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John J. Finnigan, Jr.
Senior Counsel

RECEIVED

MAR 23 2006

PUBLIC SERVICE
COMMISSION

VIA OVERNIGHT MAIL

March 22, 2006

Ms. Elizabeth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602-0615

Re: Consideration of the Requirements of The Federal Energy Policy Act of 2005
Regarding Time-Based Metering, Demand Response and Interconnection Service
Case No. 2006-00045

Dear Ms. O'Donnell:

In accordance with the Commission's Order of February 24, 2006, in the above-referenced case, enclosed are an original and seven copies of The Union Light, Heat and Power Company's responses to the Commission's initial information requests.

If you have any questions regarding this filing, please call me at (513) 287-3601.

Thank you.

Sincerely,

John J. Finnigan, Jr.
Senior Counsel

JJF/sew

cc: All Parties of Record (with enclosures)

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

RECEIVED

MAR 23 2006

PUBLIC SERVICE
COMMISSION

CONSIDERATION OF THE)
REQUIREMENTS OF THE FEDERAL)
ENERGY POLICY ACT OF 2005)
REGARDING TIME-BASED METERING,)
DEMAND RESPONSE AND)
INTERCONNECTION SERVICE)
)

Case No. 2006-00045

RESPONSES OF THE UNION LIGHT, HEAT AND POWER COMPANY
TO THE COMMISSION'S INITIAL INFORMATION REQUESTS

Respectfully submitted,



John J. Finnigan, Jr. (86657)

Senior Counsel

The Union Light, Heat and Power Company

139 East Fourth Street, 25th Floor Atrium II

P. O. Box 960 (EA025)

Cincinnati, Ohio 45201-0960

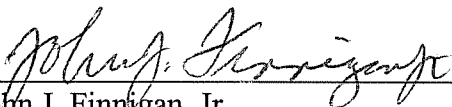
Phone: (513) 287-3601

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CERTIFICATE OF SERVICE

I hereby give notice that on March 22, 2006, I served a copy of the foregoing on all parties of record by first class United States mail, postage prepaid.



John J. Finnigan, Jr.

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Smart Metering-001

REQUEST:

1. Provide a list of programs you offer at present or have offered at any time since the enactment of the Public Utilities and Regulatory Policies Act ("PURPA") that can be included under the definition of either time-based metering or demand response set forth in Section 1252 of EPAct 2005. Include a brief description of each program, the relevant tariffs (if applicable) and a cite to the Commission case number in which the program was approved (if applicable).

RESPONSE:

ULH&P presently has the following time-based metering or demand response rates/programs:

Non-Residential – Time Of Day Pricing

- Rate DT, Time-Of-Day Rate For Service At Distribution Voltage (KY.P.S.C. Electric No. 4, Sheet No. 41). Applies to non-residential customers with average monthly demands of 500 kW or greater and who receive service at distribution voltage. Under this rate, demand charges vary between summer and winter, and between on- and off-peak periods. Summer, winter, on-peak, and off-peak periods are the same as described under Rider LM below. This rate was originally approved as an experimental rate on October 3, 1985 in Case No. 9299 and subsequently updated.
- Rate TT, Time-Of-Day Rate For Service At Transmission Voltage (KY.P.S.C. Electric No. 4, Sheet No. 51). Applies to non-residential customers who receive service at transmission voltage. Under this rate, demand charges vary between summer and winter, and between on- and off-peak periods. Summer, winter, on-peak, and off-peak periods are the same as described under Rider LM below. This rate was originally approved as an experimental rate on October 3, 1985 in Case No. 9299 and subsequently updated.
- Rider LM, Load Management Rider (KY.P.S.C. Electric No. 4, Sheet No. 73). This voluntary rate applies to non-residential customers who receive service under Rate DS (Service At Secondary Distribution Voltage) or Rate DP (Service At Primary Distribution Voltage). For customers with simple time-of-use metering, Rate DS or Rate DP demand charges are based only upon the on-peak periods. For customers with interval metering, Rate DS or Rate DP demand charges are

