

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

JUN 0 5 2007

PUBLIC SERVICE COMMISSION

E.ON U.S. LLC State Regulation and Rates 220 West Main Street PO Box 32010 Louisville, Kentucky 40232 www.eon-us.com

Rick E. Lovekamp Manager – Regulatory Affairs T 502-627-3780 F 502-627-3213 rick.lovekamp@eon-us.com

June 5, 2007

RE: Joint Application of Louisville Gas and Electric Company and
Kentucky Utilities Company for an Order Approving a Large
Commercial and Industrial Real-Time Pricing Pilot Program
Case No. 2007-00161

Dear Ms. O'Donnell:

Enclosed please find and accept for filing the original and five (5) copies of Louisville Gas and Electric Company's ("LG&E") and Kentucky Utilities Company's ("KU") Response to the Request for Information Posed by the Attorney General dated May 18, 2007, in the above-referenced matter.

Should you have any questions concerning the enclosed, please do not hesitate to contact me.

Sincerely,

Rick E. Lovekamp

cc: Lawrence W. Cook Kurt J. Boehm Michael L. Kurtz

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:	
Joint Application of Louisville Gas and)
Electric Company and Kentucky Utilities)
Company for an Order Approving a Large) Case No. 2007-00161
Commercial and Industrial Real-Time)
Pricing Pilot Program)

Response of
Louisville Gas and Electric Company
and
Kentucky Utilities Company
to the Request for Information Posed
by the Attorney General
Dated May 18, 2007

Filed: June 5, 2007

*			
		,	

Louisville Gas and Electric Company and Kentucky Utilities Company

Response to the Request for Information Posed by the Attorney General Dated May 18, 2007

Case No. 2007-00161

Question No. 1

Witness: Butch Cockerill

- Q-1. Please reference the Application, at page 4 paragraph 9. Provide a total number of customers under each of the LG&E rates LC-TOD, LP-TOD, LI-TOD and KU rates LCI-TOD, LMP-TOD, and LI-TOD.
- A-1. Currently the number of customer served under each Companies respective rate schedules are shown below.

LG&E: LC-TOD: 69 LP-TOD: 59 LI-TOD: 0

KU: LCI-TOD: 43 LMP-TOD: 11 LI-TOD: <u>1</u>

Total 183

		i	

Louisville Gas and Electric Company and Kentucky Utilities Company

Response to the Request for Information Posed by the Attorney General Dated May 18, 2007

Case No. 2007-00161

Question No. 2

Witness: Kent W. Blake

- Q-2. Please list any other electric utilities' real-time pricing programs and pilots which the company reviewed and for the programs listed, provide:
 - A. A summary of each program or pilot, which should include the design of same and if implemented, the overall financial affect on the customers;
 - B. The information which the company reviewed from each other program or pilot in making the decision to propose this pilot;
 - C. The determinants or decision making reasons for determining this pilot to be appropriate; and
 - D. The modeling or analyses conducted in reaching the decision.
- A-2. A. Duke Energy Kentucky's Real Time Pricing (RTP) Program and Georgia Power's Real Time Pricing program were reviewed. Both programs are voluntary and use a Customer Baseline Load (CBL) for billing under the standard tariff and revenue neutrality. The hourly incremental usage from the CBL is billed at day-ahead hourly price quotes adjusted for losses. An Administrative/Program Charge is added to the Customer's bill to recover additional billing, administrative, and communication costs associated with the RTP program. Please see the attached for the information the Companies reviewed from each program.
 - B. Please see response to A-2. A. above.
 - C. The Companies chose the proposed pilot rate structure because:
 - 1. Assuming no load shifting, retaining the original structure for actual metered usage ensures revenue neutrality, which protects both the Companies and their customers from risk exposure.

- 2. The RTP portion of the bill acts, in effect, as a rider to the base rate structure permitting a single rate rather than having to unbundle and design a rate for each of the 6 eligible rates.
- 3. The design provides load response price signals that encourage load shifts from higher-cost hours to lower-cost hours. That objective was stated in the Commission's December 21, 2006 Order, Page 13, in Administration Case No. 2006-00045, "The Commission believes that some of the large commercial and industrial customers of the other jurisdictional utilities may benefit from real-time pricing tariffs because such customers have greater operating flexibility and, therefore, greater ability to modify their consumption patterns." (Emphasis added.)
- 4. The Companies' proposed pilot rate structure complies with the Commission's December 21, 2006 Order Page 13, in Administrative Case No. 2006-00045, which requires the Companies to "develop voluntary pilot real-time pricing programs for their commercial and industrial customers."
- D. The Companies did not conduct any modeling or quantitative analysis when formulating the proposed pilot because the Companies will provide the RTP pilot as a voluntary rider to the Companies' standard rate schedules, and because the pilot's rate structure is revenue neutral for customers who do not load shift. The financial effect of the program will be determined on a customer by customer basis based upon the response of each specific customer to the price signals and the extent that their usage pattern varies from the CBL. Any analysis conducted by the Companies would be purely hypothetical in regards to participating customers, load shifts, and hourly prices and produce unsubstantiated results.

Blake

KY. P.S.C. Electric No. 2 First Revised Sheet No. 99 Cancels and Supersedes Original Sheet No. 99 Page 1 of 4

Duke Energy Kentucky, Inc. 1697-A Monmouth Street Newport, Kentucky 41071

RATE RTP REAL TIME PRICING PROGRAM

APPLICABILITY

Applicable to Customers served under Rate DS, Rate DT, Rate DP or Rate TT. Service under the RTP Program will be offered on an experimental basis through December 31, 2008. The incremental cost of any special metering required for service under this Program beyond that normally provided under the applicable Standard Tariff shall be borne by the Customer. Customers must enter into a written service agreement with a minimum term of one year.

PROGRAM DESCRIPTION

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 will be sent to each 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 Offer Rates.

CUSTOMER BASELINE LOAD

The CBL is one complete year of Customer hourly load data that represents the electricity consumption pattern and level of the Customer's operation under the Standard Rate Schedule. The CBL is the basis for achieving bill neutrality for Customers billed under this Rate RTP, and must be mutually agreeable to both the Customer and the Company as representing the Customer's usage pattern under the Standard Rate Schedule (non-RTP). In the event that the Customer's electricity consumption pattern differs significantly from the established CBL, the Company may renegotiate the CBL with the Customer. Agreement on the CBL is a requirement for participation in the RTP Program.

RTP BILLING

Customers participating in the RTP Program will be billed monthly based on the following calculation:

```
RTP Bill = BC + PC + \sum \{ (CC_t + ED_t + ASC_t) \times (AL_t - CBL_t) \}
Where:
BC
          = Baseline Charge
PC
          = Program Charge
CC_t
          = Commodity Charge for hour t
          = Energy Delivery Charge for hour t
ED,
ASC<sub>t</sub>
          = Ancillary Services Charge for hour t
AL_{t}
          = Customer Actual Load for hour t
          = Customer Baseline Load in hour t
CBL<sub>t</sub>
          = total number of hours in the billing period
n
          = an hour in the billing period
t
```

BASELINE CHARGE

The Baseline Charge is independent of Customer's currently monthly usage, and is designed to achieve bill neutrality with the Customer's standard offer tariff if no change in electricity usage pattern occurs (less applicable program charges). The Baseline Charge is calculated at the end of the billing period and changes each billing period to maintain bill neutrality for a Customer's CBL.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

KY. P.S.C. Electric No. 2
First Revised Sheet No. 99

Page 2 of 42
Blake

Duke Energy Kentucky, Inc. 1697-A Monmouth Street Newport, Kentucky 41071 KY. P.S.C. Electric No. 2 First Revised Sheet No. 99 Cancels and Supersedes Original Sheet No. 99 Page 2 of 4

BASELINE CHARGE (Contd.)

The Baseline Charge will be calculated as follows:

BC = (Standard Bill @ CBL)

Where:

BC = Baseline Charge

Standard Bill @ CBL = Customer's bill for a specific month on the applicable Rate Schedule including

applicable Standard Contract Riders using the CBL to establish the applicable

billing determinants.

The CBL shall be adjusted to reflect applicable metering adjustments under the Rate Schedule. All applicable riders shall be excluded from the calculation of the Baseline Charge.

