STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Case 08-E-0539 - Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service

# MANDATORY HOURLY PRICING PROGRAM EVALUATION REPORT

Appendices

Prepared by KEMA, Inc.

for

Consolidated Edison Company of New York, Inc.

Submitted by:

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May 1, 2012

# A. Appendix A – Customer Survey Notification Letter

Consolidated Edison Company
of New York, Inc.
4 Irving Place
New York, NY 10003-0987
www.conEd.com

May 1, 2012

Dear Customer,

Consolidated Edison Company of New York, Inc. "Con Ed" is currently reviewing the delivery of our Mandatory Hourly Pricing (MHP) Program. To assist in this effort, we have retained KEMA, Inc. to conduct an independent assessment of the program.

Representatives from KEMA may be contacting you by phone to gather your opinion and experience with this program. **We are requesting input from customers who are actively participating in the MHP tariff and those who are currently enrolled with an Energy Service Company (ESCO).** The information gathered in this survey is critical to help Con Ed confirm the value offerings and improve program delivery. Telephone interviews will take approximately 20 minutes depending on the length of your responses.

This letter serves to authenticate our request for your participation, for which you will receive a Visa Cash Gift card in the amount of $250 as a thank you. Incentives will be mailed via USPS to respondents upon the successful completion of the telephone survey.

We appreciate your support, feedback and cooperation in this endeavor. If you should have questions or concerns regarding this survey please feel free to contact the appropriate person listed below.

| If you… | Who to Contact | Phone Number |
|---|---|---|
| Have questions about the purpose of the study or the contractors… | Steven Mysholowsky,<br>Energy Efficiency Manager,<br>Con Ed | Telephone: (212) 460-2120<br>Email:<br>Mysholowskys@coned.com |
| Would like to set up an interview appointment or propose an alternate contact or phone number… | Amber Watkins<br>KEMA, Inc.<br>www.kema.com | Toll Free:1-(866) 439-8006<br>Email:<br>amber.watkins@kema.com |

Sincerely,

Steven Mysholowsky

# B. Appendix B – Customer Survey Procedures

The following techniques were implemented by KEMA in an effort to avoid this phenomenon and to increase participation:

1. Surveyors scheduled the interview as far in advance as possible, at a time best convenient to the interviewee.
2. The interviewee was given a thorough description of the research project, well before the actual date of interview. If desired by the interviewee, a copy of the interview questions was sent to them ahead of time.
3. During the first few minutes of the call, the interviewer went over the intent and use of the research with the respondent, and double-checked the interviewee's availability at that moment. Interviews were rescheduled if necessary.
4. Interviewees were given a specific time when the interview will end. The interviewer also tracked the time and the pace of the questions, and assured the interviewee of the intent to close out the interview at the time promised.
5. The interview questions were generally shaped as an inverted pyramid – general and important questions were given up front, and smaller, specific questions were reserved for the end.

All interviewees were given a thorough description on the confidentiality of the interview and the responses. Each was explicitly assured that all responses would remain confidential to KEMA and would not be shared with anyone else. This assured the interviewee that he/she could provide frank answers in complete confidence. It was explained to interviewees that answers would be blended together, and no one would be identified with a specific comment; at the most, KEMA might generalize a group of respondents or highlight an anecdote for illustration, such as "several customers said this", "one energy supplier explained…", or similar narratives. Interviewees were also provided a letter from CECONY that explained this study to help ease any concerns they may have had.

# C. Appendix C – Customer Survey

HOURLY ELECTRIC COMMODITY PRICING - TWO YEAR EVALUATION - CUSTOMER SURVEY

Hello, my name is ____ I am calling on behalf of Con Edison here at KEMA, Inc.

My call is in reference to the Con Edison's Mandatory Hourly Pricing Program; our firm has been hired to evaluate this electric commodity program. According to our records your company is **currently enrolled in this program/was previously enrolled** in this program, we would like to ask some questions concerning your companies experience. I'd like to speak with someone who handles your electric bills or manages building operations such as a (ex: Director of Engineering/ Facilities/Energy Manager/ Property Manager/Business Owner) [If none of those work ask for the person who pays the bills].

[IF FURTHER EXPLINATION IS NEEDED, Con Edison's Mandatory Hourly Pricing [MHP] is a program your company was automatically enrolled in as a result of your energy usage. The program began back in 2009. As you may know, electricity is a commodity bought and sold on the market, electric rates vary daily. Your company has the option to stay on the program or buy your power through an alternate supplier otherwise known as an ESCO. Customers who buy power through an alternate supplier will still receive a bill from Con Edison for the delivery fee but the power is provided through a purchase agreement from an ESCO].

**SURVEYOR BE ADVISED:** ESCO's (Energy Services Companies) are often soliciting customers so respondents maybe quick to terminate the call if they think you're an ESCO. If you sense they are skeptical tell them: "KEMA is not soliciting any products or services nor are we an Energy Services Company, we have been hired to gather input from program participants and non-participants to improve program delivery.

[ONLY IF RESPONDENT ASKS THEN MENTION LENGTH OF SURVEY IS 20 MIN] [FOR NON-PARTICIPANTS THE SURVEY LENGTH IS ONLY 10 MIN]

## SCREENER INFORMATION

Are you the correct person at your organization who would be able to answer questions about the Mandatory Hourly Pricing Program?

S1. If Yes – Would you be willing to answer our questions now? [Refer to disposition codes]

Yes ..... 1
No ..... 2
[DON'T KNOW] .....998

[ONLY MENTION INCENTIVE AMOUNT WHEN YOU REACH THE APPROPRIATE CONTACT]

For your voluntary participation and successful completion of this assessment you will receive $250 in the form of a Visa Cash Gift card which will be mailed via USPS. [United States Postal Service]

[IF RESPONDENT ASKS: YOU'LL RECEIVE YOUR VISA GIFT CARD IN 6-8 WEEKS – YOU CAN CALL 860-346-5001 IF YOU HAVEN'T RECEIVED YOUR GIFT CARD IN THAT TIMEFRAME]

S2. If No – Who would the best person be?

Name _____ Company _____

Phone _____ ..... Email _____

*If customer expresses reluctance, concerns or requests proof from Con Edison that we are under contract with them, offer to email or fax them a letter from Con Edison that explains this survey and our involvement.*

*Please verify that the following information is correct for this facility*

Account Number _____ Account Name _____

Account Address _____

Let's start by getting a little bit more about you…

R1. What is your job title?