based upon the on-peak demand or 50% of the off-peak demand, whichever is larger. Customers with simple time-of-use metering pay \$5 per month to participate in this program. Customers with interval metering pay \$100 per month. The summer season is the months of June through September. The "off-peak period" for the summer season is defined as the period from 8:00 p.m. of one day to 11:00 a.m. of the following day; Friday from 8:00 p.m. to 11:00 a.m. of the following Monday; and from 8:00 p.m. of the day preceding a legal holiday to 11:00 a.m. of the day following that holiday. The "off-peak period" for the winter season is defined as the period 2:00 p.m. to 5:00 p.m. and from 9:00 p.m. of one day to 9:00 a.m. of the following day; Friday from 9:00 p.m. to 9:00 a.m. of the following Monday; and from 9:00 p.m. of the day preceding a legal holiday to 9:00 a.m. of the day following that holiday. The "on-peak period" is defined as all hours exclusive of the "off-peak period" hours. This rate was originally approved on October 3, 1985 in Case No. 9299 and subsequently updated.

Non-Residential – Real Time Pricing

- Rate RTP, Real Time Pricing Program (KY.P.S.C. Electric No. 4, Sheet No. 99). Applies to non-residential customer receiving service under Rate DS, Rate DP, Rate DT, or Rate TT. The RTP Program is voluntary and offers customers the opportunity to manage their electric costs by either shifting load from higher cost to lower cost pricing periods and adding new load during lower cost pricing periods or to learn about market pricing. Binding Price Quotes are sent to each participating customer on a day-ahead basis. The program is intended to be bill neutral to each customer with respect to their historical usage through the use of a Customer Baseline Load (CBL) and the Company's standard rates. This rate was originally approved by the Commission pursuant to 807 KAR 5:011, Section 9(1) dated March 24, 1997. It was revised in Case No. 2000-302 dated October 30, 2000, and has been extended in subsequent cases.
- Rate RTP - M, Real Time Pricing - Market-Based Pricing (KY.P.S.C. Electric No. 4, Sheet No. 59). Applicable to all new customers as of January 1, 2002 having estimated service requirements of 5,000 kilowatts or more and to existing customers whose service requirements increase by 5,000 kilowatts or more. Where an existing customer's requirements increase by 5,000 kilowatts or more, that customer's incremental load is subject to the provisions of this rate schedule. This rate is similar to Rate RTP as described above, but it is not an optional rate. Rate RTP-M was approved in an Order dated May 11, 2001 in Case No. 2001-058.

Non-Residential – Interruptible / Load Reduction Credits

- Rider IS, Interruptible Service Rider (KY.P.S.C. Electric No. 4, Sheet No. 74). This voluntary rate applies to non-residential customers who can reduce demand by 1,000 kW or more at the direction and discretion of the Company. Participants must be willing to reduce demand for fourteen consecutive hours in any twenty-

four hour period. Under this rate, customers receive monthly demand credits that vary based on the maximum number of hours per year that the participant is willing to be interrupted. Participants that do not reduce demand when notified are billed a penalty of \$5 per kW. Customers must enter in a service agreement with the Company that specifies the details, rules, and regulations of the program. This rate was approved on October 3, 1985 in Case No. 9299.

- Rider PLM, Peak Load Management Program (KY.P.S.C. Electric No. 4, Sheet No. 77). Applies to non-residential customers receiving service under Rate DS, Rate DP, Rate DT, Rate TT, Special Contracts, or Rate RTP. The PLM Program is voluntary and offers customers the opportunity to reduce their electric costs by managing their electric usage during the Company's peak load periods. Customers and the Company will enter into a service agreement under this Rider which will specify the terms and conditions under which the customer agrees to reduce usage. PowerShare® is the brand name given to Cinergy's Peak Load Management Program. There are two product options offered for PowerShare® called CallOption® and QuoteOption®:
 - CallOption® – A customer being served under a CallOption® product agrees, upon notification by the Company, to reduce its demand or provide generation for purchase by the Company. Each time the Company exercises its option under the agreement, the Company will provide the customer a credit for the energy reduced or generation provided. If available, the customer may elect to buy through the reduction at a market-based price. In addition to the energy credit, customers on the CallOption® will receive an option premium credit. Only customers able to provide a minimum of 100 kW load response qualify for CallOption®.
 - QuoteOption® – Under the QuoteOption® products, the customer and the Company agree that when the average wholesale market price for energy during the notification period is greater than a predetermined strike price, the Company may notify the customer of a QuoteOption® event and provide a Price Quote to the customer for each event hour. The customer will then determine whether they wish to reduce demand or provide generation during the event period. If they wish to reduce demand or provide generation, the customer will notify the Company and provide the Company an estimate of the customer's projected load reduction or generation. Each time the Company exercises the option, the Company will provide the customer an energy credit. There is no option premium for the QuoteOption® product since customer load reductions are voluntary. Only customers able to provide a minimum of 100 kW load response qualify for CallOption®.