PRICE QUOTES

The Company will send to Customer, within two hours after the wholesale prices are published by the Midwest Independent Transmission System Organization, Inc. ("Midwest ISO") each day, Price Quotes to be charged the next day. Such Price Quotes shall include the applicable Commodity Charge, the Energy Delivery Charge and the Ancillary Services Charge.

The Company may send more than one-day-ahead Price Quotes for weekends and holidays identified in Company's tariffs. The Company may revise these prices the day before they become effective.

The Company is not responsible for failure of Customer to receive and act upon the Price Quotes. It is Customer's responsibility to inform Company of any failure to receive the Price Quotes the day before they become effective.

COMMODITY CHARGE

The Commodity Charge is a charge for generation. The applicable hourly Commodity Charge (Credit) shall be applied on an hour by hour basis to Customer's incremental (decremental) usage from the CBL.

Charge (Credit) For Each kW Per Hour From The CBL:

For kWh_t above the CBL_t, $CC_t = MVG_t \times LAF$ For kWh_t below the CBL_t, $CC_t = MVG_t \times 80\% \times LAF$

Where:

LAF = loss adjustment factor

= 1.0530 for Rate TS = 1.0800 for Rate DP = 1.1100 for Rate DS

MVG_t = Market Value Of Generation As Determined By Company for hour t

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Blake

KY. P.S.C. Electric No. 2 First Revised Sheet No. 99 Cancels and Supersedes Original Sheet No. 99 Page 3 of 4

Duke Energy Kentucky, Inc. 1697-A Monmouth Street Newport, Kentucky 41071

COMMODITY CHARGE (Contd.)

The MVG_t will be based on the expected market price of capacity and energy for the next day. The expected market price will be based on forecasts of market conditions for the next day using publicly available market indices and/or bona fide third-party price quotes to establish the expected market price.

The kW per hour incremental or decremental usage from the CBL shall be adjusted to reflect applicable metering adjustments under the standard Rate Schedule.

ENERGY DELIVERY CHARGE

The hourly Energy Delivery Charge is a charge for using the transmission and distribution system to deliver energy to the Customer. The applicable hourly Energy Delivery Charge (Credit) shall be applied on a hour by hour basis to Customer's incremental (decremental) usage from the CBL.

Charge (Credit) For Each kW Per Hour From The CBL

Secondary Service \$0.006053 per kW Per Hour Primary Service \$0.005540 per kW Per Hour Transmission Service \$0.002008 per kW Per Hour

The kW per hour incremental or decremental usage from the CBL shall be adjusted to reflect applicable metering adjustments under the standard Rate Schedule.

ANCILLARY SERVICES CHARGE

The hourly Ancillary Services Charge is a charge for: Scheduling, System Control & Dispatch Reactive and Voltage Control Regulation and Frequency Response Spinning Reserve Supplemental Reserve

The applicable hourly Ancillary Services Charge (Credit) shall be applied on an hour by hour basis to Customer's incremental (decremental) usage from the CBL

Charge (Credit) For Each kW Per Hour From The CBL

Secondary Delivery	\$0.000760	per kW Per Hour
Primary Delivery	\$0.000740	per kW Per Hour
Transmission Delivery		

The kW per hour incremental or decremental usage from the CBL shall be adjusted to reflect applicable metering adjustments under the standard Rate Schedule.

APPLICABLE RIDERS

The following riders are applicable pursuant to the specific terms contained within each rider:

Sheet No. 78, Rider DSMR, Demand Side Management Rider

Sheet No. 81, Rider MSR-E, Merger Savings Credit Rider - Electric

Sheet No. 82, Rider PSM, Profit Sharing Mechanism

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Blake

KY. P.S.C. Electric No. 2 First Revised Sheet No. 99 Cancels and Supersedes Original Sheet No. 99 Page 4 of 4

Duke Energy Kentucky, Inc. 1697-A Monmouth Street Newport, Kentucky 41071

PROGRAM CHARGE

Company will be provide Internet based communication software to be used to provide Customer with the Price Quotes. Customer will be responsible for providing its own Internet access. A charge of \$183.00 per billing period per site shall be added to Customer's bill to cover the additional billing, administrative, and cost of communicating the hourly Price Quotes associated with the RTP Program.

Customer may purchase from either Company or any other third-party suppliers any other necessary equipment or software packages to facilitate participation in this program. While Customers are encouraged to use such equipment or software packages to maximize benefits under t his Program, it is not a requirement for program participation. It is Customer's responsibility to ensure the compatibility of third-party equipment or software packages with any Company owned equipment or software packages.

SPECIAL TERM AND CONDITIONS

Except as provided in this Rate RTP, all terms, conditions, rates, and charges outlined in the Standard Rate Schedule will apply. Participation in the RTP Program will not affect Customer's obligations for electric service under the Standard Rate Schedule.

Customers who terminate their service agreement under this Rider RTP after the initial one (1) year term shall be ineligible to return to the program for twelve (12) months from the termination date.

The primary term of service is one (1) year consisting of a consecutive twelve month period.

Customers returning to the standard tariff shall have any historical demands in excess of the CBL, waived for purposes of calculating applicable billing demands.

The supplying and billing for service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.



Cinergy/ULH&P 139 East Fourth Street P.O. Box 960 Cincinnati, OH 45201-0960

March 8, 2006

Ms. Elizabeth O'Donnell Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Ms. O'Donnell:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2005:

- a) The average number of participants on Rate RTP for the year: 24
- b) The total number of participants on Rate RTP at year end: 18
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: ULH&P's summer system peak occurred on July 25. Based on an analysis of RTP customer price response during the summer and on the peak day, the Company believes that less than 1 MW of load shifting or demand reduction occurred due to the RTP program.
- d) <u>Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings to the total billings at the rates that would be applicable if Rate RTP did not exist:</u>

Total RTP Billings: \$12,019,161.27 Total Standard Tariff Billings: \$11,269,191.57 Total Dollar Savings: (\$749,969.70)

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer
J. Steffen



Cinergy/ULH&P 139 East Fourth Street P.O. Box 960 Cincinnati, OH 45201-0960

March 30, 2005

Ms. Elizabeth O'Donnell Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Ms. O'Donnell:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2004:

- a) The average number of participants on Rate RTP for the year: 25
- b) The total number of participants on Rate RTP at year end: 25
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: During the summer 2004 peak load period, the maximum hourly price for ULH&P RTP customers was only in the nine to ten cents per kWh range. Due to this relatively low price that occurred for a couple of days, the amount of price response was negligible.
- d) <u>Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings to the total billings at the rates that would be applicable if Rate RTP did not exist:</u>

Total RTP Billings:

\$11,553,419.33

Total Standard Tariff Billings:

\$12,456,906.44

Total Dollar Savings:

\$ 903,487.11

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer

J. Steffen

March 25, 2004

Mr. Thomas M. Dorman Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Mr. Dorman:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2003:

- a) The average number of participants on Rate RTP for the year: 27
- b) The total number of participants on Rate RTP at year end: 27
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: During the summer 2003 peak load period, the maximum hourly price for ULH&P RTP customers was only in the eight to ten cents per kWh range. Due to this relatively low price that occurred for a couple of days, the amount of price response was negligible.
- d) <u>Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings to the total billings at the rates that would be applicable if Rate RTP did not exist:</u>

Total RTP Billings: \$11,026,038.83 Total Standard Tariff Billings: \$12,591,758.50 Total Dollar Savings: \$1,565,719.67

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer

D. Rottinghaus

March 28, 2003

Mr. Thomas M. Dorman
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Mr. Dorman:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2002:

- a) The average number of participants on Rate RTP for the year: 30
- b) The total number of participants on Rate RTP at year end: 30
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: During the summer 2002 peak load period, the maximum hourly price for ULH&P RTP customers was only in the six to seven cents per kWh range. Due to this low price, the amount of price response was negligible.
- d) <u>Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings</u> to the total billings at the rates that would be applicable if Rate RTP did not exist:

Total RTP Billings:

\$11,997,329.66

Total Standard Tariff Billings:

\$13,252,086.35

Total Dollar Savings:

\$ 1,254,756.69

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer

D. Rottinghaus

March 13, 2002

Mr. Thomas M. Dorman Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Mr. Dorman:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2001:

- a) The average number of participants on Rate RTP for the year: 30
- b) The total number of participants on Rate RTP at year end: 30
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: During 2001, the maximum hourly price for ULH&P RTP customers was about 50 cents per kWh. The maximum price occurred on August 8. The Company estimates that the load reduction attributable to Real Time Pricing on this date was approximately 2,000 kW.
- d) <u>Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings</u> to the total billings at the rates that would be applicable if Rate RTP did not exist:

Total RTP Billings: \$14,160,398.66
Total Standard Tariff Billings: \$16,794,961.91
Total Dollar Savings: \$2,634,563.25

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer

D. Rottinghaus

April 20, 2001

Mr. Thomas M. Dorman Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

RE: Case No. 2000-302 ULH&P Rate RTP Annual Informational Report

Dear Mr. Dorman:

In its order dated October 30, 2000 in the above-captioned case, the Commission ordered ULH&P to file information on Rate RTP for the preceding calendar year. Following is information pertaining to ULH&P's Real Time Pricing program for the year 2000:

- a) The average number of participants on Rate RTP for the year: 32
- b) The total number of participants on Rate RTP at year end: 31
- c) The total load in megawatts that ULH&P is able to divert to periods of lower usage due to the RTP program: During 2000, the maximum hourly price for ULH&P RTP customers was 7.2075 cents per kWh. In contrast, the maximum hourly RTP price during 1999 exceeded 85 cents per kWh. The Company believes that, because of low prices during 2000 associated with cool summer weather, negligible load shifting occurred among RTP customers.
- d) Total annual dollar savings to RTP participants in a format comparing total Rate RTP billings to the total billings at the rates that would be applicable if Rate RTP did not exist:

Total RTP Billings: \$22,639,954.72
Total Standard Tariff Billings: \$29,676,331.76

Total Dollar Savings:

\$7,036,377.04

Very truly yours,

James E. Ziolkowski

bcc: J. Gainer

D. Rottinghaus

ELECTRIC SERVICE TARIFF:

REAL TIME PRICING - DAY AHEAD SCHEDULE: "RTP-DA-2"



A SOUTHERN COMPANY

PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
1 of 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.00

AVAILABILITY:

Throughout the Company's service area from existing lines of adequate capacity to both new and existing Commercial and Industrial customers. Customers must be able to benefit from hourly price signals and maintain a peak 30-minute demand not less than 250 kW each month.

APPLICABILITY:

Customers choosing the RTP-DA tariff may elect to be interruptible under the criteria as stipulated in the Company's DPEC or DEC-DA riders. Customers on these riders must comply with the provisions of the riders.

Customers will be responsible to the Company for any additional cost associated with providing service on this tariff.

TYPE OF SERVICE:

Firm service, single or three phase, 60 hertz, at a standard voltage.

PRICING METHODOLOGY:

Hourly prices are determined each day based on projections of the hourly running cost of incremental generation, provisions for losses, projections of hourly transmission costs and outage costs for each day (when applicable), and a 3 mill/kWh recovery factor. Fuel charges from incremental kWh usage are applied to the recovery of fuel cost at the current Fuel Cost Recovery (FCR) charge.

CUSTOMER BASELINE LOAD (CBL):

The CBL is initially developed using one complete calendar year of either customer-specific hourly firm load data or monthly billing determinant data that represents the electricity consumption pattern and level agreed to by the customer and Georgia Power. This CBL represents the customer's operation for billing under its conventional tariff. Changes in consumption, measured from the CBL, are billed at RTP-DA prices. The CBL is the basis for achieving revenue neutrality with the appropriate non-RTP-DA firm load tariff on a customer-specific basis. Mutual agreement on the CBL is a precondition for use of RTP-DA.

For customers with Existing Load, the CBL will initially be developed from either actual historical metered half-hourly (1/2) interval data for a customer's specific location or from a Template scaled to the actual historical monthly energy and monthly peak demands.

Public Service Commission Order Docket No. 18300-U provided that commercial customers whose peak kW was equal to or greater than 250 kW for each of the twelve months in 2004 were eligible to convert up to 20% of their 2004 usage to marginally priced energy under the RTP-DA tariff. As of January 5, 2005 this provision has been fully subscribed and is no longer available.

For customers with New Load, the CBL will initially be based on 100% of a Commercial customer's total projected load or 60% or greater of an Industrial customer's total projected load. A new Commercial or Industrial customer can establish a CBL less than its projected level provided that the customer can Demonstrate its desired CBL level or the CBL is based on a Footprint. In no case shall this CBL be less than the minimum CBL level established by Georgia Power for that specific location. Since no actual historical data exists for a new location, the CBL can be developed from a Template, or from a similar customer's load shape, scaled to the expected usage pattern of the New Load.

-	PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
	2 of 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.00

NEW LOCATION CBL DEMONSTRATION

Any new customer that is not eligible to establish its CBL based upon a Footprint is required to Demonstrate. Such Demonstration must achieve the summer peak CBL kW level in one of the four summer months immediately following the point at which the customer's specific location achieves Full Load Operation under RTP. The customer will be notified one day in advance of the required Demonstration. The Demonstration will be for a period of two (2) consecutive hours. A Demonstration is successful if the average load achieved during the Demonstration period is at or below the required Demonstration level. All other attempts are considered to be unsuccessful. Once a successful Demonstration has occurred, then no further Demonstrations will be required to establish the CBL. If there are four unsuccessful attempts, the CBL level will then be reset in the next billing month, based on the lowest average level achieved during any of the four attempted Demonstrations. The CBL billing demands will also be recalculated based on this resulting CBL level.

REVENUE NEUTRALITY:

The customer's bill for existing locations under RTP-DA would approximate the customer's bill under the Company's conventional firm non-RTP tariffs, assuming the customer does not change from its prior pattern of electricity usage. Revenue neutrality with a customer's previous firm non-RTP tariff is achieved through the monthly Standard Bill portion of a customer's total RTP bill. The Standard Bill does not vary according to RTP usage. A customer's bill will vary from its conventional firm tariff bill to the extent that its usage pattern varies from its CBL.

STANDARD BILL:

The Standard Bill is calculated by applying the appropriate firm non-RTP tariff and FCR charge to a customer's CBL for each month of the year. If there is a revision in base rate prices or in the FCR, those changes will be reflected in the customer's Standard Bill based on its CBL for a given month. RTP prices are applied only to kWh usage changes from the CBL in each hour.

BILL DETERMINATION:

An RTP bill is rendered after each monthly billing period and consists of a Standard Bill amount and a charge (or credit) for incremental energy usage based on the difference between a customer's actual usage and its CBL in each hour and the hourly energy prices provided during the billing period. The monthly bill is calculated using the following formula:

RTP-DA Bill Mo. = Standard Bill Mo. + Σ Price Hr. x [Load Hr. - CBL Hr.]

PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
3 of 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.00

Where:

RTP-DA Bill Mo. = Customer's bill for service under this tariff in a specific month

Standard Bill Mo. = Customer's bill for a specific month based on usage as defined

by the CBL and billed under the standard firm tariff

 Σ = Sum over all hours of the monthly billing period

Price Hr. = Hourly RTP-DA price based on marginal costs

Load Hr = Customer's actual load in an hour

CBL Hr. = Customer Baseline Load shape on an hourly basis

ADMINISTRATIVE CHARGE:

An Administrative Charge of \$155 per month is required to cover billing, administrative, and communication costs associated with RTP-DA for customers over 1,000 KW in each month. For customers less than 1,000 KW, the Administrative Charge is \$175 per month. The Company will provide a phone line to the meter in order to ensure the meter is operating properly. The customer will provide access for phone connection.

DETERMINATION OF REACTIVE DEMAND:

Where there is a power factor of less than 95% lagging, the Company may, at its option, install metering equipment to measure Reactive Demand. The Reactive Demand shall be the highest 30-minute kVAR measured during the month. The Excess Reactive Demand shall be kVAR which is in excess of one-third of the measured actual kW in the current month. The Company will bill excess kVAR at the rate of \$0.27 per excess kVAR.

SPECIAL PROVISIONS:

A. Modifications to the Standard Bill

Whenever a change to an applicable standard tariff or the FCR clause is approved by the Georgia Public Service Commission, the Standard Bill will be calculated to reflect such changes.

