

**Lee County Electric Cooperative, Inc.  
North Fort Myers, Florida**

**Reply Comments Regarding  
The Five PURPA Standards in Subtitle E of the  
Energy Policy Act Of 2005**

**Prepared By**

**The Staff of The  
Lee County Electric Cooperative, Inc.**

**January 26, 2007**

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### **Introduction**

On August 8, 2005, Congress issued the Energy Policy Act of 2005 (EPAct 2005), which includes updates to the Public Utility Regulatory Policies Act of 1978 (PURPA). Included in those updates is the requirement that each State regulatory authority and each non-regulated electric utility with retail sales greater than 500 million kilowatt hours shall consider five new ratemaking standards proposed in the EPAct 2005 in a public process and within certain defined time lines. Lee County Electric Cooperative, Inc. (LCEC) is considered a non-regulated utility under the EPAct 2005. In accordance with this directive, LCEC management has received and reviewed the “Initial Comments” on the proposed standards submitted by Eligible Participants and is providing “Reply Comments” for consideration by LCEC’s Board of Trustees as part of a public process regarding the proposed standards. The relevant sections of Subtitle E to EPAct 2005 are shown in Appendix A attached to LCEC's Initial Comments Regarding the Five PURPA Standards in Subtitle E of the Energy Policy Act of 2005, submitted December 15, 2006 (LCEC's Initial Comments). The five new standards are as follows:

1. Net Metering (Section 1251)
2. Fuel Sources (Section 1251)
3. Fossil Fuel Generation Efficiency (Section 1251)
4. Time-Based Metering and Communications (Section 1252)
5. Interconnection (Section 1254)

These “Reply Comments” are presented for consideration to the LCEC Board of Trustees as preliminary evidence to be used to make a final determination on each of the new standards at the completion of the required process that is detailed in the PURPA section of the LCEC website ([www.lcec.net](http://www.lcec.net)). All “Initial Comments” received from Eligible Participants are presented by topic section, followed by LCEC’s “Reply Comment” for that particular topic. Many of LCEC’s comments are restated from LCEC’s Initial Comments, and further comments and consideration of specific information offered by Eligible Participants is included as well. For each of the five standards, the following comments from LCEC reflect general considerations and information regarding the standard as well as specific conditions and issues that should be part of LCEC’s deliberations and final determinations regarding the PURPA standards. At the end of these deliberations, the Board of Trustees may decide to implement a standard as stated in EPAct 2005, implement a modification of the standard, or decline to implement the standard.

### **Net Metering Standard**

The first of the five new PURPA standards addressed in these comments is Net Metering, about which EPAct 2005 states:

Each electric utility shall make available upon request Net Metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term ‘Net Metering service’ means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

*Commenter - Dan Morrissey*

**1) Net Metering Global warming is real and is the biggest problem facing humanity, today. Global warming is caused primarily by fossil fuels. To reverse global warming we need to reduce our use of fossil fuels. Due to the urgency of global warming, we need to reduce our use of fossil fuel as quickly as possible. Net metering is perhaps the most effective incentive for home owners to reduce their fossil fuel use by switching to renewable energy, such as solar energy. Net metering will help reduce global warming. Therefore, I support implementing net metering as quickly as possible. (Referenced from Dan Morrissey's initial comments, submitted 12-14-06, Appendix B)**

*Commenter - Commissioner Ray Judah*

**Lee County would be in favor of net metering agreements that allows small renewable energy generators to connect to the LCEC distribution grid without creating or causing a negative financial impact to the system owner. It is vital to our environment to advance the greater uses of renewable energy.**

**Net metering agreements that encourage greater self-generation benefit our residents, create jobs, positively impact our local economy and create good will among our citizens. Studies have shown that renewable energy creates more jobs than fossil fuel generation and have also shown that customers of electric utilities are willing to pay more for clean generation. The most efficient deployment models require participation from utilities for delivery and government that creates**

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**favorable regulations. As an example, small solar system generators of less than 20 kW will produce power during summer peaking periods and have a benefit to the distribution grid. In contrast, electricity produced from small photovoltaic systems is typically consumed within the customer's site and little is exported to the grid.**

**Lee County is aware that many electric utilities throughout the country have agreements that do not negatively impact either the utility or the renewable energy generator. That balance is accomplished by having a reasonable agreement such as can be found in model agreements offered by the Interstate Renewable Energy Council. Model Net-Metering is available on their web site: [www.irecusa.org](http://www.irecusa.org). A simple agreement would credit the electric generation in kWh but never offer an exchange of currency. If a customer leaves the utility the credit is lost and no money is ever exchanged.** *(Referenced from Commissioner Ray Judah's initial comments, pages 1&2, submitted 12-15-06, Appendix B)*

*LCEC Reply Comments:*

Renewable energy has long been recognized as a key to reducing the use of fossil fuels and therefore reducing the amount of emissions generated by the burning of fossil fuels. Recent tax incentives and renewable funding initiatives have helped bring further interest and support to renewable technologies. Both Solar and Photovoltaic systems can provide returns on the initial investment through avoiding the use and cost of fossil fuel produced energy. These avoided costs to the consumer are at the retail rate and generate savings back to the end-use customer. In addition, further savings can be generated by programs such as "Seminole's Interconnection Agreement for Small Photovoltaic

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Systems of 10 kilowatts or less”, which establishes a credit to the customer for excess energy produced by the system and exported to the distribution system. The credit is represented through “net billing”, and the cost for the additional metering is assumed by Seminole (Seminole Electric Cooperative, Inc.). Net billing is favored by LCEC over “net metering” for a variety of reasons that were expressed in LCEC’s Initial Comments or are expressed in these reply comments. LCEC has a strong record of helping customers recognize how they can conserve energy and, as a group, impact the environment by reducing the amount of fossil fuels burned.

Net metering produces a one to one credit value at the retail rate, therefore allowing a customer with net metering to effectively reduce the appearance of kilowatts consumed and avoid paying LCEC for the use of the distribution system to deliver the original kilowatts consumed. This is unfair to other customers served by LCEC that eventually would have to make up that difference through the retail rates they pay at a higher ratio of distribution costs than the customer with net metering. Also, the LCEC retail rate offered to end use customers is uniform throughout a defined billing period, as opposed to the wholesale rate LCEC pays its power supplier in which LCEC pays a significant demand charge in addition to energy based on a single coincident peak established during a given billing period. The result for the customer producing energy would likely be over-compensation for the energy they produced, as LCEC’s retail rates reflect an average of system energy and demand costs of purchased power. If the customer happens to operate the generator during the time of LCEC’s coincident peak, then the reverse scenario would likely under-compensate the customer for their excess

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energy. Regardless, net metering would provide inherent rate inequities for both the energy producing and non-energy producing customers served by LCEC.

Second, net metering would put LCEC in the position of directly purchasing energy from the customer which is expressly forbidden in the all- requirements contract with its power supplier, Seminole. Under the terms of that contract, LCEC is required to purchase all energy delivered through the distribution system to retail customers from Seminole. Therefore, the all-requirements wholesale power contract prohibits LCEC from purchasing excess energy produced by customer-owned generation through the term of the contract which is currently in effect through mid-year 2020.

Seminole states in its comments referenced below: “When the customer generates more power than it uses at any moment ("Excess Energy"), the dial on the meter rolls backwards and erases previously recorded customer usage. When the customer generator is providing Excess Energy and the customer meter is rolling backwards, the customer generator is providing a flow of electricity into the Cooperative's system which is used to serve other Cooperative customers. The Cooperative would then in effect be "purchasing" power and energy from its customer which would in turn be used to serve the Cooperative's system.