This rate was approved pursuant to 807 KAR 5:011, Section 9(1) dated November 12, 1999 in Tariff Filing No. T60-1196.

- Rider EOP-RTP, Energy Call Option Program (KY.P.S.C. Electric No. 4, Sheet No. 77). Applies to customers participating in the Real Time Pricing Program. This program has been replaced by Rider PLM as described above, and is similar in nature. Rider EOP-RTP was issued pursuant to 807 KAR 5:011, Section 9(1) dated March 24, 1997.

Residential – Load Reduction Credits

- PowerManager® (Residential Direct Load Control (“DLC”)). PowerManager® is a voluntary program for residential customers with central air conditioning. It is a residential air conditioning, direct load control program. This is a cycling DLC program where a load management switch is installed to the central air compressor unit outside the home. The compressor unit can be cycled on and off during an event between the months of May through September. Customers may enroll in different options which pay varying installation and event incentive levels for different levels of load reduction capability. Our current offerings include:
 - a. Option A – 1.0 kW cycling
 - b. Option B – 1.5 kW cycling
 - c. Retention Option – not advertised – 0.5 kW cycling

This program was approved in Case No. 2003-00367 dated November 20, 2003.

WITNESS RESPONSIBLE: James E. Ziolkowski

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Smart Metering-002

REQUEST:

2. Provide a general discussion of the types of time-based metering or demand response programs that are possible using existing technologies and a specific discussion on which of these programs, if any, are feasible for current implementation in Kentucky.

RESPONSE:

Currently, ULH&P offers one or more programs that fit into the generic types of time-based metering or demand response programs. There are two broad categories of demand response programs based on how the load response is brought about. These categories would be Price-Based programs and Incentive-Based programs.

- a. Price-Based Programs – Typical programs placed under this category include Real Time Pricing (“RTP”) programs, Time of Use (“TOU”) rates, and Critical Peak Pricing (“CPP”) programs. They are price-based programs because end-use customers determine the level of demand response based on the price of energy for a specific period of time (*e.g.*, day or hour). ULH&P is currently reviewing the need for a residential TOU rate and will address this matter in an upcoming electric base rate case. Preliminary findings would suggest that automated technologies to enable load response are very important to make these programs efficient and cost effective. ULH&P recognizes that there are many pilot programs and studies of new technologies underway around the country such as in California, Florida, and other states. As we study these technologies and programs and find them to be cost effective, we will bring them to the commission for approval and implementation. ULH&P currently offers several TOU rates including rate DT, rate TT, and an RTP program for non-residential customers.
- b. Incentive-Based Programs – These programs provide incentives to customers outside of or in addition to their energy rate in exchange for reducing load when needed. Some common descriptions of programs in this category include Direct Load Control (“DLC”), Interruptible Special Contract Rates, and Energy and/or Capacity Buyback Programs. ULH&P currently offers PowerManager®, PowerShare®, and has one interruptible special rate contract. For PowerShare®, ULH&P has recently researched ways to increase participation in this program. We believe that

transforming the program to pay incentives based on avoided capacity cost instead of market prices would provide stability and additional incentives to customers and increase participation. In addition, across the country, there are many different varieties of incentive based programs. As we study new programs and designs and find them to be cost-effective or improvements to our current programs, we will bring them to the Commission for approval and implementation.

WITNESS RESPONSIBLE: Richard G. Stevie

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Smart Metering-003

REQUEST:

3. Provide, in narrative form, with all relevant calculations, workpapers and assumptions included, what you see as the potential impact of implementing the Smart Metering standard included in Section 1252 of EPAct in Kentucky. At a minimum, the response should address the costs of implementation, and possible rate making and rate treatment issues.