B. Price Notification and Responsibility

Georgia Power Company will make hourly energy prices available to customers by 4:00 p.m. for the following day, via a method specified by the Company. Except during unusual times of high risk of outage, the Company will make available prices for Saturday through Sunday on the previous Friday. Prices may be made available more than a day ahead during holiday periods. Under high-outage-risk circumstances the Company may not be able to project prices more than one day in advance and reserves the right to update prices on a one-day-ahead basis.

The Company is not responsible for a customer's failure to receive and act upon the hourly RTP-DA prices. If a customer does not receive these prices, it is the customer's responsibility to inform the Company so the prices may be supplied.

	PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
	4 of 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.00
1			l	

C. CBL Revisions

Both CBL billing demands and energy may be revised when a customer requests to increase or lower its CBL and such customer meets the criteria of this section. The CBL will not be revised due to RTP price response, economic downturn, effects of weather, or any other change not contemplated by this section. No revised CBL shall be less than the minimum CBL level determined by Georgia Power for such customer's location.

Regardless of the type of revision sought, it is the customer's responsibility to request revision of its CBL from Georgia Power within two years after the event causing the need for revision. The customer shall provide sufficient documentation to support its request. If necessary, the Company may require additional information to determine the amount of the revision. Georgia Power will only use the revised CBL billing demands and energy for future billings.

The CBL billing demands and energy may be permanently increased as requested by the customer and approved by the Company. However, the CBL may not be increased above total historical usage. Historical usage is usually considered the last twelve (12) months of operation. In addition, the off-peak portion of the CBL load shape will not be increased without a corresponding increase to the on-peak CBL. This methodology is required so as to continue the overall load factor and hours use of demand relationship that exists within the prior CBL load shape. Once the requested CBL increase is made, the customer's CBL will only be lowered if such customer meets the criteria for lowering a CBL as described below.

The CBL billing demands and energy may be permanently decreased when the customer reduces its load by energy efficient improvements; equipment removal or disabling; or permanent changes in operation (e.g., altering manufacturing or industrial processes, reducing operations from three shifts to two, removal of a piece of machinery, or installing more efficient lighting systems). In such instances, the CBL energy and CBL actual demands, as well as the billing demands under the CBL, will be revised to reflect the change in usage pattern. The revised CBL shall not be less than the minimum CBL determined by Georgia Power based on costs to serve.

For load removal, the customer's request for revision must include a list of equipment removed or replaced, the hours and days of operation and whether the load existed when the CBL was established. If equipment is replaced with equipment of like kind, only the net reduction in demand and energy usage will be used in revising the CBL. If the customer was a former Supplemental Energy (SE) customer, the customer's request for revision must also provide information as to whether the load removed was used in meeting curtailment levels during former SE calls for curtailment. The CBL billing demands and energy will be revised based upon the amount of usage that was removed and that was also considered firm usage (non-SE) during SE curtailments.

For a CBL previously established for a new customer, only a portion of the requested load reduction will be removed from the CBL. The amount of the actual reduction will equal the requested load reduction amount multiplied by the percentage that the initial CBL is to the initial projected load.

If an existing RTP customer, without approved load removal, wants to establish a lower CBL level, the customer must come off RTP for a full calendar year to establish the new usage pattern that will then become their CBL level. The Company will establish a minimum level for this CBL based on costs to serve.

PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
5 of 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.00
5 01 5	With Bills Rendered for the Billing Month of May, 2004	Second	5.

DEFINITIONS:

- A. "New Load" means load not previously served by Georgia Power at any specific location; or load at a specific location where such location has been vacant for at least twelve (12) months; or load at a specific location that has been vacant less than twelve (12) months, provided that the operation is not similar in nature to the previous operation which occurred at that location.
- B. "Existing Load" means load not defined in A.
- C. "Customer Baseline Load" or "CBL" refers to the portion of a customer's load which will be billed under a conventional firm tariff.
- D. "Incremental Load" means New Load consumed by a customer which exceeds the CBL established for such customer's specific location.
- E. "Demonstrate" or "Demonstration" refers to a method by which a new Commercial customer may establish a CBL at less than 100% of its projected load, or a new Industrial customer may establish a CBL at less than 60% of its projected load.
- F. "Footprint" refers to the CBL load shape of an existing customer that may be used to develop the CBL for such customer's new locations, as long as such CBL was initially established by the Demonstration method, and where such customer uses similar facilities in terms of basic design and energy requirements, including equipment used by the Demonstration customer to shed load during its Demonstration.
- G. "Template" means generic load shapes that can be scaled to projected or actual monthly energy and monthly peak demand.
- H. "Full Load Operation" refers to operations once all equipment and processes used in determining the total load and the CBL are fully operational.

TERM OF CONTRACT:

Five years.

GENERAL TERMS & CONDITIONS:

The bill calculated under this tariff is subject to change in such an amount as may be approved and/or amended by the Georgia Public Service Commission under the provisions of applicable riders.

Service hereunder subject to Rules and Regulations for Electric Service on file with the Georgia Public Service Commission.

ELECTRIC SERVICE TARIFF:

REAL-TIME PRICING DAY-AHEAD WITH ADJUSTABLE CBL SCHEDULE: "RTP-DAA-2"



PAGE	EFFECTIVE DATE	REVISION	PAGE NO.
1 of 4	With Bills Rendered for the Billing Month of May, 2002	First	5.10

AVAILABILITY:

Throughout the Company's service area from existing lines of adequate capacity. Customers must be able to benefit from hourly price signals and demonstrate and maintain a peak 30-minute demand not less than 250 kW each month.

APPLICABILITY:

The "Raising the CBL" option described in the Standard Bill section of this tariff is applicable only to customers who have received service under the Company's Real-Time Pricing Day-Ahead (RTP-DA) tariff or Real-Time Pricing Hour-Ahead (RTP-HA) tariff for at least one year in order to establish how high the CBL may be raised. The "Lowering the CBL" option is applicable to eligible customers without the one year requirement on RTP-DA or RTP-HA.

Customers choosing the RTP-DA tariff may elect to be interruptible under the criteria as stipulated in the Company's DPEC or DEC-DA riders. Customers on these riders must comply with the provisions of the riders.

Customers will be responsible to the Company for any additional cost associated with providing service on this tariff.

TYPE OF SERVICE:

Firm service, single or three phase, 60 hertz, at a standard voltage.

PRICING METHODOLOGY:

Hourly prices are determined each day based on projections of the hourly running cost of incremental generation, provisions for losses, projections of hourly transmission costs and outage costs for each day (when applicable), and a 3 mill/kWh recovery factor.

ADJUSTABLE CUSTOMER BASELINE LOAD (CBL):

The customer's original baseline load (CBL) is developed under the terms and conditions of the RTP-DA or RTP-HA tariff. Once the customer switches to RTP-DAA, the customer may select to raise or lower the original CBL for a contract period specified by the company. The monthly Standard Bills will be recalculated to reflect the adjustment to the CBL. RTP prices will then apply to differences between the customer's actual load and the adjusted CBL. RTP credits will be given for load reductions below the customer's adjusted CBL.

The adjusted CBL applies only to the contract period. If the customer does not select an adjustment for a subsequent contract period, the company will use the original CBL to calculate the CBL bill and determine when RTP prices will apply.

REVENUE NEUTRALITY:

Revenue neutrality with a customer's previous firm Non-RTP tariff is achieved through the monthly Standard Bill portion of a customer's total RTP bill that applies to the customer's original CBL.

PAGE	EFFECTIVE DATE	REVISION	PAGE
2 of 4	With Bills Rendered for the Billing Month of May, 2002	First	5.10

ADJUSTED STANDARD BILL:

The following procedures will be used to compute the Adjusted Standard Bill.

Raising the CBL:

Step 1:	The customer selects to raise the CBL by an amount for a contract period
·	specified by the company. The amount shall not exceed the customer's
	expected consumption as set by the company based on historical usage.

Step 2:		adjustment kWhs	by expected	RTP prices	for the contract
	period.				

Step 3:	Add the result of Ste	p 2 to the original Standard Bill'	for the contract period.
---------	-----------------------	------------------------------------	--------------------------

Step 4:	Divide the Adjusted Standard Bill by the total CBL kWhs including the
	adjustment to get an average cents/kWh for the Adjusted CBL.

- Step 5: Subtract the FCR at the time of the contract to obtain the DAA rate.
- Step 6: Apply the result of Step 5 plus the current FCR rate to the adjusted CBL kWhs for each month to calculate the Adjusted CBL Standard Bill for each month.