Given that the implementation of net metering service results in the sale of Excess Energy from the consumer to the Cooperative, it is Seminole's position that offering net metering service is inconsistent with the Wholesale Power Contract.” ( *Referenced from, “Seminole's Input for Cooperative's Consideration In Implementing the Directives under the Energy Policy Act of 2005”, in Appendix A, attached hereto*)

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However, as mentioned previously, LCEC may implement a net billing program as enabled by Seminole's Interconnection Agreement for Small Photovoltaic Systems of 10 kilowatts or less. After the Florida Public Service Commission put forth the rule for investor-owned utilities previously mentioned concerning small photovoltaic systems of 10 kilowatts or less in 2002, Seminole and its Members developed a standard interconnection agreement for such systems. In that agreement, the participating cooperative installs additional metering equipment capable of measuring excess energy produced by the customer, exported to the distribution system and sold to Seminole. The cooperative then compensates the energy generating customer for the amount of the energy they produce through a credit on the customer's bill based upon Seminole's credits to the cooperative. Seminole then in turn credits the cooperative based on the avoided cost to produce the same amount of energy as detailed in the standard offer rate contained in Seminole's QF-1 rate for Qualifying Facilities of 100 kilowatts or less.

As explained, LCEC is unable to implement the net metering standard in EPAct 2005 due to conditions of the all-requirements contract with Seminole. However, LCEC may implement a net billing program to encourage customers who can produce excess capacity to be exported and sold to a utility other than LCEC. Mainly, the net metering approach differs from the IREC Model Net-Metering Rules at [www.irecusa.org](http://www.irecusa.org) referenced in the customer comments above, in that there are two meters versus one and the distribution costs included in the retail rate are not absorbed by LCEC.

LCEC believes the net billing approach serves to both enable and encourage customers capable of producing excess capacity, while protecting against cross subsidization by customers that only consume electric energy. Net billing also allows

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LCEC to continue purchasing all the energy required by the customer from Seminole, which is consistent with the Seminole all-requirement contract and the costs incurred by both LCEC and Seminole.

### **Fuel Sources Standard**

The second of the five new PURPA standards addressed in these comments is Fuel Sources, about which EPAct 2005 states:

Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

*Commenter - Dan Morrissey*

**2) Fuel Sources Although LCEC is not a producer of electricity, but instead, a purchaser, non-the-less, LCEC can develop a plan to minimize dependence on one fuel source by encouraging its customers to diversify their energy sources.**

*(Referenced from Dan Morrissey's initial comments, submitted 12-14-06, Appendix B)*

*Commenter - Commissioner Ray Judah*

**While LCEC may not be a generation owner, Lee County would seek to encourage LCEC to promote greater use of renewable fuels from generation used by LCEC customers. This can take the form of providing energy to end user customers on site or by specifying a renewable energy fuel (biomass or biofuels) to be used in existing generators. Standby generators located onsite and operated by LCEC could use bio fuels or establish solar water heating on customer sites with the energy sold to the customer. This, in turn, would be a new product offering that is**

**renewable and has favorable economic returns to LCEC shareholders. This will serve to reduce the use of non renewable fuels, create fuel diversity, local jobs and keeps dollars that would otherwise be spent on fuels purchased from out of state locations and even out of this country. (Referenced from Commissioner Ray Judah's initial comments, page 3, submitted 12-15-06, Appendix B)**

LCEC Reply Comments:

LCEC is committed to helping customers produce renewable energy and to giving customers access to the distribution system for excess capacity produced by renewable technologies. The net billing program and our interconnection standards enable customers to access the system for distribution and compensation of the renewable energy they produce. LCEC should explore the use of biofuels in existing and future standby generation.

LCEC has no shareholders as a not-for-profit cooperative. In a cooperative, as opposed to an investor owned utility, profit is represented by the customers' share of net margins called equity capital and capital credits are the profits (margins) that are left over after all operating expenses are deducted from revenue, which are then allocated back to the customer.

Services for and applications of solar water heating for central plant and individual use are currently commercially available. LCEC encourages the use of these applications where customers determine that to be in their best interest. LCEC entering this market provides no additional benefit to the end use customer, as the benefits of these

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systems are apparent in their energy savings and would not change the nature or level of gain in the investment except at a cost to other LCEC customers.

LCEC is a distribution electric utility that purchases power under an all-requirements contract with Seminole, and therefore LCEC is obligated to the terms of that contract through the year 2020. Under the terms of that contract, LCEC cannot produce and sell energy to the end-use customer. Since LCEC is not a generation utility, it has no direct control in implementing the Fuel Sources Standard as proposed in EPAct 2005. However, LCEC recognizes that having diverse fuel sources is important to maintain stable rates for consumers during times where costs for certain fuels used for generation are high. In that regard, LCEC is committed to encouraging Seminole to be diligent in their planning process, for both generation and purchases of wholesale energy, to reflect activities which are consistent with the implementation of this standard.

Seminole provided information contained in Appendix A, attached hereto that indicates a diverse range of fuel sources. In that document Seminole states, "In 2006, Seminole's system energy requirements will be generated (both owned and purchased) from approximately 37% natural gas and 63% non-gas fuels, predominantly coal and renewable energy. At present, renewable energy resources serve almost 3% of the total energy requirements for Seminole and its Members. These renewable energy resources include biomass, landfill gas, waste-to-energy, and hydroelectric resources."

LCEC cannot implement the fuel sources standard in EPAct 2005 because it is not a generating utility, but should encourage the examination and use of diverse fuel sources by Seminole.

### **Fossil Fuel Generation Efficiency Standard**

The third of the five new PURPA standards addressed in these comments is Fossil Fuel Generation Efficiency, about which EPAct 2005 states:

Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.

*Commenter - Commissioner Ray Judah*

**Where LCEC may have distributed generation, Lee County would like to see highly efficient generators that would utilize the combined heat and power to achieve the maximum efficiency from the precious fossil fuel being used. (Referenced from Commissioner Ray Judah's initial comments, page 3, submitted 12-15-06, Appendix B)**

*LCEC Reply Comments:*

LCEC recognizes the importance of the standard and its economic and environmental impact. LCEC will continue to encourage and support Seminole's efforts to promote efficiencies in the production of electric energy for LCEC's customers. Further information from Seminole on their efforts to increase efficiencies in their generation plants is included on pages 3 and 4 of Exhibit A, attached hereto.

LCEC's distributed generation is currently deployed as standby generation dedicated to specific customer loads. This generation is used to reduce system peak loads for load management and as backup power during outages. When the generators are used for load management, they are typically operated for two to four hour periods in a single

day, and operations may be several days apart depending on system peak load measurements. Under these circumstances it is usually not cost-effective to use cogeneration, which requires significant additional equipment to capture the heat produced to provide hot water or steam for the specific customer receiving that generation. However, if the circumstances change where future LCEC distributed generation would be deployed providing longer run times, LCEC should investigate cogeneration to maximize economic efficiencies and therefore, additional benefit for the fuel being used.

LCEC's distinction as an electric distribution company obligated to an all-requirements contract with Seminole precludes LCEC from having a direct impact on the implementation of the Fossil Fuel Generation Efficiency Standard in EPAct 2005.

Therefore, LCEC cannot implement the fossil fuel generation standard in EPAct 2005 because it is not a generating utility, but should encourage Seminole to employ efficient practices in the production of electric power.

