;
- 22 g) incentives to commercial members for purchase and installation of energy-  
23 efficient cooling systems (retrofit or new construction);

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- 1 h) incentives to commercial members for purchase and installation of energy-
  - 2 efficient thermal envelope (retrofit or new construction);
  - 3 i) incentives to commercial members to install thermal energy storage (TES)
  - 4 systems in eligible facilities;
  - 5 j) incentives to commercial and industrial members to purchase and install energy
  - 6 efficient motors (retrofit, new, or replace-on-burnout); and
  - 7 k) promotion for commercial builders to design and build more energy-efficient
  - 8 buildings and use compact florescent lighting.

9 Q. What are the benefits of COSERV's existing programs or actions, and what are the  
10 potential benefits of the programs or actions COSERV is considering, should the  
11 cooperative determine new programs are cost effective and achievable?

12 A. COSERV will receive four benefits. First, as Brazos' need for additional capacity is  
13 partially mitigated through the energy efficiency programs that COSERV and other  
14 Brazos member cooperatives encourage, COSERV members will see reductions in the  
15 amount of future increased purchased power cost related to additional capacity. Second,  
16 as COSERV and other Brazos member cooperatives currently continue to promote cost  
17 effective energy efficiency, current power costs paid by COSERV members, both total  
18 power cost and average cost of power, should be reduced. Third, COSERV will  
19 participate in meeting the state of Texas' stated goal of significant reductions in the rate  
20 of growth in future capacity needs. Fourth, COSERV members will benefit from any  
21 accompanying environmental improvements.

22 Q. What are the costs of these programs or actions?

23 A. The existing programs indicated are currently being provided to COSERV members by

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1 the COSERV staff and such costs were included in COSERV's expenses at the time of  
2 the most recent COSERV rate design and cost of service process. As a result, such  
3 program costs are being recovered from members under existing rates. It should be noted,  
4 of course, that any decrease in the cost of purchased power or the average cost per kWh  
5 of purchased power does not increase the cooperative's margins. The cost of purchased  
6 power is passed directly to member-owners through COSERV's power cost recovery  
7 factor (PCRF). This means that any future energy efficiency programs adopted by the  
8 cooperative will entail expenses that will not be offset for the cooperative by reduced  
9 costs. These future energy efficiency programs may be funded through one or more of  
10 the following mechanisms:

- 11 1. Increase the retail rates,
- 12 2. Pass through energy efficiency program costs in COSERV's Power Cost  
13 Recovery Factor mechanism,
- 14 3. An energy efficiency program surcharge to COSERV by COSERV's  
15 wholesale power provider with reimbursement to COSERV for approved actual  
16 energy efficiency program costs incurred, or
- 17 3. Pursuant to Texas law, allocate, for the purpose of funding energy efficiency  
18 programs, a portion of unclaimed property, ie: capital credits, outstanding credit  
19 balances, etc., allowed by the state to be retained by COSERV for permitted  
20 purposes.

21 Q. Does the cooperative staff recommend that the cooperative adopt this standard?

22 A. Yes. COSERV has for many years promoted energy efficiency. It should continue to do  
23 so through existing programs, while continuing to consider new programs,

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1 acknowledging at the same time that the cost of each of these new programs must be  
2 weighed against the benefits provided and potential reduction in cooperative margins.

3 Q. How would this standard be modified, should it be adopted by COSERV?

4 A. The following wording is recommended and is included in Exhibit 2:

5  
6 *INTEGRATED RESOURCE PLANNING.—COSERV ELECTRIC shall cooperate with its*  
7 *power supplier so its power supplier can —*

8 *(A) integrate energy efficiency resources into resource plans; and*

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

11  
12 Q. Does the proposed standard meet the stated purposes of PURPA Title 1?