Lowering the CBL:

Step 1:	The customer selects to lower the CBL by an amount for a contract period.				
,	The amount shall not exceed limits set by the company based on historical				
	usage, and the customer's CBL shall never be less than zero.				

Step 2:	Multiply the CBL adjustment kWhs by expected RTP prices for the contract
	period.

- Step 3: Subtract the result of Step 2 from the original Standard Bill* for the contract period.
- Step 4: Divide the Adjusted Standard Bill by the total CBL kWhs including the adjustment to get an average cents/kWh for the Adjusted CBL. If necessary, the company will calculate Access Charges to be included in the Adjusted Standard Bill.
- Step 5: Subtract the FCR at the time of the contract to obtain the DAA rate.
- Step 6: Apply the result of Step 5 plus the current FCR rate to the Adjusted CBL kWhs for each month to calculate the Adjusted CBL Standard Bill for each month.

If there is a revision in base rate prices, those changes will be reflected in the customer's Adjusted Standard Bill.

Expected RTP prices for the CBL adjustments will be updated prior to each contract period.

^{*} The original Standard Bill is calculated by applying the appropriate firm non-RTP tariff and the Fuel Cost Recovery (FCR) charge to a customer's original CBL for each month of the contract period.

PAGE	EFFECTIVE DATE	REVISION	PAGE
3 of 4	With Bills Rendered for the Billing Month of May, 2002	First	5.10

BILL DETERMINATION:

An RTP bill is rendered after each monthly billing period and consists of a standard bill amount and a charge (or credit) for incremental energy usage based on the difference between a customer's actual usage and his CBL in each hour and the hourly energy prices provided during the billing period. The monthly bill is calculated using the following formula:

RTP-DAA Bill $M_{O.}$ = Adjusted Standard Bill $M_{O.}$ + Σ Price $H_{r.}$ x [Load $H_{r.}$ - Adjusted CBL $H_{r.}$]

Where:

RTP-DAA Bill Mo. = Customer's bill for service under this

tariff in a specific month

Adjusted Standard Bill Mo. = Customer's bill for a specific month on

usage as defined by the original CBL and billed under the standard firm tariff and adjusted according to the terms of

this tariff

 Σ = Sum over all hours of the monthly billing

period

Price H_r = Hourly RTP-DA price based on marginal

costs

Load Hr. = Customer's actual load in an hour

Adjusted CBL Hr = Adjusted Customer Baseline Load

shape on an hourly basis

ADMINISTRATIVE CHARGE:

An Administrative Charge of \$175 per month is required to cover billing, administrative, and communication costs associated with RTP-DAA for customers over 1,000 kW in each month. For customers less than 1,000 kW, the Administrative Charge is \$195 per month. If also choosing the DPEC Rider, the administrative charge will be increased by the DPEC administrative charge of \$120 per month. The Company will provide a phone line to the meter in order to ensure the meter is operating properly. The customer will provide access for phone connection.

DETERMINATION OF REACTIVE DEMAND:

Where there is a power factor of less than 95% lagging, the Company may, at its option, install metering equipment to measure Reactive Demand. The Reactive Demand shall be the highest 30-minute kVAR measured during the month. The Excess Reactive Demand shall be kVAR which is in excess of one-third of the measured actual kW in the current month. The Company will bill excess kVAR at the rate of \$0.27 per excess kVAR.

PAGE	EFFECTIVE DATE	REVISION	PAGE
4 of 4	With Bills Rendered for the Billing Month of May, 2002	First	5.10

SPECIAL PROVISIONS:

Price Notification and Responsibility

Georgia Power Company will make hourly energy prices available to customers by 4:00 p.m. for the following day, via a method specified by the Company. Except during unusual times of high risk of outage, the Company will make available prices for Saturday through Sunday on the previous Friday. Prices may be made available more than a day ahead during holiday periods. Under high-outage-risk circumstances the Company may not be able to project prices more than one day in advance and reserves the right to update prices on a one-day-ahead basis.

The Company is not responsible for a customer's failure to receive and act upon the hourly RTP-DA prices. If a customer does not receive these prices, it is the customer's responsibility to inform the Company so the prices may be supplied.

TERM OF CONTRACT:

Service hereunder shall be for the greater of the amount of time remaining on the customer's service contract under the RTP-DA or RTP-HA tariff or one year.

GENERAL TERMS & CONDITIONS:

The bill calculated under this tariff is subject to change in such an amount as may be approved and/or amended by the Georgia Public Service Commission under the provisions of applicable riders.

Service hereunder subject to Rules and Regulations for Electric Service on file with the Georgia Public Service Commission.

ch price response? it's successiu Mat's new about Georg Power Compan

PLMA Spring 2005 Conference

Jeff Burleson Georgia Power Company

Michael T. O'Sheasy Christensen Associates

April 2005

in the State of Georgia Vear 2005

- □ Largest RTP program in the world
- $\Box > 1600$ Customers
- _ > 5,000 MW
- _ > \$1 billion revenue
- □ IRP resource
- □ Increasing marginal costs
- □ Day-Ahead and Hour-Ahead programs

RTP Value in an Open-Access Marketplace

- □ Competitive cost-based offers.
- Within-state customer choice in Georgia
- Customer choice for new load > 250 kW
- cost incremental power and little regulation Competition is munis and REAs with low-
- would probably be no more than 50-60% • RTP enables GPC win rates of 65-80%; without RTP

What is Real-Time Pricing?

An electricity rate structure in which retail energy prices:

- Vary frequently (e.g., hourly)
- Change with short notice (e.g., hour-ahead orday-ahead)
- Reflect expected hourly costs
- Can mimic an open market and market prices

Benefits from an RTP Progra

- □ Improved system reliability
- □ Reduced wholesale price volatility
- □ Less reliance on outside (high-priced) power purchases

Benefits from RTP (2

□ Typical utility will achieve, at least cost, a

"virtual generation" asset representing as

much as 5% of total system load requirements in critical hours (about 20% load response from participants' total load)

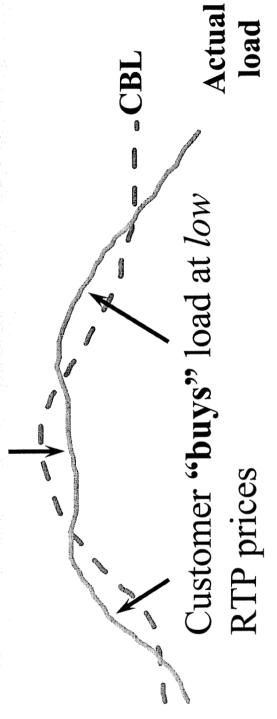
Benefits from RTP (3)

- □ Customer satisfaction
- Provides open access to market
- Two-part structure limits price risk exposure
- □ RTP customers have incentive to innovate with economic energy efficiency programs/devices

24

Wo-Part RTP Design and What Makes GPC Engine Go.