### **Time-Based Metering and Communications Standard**

The fourth of the five new PURPA standards addressed in these comments is Time-Based Metering and Communications, about which EPAct 2005 states:

- (A) No later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.
- (B) The types of time-based rate schedules that may be offered under the schedule referred to in subparagraph (A) include, among others--
  - (i) time-of-use pricing whereby electricity prices are set for a specific time period on an advance or forward basis, typically not changing more often than twice a year, based on the utility's cost of

- generating and/or purchasing such electricity at the wholesale level for the benefit of the consumer. Prices paid for energy consumed during these periods shall be pre-established and known to consumers in advance of such consumption, allowing them to vary their demand and usage in response to such prices and manage their energy costs by shifting usage to a lower cost period or reducing their consumption overall;
- (ii) critical peak pricing whereby time-of-use prices are in effect except for certain peak days, when prices may reflect the costs of generating and/or purchasing electricity at the wholesale level and when consumers may receive additional discounts for reducing peak period energy consumption;
  - (iii) real-time pricing whereby electricity prices are set for a specific time period on an advanced or forward basis, reflecting the utility's cost of generating and/or purchasing electricity at the wholesale level, and may change as often as hourly; and
  - (iv) Credits for consumers with large loads who enter into pre established peak load reduction agreements that reduce a utility's planned capacity obligations.

Commenter - Commissioner Ray Judah

**While the concept of time based metering is important, the incentive to take advantage of these rates and tariffs are the key to participation. Lee County would judge the success of such a program by the amount of load shaping that has occurred by customers in the LCEC service territory. Significant and sustained reduction and shifting of energy use will have an impact on the requirements for future generation. Lee County appreciates the efforts of LCEC in offering energy conservation programs and believes much, much more could be done. We would like challenge LCEC to commit to a demonstrable goal that is reasonable, understandable, measurable, believable and achievable. (Referenced from Commissioner Ray Judah's initial comments, page 4, submitted 12-15-06, appendix B)**

LCEC Reply Comments:

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LCEC agrees that load shaping and significant and sustained reduction and shifting of energy use have a direct impact on requirements for future generation. It should be noted that LCEC has historically worked to pass savings from the reduction of system peak load to customers through methods that put customers in control of their energy use. LCEC's Good Cents Home program was one of the nation's first new home energy efficiency programs. Through the program, started in 1980, LCEC currently works with 80 active builders and has certified over 8000 new homes to an energy efficiency level of 15-18% above the state standard. LCEC continues to educate customers on energy conservation and efficiencies through home energy audits and in 2006, completed over 1650 residential surveys. Another form of education is the online energy Calc-U-Saver. This unique online energy tool hosted in 2006, 9,430 customer visits and performed over 11,600 energy calculations (33 per day).

LCEC also agrees that incentives to take advantage of these rates and tariffs are the key to participation, and in turn, it is important for time based elements to be part of a distribution company's costs so that savings may be equitably passed on to participating customers. As stated previously, LCEC is obligated to a wholesale power contract with Seminole. Under the terms of that contract LCEC is mandated to purchase all energy delivered to our customers from Seminole. This is important in relation to the Time-Based Metering and Communication Standard, in that the Cooperative shall, "...provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level." The phrase "if any" contained in part (A) is key in determining any

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time-based variances in the wholesale rate Seminole offers LCEC and whether any variances in cost can be offered in a retail rate to LCEC's customers.

Currently, there are no true time-based price signals contained in the wholesale rate SECI-7h, that Seminole offers LCEC. That rate is comprised of 5 separate components. The first is the Production Demand Charge which is expressed on a dollar per kW per month basis and applied to the Cooperative's metered kW at the time of Seminole's monthly system peak during eight peak months of the year (January through March, June through September and December). The second is the Production Fixed Energy Charge which is a fixed dollar per month charge. The third is a Transmission Demand Charge that is expressed on a dollar per kW per month basis and applied to Cooperative's metered kW at the time of Seminole's monthly system peak for each month during the year. The fourth is the Non-fuel Energy Charge, a non-time differentiated rate expressed on a dollar per kWh basis. And the final component is the Fuel Rate, a non-time differentiated rate expressed on a dollar per kWh basis and trued-up for actual fuel costs every six months.

As stated earlier, Seminole's current Rate Schedule SECI-7h, which went into effect January 1, 2007, severely limits LCEC's ability to implement time-based energy rates. Seminole has, however, expressed intent to examine the feasibility of offering a time-of-use energy rate option in the wholesale rates. Seminole has included the effort as part of its 2006-07 tactical plan initiatives as indicated in Exhibit A, attached hereto.

Based on the potential shift in wholesale rate structure that may result from Seminole's efforts to study time based elements in their wholesale rate, it may be sensible

for LCEC to decline to implement any new time-based rates in the absence of current time-based energy price signals from the supplier.

### **Interconnection Standard**

The last of the five new PURPA standards addressed in these comments is Interconnection, about which EPAct 2005 states:

Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term ‘interconnection service’ means service to an electric consumer under which an on-site generating facility on the consumer’s premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential.

*Commenter - Dan Morrissey*

**5) Interconnection This issue goes hand in hand with the first issue: net metering. In order for the benefits of net metering to be realized, i.e. the reversing of global warming, the interconnection process must be easy for a home owner to understand and implement. I support a renewable energy-friendly interconnection process. (Referenced from Dan Morrissey’s initial comments, submitted 12-14-06, Appendix B)**

*Commenter - Commissioner Ray Judah*

**Lee County would be in favor of interconnection agreements that allow small**

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**renewable energy generators to safely connect to the LCEC distribution grid with out creating or causing a negative financial impact to the system owner. Lee County is aware that many electric utilities throughout the country have agreements that do not negatively impact either the utility or the renewable energy generator. Studies show that distributed solar generation has, in fact, caused a benefit to the grids by reducing demand on the grid. Targeted deployment of solar energy relieves loads on the utility's transmission, sub-transmission, and distribution systems, thereby effectively increasing available T&D capacity. This relief allows utility T&D planners to defer capital investments in the T&D system. The economic value of these deferrals includes both the time value of money and the reduction in T&D system O&M costs.**

**A fare and balanced interconnection agreement is accomplished by having a reasonable agreement such as can be found in the California Rule 21 interconnection agreement or model agreements offered by the Interstate Renewable Energy Council. Model Net-Metering Rules and Interconnection Standards for Small Generators are available on their web site: [www.irecusa.org](http://www.irecusa.org).**

*(Referenced from Commissioner Ray Judah's initial comments, pages 5&6, submitted 12-15-06, appendix B)*

LCEC Reply Comments:

LCEC understands and supports the idea of reasonable interconnection standards allowing for interconnection of equipment. The primary drivers of interconnection standards are safety, system reliability and system protection. These drivers are

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considered for the benefit of the customer or provider seeking interconnection, and the customers who rely on LCEC's distribution system for reliable power. The balance between the customers and connectors is dependent on the specific circumstances of each interconnection. It is likely that most homeowners may not recognize the potential impact of an interconnection on the system, their home and equipment, or the employees of LCEC who both maintain and repair facilities in the field. Therefore, standards are developed to provide for both complex and simple interconnection scenarios. However, LCEC's tradition and mission to provide excellent customer service indicates that LCEC will continue to educate and help the both the customer and local generation equipment providers understand the interconnection guidelines so they can enjoy the benefits of a reliable, safe interconnection of their equipment.

LCEC also agrees that reducing system peak load allows for savings and the deferment of transmission and distribution capital costs. To be effective in that regard, the peak reduction should be perpetual or able to be dispatched in times of peak system loading. The LCEC conservation programs mentioned previously provide for perpetual system reduction, while programs such as LCEC's Residential Load Management program, Interruptible Service rate and Generation Program provide direct dispatch of resources to reduce system and feeder load, therefore reducing the need for construction of utility plant to accommodate higher peak loads. The RSL rate in Appendix C, attached hereto, averages savings generated by system load reduction, and returns a fixed credit to residential customers who use at least 500 kWh in a billing period and allows LCEC to install devices to cycle off certain appliances in the home during system peak usage. This allows LCEC to avoid paying higher coincident demand costs during these system peaks.