13 A. Yes. As indicated above, the three stated purposes of the PURPA Title 1 standards are to  
14 encourage (1) the conservation of energy supplied by electric utilities, (2) the optimal  
15 efficiency of electric utility facilities and resources, and (3) equitable rates for electric  
16 consumers. COSERV's existing conservation and efficiency programs already in place,  
17 followed by the existing procedure of consideration of those programs by the cooperative  
18 when developing COSERV load forecast, followed by the existing procedure of  
19 consideration by Brazos of the COSERV load forecast when developing its resource  
20 planning, does implement the proposed standard and meet the first and second stated  
21 purposes of PURPA Title 1.

22 Q. What is required of COSERV in order to implement this standard?

23 A. COSERV's current procedures meet the requirements of this standard. It should continue  
24 to work with its power supplier to allow Brazos to maximize energy efficiency in its  
25 resource planning. It should continue to weigh the advantages and consider new  
26 programs to expand its existing program base.

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1 Q. What is the new PURPA standard with regard to Rate Design to Promote Energy  
2 Efficiency Investments?

3 A. This standard reads as follows:

4 *(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY*  
5 *INVESTMENTS.—*

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

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

8 *(ii) promote energy efficiency investments.*

9 *(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory*  
10 *authority and each non-regulated utility shall consider—*

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

13 *(ii) providing utility incentives for the successful management of energy efficiency*  
14 *programs;*

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

18 *(iv) adopting rate designs that encourage energy efficiency for each customer*  
19 *class;*

20 *(v) allowing timely recovery of energy efficiency related costs; and*

21 *(vi) offering home energy audits, offering demand response programs, publicizing*  
22 *the financial and environmental benefits associated with making home energy*  
23 *efficiency improvements, and educating homeowners about all existing Federal*  
24 *and State incentives, including the availability of low-cost loans, that make*  
25 *energy efficiency improvements more affordable.*  
26

27 Q. Do the cooperative's existing tariffs align utility incentives with the delivery of cost-  
28 effective energy efficiency and promote energy efficiency investments?

29 A. The primary design objective in the cooperative's tariffs for many years has been  
30 recovery of the costs of providing service to each rate class. Rates have generally been  
31 designed to reflect the wholesale demand and energy costs as well as a recovery of the  
32 distribution demand and customer related costs necessary to provide service. The design  
33 of electric rates based on the cost of providing service generally promotes the use of  
34 energy in an efficient manner since rate charges are generally in line with how the costs

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1 are incurred. For example, the Industrial rate is a demand design that provides a price  
2 signal that promotes the improvement of load factor. Improved load factor provides a  
3 more efficient use of energy resources. In addition, the Industrial rate demand charges are  
4 higher in summer months, based on the potential of wholesale ratcheted demand charges  
5 established in summer months but billed in winter months.

6 However, there are other provisions of the tariffs which do not promote the provision of  
7 energy efficiency initiatives and investments.

8 Q. Please describe the provisions of the cooperative's tariffs which do not promote energy  
9 efficiency initiatives and investments.

10 A. COSERV is similar to other cooperatives, in that the Residential customer class  
11 represents a majority of the load on the system. Effective energy efficiency programs  
12 must include this customer class. As is the case with most cooperative tariffs, only a  
13 portion of the fixed distribution costs of providing service are recovered in the customer  
14 charge component of the Residential rate. The costs not recovered in the customer charge  
15 are instead recovered in the energy component of the rate. This creates a financial  
16 disincentive with respect to the cooperative's promotion and participation in energy  
17 efficiency or conservation programs which by their nature are intended to reduce the  
18 amount of energy sold. The reduction in kWh sold resulting from energy efficiency and  
19 conservation reduces the ability of the cooperative to recover costs and therefore reduces  
20 margins.

21 Q. Can you provide an example of how the rate design is not aligned with the provision of  
22 energy efficiency initiatives?