RESPONSE:

ULH&P is currently very close to full compliance with the proposed smart metering standard included in Section 1252 of EPAct 2005. The only gap that exists is because the Company does not offer a Time of Use (“TOU”) rate to the residential customer class. Each topic listed in question three will be discussed below and separated into two parts. First, a reply is provided specific to offering a new voluntary residential TOU rate which would bring ULH&P into full compliance with EPAct 2005 Smart Metering standards. Second, a reply is provided relative to implementing a mandatory price based demand response program for all customers.

a. Costs of Implementation

- i. Voluntary: The cost to offer a residential TOU rate will be negligible. Since we are currently investigating a time differentiated cost of service study, there would be practically no cost associated with using this study to develop a residential TOU rate. Marketing costs to promote rate awareness would be significant but has not been reviewed.
- ii. Mandatory: Implementation costs for a mandatory program such as CPP or RTP for all customers would be expensive. ULH&P is evaluating the cost-effectiveness of replacing all meters with smart meter technology or capability and will bring these results to the commission if we find cost-effective solutions.

b. Financial Impact

- i. Voluntary: The financial impact to the company of a residential TOU rate should be small assuming the new TOU rate is designed to be revenue neutral.

- ii. Mandatory: The impacts of implementing a mandatory rate for all customers could be large and will be investigated as we prepare a comprehensive study of the impacts of this option.
- c. Who Should Bear the Implementation Cost
- i. Voluntary: For a new residential TOU rate, the customer should bear the cost of installing a new meter to make TOU billing possible. This cost should be incorporated in their decision to participate in the rate along with the savings they anticipate due to changes in the timing of their energy consumption. As an alternative, as customers request meters, ULH&P could bear these costs and the costs for these meters could be recovered through ULH&P's rates. This strategy assumes that the customers requesting the meters would provide significant demand response that would benefit everyone in the system and therefore justify the argument to recover costs from all customers.
 - ii. Mandatory: For a larger implementation of a mandatory price-based demand response rate for all customers, it is not clear if benefits from such an implementation would be more or less than the cost to implement a solution to make this possible. Further study is needed to complete a comprehensive review of the benefits and costs. Further improvements in capability through technological change may be required before system wide deployment makes economic sense.
- d. Possible Rate Making and Rate Treatment Issues
- i. Voluntary: No issues have been identified for offering a new voluntary residential TOU.
 - ii. Mandatory: A large scale implementation of a price-based demand response rate to all customers presents significant issues. Issues would flow through the entire rate process given the fact that reliable estimates of load response are not currently available. Estimates in the response from California and other pilots certainly cannot be transferred to Kentucky without extensive scrutiny. It may be necessary to implement pilot programs in Kentucky to determine the best program design and features as well as to identify all the rate making and rate treatment issues for such an implementation.

WITNESS RESPONSIBLE: Richard G. Stevie

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Smart Metering-004

REQUEST:

4. Provide a general discussion of what you perceive to be the pros and cons of implementing a Smart Metering standard in Kentucky and the policy issues that you believe the Smart Metering standard presents for the Commission.

RESPONSE:

There are many advantages to implementing a Smart Metering standard in Kentucky and ULH&P is already very close to meeting the proposed Smart Metering standard. Many of the advantages are financial in nature such as potential customer bill savings, deferred need for new capacity and new T&D infrastructure, and wholesale price containment. In addition, reliability benefits would be received although difficult to quantify. However, one of the largest benefits will be creating the potential for new programs and technology. New rate structures could flourish similar to what has occurred in communications services. New demand-side management programs could also flourish. New technologies would be motivated to enter the marketplace to assist customers with saving money and energy based on their usage and behavior patterns. The way customers view their energy service could be changed dramatically.

Of course, with great potential for change comes risk. Implementation of new systems should be cost-effective. The company does not currently have a comprehensive study to review the costs and benefits of a mandatory TOU, RTP, or CPP rate structure for all customers. Such new rate structures could not be implemented without further study as to the corresponding rate and revenue impacts on the Company. As the company evaluates new rate options, the results will be communicated to the Commission.

In addition, further movement towards reliance on Smart Metering raises additional questions. Will new technologies enter the marketplace? Will customers change behavior? These are important questions. ULH&P's sister company in Ohio, The Cincinnati Gas & Electric Company, has offered a residential TOU rate for many years. This rate has never attracted a large number of participants nor has it provided significant benefit to the system or changed overall customer behavior.

WITNESS RESPONSIBLE: Richard G. Stevie

**KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006**

KyPSC-DR-01-Interconnection-001

REQUEST:

1. Provide, in narrative form, with all relevant calculations, workpapers and assumptions included, what you see as the potential impact of implementing the Interconnection standard included in Section 1254 of EAct in Kentucky. At a minimum, the response should address the costs of implementation, financial impact on the utility, who should bear the costs of implementation, and possible rate making and rate treatment issues.