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The residential load management program was introduced in the early 1980's and currently has approximately 35,000 customers and 100,000 control points contributing 36 megawatts, or about 4.5% of system peak demand control.

The IS rate in Appendix C, attached hereto, also averages savings generated by system load reduction, and returns a credit for each kW that the contracted maximum demand during a curtailment period is less than the billing demand during the current billing period. This rate is available to general service demand customers that agree to curtail demand by 50 kW or more upon request by LCEC. The interruptible service program provides approximately 60 points of control, contributing 11.9 megawatts, or about 1.5% of system peak demand control.

After careful review of the Interconnection Standard, it was found that current LCEC practices are consistent with the standard. LCEC reserves the right to evaluate future applicability of the standard as it is amended from time to time.

LCEC has had guidelines for interconnection services required by PURPA 1978 for more than twenty years. Seminole and its members including LCEC had developed interconnection guidelines for allowing Qualifying Facilities to interconnect with the LCEC system in accordance with the rules adopted by the Federal Energy Regulatory Commission implementing Sections 201 and 210 of PURPA 1978. The Interconnection guideline: (1) permits any Qualifying Facility (QF) to interconnect with Seminole's transmission system or the distribution or transmission system of LCEC; (2) permits any QF to sell energy and capacity to Seminole; (3) permits any QF to purchase supplementary, back-up, maintenance, and interruptible power from LCEC at rates that are nondiscriminatory, just and reasonable, and in the public interest; and (4) permits any

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QF so requesting to wheel its energy and capacity over the distribution or transmission system of LCEC and/or the transmission system of Seminole, to the extent transmission or distribution system capacity is available, to any electric utility purchasing such power.

LCEC is currently updating its interconnection guidelines for small power producers, customer-owned generators, and non utility generators. As stated previously, the primary focus of this interconnection upgrade as in the past has been safety of personnel and equipment and incorporates best practices, guidelines of state and federal agencies as well as industry standards. The new guideline will use IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems, IEEE Std. 1547-2003, as a model. As mentioned through the initial and reply comments regarding the PURPA standard, LCEC has also used FERC rules in addition to the IEEE Std. 1547 to develop interconnection standards. These sources are a common reference included in the IREC (International Renewable Energy Council) Model Interconnection Standards and Procedures for Small Generator Facilities referred to at [www.irecusa.org](http://www.irecusa.org) , which were cited in customer comments on the subject.

LCEC's use of the IEEE Standard 1547 for implementing the EPAct 2005 interconnection standard is consistent with the recent "Stipulation Regarding the Interconnection of Distributed Resources to the Electric Power System" recently submitted to the Florida Public Service Commission (FPSC) by the investor-owned utilities in Florida, which was subsequently approved by the FPSC on August 18, 2006.

In addition, LCEC should continue to review the standards offered for interconnection. This allows for adoption of emerging technologies that may simplify

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interconnection further and strengthen the interconnection for safe, reliable access to

LCEC's distribution and transmission system.

## **Appendices**

## **Appendix A**

### **Seminole's Input for Cooperative's Consideration In Implementing the Directives under the Energy Policy Act of 2005**

With the passage of the 2005 Energy Policy Act (EPAct 2005), all electric utilities with retail sales of over 500 million kWh are required to consider whether to implement five new Public Utilities Regulatory Policies Act of 1978 (PURPA) standards. Lee County Electric Cooperative, Inc. (Cooperative) meets the kWh threshold, and thus under EPAct 2005 its Board of Trustees must consider whether to implement each of the new PURPA standards after a public hearing process. The final determination must be in writing, based upon the evidence presented during the hearing process, and made available to the public. As the Cooperative's all requirements power supplier,<sup>1</sup> Seminole Electric Cooperative, Inc. (Seminole) is best situated to address certain of the new standards. The purpose of this document is to provide input regarding those four standards that are under Seminole's purview and/or responsibility. The Cooperative may utilize this document as evidence in its hearing process if it deems that appropriate.

The five new PURPA standards deal with the following areas: 1) net metering, 2) fuel diversity, 3) fossil fuel generation efficiency, 4) time based rate schedules utilizing advanced metering and communication equipment, and 5) interconnection service. Seminole is providing comments below regarding the first four of the new standards. The specific statutory language describing these four standards is as follows:

#### **Net Metering**

Each electric utility shall make available upon request net metering service to any electric utility consumer that the electric utility serves. For purposes of this paragraph, the term 'net metering service' means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

#### **Fuel Diversity**

Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

#### **Fossil Fuel Generation Efficiency**

Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil generation.

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<sup>1</sup> In 1975, Seminole and the Cooperative entered into an all requirements wholesale power contract ("Wholesale Power Contract") which provides that the Cooperative is required to purchase from Seminole all of its power requirements for distribution within the State of Florida. The all requirements Wholesale Power Contract has an initial term through July 30, 2020.

### **Smart Metering and Real Time Pricing**

Each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.<sup>2</sup>

#### **PURPA Standard: Net Metering**

This standard requires the Cooperative to consider whether to offer to its consumers a service which allows the netting (on a kWh-to-kWh basis) of the sales of electricity from a consumer-owned generator against the consumer's purchases of electricity from the utility. Net metering is a service generally measured from a single meter. When the customer uses more power than it generates at any moment, the dial on the meter rolls forward, recording positive kWh consumption. When the customer generates more power than it uses at any moment ("Excess Energy"), the dial on the meter rolls backwards and erases previously recorded customer usage. When the customer generator is providing Excess Energy and the customer meter is rolling backwards, the customer generator is providing a flow of electricity into the Cooperative's system which is used to serve other Cooperative customers. The Cooperative would then in effect be "purchasing" power and energy from its customer which would in turn be used to serve the Cooperative's system.

Under the all-requirements Wholesale Power Contract between Seminole and the Cooperative, Seminole is required to sell and deliver, and the Cooperative is required to purchase and receive from Seminole, all electric power and energy that the Cooperative requires for the operation of its system. The "all requirements" nature of the Wholesale Power Contract prohibits the Cooperative from purchasing or otherwise acquiring power and energy from a source other than Seminole to serve its system, which means that the Cooperative is not permitted to purchase any of the Excess Energy from its consumers. Given that the implementation of net metering service results in the sale of Excess Energy from the consumer to the Cooperative, it is Seminole's position that offering net metering service is inconsistent with the Wholesale Power Contract.

#### **PURPA Standard: Fuel Diversity**

A diverse generation mix is very important to a utility's ability to provide competitively priced energy over a long period of time. This is because the best combination of generation technology and associated fuels at one point in time may not

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<sup>2</sup> This is the opening paragraph of this standard. The second paragraph of the standard describes the types of time-based rate schedules, among others, that may be considered.

provide optimal results at a later point in time due to technological advancement, environmental legislation, and/or fuel price trends. Such is the case today: utilities that in recent years constructed gas-fired generation to meet a portion of their system energy requirements are confronted with higher-than-forecast natural gas prices, which have led to higher consumer prices for energy as these utilities were limited in their options to change fuels due to the infrastructure they had put in place.

Seminole historically has strived to provide its wholesale customers (ten Member Systems) with a generation and fuel mix designed to provide relatively stable energy prices over a range of possible scenarios. In 2006, Seminole's system energy requirements will be generated (both owned and purchased) from approximately 37% natural gas and 63% non-gas fuels, predominantly coal and renewable energy. At present, renewable energy resources serve almost 3% of the total energy requirements for Seminole and its Members. These renewable energy resources include biomass, landfill gas, waste-to-energy, and hydroelectric resources. Seminole has procured renewable resources that are cost competitive and which provide economic value to Seminole's Members and their member/consumers. Seminole will continue to seek additional renewable energy resources that are cost-effective and provide fuel diversity to Seminole's generation portfolio.