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1 A. Yes. A good example is the provision of Compact Florescent Light bulbs (CFLs). The  
2 replacement of standard incandescent light bulbs with CFLs provides a direct reduction in  
3 the amount of energy consumed. As a result of the reduction in energy consumed, the  
4 cooperative reduces its purchased power energy costs. Embedded within its current rates,  
5 COSERV has energy related power costs. The cooperative's distribution costs of  
6 providing service are not affected by the use of CFLs. The cooperative's demand related  
7 power cost may or may not be affected by the use of CFLs, depending on the extent of  
8 lighting usage at the time of the cooperative's peak. Therefore, the only certain cost  
9 reduction associated with the promotion of CFLs is the reduction in the energy related  
10 power costs. However, the use of CFLs results in a loss of revenue from the reduction in  
11 kWh sold. The loss of revenue is equal to the residential rate per kWh sold reduced. Since  
12 the cooperative is recovering in its retail energy charges, in addition to the wholesale  
13 energy-related power costs which are reduced by CFLs, wholesale power demand-related  
14 costs which may or may not be reduced by CFLs, and retail distribution wires capacity-  
15 related costs billed in energy rates and a portion of the retail customer-related distribution  
16 wires costs billed in energy rates which will not be reduced by CFLs, as customers install  
17 CFLs, the margins of the cooperative are reduced.

18 Q. Why are CFLs promoted if there is a negative impact on the cooperative's margins?

19 A. CFLs reduce the amount of energy consumed and therefore reduce the amount of fossil  
20 fuels needed to generate power. In the case of CFLs, an energy efficiency benefit is  
21 realized at the wholesale generation level even though there is a costs issue at the  
22 distribution level.

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1 Q. What changes should the cooperative consider to its rate structures to eliminate the  
2 disincentives to energy efficiency and conservation?

3 A. The primary change would be to increase the customer charge and/or demand charge  
4 component of the retail rate. As the customer charge and/or demand charge is increased,  
5 less of the distribution cost recovery is dependent upon the sale of energy. This would  
6 have the effect of reducing the financial disincentive of promoting energy efficiency. As  
7 the fixed cost component becomes a large component of the rate, the cooperative's  
8 margins are less impacted by the promotion of energy efficiency and conservation efforts.  
9 At the time of its next rate design, COSERV should consider whether it should raise its  
10 customer charges and demand charges where appropriate to more fully recover its fixed  
11 cost of operating from fixed billing units.

12 Q. What does it mean to eliminate the "throughput" incentive to energy efficiency?

13 A. In addition to the discussion above, another example of a throughput incentive is a rate  
14 which provides a lower energy charge for consumption over a certain level. One general  
15 purpose of such a "declining block" rate may be to promote usage, which is counter to  
16 the energy efficiency and conservation initiative.

17 COSERV has declining block structure rates for its Residential, Public Building and  
18 College and University rate classes. These rates in addition have higher energy charges in  
19 summer months than in winter months. This seasonal portion of the rate structure is not  
20 primarily intended to promote energy usage as a throughput incentive. As discussed  
21 above concerning the Industrial rate class, the seasonal energy charge differential is  
22 intended to reflect the seasonal nature of the ratcheted wholesale demand charge.

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1 In changing the structure of any rate design, promoting energy efficiency is an important  
2 consideration. Another important consideration is the impact of changing the structure of  
3 any retail rate on the customers paying that rate. At the time of its next rate design,  
4 COSERV should consider whether it should eliminate the declining block structure in its  
5 rate designs.

6 Q. Does COSERV face any regulatory or management disincentives to energy efficiency?

7 A. No.

8 Q. Should the cooperative consider providing incentives for the successful management of  
9 energy efficiency programs?

10 A. COSERV does not currently provide itself or its members with such incentives.

11 COSERV will continue to review the advantages of implementing such incentives and  
12 will weigh the potential advantages of implementing such a program against the cost of  
13 the program and customer impact.

14 COSERV is currently studying in conjunction with its power supplier, the possibility of  
15 implementing demand-side management and/or demand response programs, as well as  
16 additional energy efficiency programs. Should those programs be implemented,  
17 COSERV will review its retail rate designs to provide appropriate pricing signals to  
18 members through its rates, programs and/or charges.