Customer "sells" load at high RTP prices



MWh

Hour of Day

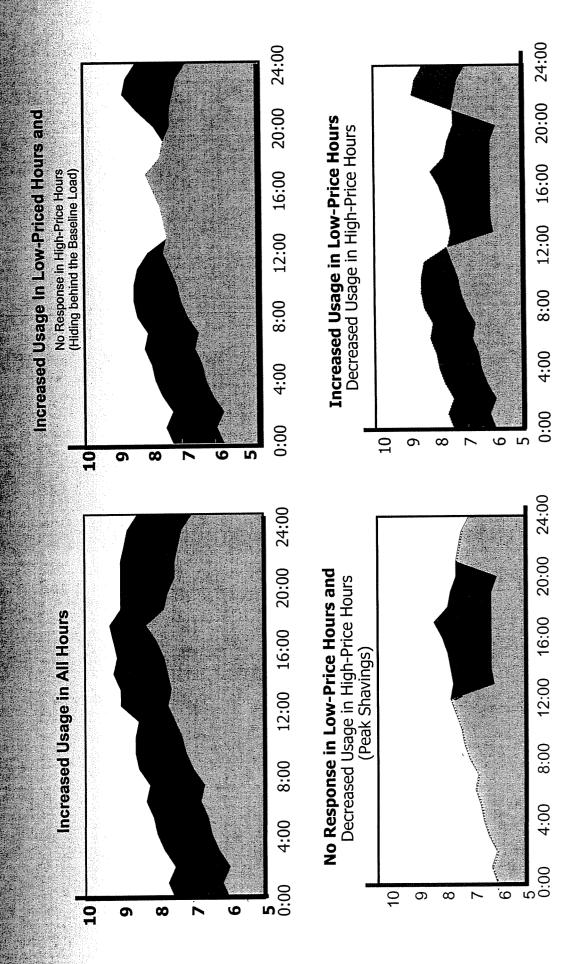
 ∞

Do Customers Respond to RTP? Summary of Findings

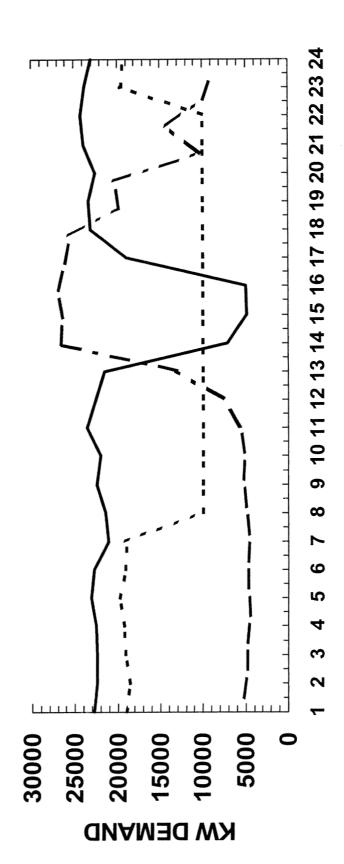
- □ Portion of customers found to respond significantly to RTP prices: 60-75%
- □ Range of flexibility parameters: .01 .40 (Comparable to negative of own-price elasticity)

A short-period price spike of 10 to 20 times the typical price can yield load reductions of 10 to 20% (e.g., 150 MW from 1,000 MW of load)

Iypical Load Response

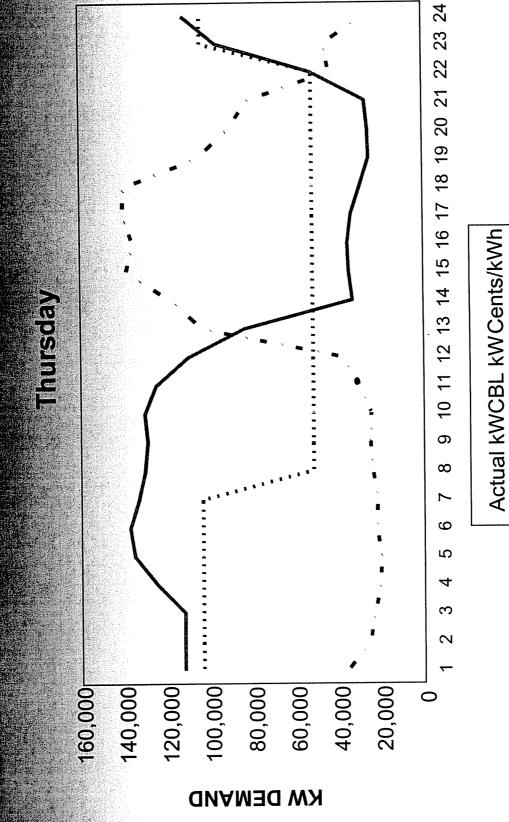


Jemand Profit Tuesday



CENTS/KWH



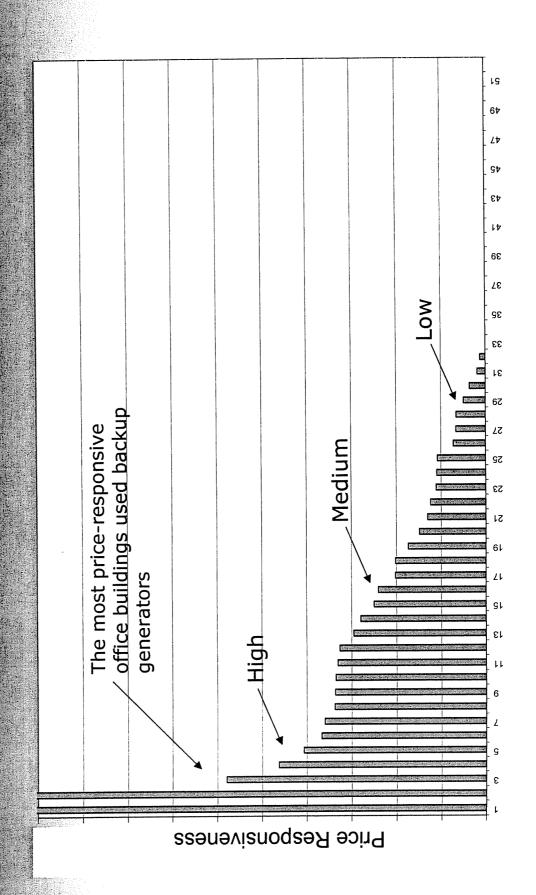


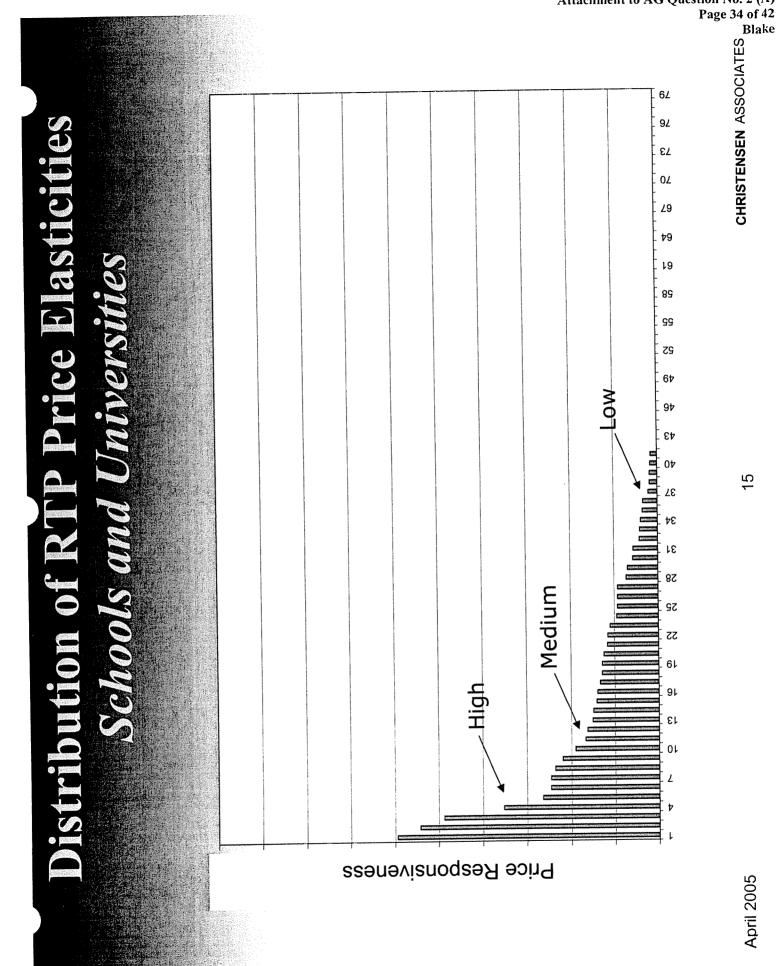
Attachment to AG Question No. 2 (A)