Over the course of the last few years, which have evidenced dramatic increases in natural gas prices, Seminole has been able to retain a competitive wholesale rate. Even though increased gas prices did in fact increase Seminole's cost of wholesale power, the inherent stability of Seminole's coal and renewable energy resources helped mitigate the increase and enabled Seminole to charge competitive wholesale rates through this period. Over the next few years, Seminole's reliance on natural gas will increase somewhat until 2012, at which time a new coal unit will be added. In 2013, Seminole's system energy requirements will be provided by a generation mix of approximately 29% natural gas and 71% non-gas fuels.

Fuel diversity in Seminole's generating portfolio is a significant factor in Seminole's ability to stay competitive as fuel prices change. Seminole is committed to maintaining a diverse generation and fuel mix in future years, which will provide stable and competitive wholesale energy prices for its Members. As a part of its current business planning cycle, Seminole will be reviewing its generation plan and fuel mix to ensure stable energy pricing in future years.

#### **PURPA Standard: Fossil Fuel Generation Efficiency**

Generation efficiency is measured by the heat rate: the amount of energy needed to produce one kWh of electricity, measured in Btu/kWh. Increasing a plant's efficiency (i.e., lowering its heat rate) is the ability to generate a kWh of electricity using less fuel than before the improvement (or, stated another way, generating more kWh for the same amount of fuel used).

Maintaining the optimal efficiency of Seminole's generating facilities is, and has always been, a high priority for Seminole. There are several ways that Seminole monitors and maintains overall plant heat rates. On a day-to-day basis plant personnel are required to monitor and operate the facility equipment within acceptable operating ranges that maximize facility efficiencies. A real time Plant Heat Rate Monitoring System (specific to each facility) summarizes equipment performance and process variables to provide real time information to operating personnel on equipment-specific performance. Should equipment operation fall outside of the expected limits, the operator is expected to correct the condition, bringing the facility performance back to optimal efficiency levels. If due to equipment failure, or if the operator is unable to achieve acceptable performance, the condition is reported to the Senior Site Engineer.

The Senior Site Engineer is responsible for monitoring the overall effectiveness of the facility operations and for the correction of any deficiencies which result in negative heat rate trends (i.e., poor equipment performance or operator errors). The Senior Site Engineer is responsible to report required equipment maintenance to the maintenance departments and to provide technical advice to Plant Operations to ensure corrective measures are taken to eliminate any negative trends in plant performance. Heat rate related maintenance work is given the highest priority.

In addition to the daily equipment performance efficiency improvements, long term equipment problems, such as refurbishments and replacements, are investigated on an ongoing basis. Through review of daily equipment performance, any deficiencies which cannot be eliminated by equipment maintenance are reviewed to determine the appropriate action necessary to correct the deficiency in the future. In addition, heat rate improvements through capital additions to the facilities are considered and evaluated for cost efficiencies. An example of a heat rate capital improvement being implemented at Seminole's coal generating facilities is the modification of the low pressure turbines to improve facility efficiency and increase facility output by 20 MW. Another example of an improvement being made to Seminole's combined cycle facility is the installation of stack dampers to minimize boiler heat loss during cycling operations.

On a quarterly basis facility performance is reviewed with senior management. Plant operational performance is also reviewed quarterly, including those corrective actions initiated to address performance issues. In addition, an annual review of each facility's performance is performed by a third party consultant. The consultant provides benchmarking of the historical facility performance against industry performance.

Overall, Seminole's heat rate programs for the existing generating facilities have shown Seminole to be very competitive as compared to Seminole's electric utility peer group. This demonstrates that Seminole's approach to controlling and addressing heat rate inefficiencies at the generating facilities has been successful.

With regard to Seminole's decision-making process for determining which type of new generating facilities to include in its portfolio for meeting the Member Cooperative's demand and energy requirements, a key consideration is the technology assessment that evaluates different attributes of the different available technologies. The assessment evaluates each generating technology for the following elements:

- Efficiency
- Availability
- Capital Cost
- Fuel
- Unit Size
- Heat Rate
- Maintenance Requirements
- Fixed and Variable Operating Costs

Seminole recently made the decision to construct a new coal-fired electric generating unit to provide up to 750 MW of base load generating capacity. The technology assessment identified several types of coal burning unit types that operate under different operating conditions resulting in different efficiency ratings. The assessment concluded that while the majority of utility coal-fired units in the United States utilize a sub critical technology, which operates at a lower operating temperature and pressure, a newer supercritical technology, which operates at higher temperatures and pressure, is more efficient. The improved efficiency results in using less fuel, producing fewer air emissions to produce the same amount of energy, and providing the lowest cost of energy.

#### **PURPA Standard: Smart Metering and Real Time Pricing**

This standard requires the Cooperative to consider whether to offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and which reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level. It is important to note that since, as noted, the Cooperative is required to purchase all of its power requirements from Seminole under the Wholesale Power Contract, a key consideration in determining whether to offer time-based rates to the Cooperative's consumers is the price signals reflected in Seminole's power bills to the Cooperative.

Under the Wholesale Power Contract with its Member Cooperatives, Rate Schedule SECI-7g is applicable to serve the total firm demand and energy requirements at a Member Cooperative's delivery points. Seminole's current Rate Schedule SECI-7g, as well as Rate Schedule SECI-7h which will go into effect January 1, 2007, reflects a rate design methodology which has been in place since 1999. The wholesale rate schedule provides the following separate unit charges:

1. Production Demand Charge – expressed on a dollar per kW per month basis and applied to the Cooperative's metered kW at the time of Seminole's monthly system peak during eight peak months of the year (January through March, June through September and December)
2. Production Fixed Energy Charge – a fixed dollar per month charge
3. Transmission Demand Charge – expressed on a dollar per kW per month basis and applied to Cooperative's metered kW at the time of Seminole's monthly system peak for each month during the year
4. Non-fuel Energy Charge – a non-time differentiated rate expressed on a dollar per kWh basis
5. Fuel Rate – a non-time differentiated rate expressed on a dollar per kWh basis and true-up for actual fuel costs every six months

As described above, Seminole's wholesale rate schedule, which applies to the Cooperative's purchases of firm service, contains Production and Transmission Demand charges, which are based upon coincident demands, and the Production Demand Charge, which is a seasonal rate that applies only during peak months. Seminole's energy charges (both fuel and non-fuel charges) are not time-differentiated. The energy charges, which are developed on a dollar per kWh basis, do not reflect seasonal or on and off peak price differences. Although Seminole's current firm wholesale rate schedule does not reflect time-based energy charges, Seminole staff has included as one of its 2006-07 tactical plan initiatives, the examination of the feasibility of offering a time-of-use energy rate option in Seminole's wholesale rate to its Member Cooperatives. It is expected that this initiative will be completed by the end of 2007. If it is determined that a time-based energy rate is feasible, and if approved by Seminole's Board of Trustees, the earliest such a rate would be implemented is January 1, 2009.

## **Appendix B**

**All Initial Comments received from LCEC Customers**

*Commenter - Dan Morrissey, received 12/14/2006*

1) Net Metering Global warming is real and is the biggest problem facing humanity, today. Global warming is caused primarily by fossil fuels. To reverse global warming we need to reduce our use of fossil fuels. Due to the urgency of global warming, we need to reduce our use of fossil fuel as quickly as possible. Net metering is perhaps the most effective incentive for home owners to reduce their fossil fuel use by switching to renewable energy, such as solar energy. Net metering will help reduce global warming. Therefore, I support implementing net metering as quickly as possible. 2) Fuel Sources Although LCEC is not a producer of electricity, but instead, a purchaser, non-the-less, LCEC can develop a plan to minimize dependence on one fuel source by encouraging its customers to diversify their energy sources. 3) Fossil Fuel Generation Efficiency No comment at this time. 4) Time-Based Metering and Communications No comment at this time. 5) Interconnection This issue goes hand in hand with the first issue: net metering. In order for the benefits of net metering to be realized, i.e. the reversing of global warming, the interconnection process must be easy for a home owner to understand and implement. I support a renewable energy-friendly interconnection process. Thank you.