R2. What are your general responsibilities?

R3. How long have you been in that position?

R4. Do you manage or monitor electricity use at your facility?

Yes ..... 1
No, someone else at the facility ..... 2
No, a rate consultant ..... 3
DON'T KNOW.....988

R4a. If no, who does?

Name _____ Company _____

Phone _____ ..... Email _____ _____

[IF RESONDENT IS NOT THE APPROPRIATE CONTACT FOR THE INTERVIEW, RESTART INTERVIEW WITH APPROPRIATE CONTACT]

R5. How important is energy efficiency at your facility, on a scale of 1 to 5, where 1 is not important and 5 is very important?

R6. In the success of your business, how important is the cost of electricity, on a scale of 1 to 5, where 1 is not important at all to business success and 5 is critical to business success?

| Question | Not at All Satisfied /Critical | Somewhat Unsatisfied | Neutral | Somewhat Satisfied | Very Satisfied/ Critical | Don't Know |
|---|---|---|---|---|---|---|
| R5_imp EE | 1 | 2 | 3 | 4 | 5 | 988 |
| R6- success | 1 | 2 | 3 | 4 | 5 | 988 |

R7. Is your organization currently enrolled in the Mandatory Hourly Pricing (MHP) Program?

Yes ..... (Continue R7a) 1
No .....(SKIP TO R8) 2
[DON'T KNOW] ..... (Describe difference between MHP & ESCO, than ask again). 998

[IF YES to R7] R7a. Why did your organization choose to stay in the MHP Program?

RECORD VERBATIM: _____.....

R8. Is your organization currently enrolled with an Energy Service Company (ESCO)?

Yes ..... [1
No ..... 2
[DON'T KNOW] .....998

R9. What type of pricing structure are you currently being billed under? [IF NEEDED, READ RESPONSES]

Market Rate..... 1
Hourly Pricing ..... 2
Average Monthly Price..... 3
Fixed Price ..... 4
Other (Describe) ..... 50
Don't know.....988

R10. How well do you understand the calculations for the commodity price on your utility bill, on a scale of 1 to 5, where 1 means you don't understand at all the calculations for commodity price on your utility bill and 5 means you completely understand the calculations?

| Question | Do not Understand | Somewhat | Understand | Somewhat Understand | Thoroughly Understand | Don't Know |
|---|---|---|---|---|---|---|
| R10 | 1 | 2 | 3 | 4 | 5 | 988 |

R11. What percent of your organization's total annual operating costs do your electricity costs represent? [READ PERCENTAGES PROBE FOR BEST GUESS]

0% to 25% ..... 1
26% to 50%..... 2
51% to 75%..... 3
76% to 100%..... 4
Other_____ % ..... 50
Don't know.....988

[FOR PARTICIPANTS ONLY; NON-PARTICIPANTS SKIP TO A10]

V1. Have you spoken with a consultant or energy service company (ESCO) about hourly pricing or other options available to you?

Yes ..... 1
No ..... 2
Don't know.....988

V2. Did you consider purchasing energy from an alternate supplier? [IF NEEDED: FOR EXAMPLE, Just Energy, Constellation Energy, TXU Energy, Direct Energy]

Yes ..... 1
No ..... 2
Don't know.....988

V3. Does your facility have the flexibility to shift operations in response to hourly prices?

Yes ..... 1
No ..... 2
Don't know.....988

V4. Does your facility have someone who tracks and checks hourly prices on a daily basis?

Yes ..... 1
No ..... 2
Don't know.....988

V5. Do you feel it is helpful to be able to view hourly commodity prices a day in advance?

Yes ..... 1
No ..... 2
Don't know.....988

V6. Do you feel you have the necessary information to develop a strategy for responding to hourly pricing?

Yes ..... 1
No ..... 2
Don't know.....988

V6a. Have you received information about Mandatory Hourly Pricing from…? [READ LIST]

Your utility (ConEdison) ..... 1
Energy Service Company (ESCO)..... 2
New York Energy Research and Development Authority (NYSERDA) ..... 3
The NYISO website..... 4
An Industry Association or Consultant..... 5
A Media or Trade publication..... 6
Through some other means: _____ ..... 50
Don't know.....988

V7. Did your organization take any steps to ensure that you were fully informed and comfortable with information you received from Con Edison regarding the MHP program since the program began?

Yes ..... 1
No ..... 2
Don't know.....988

V7a. Did your organization…? [READ LIST]

Receive and read customer letters and newsletters, emails..... 1
Attend customer forums..... 2
Visit the Coned rates site at: Coned.com/rates..... 3
Sign up for the Customer Care for Energy Management website ..... 4
Contact customer service..... 5
None of the above ..... 6
Other..... 50
Don't know.....988

V8. Have you attended a seminar, workshop or speak with anyone from your utility since the change to mandatory hourly pricing?

Yes, Seminar ..... 1
Yes, Workshop..... 2
Yes, Spoke with Utility ..... 3
None of the Above..... 4
Other:..... 50
Don't know.....988

[IF YES] V8a. What information did you receive and how helpful was it?

RECORD VERBATIM: _____.....

[PARTICIPANTS ONLY]

A1. Do you have a maximum hourly price threshold that you target for reducing energy consumption?
[Interviewer: Circle the units corresponding to the answer given, probe if necessary]

Yes ..... (Continue A1a) 1
No .....(Skip A1b) 2
Don't know..... (Skip A2) 988

A1a. What is it? _____ cents/kWh or cents/MWh or $/kWh or $/MWh

A1b. If no, have you thought about developing a maximum price?

Yes ..... 1
No ..... 2
Don't know.....988

A2. Do you compare hourly pricing with previous energy consumption to understand the potential impact to your energy costs?

Yes ..... 1
No ..... 2
Don't know.....988

A3. By knowing the day-ahead prices, do you make plans for energy reduction if you see hourly pricing that you feel is excessive?

Yes ..... 1
No ..... 2
Don't know.....988

A4. Are you able to reduce your energy usage (or consumption) for high pricing periods? If yes, what strategies are implemented?

No, cannot reduce energy for high pricing periods ..... 1
Utilize EMS controls for reducing energy..... 2
Reduce HVAC..... 3
Fuel Switching ..... 4
Reduce Lighting ..... 5
Reduce or Shift Processes ..... 6
Other Strategy _____..... 50
Don't know.....988

A5. Did you know that the Customer Care for Energy Management website can send you automated email alerts if your demand or next day's price per kWh are above or below your customized threshold?