19 Q. Does COSERV have any rates in place to promote efficiency?

20 A. Yes. COSERV offers optional time of use rates for its rate classes. These rates provide a  
21 clear pricing signal for members to remove usage during periods of peak demand. This is  
22 a strong efficiency pricing signal intended to reduce COSERV's power supplier's need  
23 for additional capacity. In addition, the cooperative has Industrial rates that are unbundled

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1 to pass through directly the wholesale power supplier's pricing signal to reduce peak  
2 usage.

3 Q. What is the impact on the cooperative of adopting "energy efficiency" as one of the goals  
4 of rate design?

5 A. As discussed previously, the primary impact is in the structure of the rate design itself.  
6 Promotion of energy efficiency without reducing cooperative margins requires that the  
7 fixed component of the rates be increased and any throughput incentives be removed.  
8 Adopting energy efficiency as a priority requires that a high degree of attention be placed  
9 on rate design to ensure that the cooperative's margins are not adversely affected.

10 Q. Should COSERV consider the timely recovery of energy efficiency related costs?

11 A. Yes. Any costs incurred for energy efficiency programs or investments should be  
12 recoverable from the appropriate rate classes. The cooperative should carefully consider  
13 the costs of implementation and operation of energy efficiency programs in comparison  
14 to the benefits that are produced by such programs.

15 Q. Should COSERV consider offering the programs cited in part (vi) of Section B of this  
16 standard?

17 A. As discussed previously, COSERV has several programs that promote energy efficiency  
18 such as provision of home energy audits. Other programs either are being considered or  
19 could be considered by COSERV as part of their energy efficiency efforts. Consideration  
20 of such programs does not obligate COSERV to implement said programs. COSERV  
21 includes in any analysis of potential programs to promote energy efficiency analysis of  
22 the costs and benefits of such programs.

23 Q. Does the adoption of this standard promote the three objectives of PURPA?

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1 A. Yes. The adoption of this standard promotes the conservation of energy by promoting  
2 the removal of disincentives to energy efficiency in the rate design. The optimal  
3 efficiency of electric utility facilities and resources is also supported by the removal of  
4 disincentives to energy efficiency in the rate design. The objective of equitable rates  
5 between rate classes is also promoted with the adoption of this standard. Recovery of  
6 energy efficiency costs from the appropriate members and increasing the customer  
7 component of the retail rates promotes equity in the rate design.

8 Q. What is staff's recommendation with respect to the consideration of this standard?

9 A. The cooperative staff recommends the adoption of this standard.

10 Q. How would this standard be modified, should it be adopted by COSERV?

11 A. The following wording is recommended and is included in Exhibit 2:  
12

13 *RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY*  
14 *INVESTMENTS.—*

15 (A) *IN GENERAL.—COSERV's retail rates shall—*

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

18 (ii) *promote energy efficiency investments.*

19 (B) *POLICY OPTIONS.—In complying with subparagraph (A), COSERV shall*  
20 *consider—*

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

23 (ii) *providing incentives for the successful management of energy*  
24 *efficiency programs;*

25 (iii) *including the impact on adoption of energy efficiency as one of the*  
26 *goals of retail rate design, recognizing that energy efficiency must be*  
27 *balanced with other objectives;*

28 (iv) *adopting rate designs that encourage energy efficiency for each*  
29 *customer class;*

30 (v) *allowing timely recovery of energy efficiency related costs; and*

31 (vi) *offering cost effective energy efficiency programs, offering cost*  
32 *effective demand response programs, publicizing the financial and*  
33 *environmental benefits associated with making home energy efficiency*  
34 *improvements, and educating homeowners about all existing Federal and*

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1                    *State incentives, including the availability of low-cost loans, that make*  
2                    *energy efficiency improvements more affordable.*

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4 Q.     What is required of COSERV in order to implement this standard?

5 A.     The cooperative should continue to include consideration of the advantages of aligning  
6     utility incentives with promoting energy efficiency improvements and increased  
7     conservation through its retail rate designs and other programs as one of the important  
8     considerations in developing such rates and programs.

9  
10 Q.    What is the new standard related to State Consideration of Smart Grid investments?