*Commenter - Commissioner Ray Judah, received December 15, 2006*

**Lee County, as an “Eligible Participant” would like to make comments on the five new PURPA standards defined by EPAct 2005. The comments provided at this time are general in nature, however, Lee County will seek to have a greater understanding of the impact to the County during the upcoming process leading to**

**the determination. Below are the five sections of the PURPA Standards to be addressed followed by Lee County's general comments.**

1. *Net Metering*. Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term "net metering service" means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

**Response:**

**Lee County would be in favor of net metering agreements that allows small renewable energy generators to connect to the LCEC distribution grid without creating or causing a negative financial impact to the system owner. It is vital to our environment to advance the greater uses of renewable energy. Net metering agreements that encourage greater self-generation benefit our residents, create jobs, positively impact our local economy and create good will among our citizens. Studies have shown that renewable energy creates more jobs than fossil fuel generation and have also shown that customers of electric utilities are willing to pay more for clean generation. The most efficient deployment models require participation from utilities for delivery and government that creates favorable regulations. As an example, small solar system generators of less than 20 kW will produce power during summer peaking periods and have a benefit to the**

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**distribution grid. In contrast, electricity produced from small photovoltaic systems is typically consumed within the customer's site and little is exported to the grid. Lee County is aware that many electric utilities throughout the country have agreements that do not negatively impact either the utility or the renewable energy generator. That balance is accomplished by having a reasonable agreement such as can be found in model agreements offered by the Interstate Renewable Energy Council. Model Net-Metering is available on their web site: [www.irecusa.org](http://www.irecusa.org). A simple agreement would credit the electric generation in kWh but never offer an exchange of currency. If a customer leaves the utility the credit is lost and no money is ever exchanged.**

2. *Fuel Sources.* Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

**Response:**

**While LCEC may not be a generation owner, Lee County would seek to encourage LCEC to promote greater use of renewable fuels from generation used by LCEC customers. This can take the form of providing energy to end user customers on site or by specifying a renewable energy fuel (biomass or biofuels) to be used in existing generators. Standby generators located onsite and operated by LCEC could use bio fuels or establish solar water heating on customer sites with the energy sold to the customer. This, in turn, would be a new product offering that is**

**renewable and has favorable economic returns to LCEC shareholders. This will serve to reduce the use of non renewable fuels, create fuel diversity, local jobs and keeps dollars that would otherwise be spent on fuels purchased from out of state locations and even out of this country.**

3. *Fossil Fuel Generation Efficiency.* Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.

**Response:**

**Where LCEC may have distributed generation, Lee County would like to see highly efficient generators that would utilize the combined heat and power to achieve the maximum efficiency from the precious fossil fuel being used. In other words, get more “bang for the buck” by utilizing the heat energy instead of it being lost as a by-product.**

4. *Time-Based Metering and Communications.* Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility’s costs of generating and purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology. [This reflects the opening paragraph of the standard; the

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second paragraph of the standard lists some of the types of time-based rate schedules that may be offered; and the third paragraph provides that each electric utility subject to the first paragraph shall provide each customer requesting a time-based rate with a time-based meter capable of enabling the utility and customer to offer and receive such rate. The full text of this standard is available on the LCEC Web site [www.lcec.net](http://www.lcec.net) by clicking on the PURPA link.

**Response:**

**While the concept of time based metering is important, the incentive to take advantage of these rates and tariffs are the key to participation. Lee County would judge the success of such a program by the amount of load shaping that has occurred by customers in the LCEC service territory. Significant and sustained reduction and shifting of energy use will have an impact on the requirements for future generation. Lee County appreciates the efforts of LCEC in offering energy conservation programs and believes much, much more could be done. We would like challenge LCEC to commit to a demonstrable goal that is reasonable, understandable, measurable, believable and achievable.**

*5. Interconnection.* Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term “interconnection service” means service to an electric consumer under which an on-site generating facility on the consumer’s premises shall be connected to the local distribution facilities. Interconnection services shall be

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offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential. Please note that LCEC purchases its full power requirements from Seminole Electric Cooperative, Inc. (Seminole) under a long-term full-requirements contract. For this reason, LCEC would not be able to implement certain PURPA standards, most notably Standards 2 (Fuel Sources) and 3 (Fossil Fuel Generation Efficiency). LCEC's ability to fully implement other standards may be limited as well. LCEC notes, however, that Seminole follows policies consistent with Standards 2 and 3, which LCEC supports. Commenters are urged to take such limitations into account when presenting their views.

**Response:**

**Lee County would be in favor of interconnection agreements that allow small renewable energy generators to safely connect to the LCEC distribution grid without creating or causing a negative financial impact to the system owner. Lee County is aware that many electric utilities throughout the country have agreements that do not negatively impact either the utility or the renewable energy generator. Studies show that distributed solar generation has, in fact, caused a benefit to the grids by reducing demand on the grid. Targeted deployment of solar energy relieves loads**

**on the utility's transmission, sub-transmission, and distribution systems, thereby effectively increasing available T&D capacity. This relief allows utility T&D planners to defer capital investments in the T&D system. The economic value of these deferrals includes both the time value of money and the reduction in T&D system O&M costs. A fare and balanced interconnection agreement is accomplished by having a reasonable agreement such as can be found in the California Rule 21 interconnection agreement or model agreements offered by the Interstate Renewable Energy Council. Model Net-Metering Rules and Interconnection Standards for Small Generators are available on their web site: [www.irecusa.org](http://www.irecusa.org).**

## **Appendix C**

IS

RATE SCHEDULE IS  
 INTERRUPTIBLE GENERAL SERVICE-DEMAND  
ELECTRIC SERVICE RATE SCHEDULE

The Lee County Electric Cooperative, Inc., shall charge and collect for interruptible general service-demand electric energy on the following basis of availability, application, character of service, monthly rate, minimum charge, power cost adjustment, primary service discount, power factor adjustment, and tax adjustment.

AVAILABILITY:

This schedule is available throughout the entire territory served by and at the option of the Lee County Electric Cooperative, Inc.

APPLICATION:

This schedule is available to any customer who qualifies for Rate Schedule GSD or GSD-0 and contracts for at least 50 kW demand and agrees to curtail its demand by 50 kW or more upon request from time to time of the Lee County Electric Cooperative, Inc.

CHARACTER OF SERVICE:

Service under this schedule shall be single phase or three phase, 60 Hertz, alternating current at the Lee County Electric Cooperative, Inc.'s available standard voltages. All service required on the premises by the customer shall be furnished through one meter. Stand-by or resale service is not permitted hereunder.

MONTHLY RATE:	<u>GSD</u>	<u>GSD-0</u>
Customer Charge. . . . .	\$50.00	\$50.00
Demand Charge:		
All kW of billing demand per month @ . . . . .	\$ 5.84	\$ 9.99
Energy Charge:		
All kWh per month @. . . . .	5.73¢	4.71¢

(Continued on Sheet No. 16.1)

ISSUED BY: PAMELA M. MAY  
 EXECUTIVE VICE PRESIDENT  
 AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: July 1, 2006

IS

(Continued from Sheet No. 16.0)

INTERRUPTIBLE CREDIT:

A credit will be calculated at the rate of \$3.75 for each kw that the contracted maximum demand during a curtailment period is less than the billing demand during the current billing period. The contracted maximum demand during a curtailment period must be established by agreement and at the customers option may be revised once during the initial twelve (12) month period of service. Thereafter, a change may be made after a twelve (12) month period. If the demand during a curtailment period is higher than that established by agreement, then the Lee County Electric Cooperative, Inc., shall recover one hundred fifteen percent (115%) of all excess credits given to the customer during the preceding twelve (12) month period or since the last curtailment, whichever is less.