Yes, and I have alerts established..... 1

Yes, but I have not yet established alerts..... 2
No, I did not know that functionality was available, but I am not interested. ..... 3
No, I did not know that functionality was available, but I am interested in using it..... 4
Don't know.....988

A6. What barriers has your facility experienced in responding to hourly electricity supply prices? [READ LIST]

Insufficient resources to pay attention to hourly prices..... 1
Inflexible labor schedule ..... 2
Managing electricity use is not a priority in my organization..... 3
The cost of responding outweighs the savings..... 4
Negative previous experience with day-ahead hourly pricing ..... 5
No barriers have been encountered..... 6
All of the Above Barriers Mentioned ..... 7
Other (please specify): _____..... 50
Don't know.....988

A7. Have you used the Customer Care for energy Management online tool at www.coned.com/customer care?

Yes ..... 1
No ..... **SKIP TO A7g-A6h** 2
Don't know..... **SKIP TO A7g-A6h** 988

A7a.If yes, how often do you use it?

Daily..... 1
Weekly ..... 2
Monthly..... 3
Less than once a month ..... 4
Other:_____..... 50
Don't know..... 98

A7b. Do you find the tools useful?

Yes (IF YES THEN Specify :_____)..... 1
No ..... 2
Don't know.....988

A7c. Which features do you use? _____

A7d. Have you had any problems with the tool?

Yes (IF YES THEN Specify:_____)..... 1
No ..... 2

A7e. Will you continue to use it in the future?

Yes ..... 1
No (Why Not :)_____..... 2
Don't know.....988

**[IF A7 = NO OR DON'T KNOW THEN READ, and ask A7f, A7g]** The Customer Care for Energy Management online tool is designed to help you understand the energy consumption patterns and the effects of hourly pricing for your facility.

A7f. Would you like more information on this tool? _____

A7g. Have you contacted IntervalMetering@coned.com for further access to Customer Care or for other MHP related questions?

Yes I have ..... 1
No, I haven't had the need to..... 2
No, I didn't know that email address was in place ..... 3
Don't know.....988

A8. In your response to the hourly electricity pricing program, I'm going to ask you about what actions have you already taken during the past 24 months, or anticipate taking during the next 12 months? [READ LIST]
**[CIRCLE ALL APPLICABLE RESPONSES]**

A8a. Energy audit ..... (24 /12 / NO /DK /NA)
A8b. Technical Assessment ..... (24 /12 / NO /DK /NA)
*[IF NEEDED) (In-house / consolations to determine strategies to reduce (load) energy use during high price hours.)*
A8c. Improve energy efficiency..... (24 /12 /NO /DK /NA)
A8d. Shift electricity demand..... (24 /12 /NO /DK /NA)
A8e. Use load management software ..... (24 /12 /NO /DK /NA
A8f. Management website ..... (24 /12 /NO /DK /NA
A8g. Participate in Con Edison Energy Efficiency program(s) ..... (24 /12 /NO /DK /NA
A8h. Participate in NYISO load management programs ..... (24 /12 /NO /DK /NA)
A8i. Switch to an electricity supplier other than your local utility ..... (24 /12 /NO /DK /NA)
A8j. Install on-site or distributed generation ..... (24 /12 /NO /DK /NA)
A8k. None/Nothing..... (24 /12 /NO /DK /NA)

A9. Have you taken any OTHER actions in response to the hourly electricity pricing program since you have been enrolled in it? If yes, what have you done?

Yes Specify_____..... 1
No ..... 2
Don't know.....988

A10. Are you aware that NYSERDA offers incentives for qualifying energy efficiency measures?

Yes ..... 1
No ..... 2
Don't know.....988

[PARTICIPANTS AND NON-PARTICIPANTS]

A11. Have you participated in a NYSERDA program?

Yes .....[Go to A11a] 1
No .....(Skip to A12) 2
Don't know.....988

[IF YES] A11a. Please describe what improvements you made at this facility by working with NYSERDA.

RECORD VERBATIM: _____.....

[PARTICIPANTS AND NON-PARTICIPANTS]

A12. Have you participated in a Con Edison's Energy Efficiency program?

Yes .....[Go to A12a] 1
No ..... [Go to A13] 2
Don't know.....988

[IF YES] A12a. Please describe what improvements you made at this facility by working with Con Edison.

RECORD VERBATIM: _____.....

[PARTICIPANTS AND NON-PARTICIPANTS]

A13. Are you considering an energy audit or technical evaluation to identify load management strategies to facilitate responding to pricing signals?

Yes ..... 1
No ..... 2
Don't know.....988

[PARTICIPANTS AND NON-PARTICIPANTS]

A14. Are you interested in receiving more information about energy efficiency or energy audits from Con Edison?

Yes ..... 1
No ..... 2
Don't know.....988

A14a. [Note for INTERVIEWER: Please inform Andrea Vassallo if anyone responds YES to this question. Gather contact information for person who should be contacted IF DIFFERENT FROM PERSON BEING SURVEYED].
Name & Title _____
Phone& Email_____

[PARTICIPANTS AND NON-PARTICIPANTS]
A15. If incentives were available for making any changes that were recommended from an energy audit or technical evaluation, would you apply for them?

Yes ..... 1
No ..... 2
Don't know.....988

**[SKIP THE FOLLOWING SECTION FOR RESPONDENTS WHO ARE NOT IN AN ESCO (ENERGY SERVICE COMPANY)]**
**[If R8=YES, ASK ESCO1-ESCO3; IF R8=NO OR DON'T KNOW, SKIP TO P1]**

**REASONS FOR PARTICIPATING WITH AN ESCO**

[IF R8=YES; RESPONDENT'S ORGANIZATION IS ENROLLED IN AN ESCO]

ESCO1. What did your organization do when the Mandatory Hourly Pricing tariff went into effect?

Continued on MHP for a test period then switched to an alternative energy supplier after test period
1
Switched to an Energy Services Company (ESCO) for energy supply immediately ..... 2
Switched to an alternative energy supplier immediately ..... 3
Other _____ ..... 50
Don't Know 988.....

ESCO2. Why did you decide not to purchase energy from Con Edison's MHP Program?