Page 32 of 42

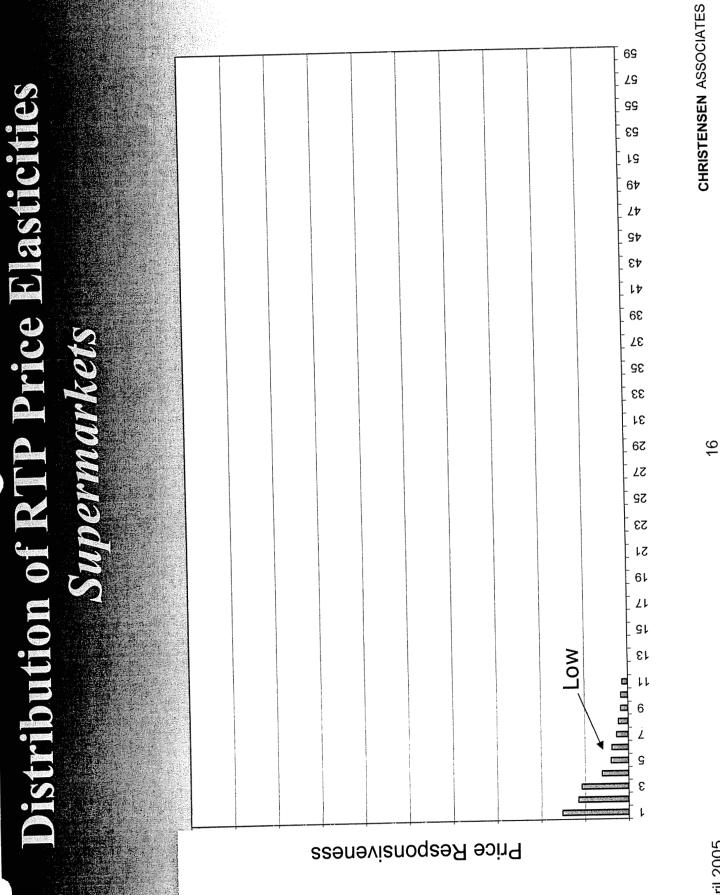
Blake

Distribution of RTP Price Elasticities Commercial Office Buildings



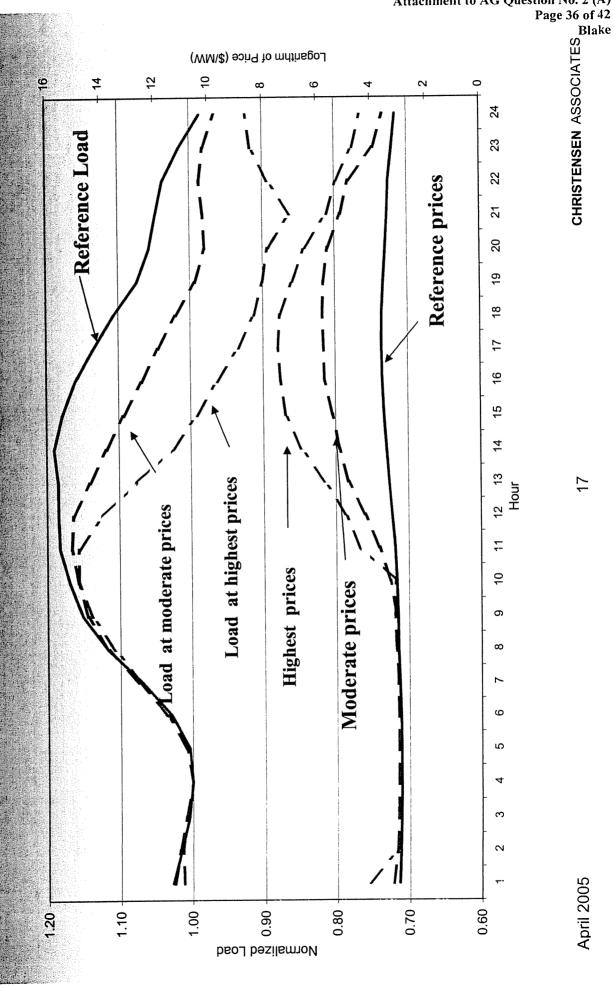


Blake



April 2005

Moderate and



23

22

21

20

19

18

17

91

15

14

13

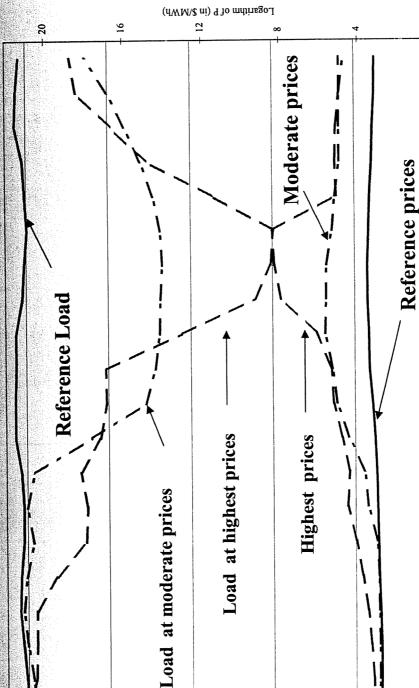
Ξ

10

0.20

0.40

Hour



0.60

Normalized Load

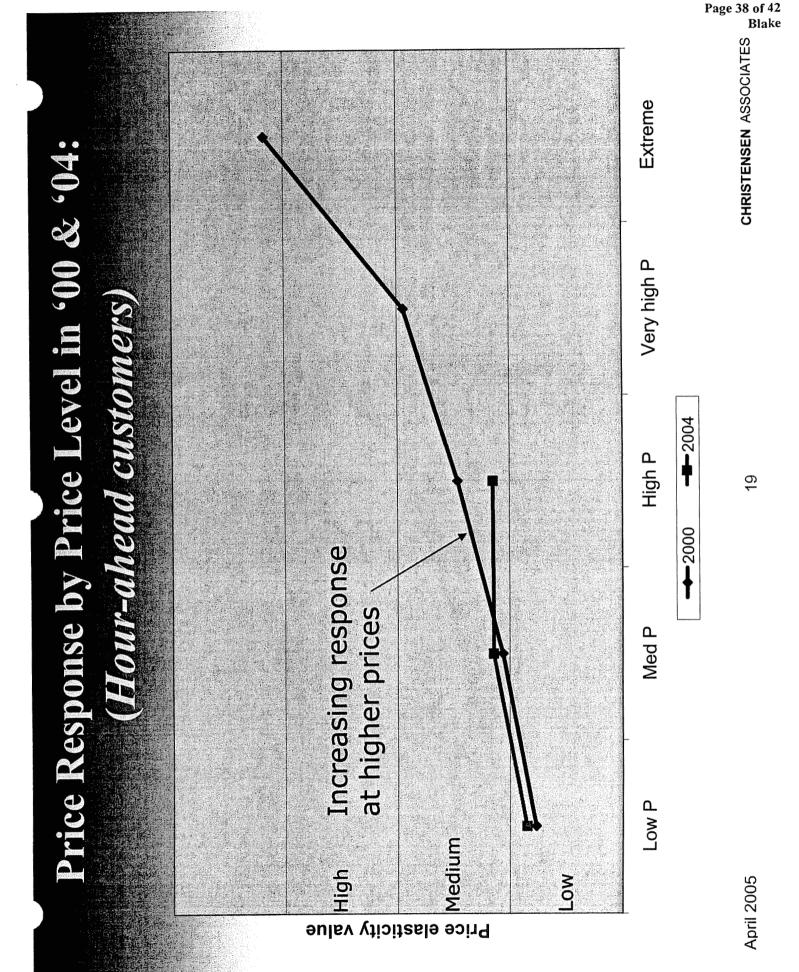
8:0

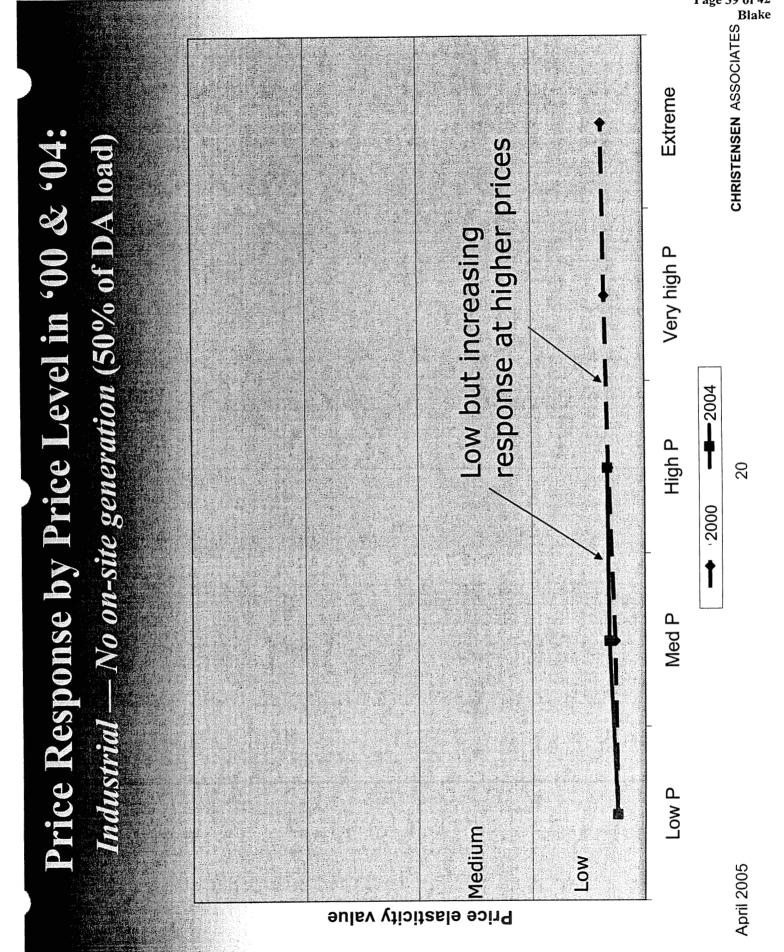
0.80

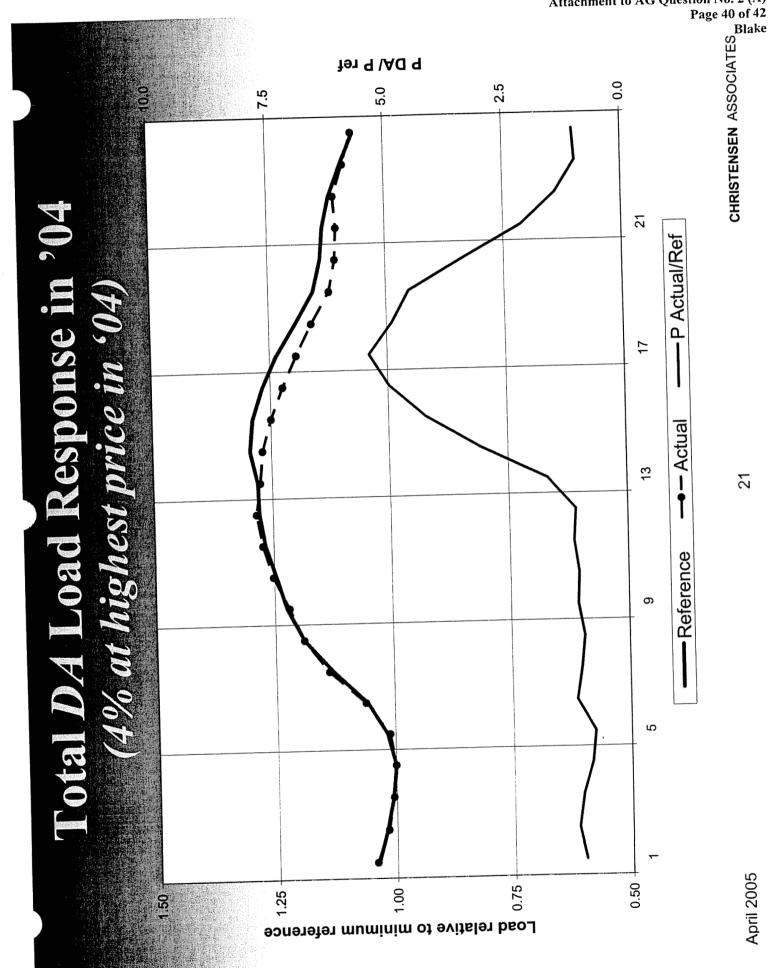
P-HA Load Response in '99/'00

Moderate and High-price days

4







Conclusions

- Overall RTP price response continues and comparable prices, helping GPC manage at about the same level in '04 as '00, at supply risk
- ☐ Two-Part Design enables price response, risk management, and efficient growth
- customers since 2000 and many more in '05 □ RTP remains popular, with > 300 new

Louisville Gas and Electric Company and Kentucky Utilities Company

Response to the Request for Information Posed by the Attorney General Dated May 18, 2007

Case No. 2007-00161

Question No. 3

Witness: Kent W. Blake

- Q-3. Please reference the Application, at page 5, paragraph 10.
 - A. What year is proposed for use as the "Customer Baseline Load" ("CBL")?
 - B. Is the "CBL" data fixed for the duration of the program or is this data subject to revision under the terms of the program? If so, under what terms?
- A-3. A. As stated in the proposed rate sheets, "The CBL is based on one complete calendar year of hourly firm kVA load data developed from actual historical metered interval data for the Customer's specific service delivery." For each pilot customer, the Companies will use the most recent complete calendar year's data available for that customer.
 - B. The historical CBL period for a specific customer will be fixed for the duration of customer's participation in the program, though the data is subject to revision on a monthly basis. As stated in the proposed rate sheets, a current billing month's CBL is determined by:
 - 1. Selecting the historical calendar period that corresponds to the current billing period;
 - 2. Shifting the historical calendar period back no more than 4 days or forward until the days of the week agree for the historical calendar period and the current billing period; and
 - 3. Adjusting on a pro rata basis each hour of the historical calendar period so that the sum of the hourly kVA loads for the historical calendar period matches the sum of the hourly kVA loads for the current billing period.

		,	

Louisville Gas and Electric Company and Kentucky Utilities Company

Response to the Request for Information Posed by the Attorney General Dated May 18, 2007

Case No. 2007-00161

Question No. 4

Witness: Kent W. Blake

- Q-4. Please reference the Application, at page 5 paragraph 11. Clarify whether the "CBL" adjustment is based on *a ratio* of actual ("AL") to historic ("CBL") usage or on the *difference* between the actual ("AL") to historic ("CBL") usage (i.e., the application references the term *ratio* which implies a numerator/denominator relationship between the two items, whereas Exhibits KWB-1 and KWB-2 seem to indicate that the *difference* between the two items, either positive or negative, will be utilized in the adjustment).