POWER COST ADJUSTMENT:

The amount computed at the above monthly rate shall be adjusted plus or minus by an amount calculated in accordance with the formula specified in the Lee County Electric Cooperative, Inc.'s power cost adjustment clause which is a part of this rate schedule.

MINIMUM CHARGE:

The monthly minimum charge shall be the "Customer Charge" plus the "Demand Charge Adjusted for Interruptible Credit."

DETERMINATION OF BILLING DEMAND:

The demand to be used for billing purposes shall be the maximum fifteen (15) minute integrated demand occurring during the billing period as indicated to the nearest one-tenth of a kW by a meter installed to measure demand, but in no event shall billing demand be less than 20 kW, nor less than seventy (70) percent of the maximum measured demand, if applicable, during the preceding eleven (11) months.

POWER FACTOR ADJUSTMENT:

The Lee County Electric Cooperative, Inc., may, at its option, install metering equipment to allow determination of the reactive component of power utilized by the customer. The customers utilization equipment shall not result in a power factor at the point of delivery of less than 90% lagging at the time of maximum demand. Should this power factor be less than 90% lagging during the month, the Cooperative may adjust the reading taken to determine the demand multiplying the kW obtained through such reading by 90% and by dividing the result by the power factor actually established at the time of maximum demand during the current month. Such adjusted reading shall be used in determining the demand. At the request of the customer, but not more frequently than once in each twelve (12) month

(Continued on Sheet No. 16.2)

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: February 1, 2002

LEE COUNTY ELECTRIC COOPERATIVE, INC.  
NORTH FORT MYERS, FLORIDA

SECOND REVISED SHEET NO. 16.2  
CANCELLING FIRST SHEET NO. 16.2

IS

(Continued from Sheet No. 16.1)

period, the Lee County Electric Cooperative, Inc., will review the need for such metering and may, at its option, terminate such metering.

CURTAILMENT PERIOD:

All hours established by the Cooperative during a monthly billing period in which the Customer is requested to curtail demand.

TERM OF SERVICE:

Not less than one year.

PRIMARY SERVICE DISCOUNT:

For service provided and metered at 14.4 kV and higher where the Lee County Electric Cooperative, Inc., has such service available in the immediate area of the load and where the customer owns the necessary transformation equipment, the foregoing demand charges shall be subject to a discount of twenty-five cents (\$0.25) per kW of billing demand.

TAX ADJUSTMENT:

The amount computed at the above monthly rate as adjusted by the application of the monthly power cost adjustment clause shall be subject to taxes, assessments, and surcharges imposed by any governmental authority calculated in accordance with the Lee County Electric Cooperative, Inc.'s tax adjustment clause which is a part of this rate schedule.

TERMS OF PAYMENT:

The above rates are net. In the event the current bill is not paid after due notice, to the extent permitted by law, the customer is subject to a late-payment charge and disconnection. In the event it is necessary for the Lee County Electric Cooperative, Inc., to send a bill collector to collect the bill, to the extent permitted by law, a collection charge shall be made.

ISSUED BY: JAMES D. SHERFEY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 1986

RSL

RATE SCHEDULE RSL  
RESIDENTIAL LOAD MANAGEMENT ELECTRIC SERVICE RATE SCHEDULE

The Lee County Electric Cooperative, Inc., shall charge and collect for residential load management electric service on the following bases of availability, application, character of service, monthly rate, minimum charge, power cost adjustment, and tax adjustment.

AVAILABILITY:

This schedule is available only within the range of the Lee County Electric Cooperative, Inc.'s load management communication system.

APPLICATION:

This schedule is applicable to all customers eligible for residential electric service under Rate Schedule RS who elect service under this rate schedule and who utilize any of the following electrical equipment:

1. Standard water heater
2. Central cooling system
3. Central heating system
4. Swimming pool pump

Service under this rate schedule is restricted to customers that request such service based upon the Lee County Electric Cooperative, Inc.'s, determination of the cost effectiveness to the customer and the utility and is subject to the Terms of Service included here- in after.

LIMITATION OF SERVICE:

Service to the electrical equipment specified above may be interrupted at the option of the Lee County Electric Cooperative, Inc., by means of load management devices installed on the customer's premises.

(Continued on Sheet No. 20.1)

ISSUED BY: JAMES D. SHERFEY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 1986

RSL

CHARACTER OF SERVICE:

Service under this schedule shall be single phase or three phase, 60 Hertz, alternating current at the Lee County Electric Cooperative, Inc.'s, available standard voltages. At the option of the Lee County Electric Cooperative, Inc., three phase service will be provided. All residential service required on the premises by the customer will be supplied through one meter. Standby or resale service is not permitted hereunder.

MONTHLY RATE:

Customer Charge:

Single Phase Service . . . . \$ 8.00

Three Phase Service. . . . \$11.00

Energy Charge:

All kWh per month @. . . . 8.71¢

LOAD MANAGEMENT MONTHLY CREDIT AMOUNTS:

<u>Interruptible Electrical Equipment</u>	<u>Monthly Rate</u>	
	<u>Summer(1)</u>	<u>Winter(2)</u>
Standard water heater	\$1.50	\$3.00
Central cooling system (1)	1.75	-
Central heating system (2)	-	2.25
Swimming pool pump	2.25	2.25

(1) Credit applicable for the billing months of April 1 through October 31 only.

(2) Credit applicable for the billing months of November 1 through March 31 only.

(Continued on Sheet No. 20.2)

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 2006

RSL

(Continued on Sheet No. 20.1)

Equipment interruptions for central cooling and central heating systems will not exceed an accumulated total of 18 minutes during any 60 minute interval within the Lee County Electric Cooperative, Inc.'s, designated peak periods and will not exceed a total of 9 minutes of continuous interruption during such designated peak periods.

Equipment interruptions for standard water heaters and swimming pool pumps may be interrupted continuously, not to exceed 240 minutes, during the Lee County Electric Cooperative, Inc.'s, designated peak periods.

Designated peak periods in terms of prevailing clock time shall be as follows:

6:00 a.m. to 10:00 a.m.  
4:00 p.m. to 9:00 p.m.

POWER COST ADJUSTMENT:

The amount computed at the above monthly rate shall be adjusted plus or minus by an amount calculated in accordance with the formula specified in the Lee County Electric Cooperative, Inc.'s, power cost adjustment clause which is a part of this rate schedule.

MINIMUM CHARGE:

The monthly minimum charge shall be the "customer charge."

(Continued on Sheet No. 20.3)

ISSUED BY: JAMES D. SHERFEY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: February 1, 1989

RSL

(Continued from Sheet No. 20.2)

TAX ADJUSTMENT:

The amount computed at the above monthly rate as adjusted by the application of the monthly power cost adjustment clause shall be subject to taxes, assessments, and surcharges imposed by any governmental authority calculated in accordance with the Lee County Electric Cooperative, Inc.'s, tax adjustment clause which is a part of this rate schedule.