Unable to shed load during high pricing periods ..... 1
Insufficient resources to pay attention to hourly prices..... 2
Costs would be too high ..... 3
Inability to shift load and react to pricing signals..... 4
Bad experience with prior programs or service ..... 5
My account had been enrolled with an ESCO prior to my eligibility for Mandatory Hourly Pricing.... 6
All reasons mentioned above..... 7
Other: _____..... 50

Don't Know .....988
Refused .....999

ESCO3. Why did your organization choose to enroll with an ESCO provided program?

RECORD VERBATIM: _____.....

[IF R8=YES; RESPONDENT'S ORGANIZATION IS ENROLLED IN AN ESCO]
[SKIP TO F1; IF RESPONDENT IS A NON-PARTICIPANT]

PROGRAM EXPERIENCE: Mandatory Hourly Pricing Program for 2yr Participant

P1. Since participating in MHP, did you experience changes in your daily operations?

Yes ..... 1
No ..... 2
Don't know.....988

[IF YES] P1a. What changes have you experienced?

RECORD VERBATIM: _____.....

P2. Have you had to shut down your operations?

Yes ..... 1
No ..... 2
Don't know.....988

P2a. What caused you to shut down your operations?

RECORD VERBATIM: _____.....

P3. Since participating in MHP, has your business increased operations during off-peak hours?

Yes ..... [P3a] 1
No, it's the same..... 2
Don't know.....988

[IF YES TO P3] P3a. If yes, do you know how they have changed?

RECORD VERBATIM: _____.....

P4. Since participating in MHP, has your business installed or increased distributive generation?

Yes ..... [P4a] 1
No ..... 2
Don't know.....988

[If YES] P4a. How so? RECORD VERBATIM:_____.

P5. Has your business increased or decreased your hours of operation since participating in MHP, or maintained the same hours of operations since participating in MHP?

Increased/decreased hours of operation ..... [P6] 1
Maintained the same hours of operation..... [P6] 2
Don't know ..... [P7] 988

[IF HOURS OF OPERATIONS INCREASED/DECREASED]

P6. By how many hours has your business increased/decreased its hours of operation?

RECORD # HRs_____

P7. Has your business brought in 3rd party energy expertise (energy consultants?)

Yes ..... [P7A] 1
No ..... 2
Don't know.....988

[IF YES] P7a. Why did your business bring in that expertise?

RECORD VERBATIM: _____.....

P8. Has your business installed or enhanced its energy management systems?

Yes ..... [P8A] 1
No ..... 2
Don't know.....988

[IF YES] P8a. Does it have the ability to control any of the following?

Air-Conditioning Units ..... 1
Air-Handling Units ..... 2
Ventilation Units ..... 3
Heating Systems..... 4
Lighting 5
Pumping Equipment..... 6
Other _____ ..... 50

Don't know 988

[IF P3=NO OR DON'T KNOW; ORGANIZATION HAS INCREASED HOURS OF OPERATION DURING OFF-PEAK HOURS]
P9. Is your business thinking and/or considering policies to shift load away from peak periods?

Yes ..... [P9A] 1
No ..... 2
Don't know.....988

P9a. If yes, why are you thinking and/or considering these policies?
RECORD VERBATIM: _____.....

**[SKIP TO F1; IF RESPONDENT IS A NON-PARTICIPANT]**

Next I have a few questions about how satisfied you are with the different aspects of the Mandatory Hourly Pricing (MHP) program A6=YES; ORGANIZATION HAS USED CUSTOMER CARE FOR ENERGY MGMT. WEBSITE]

S1. On a scale of 1 to 5 where 1 is "Not at all satisfied" and 5 is "Very Satisfied" how satisfied are you with Con Edison's Customer Care for Energy Management website?

S2. Using the same scale, how satisfied are you with your ability to contact Con Edison and receive information on Mandatory Hourly Pricing?

S3. Overall, how satisfied are you with the Mandatory Hourly Pricing Program? .....

| Question | Not at All Satisfied | Somewhat Unsatisfied | Neutral | Somewhat Satisfied | Very Satisfied | Don't Know |
|---|---|---|---|---|---|---|
| S1_web | 1 | 2 | 3 | 4 | 5 | 988 |
| S2_contact | 1 | 2 | 3 | 4 | 5 | 988 |
| S3_overall | 1 | 2 | 3 | 4 | 5 | 988 |

S1a. [IF <3 THEN ASK] Why? _____
S2a. [IF <3 THEN ASK] Why? _____
S3a. [IF <3 THEN ASK] Why? _____

S4. How do you think hourly pricing has affected or will affect your business?

Positively..... 1
Not very much at all..... 2
Negatively ..... 3
Don't know..... 4

S4a. Why do you say that?

RECORD VERBATIM: _____

S5. What do you like best about the program?

RECORD VERBATIM: _____.....

S6. What, if anything, could Con Edison do to improve the MHP program?

RECORD VERBATIM: _____.....

S7. Are there any other specific improvements and recommendations you have on marketing, outreach and education that would be helpful in managing your facility with respect to hourly pricing?

RECORD VERBATIM: _____

F1. What is the annual peak demand of the facility? [IF NEEDED This information would be found on their bill]

RECORD VERBATIM: _____.....

Don't know.....**[-988]**

F2. What is the monthly kW load for your organization?

1,500kW or larger..... 1

1,000kW to 1,499Kw ..... 2

500kW to 999Kw..... 3

Don't know **[-988]**

F3. How many employees work at your facility? _____

[Residential only, try and capture both]

F4. How many units and/or tenants are at the facility? _____units/_____tenants

F5. What is the square footage of your facility? _____

F6. What description best reflects your organization? [READ LIST]

Manufacturing (one-shift operation)..... 1

Manufacturing (two-shift operation) ..... 2

Manufacturing (three-shift operation)..... 3

Water Treatment/Sanitation Facilities ..... 4

Warehouse/Distribution Facilities..... 5

Utility - Energy/Telecommunications..... 6

Power Generator..... 7

Commercial Office Building..... 8

Hospital, Nursing Home or other Health Care ..... 9

Government ..... 10

Correctional Facility..... 11
Religious Organization..... 12
Farm/Food Processor ..... 13
Education K-12 ..... 14
Education College/University..... 15
Retail ..... 16
Lodging/Entertainment ..... 17
Data Center ..... 18
Residential Housing..... 19
Other, please explain _____ ..... 50

Those are all of the survey questions that I have for you today. Do you have any addition questions or comments for me? [IF YES, RECORD]

F7. Before we close I would like to confirm the service address I have on file is also your mailing address and any additional information we may need to ensure you receive the $250 Visa Cash Gift Card Incentive.