11 A.    The new State Consideration of Smart Grid investment standard in the Energy  
12    Independence and Security Act of 2007 reads as follows:

13        “(18) *CONSIDERATION OF SMART GRID INVESTMENTS.*—

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

18            (i) *total costs;*

19            (ii) *cost-effectiveness;*

20            (iii) *improved reliability;*

21            (iv) *security;*

22            (v) *system performance; and*

23            (vi) *societal benefit.*

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

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

34  
35 Q.    How does this standard differ from the other standards under consideration?

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1 A This standard is directed at the State Regulatory Agencies who have authority over the  
2 rate making considerations of electric utilities. COSERV is not regulated by the Texas  
3 PUC.

4 Q COSERV is not a State Regulatory Agency. Why should COSERV consider this  
5 standard?

6 A The standard does identify factors and considerations that COSERV believes are prudent  
7 and applicable. Thus, COSERV's adoption of this standard only reinforces its support of  
8 smart grid technology while considering if any investment is appropriate for COSERV  
9 and its members.

10 Q Does COSERV include considerations as indicated in this standard such as total costs,  
11 cost-effectiveness, improved reliability, security system performance and societal benefit  
12 when determining whether to make investments in approved smart grid technologies as  
13 opposed to making investments in non-advanced grid technologies?

14 A Yes. COSERV includes this analysis in their consideration and intends to continue doing  
15 so.

16 Q. How is COSERV currently active in smart grid technology?

17 A. COSERV has installed a Supervisory Control and Data Acquisition system (SCADA) for  
18 its distribution substations, extended SCADA capabilities through two way  
19 communication to certain NOVA reclosers and pad mounted switchgear on its  
20 distribution lines and extended SCADA capabilities through one way communication to  
21 capacitor stations for controlling power factor on its lines. COSERV has examined its  
22 current practices and potential cost/benefits of an Advanced Metering Infrastructure  
23 (AMI) system within the service territory. This examination included evaluation of

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1 operational benefits, rate of return, financial and rate impacts, value of such technology to  
2 the membership, and economic impact. In addition, other qualitative considerations of  
3 the smart grid technology versus non-advanced grid technology will be weighed and  
4 evaluated prior to considering any investment.

5 Q What is staff’s recommendation with respect to the consideration of this standard?

6 A. The cooperative staff recommends the standard be modified before consideration.

7 Q What are the modifications being recommended for consideration?

8 A The modification are “housekeeping” in nature:

9 (1) Replacing State with COSERV

10 (2) Deleting reference of State actions such as authorizing the electric utility

11 (3) Deleting reference of electric utility obligations to State

12 Q What is the revised standard that should be considered (See Exhibit 2)?

13 A “ *CONSIDERATION OF SMART GRID INVESTMENTS.—*

14 “(A) *IN GENERAL.—COSERV shall, prior to undertaking investments in non-advanced*  
15 *grid technologies, consider an investment in a qualified smart grid system based on*  
16 *appropriate factors, including—*

- 17 (i) *total costs;*
- 18 (ii) *cost-effectiveness;*
- 19 (iii) *improved reliability;*
- 20 (iv) *security;*
- 21 (v) *system performance; and*
- 22 (vi) *societal benefit.*

23 “(B) *RATE RECOVERY.—COSERV shall consider the recovery factors*  
24 *from members on any capital, operating expenditure, or other costs of COSERV relating*  
25 *to the deployment of a qualified smart grid system, including a reasonable rate of return*  
26 *on the capital expenditures of the cooperative for the deployment of the qualified smart*  
27 *grid system.*

28 “(C) *OBSOLETE EQUIPMENT.—COSERV shall consider deploying a qualified smart*  
29 *grid system to recover in a timely manner the remaining book-value costs of any*  
30 *equipment rendered obsolete by the deployment of the qualified smart grid system, based*  
31 *on the remaining depreciable life of the obsolete equipment.*

32  
33 Q What is staff’s recommendation with respect to the modified standard.

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1 A. The cooperative staff recommends the standard be adopted as modified.