TERMS OF SERVICE:

Services under this rate schedule are subject to the following special provisions:

- (1) The Lee County Electric Cooperative, Inc., shall be allowed reasonable access to the customer's premises to install, maintain, inspect, test and remove load management devices on the electrical equipment specified above.
- (2) Prior to the installation of load management devices, the Lee County Electric Cooperative, Inc., may inspect the customer's electrical equipment to ensure good repair and working condition, but the Lee County Electric Cooperative, Inc., shall not be responsible for the repair or maintenance of the customer's electrical equipment.
- (3) The Lee County Electric Cooperative, Inc., shall not be required to install load management devices on electrical equipment which would not be economically justified, including such reasons as excessive installation costs, improperly sized heating or cooling equipment, inaccessible equipment, or abnormal utilization of equipment, including vacation or other limited occupancy residences.
- (4) Multiple units of any interruptible electrical equipment specified above must be installed with load management devices to qualify for the credit attributable to that equipment.

(Continued on Sheet No. 20.4)

ISSUED BY: JAMES D. SHERFEY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 1986

RSL

(Continued from Sheet No. 20.3)

- (5) Billing under this rate schedule for standard water heaters and swimming pool pumps will commence with the first complete billing period following installation of the load management device. Billing under this rate schedule for central heating systems will commence with the first complete billing period following installation of the load management device during the heating season (November through March), and, for central cooling systems, with the first complete billing period following installation of the load management device during the cooling season (April through October). A customer may change the selection of electrical equipment installed with load management devices or transfer to another rate schedule by notifying the Lee County Electric Cooperative, Inc., 60 days in advance.
- (6) The limitations on equipment interruptions shall not apply during capacity emergencies on the Lee County Electric Cooperative, Inc., system.
- (7) If the Lee County Electric Cooperative, Inc., determines that the load management devices have been altered or tampered with, the Lee County Electric Cooperative, Inc., may discontinue service under this rate schedule and bill for all prior load management credits received by the customer, unless an earlier alteration or tampering date can be established, plus applicable investigative charges.
- (8) If the Lee County Electric Cooperative, Inc., determines that the effect of equipment interruptions has been offset by the customer's use of supplementary or alternative electrical equipment, service under this rate schedule may be discontinued and the customer will be billed for all prior load management credits received over a period not in excess of six (6) months.

(Continued on Sheet No. 20.5)

ISSUED BY: JAMES D. SHERFEY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 1986

RSL

(Continued from Sheet No. 20.4)

- (9) If the Lee County Electric Cooperative, Inc., determines that the interruptible electrical equipment is no longer being used by the customer, then the Lee County Electric Cooperative, Inc., shall have the right to remove the load management device and discontinue billing the monthly credit.
- (10) The monthly credit for the load management equipment shall not reduce a customer's monthly bill when the customer's energy usage is less than 500 kWh during the billing period.

TERMS OF PAYMENT:

The above rates are net. In the event the current bill is not paid after due notice, to the extent permitted by law, the account is subject to a late-payment charge and disconnection. In the event it is necessary for the Lee County Electric Cooperative, Inc., to send a collector to collect the bill, to the extent permitted by law, a collection charge shall be made.

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 2006

RATE SCHEDULE GSDT  
GENERAL SERVICE DEMAND-TIME OF USE ELECTRIC SERVICE RATE SCHEDULE  
(OPTIONAL)

GSDT

The Lee County Electric Cooperative, Inc., shall charge and collect for general service demand-time of use electric energy on the following bases of availability, application, character of service, monthly rate, power cost adjustment, primary service discount, minimum charge, power factor adjustment, and tax adjustment.

AVAILABILITY:

This schedule is available throughout the entire territory served by the Lee County Electric Cooperative, Inc.

APPLICATION:

This schedule is applicable to all electric service required for lighting, power, and any other purpose with a maximum demand in excess of 20 kW for which no specific rate schedule is applicable. This is an optional rate available to General Service Demand customers upon request subject to the availability of meters.

CHARACTER OF SERVICE:

Service under this schedule shall be single phase or three phase, 60 Hertz, alternating current at the Lee County Electric Cooperative, Inc.'s available standard voltages. All service required on the premises of the customer shall be furnished through one meter. Standby or resale service is not permitted under this rate schedule.

MONTHLY RATE:

Customer Charge . . . . . \$30.00

Demand Charge:

All kW of Billing Demand whenever it occurs . . @ \$3.20

Plus

All kW of Billing Demand occurring during the  
On-Peak periods . . . . . @ \$3.60

Energy Charge:

	<u>OFF-PEAK PERIOD</u>	<u>ON-PEAK PERIOD</u>
All kWh per month @. . . . .	4.71¢	6.42¢

(Continued on Sheet No. 22.1)

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: April 1, 2006

GSDT

(Continued From Sheet No. 22.0)

POWER COST ADJUSTMENT:

The amount computed at the above monthly rate shall be adjusted plus or minus by an amount calculated in accordance with the formula specified in the Lee County Electric Cooperative, Inc.'s power cost adjustment clause which is a part of this rate schedule.

RATING PERIODS:

Designated on-peak periods in terms of prevailing clock time shall be as follows:

For the calendar months of November through March:

Monday through Friday: 6:00 a.m. to 10:00 a.m. and  
6:00 p.m. to 10:00 p.m.

For the calendar months of April through October:

Monday through Friday: 12:00 Noon to 8:00 p.m.

Designated off-peak periods include all other hours not included above for the on-peak period including Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, and New Year's Day.

MINIMUM CHARGE:

The monthly minimum charge shall be the "Customer Charge" plus the "Demand Charge."

If the customer elects to make a lump sum payment to the company for time of use metering costs of \$350.00, the customer charge shall be \$15.00.

DETERMINATION OF BILLING DEMAND:

The demand to be used for billing purposes shall be the maximum fifteen (15) minute integrated demand occurring during the designated on-peak and off-peak billing periods as indicated to the nearest one-tenth of a kW as determined by the Lee County Electric Cooperative, Inc.'s time-of-use metering equipment but in no event shall billing demand be less than 20 kW or the contract demand, if applicable, for the designated on-peak and off-peak billing periods nor less than seventy (70) percent of the maximum measured demand during the designated on-peak billing period, if applicable, during the preceding eleven (11) months.

(Continued on Sheet 22.)

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: February 1, 2002

GSDT

(Continued From Sheet No. 22.1)

POWER FACTOR ADJUSTMENT:

The Lee County Electric Cooperative, Inc., may, at its option, install metering equipment to allow determination of the reactive component of power utilized by the customer. The customers utilization equipment shall not result in a power factor at the point of delivery of less than 90% lagging at the time of maximum demand. Should this power factor be less than 90% lagging during any month, the Cooperative may adjust the reading taken to determine the demand by multiplying the kW obtained through such reading by 90% and by dividing the result by the power factor actually established at the time of maximum demand during the current month. Such adjusted reading shall be used in determining the demand. At the request of the customer, but not more frequently than once in each twelve (12) month period, the Lee County Electric Cooperative, Inc., will review the need for such metering and may, at its option, terminate such metering.

PRIMARY SERVICE DISCOUNT:

For service provided and metered at 14.4 kV and higher where the Lee County Electric Cooperative, Inc., has such service available in the immediate area of the load and where the customer owns the necessary transformation equipment, the foregoing demand charges shall be subject to a discount of twenty-five cents (\$0.25) per kW of billing demand.

TAX ADJUSTMENT:

The amount computed at the above monthly rate as adjusted by the application of the monthly power cost adjustment clause shall be subject to taxes, assessments, and surcharges imposed by any governmental authority calculated in accordance with the Lee County Electric Cooperative, Inc.'s tax adjustment clause which is a part of this rate schedule.

TERMS OF PAYMENT:

The above rates are net. In the event the current bill is not paid after due notice, to the extent permitted by law, the customer is subject to a late-payment charge and disconnection. In the event it is necessary for the Lee County Electric Cooperative, Inc., to send a collector to collect the bill, to the extent permitted by law a collection charge shall be made.

ISSUED BY: PAMELA M. MAY  
EXECUTIVE VICE PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

EFFECTIVE: February 1, 2002