On behalf of ConEdison, I'd like to thank you for your input and participation END

# D. Appendix D – Customer Outreach

## D.1 2012 February Reactive Power Billing Letter

May 1, 2012

Dear Customer,

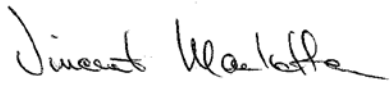
In preparation for the Reactive Power and Mandatory Hourly Pricing programs, interval metering and communications capability have been installed at the premise referenced above. Our Customer Care for Energy Management web site (**conEd.com/customercare)** lets you view and evaluate the metered data so you can better manage the impact the two programs may have on your energy bills.

In addition to accessing data from the meter, viewing hourly prices from the New York Independent System Operator (NYISO), and creating usage reports, you can also:

- **Calculate how much you may have to pay for reactive power.** Data showing how much reactive power (kVAr) your facility uses will be available for at least a six-month period before you are first assessed the reactive-power demand charge with your bill beginning on or after «Reactive_Power_Billing_Start_Date». If you can raise your facility's power factor you will reduce the new reactive power charge. If you can raise your facility's power factor to 95% or above, you will not be charged for reactive power. In addition, we will begin displaying your reactive power demand and power factor on the three bills prior to assessing the reactive-power demand charge. Look for the line item under the Delivery Charges section of your bill.
- **Securely share data with employees and consultants** so they can help you better manage your facility's energy use and costs. The site also makes it easy to restrict access to the data without having to create a new username and password.
- **Schedule energy-use reports.** Get the reports you need automatically via e-mail.
- **Set your standards.** Receive automatic e-mail alerts when NYISO prices and demands are above or below your customized levels.

You will need a username and password to access the Customer Care for Energy Management web site. To obtain one, send an e-mail to IntervalMetering@coned.com. If you have questions, we invite you to visit **conEd.com/reactivepower,** where you'll find copies of our *Smarter Energy Management* newsletter and our reactive power/mandatory hourly pricing information sheets.

Sincerely,



Vincent Marketta
Section Manager - Corporate Customer Group

## D.2 September 2010 Customer Care for Energy Management Manual

Since 2006, Con Edison has offered customers access to their electric interval metered data via the Demand Monitoring Software, or DMS. DMS has allowed customers to view the metered data, to run reports in analyzing their energy usage, and to view the NY Independent System Operator's (ISO) day-ahead zonal hourly prices for their load zone.

Customer Care for Energy Management has the functionality of DMS, and more:

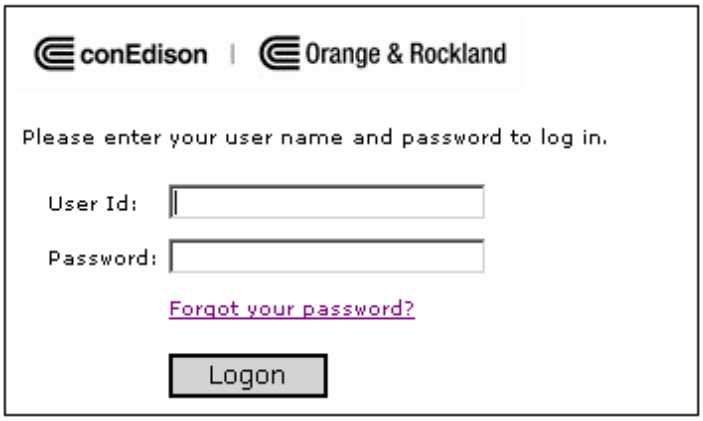
- Customers can view interval metered data in kWhrs and kVar (if installed for Reactive Power).
- Reports can be scheduled to be run automatically and e-mailed at a frequency and time of your choosing.
- Alerts can be customized so you can be notified if demand and/or hourly prices meet your thresholds.
- Customer Care allows the ability to manage sub-users. You can enable and disable access to others as you see fit.
- Aggregate meters in order to analyze energy usage across accounts.

The goal of this manual is to facilitate your introduction to Customer Care. Use the table of contents to jump to points of interest.

Please address access or other questions to:
IntervalMetering@coned.com, for Con Edison customers, and
RogersD@oru.com, for Orange & Rockland customers.

Logging in

To enter Customer Care, a User Id and Password is required.
The User Id and Password are case sensitive.
If you've logged into the site in the past, and have forgotten your password, click the 'Forgot your password?' link for assistance.
If you need further assistance or are a first time user, e-mail us at IntervalMetering@coned.com.
Orange & Rockland customers should e-mail drogers@oru.com.





conEdison
Orange & Rockland
Please enter your user name and password to log in.
User Id:
Password:
Forgot your password?
Logon

Top of Form

Customer and Meter Selection

The meter and customer selection dialog is similar across most reports and configuration screens. Radio buttons indicate you can make one selection for the report, alert, or other feature. Check boxes indicate that you can make multiple selections, such as meter groups or customers for the report, alert, or other feature.

Customer Selection

If you have access to more than one customer's data, use this table to select the customers whose meters you want to view in the meter list.

Note: Most users do not have the ability to view data for other customers. If you do not have access to more than one customer's data, the Customer Selection does not display.

To select customers

From the Meter Selection display, click Switch Customer.
On the Customer Selection tab, use the following features to find customers:
Customer List - Click the radio button or select the check box of the customer or customers to include in the report, alert or other feature. If the Customer List does not show all the customers you need, click Reset Filter on the Customer Filter tab to remove filtering.
Customer Filter - Enter search criteria, such as customer name or account number, and click Filter Customers to limit the customers displayed in the customer list. You can filter for multiple customers by separating the filter criteria by commas (e.g., Helga,Marzipan,Baloney). All text fields in this dialog support wildcards. No SQL special characters are allowed.

Customer Name - Searches the Customer entity.
Account - Searches the Account entity.
State, City, Zip - Searches the Service Point address entity. If the Service Point has no associated address, searches the Premise entity.

Selected Customers - This section displays information about the selected customers.
Click Select to return to the Meter List. The Meter List now displays all meters associated with the selected customers.