2 Q. What is required of COSERV in order to implement this standard?

3 A. COSERV's existing procedures meet the standard. It should continue to include  
4 consideration of the advantages and costs associated with smart grid technology prior to  
5 investments and deploy smart grid technology where appropriate.

6

7 Q. What is the new standard related to Smart Grid Information?

8 A. The new Smart Grid Information standard in the Energy Independence and Security Act  
9 of 2007 reads as follows:

10 *“(19) SMART GRID INFORMATION.—*

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

14 *“(B) INFORMATION.—Information provided under this section, to the extent*  
15 *practicable, shall include:*

16 *“(i) PRICES.—Purchasers and other interested persons shall be provided with*  
17 *information on—*

18 *“(I) time-based electricity prices in the wholesale electricity market; and*

19 *“(II) time-based electricity retail prices or rates that are available to the*  
20 *purchasers.*

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

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

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

33 *“(C) ACCESS.—Purchasers shall be able to access their own information at any time*  
34 *through the Internet and*

35 *on other means of communication elected by that utility for Smart Grid applications.*  
36 *Other interested persons shall be able to access information not specific to any purchaser*  
37 *through the Internet. Information specific to any purchaser shall be provided solely to*

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1        *that purchaser.’’.*  
2

3    Q     If this standard is adopted, what responsibilities would be placed on COSERV?

4    A     Adopting this standard would require COSERV to make available to its members  
5        information concerning energy rates, members energy usage, sources of power, and other  
6        energy related information..

7    Q     What is the purpose of making this information available to the members?

8    A     The members would have readily available and unencumbered information to evaluate  
9        potential energy conservation practices or offerings.

10   Q     What information is COSERV currently providing its members?

11   A     COSERV provides members with monthly price, kWh usage, and KW demand (if  
12        appropriate). There is also an annual kWh usage graph for each metered location printed  
13        on the customer’s monthly billing. This information is not only mailed to the member but  
14        also available from COSERV’s Web site.

15   Q     What is staff’s recommendation with respect to the consideration of this standard?

16   A.     The cooperative staff recommends the standard be modified before consideration.

17   Q     What are the modifications being recommended for consideration?

18   A     The modification states that COSERV will provide information to its member as that  
19        information becomes available and applicable to its members.

20   Q     What is the revised standard that should be considered (See Exhibit 2)?

21   A     *“ SMART GRID INFORMATION.—*

22        *“(A) STANDARD.—COSERV will provide direct access, in written or electronic*  
23        *machine-readable form as appropriate, to information to its members as provided in*  
24        *subparagraph (B).*

25        *“(B) INFORMATION.—Information provided under this section, to the extent*  
26        *practicable and applicable to the member, shall include:*

27            *“(i) PRICES.—Members and other interested persons shall be provided, to the*

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1                    *extent practicable and applicable to the member, with information on—*

2                    *“(I) time-based electricity prices in the wholesale electricity market; and*

3                    *“(II) time-based electricity retail prices or rates that are available to the*  
4                    *purchasers.*

5                    *“(ii) USAGE.—Members shall be provided, to the extent practicable and*  
6                    *applicable to the member, with the number of electricity units, expressed in kwh,*  
7                    *purchased by them.*

8                    *“(iii) INTERVALS AND PROJECTIONS.—Updates of information on prices and*  
9                    *usage shall be offered, to the extent practicable and applicable to the member, on*  
10                    *not less than a daily basis, shall include hourly price and use information, where*  
11                    *available, and shall include a day-ahead projection of such price information to*  
12                    *the extent available.*

13                    *“(iv) SOURCES.—Members and other interested persons shall be provided, to*  
14                    *the extent practicable and applicable to the member, annually with written*  
15                    *information on the sources of the power provided by the utility, to the extent it can*  
16                    *be determined, by type of generation, including greenhouse gas emissions*  
17                    *associated with each type of generation, for intervals during which such*  
18                    *information is available on a cost effective basis.*

19                    *“(C) ACCESS.—Members shall be able to access, to the extent practicable and*  
20                    *applicable to the member, their own information at any time through the Internet and*  
21                    *on other means of communication elected by that utility for Smart Grid applications.*  
22                    *Other interested persons shall be able to access information not specific to any purchaser*  
23                    *through the Internet. Information specific to any purchaser shall be provided solely to*  
24                    *that purchaser.”*

25  
26  
27    Q.     Does COSERV face any challenges in providing information of this type to members?