RESPONSE:

In recent years, ULH&P has provided interconnection service to any customer requesting such service. ULH&P enters into contracts with customers for the interconnection service, and ULH&P files the contracts with the Commission. ULH&P uses the Institute of Electrical and Electronics Engineers (“IEEE”) Standards Section 1547 as the core of its technical interconnection requirements for customer interconnections. ULH&P’s interconnection contracts require the customer to pay any costs for modifying ULH&P’s facilities to accommodate the interconnection with the customer’s facilities.

The IEEE Section 1547 technical standard is part of the Section 1254 Interconnection standards in the EAct of 2005; therefore, ULH&P’s current practice conforms with Section 1254 of the EAct of 2005. ULH&P therefore does not anticipate any additional cost of providing interconnection service, provided that the Commission adopts an interconnection standard based on Section 1254 of the EAct of 2005, and if the Commission’s standard requires the customer to pay any costs for modifying ULH&P’s facilities to accommodate the interconnection with the customer’s facilities.

ULH&P believes that it is appropriate for the customer to pay for modifying ULH&P’s facilities to accommodate the interconnection with the customer’s facilities, because this is consistent with accepted ratemaking practices, which generally require that costs should be assigned to the customer(s) which cause the costs to be incurred. This is also the accepted practice followed by ULH&P’s affiliated operating companies in Ohio and Indiana.

WITNESS RESPONSIBLE: James W. Lemke

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Interconnection-002

REQUEST:

2. Provide a general discussion of what you perceive to be the pros and cons of implementing an Interconnection standard in Kentucky and the policy issues that you believe the Interconnection standard presents for the Commission. Include discussion of the issues that must be addressed to comply with IEEE 1547.

RESPONSE:

ULH&P believes that adopting an Interconnection Standard for Kentucky would be in the best interests of all stakeholders. This would promote uniform interconnection practices that are consistent within Kentucky and can be consistent with best practices that are evolving nationally. This will also result in transparent interconnection standards. ULH&P has participated in the development of the IEEE 1547 Standard and supports its use as the basis for Kentucky interconnection standards.

In addition to the technical standards in IEEE 1547, the EPAct 2005 refers to adoption of procedures and agreements. Several states have recently adopted Interconnection Procedures which have many common characteristics. These procedures are generally designed to provide clear, simple and uniform procedures for customers, with appropriate protections for utilities. Cinergy has recently participated in the development of new interconnection rules for Indiana, which will take effect in a few months. The Indiana interconnection rules contain procedures which are similar to those recently adopted in several other states, as well as interconnection rules recently adopted by FERC. Due to this similarity, ULH&P suggests that the Commission consider the Indiana rule as a model for interconnection rules in Kentucky. A copy of the Indiana interconnection rules is attached.

Issues that should be addressed in an interconnection rule include:

- Application fees
- Study fees
- Interconnection Agreements
- Insurance requirements
- Technical Standards
- Application processing time based on level of complexity of request
- Responsibility for costs of any changes to the utility system to accommodate interconnection

ULH&P believes it is a relatively simple step to incorporate IEEE 1547 into technical interconnection requirements. However, it should be pointed out that there are several technical interconnection issues that are not addressed by IEEE 1547. Therefore, IEEE 1547 can be the core of technical requirements but not the sole source of technical requirements.

WITNESS RESPONSIBLE: James W. Lemke

KyPSC Staff First Set Data Requests
ULH&P Case No. 2006-00045
Date Received: February 28, 2006
Response Due Date: March 23, 2006

KyPSC-DR-01-Interconnection-003

REQUEST:

3. Identify any customer with on-site generation that is currently connected to your distribution system. Provide the customer's maximum demand in 2005 and current generating capacity.

RESPONSE:

ULH&P currently has four customers with on-site generation interconnected to the distribution system. Those customers have the following characteristics:

Customer	Generation Capacity	2005 Max Demand	Comments
#1	2250 kW	5063 kW	Currently used for back-up power only
#2	4500 kW	3472 kW	Currently used for back-up power only
#3	20 kW	547 kW	Photovoltaic
#4	50 kW	1169 kW	Photovoltaic

WITNESS RESPONSIBLE: James W. Lemke