Meter Selection
When you select a meter for a single-meter (or meter group) report, the meter remains selected when you click to other single-meter reports. When you select meters and meter groups for multiple-meter reports, those meters remain selected when you click through to other multiple-meter reports.

Customer Care treats a meter group as a single meter. The meter group contains the aggregate value of all the meters within the group.

To select meters

Click Select Meters to launch the Meter Selection dialog, which displays all meters associated with the current customer. To select meters from a different customer or multiple customers, see Customer Selection.

Use the following features to select the meters you want:
Meter List - Click the radio button or check box of the meter(s) or meter group(s) to include in the report, alert, or other feature. The meter list only displays meters configured for a particular customer. Customer shows to which customer the meter belongs. Available Date Range displays the date range for which IEE has readings for that meter. In Bill Analysis, Available Bill Data displays the date range for which IEE has bill data for that meter.
Meter Details - This section displays information about the meter or meter group selected in the Meter List. For individual meters, it displays information such as meter ID, the date range for which data is available, and commodity. For meter groups, it displays only the list of channels included in the group.
Meter Filter - Enter criteria, such as service ID and reading interval, to filter the meters displayed in the meter list. You can filter for multiple customers by separating the customer names by commas. Do not use spaces between strings (e.g., Helga,Marzipan,Baloney is correct, but Helga, Marzipan, Baloney is incorrect.). All text fields in this dialog EXCEPT Available Data and Reading Interval support wildcards. No special SQL characters are allowed.
Optional: Click New Meter Group to create a meter group from the meters currently displayed in the Meter List.
Click Select Meter to add the selected meter(s) to the report, alert, or other feature

Energy Analysis

Load Analysis

The Load Analysis report helps you:

Gain insights into the shape of your meter's load (demand).

Identify when peak loads occur.

Identify specific 15-minute, hourly or daily anomalies.

Identify monthly and seasonal variations in your load.

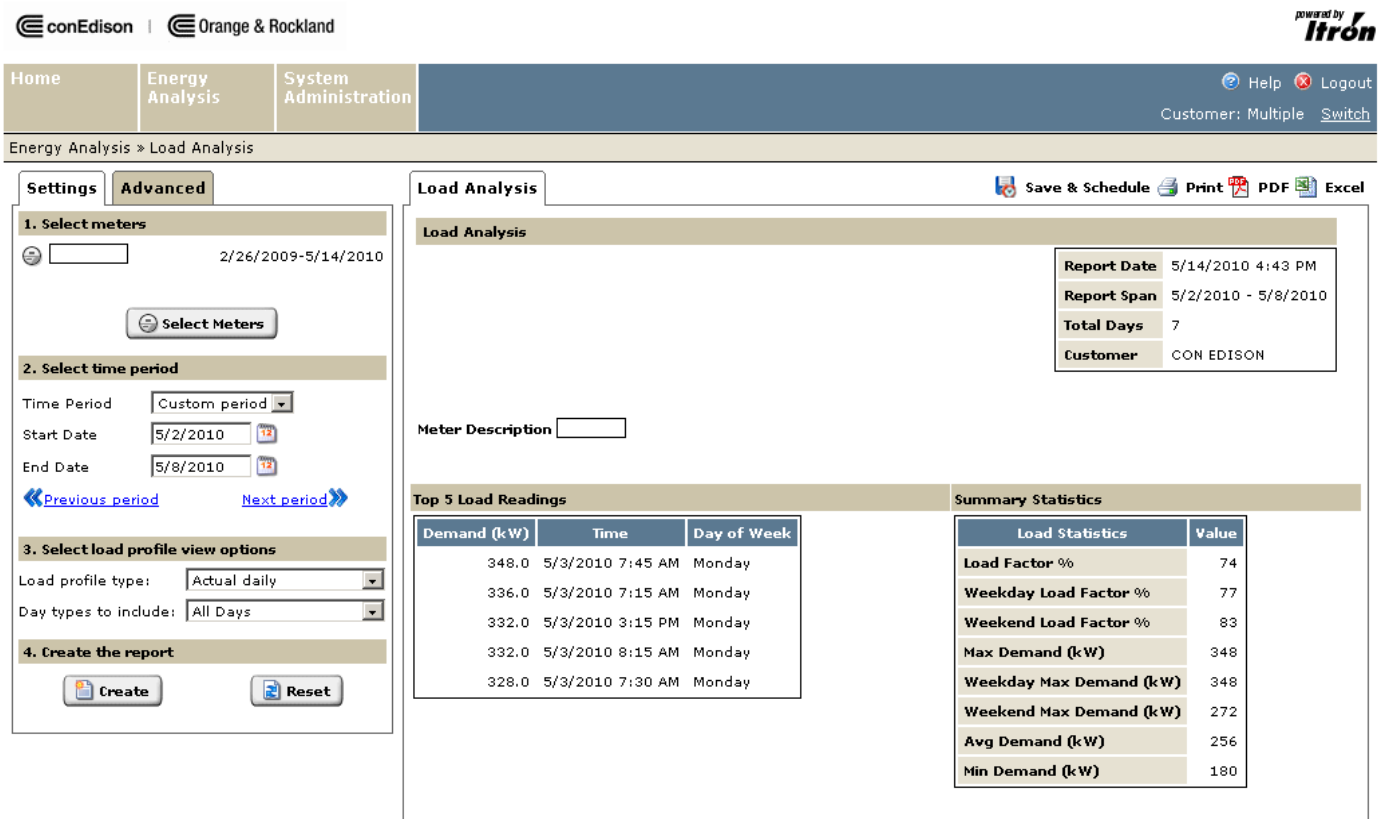
Load Analysis allows selection of a single meter and includes the following components:

Summary Statistics

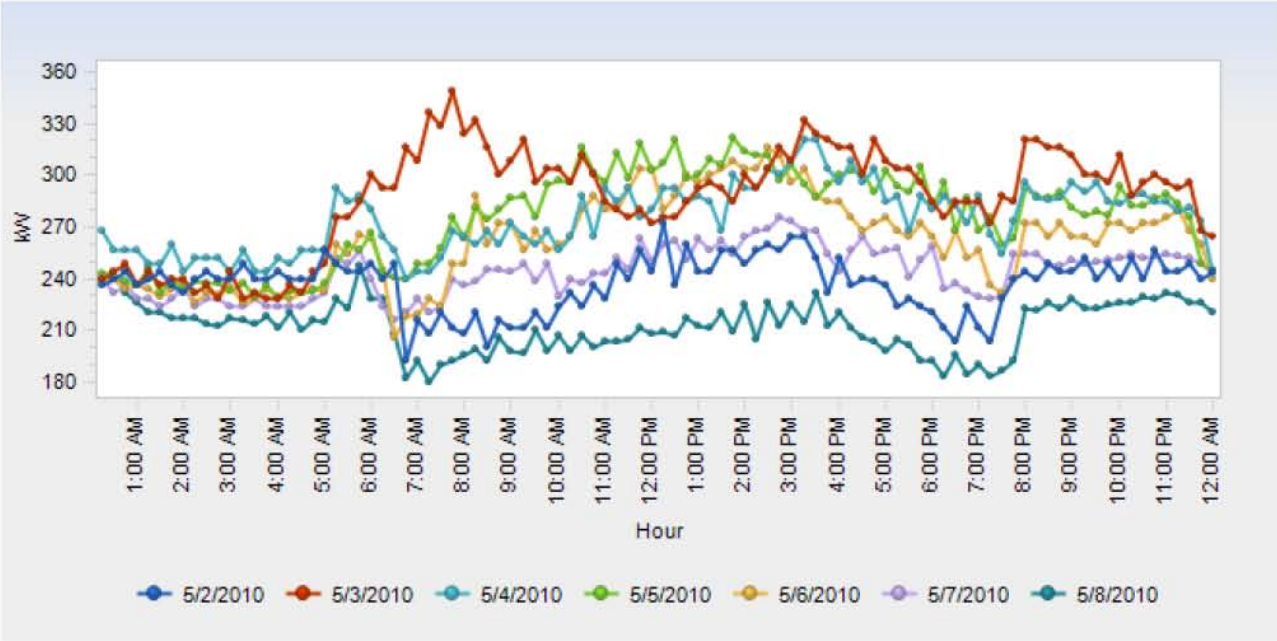
Load Profile chart and table

Average Hourly Consumption chart

Load Duration chart and table



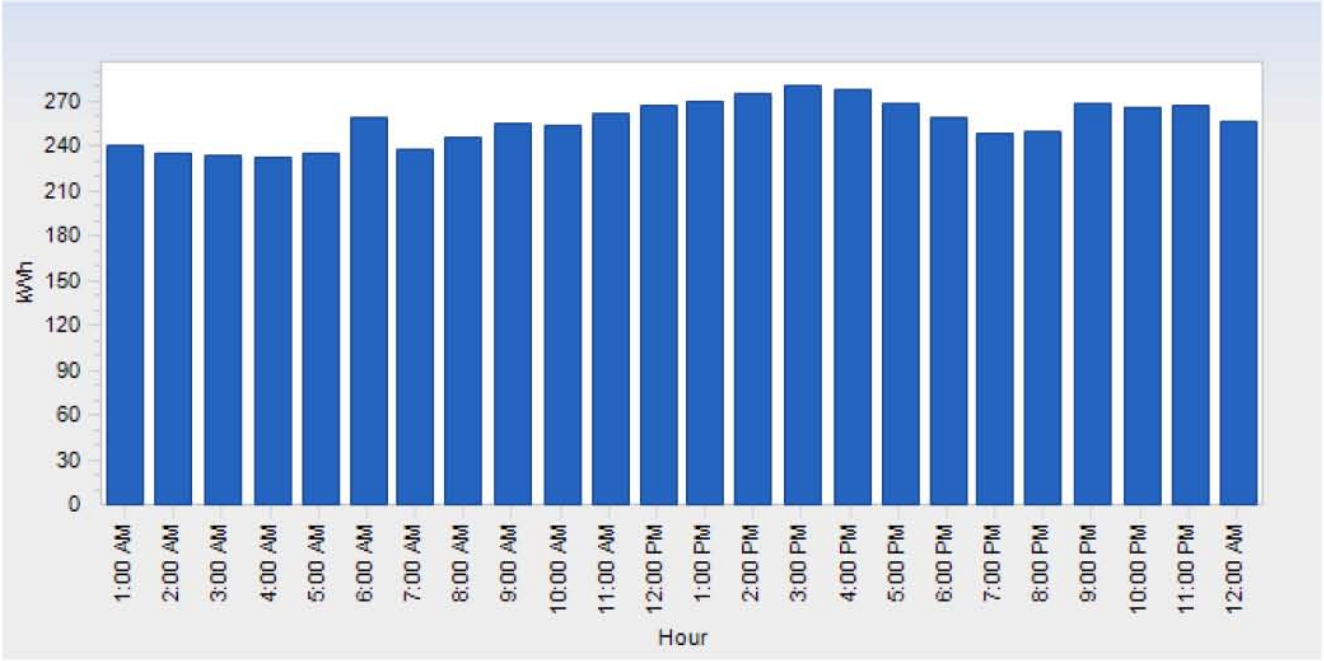
**Load Profile - Actual daily**



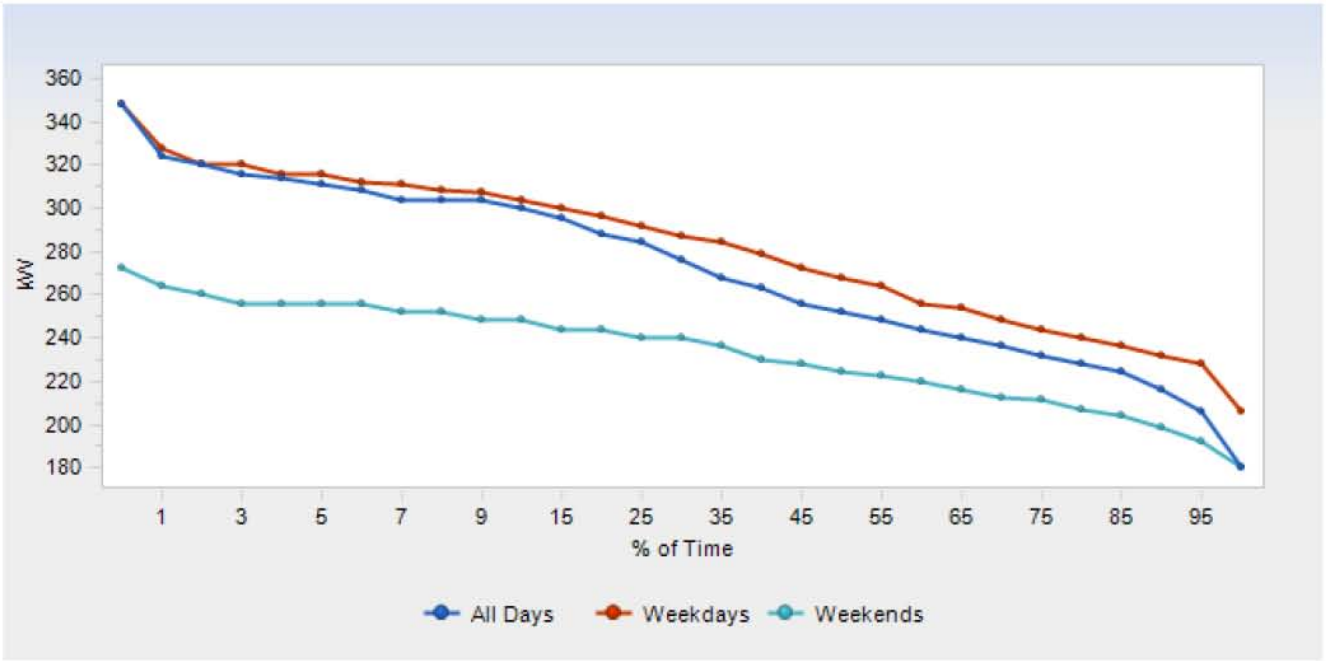

**Load Profile Table**

| Period Ending | Average (kW) | Max Value (kW) | % of Max | Max Timestamp | Min Value | Min Timestamp |
|---|---|---|---|---|---|---|
| 5/2/2010 | 237 | 272 | 78.0 | 12:15 PM | 192 | 06:45 AM |