- A-4. A portion of the historical CBL is matched to the current month billing period and adjusted so that the total of the hourly loads for the adjusted CBL and the hourly loads for the current month is equal. (See response to A-3. B.) The difference in load for each hour of the adjusted CBL and the corresponding actual hour of the billing period is then billed at the posted day-ahead price. That hour's billing is a credit or charge depending on whether the difference in load is positive or negative. Please see response to Commission Staff's Question No. 3 a. and b. for a sample calculation of the RTP billing.

Louisville Gas and Electric Company and Kentucky Utilities Company

Response to the Request for Information Posed by the Attorney General Dated May 18, 2007

Case No. 2007-00161

Question No. 5

Witness: Butch Cockerill

- Q-5. Is the contemplated meter and communication board proposed by the company failsafe with no possibility of error? If not, please provide the following:
 - A. What are the precautions undertaken by the company to eliminate any possible errors?
 - B. If the company under bills the customer, will the company agree to absorb the costs and not bill the customer?
 - C. Will the company implement any new or additional protocol to monitor the accuracy of the meters?
 - D. Will the company implement any new or additional protocol to monitor the accuracy of the implementation of the pilot?
- A-5. A. To our knowledge, no meter with or without communication capability is failsafe with no possibility of error. We therefore plan to take several precautions to minimize the potential for error. First, because we will use our standard commercial and industrial meter for this program, we have confidence in the accuracy of the meters. This type of meter has been used successfully by our commercial customers for many years. Second, in addition to our previous history, prior to installation we will review the test data of each meter to ensure it complies with 807 KAR 5:022 and 807 KAR 5:041. Third, we will also test each meter installation to ensure that the meter and all its associated equipment are properly operating and communicating. Additionally, once a meter is installed and operating, it will be placed into our current meter sampling test program and be monitored for accuracy under the terms of the PSC-approved program (Case No. 2005-00276).
 - B. No. The Company will treat these customers like any other that is either under- or over-billed. To that end, a customer who is under-billed will be bill corrected for no more than two years and a customer who is over-billed will

- be bill corrected back to the time the error initiated. The Company has developed its procedures on the basis of KRS 278.170 and KRS 278.225.
- C. Yes. As part of this program, the Project Team will be responsible to oversee the installation of the meters and associated equipment. Additionally, we will program the system with real time exception reporting that will alert us when the system detects any abnormal function such as tampering, outage management, and loss of connectivity to the collector. This will alert us immediately when such a condition occurs.
- D. Yes. See response to A-5. C. above.