28    A.     Yes. COSERV is a distribution cooperative. This means that COSERV’s cost of power  
29           supply capacity and energy is determined, not by cost of service, but indirectly through  
30           the wholesale rate structure. COSERV’s ability to respond in providing information  
31           indicated in this standard to members is limited, therefore, by 1) its ability to readily  
32           obtain such data from its power supplier, or 2) the extent to which the wholesale power  
33           rate provides correct pricing information. Since Brazos’s wholesale rate is not time-  
34           based, COSERV’s ability to provide such information to members is limited. As Brazos  
35           provides such information to COSERV in the future, or structures its wholesale rate to  
36           provide such a pricing signal, additional information can be provided to members.

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1 Q Give examples of how the proposed modification to the standard applies?

2 A There are two examples that can be used to further explain this modification:

3 (1) Currently the residential members are billed under two optional rates. One is a time of  
4 use rate which clearly specifies blocks of time in which prices vary. While this rate is  
5 certainly time-based, the time periods, once set by tariff, do not change. The standard  
6 residential rate has energy charges that do not vary by time of day, though they do vary  
7 by time of year. Since the energy charges for residential customers do not vary by hourly  
8 market fluctuations in price or usage, giving the member hourly information on pricing  
9 will not assist them in making conservation decisions. Should Brazos move to wholesale  
10 rates that reflect more discrete daily information, COSERV could in turn develop retail  
11 rates that would also be time-based. Should this happen, COSERV would provide  
12 information to members to allow them to take full and effective advantage of any retail  
13 rates so developed. Until such time as time-based wholesale rates are available, providing  
14 time-based information to members would not be usable, particularly when balanced  
15 against the potential cost of implementing the technology required to provide such  
16 information to members.

17 (2) The technology deployment of the smart grid is an additional consideration to  
18 information available. As COSERV continues to deploy technology that collects  
19 information that would assist the member's consideration of conservation measures, and  
20 develops the interface technology to allow customers to access that data, it will be made  
21 available to the extent practicable.

22 Q. Does technology exist to permit COSERV to provide its members with the information as  
23 contemplated in this standard?

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1 A. Yes. But the cooperative must continue, as is in fact contemplated in the final two  
2 standards, to weigh the potential advantages of such technology against the potential  
3 costs for the customer. Moving to a more advanced technology, such as home digital  
4 displays or advanced computer interface access, add additional costs. Nevertheless, as  
5 discussed in other sections, the cooperative continues to review the advantages of  
6 installing such technology and the potential advantages of prepaid metering. In addition,  
7 the cooperative must move carefully to ensure that confidential information about  
8 individual customer usage and billing is secure and available only to that customer.

9 Q. What is staff's recommendation with respect to the modified standard?

10 A. The cooperative staff recommends the standard be adopted as modified.

11 Q. What is required of COSERV in order to implement this standard?

12 A. COSERV should continue to provide existing information to members. As additional  
13 information is available from COSERV's power supplier, and as and if wholesale and  
14 retail rates are developed that would allow members to take advantage of time-based  
15 rates, and as such information can be provided to members and other interested parties on  
16 a cost-effective basis, COSERV should provide such information to members that will  
17 allow them to take full advantage of such rates. Should COSERV's power supplier  
18 provide COSERV with information about the greenhouse gas emissions associated with  
19 each type of generation for the purpose of dissemination to the public, the cooperative  
20 will provide this information to its members.

21

22 Q. What additional information is being provided to the COSERV board for their  
23 consideration?

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- 1 A. Exhibit 1. The Energy Independence and Security Act of 2007.
  - 2 Exhibit 2. Proposed Standards as Modified
  - 3