| 5/3/2010 | 287 | 348 | 100.0 | 07:45 AM | 228 | 02:45 AM |
| 5/4/2010 | 275 | 320 | 91.0 | 03:15 PM | 240 | 06:45 AM |
| 5/5/2010 | 275 | 322 | 92.0 | 01:45 PM | 228 | 04:00 AM |
| 5/6/2010 | 262 | 316 | 90.0 | 02:30 PM | 206 | 06:30 AM |
| 5/7/2010 | 244 | 276 | 79.0 | 02:45 PM | 216 | 06:30 AM |
| 5/8/2010 | 212 | 247 | 71.0 | 05:45 AM | 180 | 07:15 AM |

**Average Hourly Profile**




**Load Duration Curve**

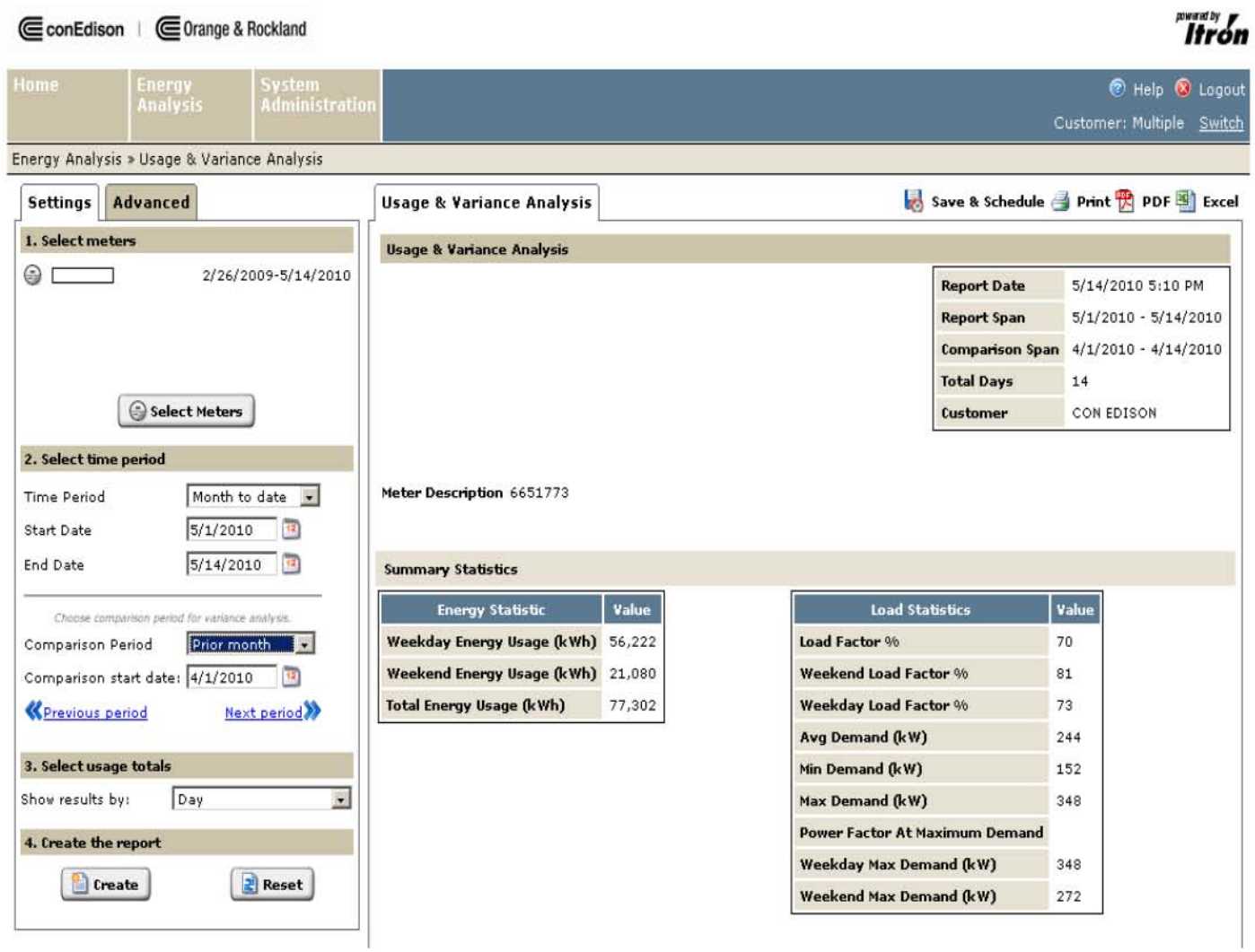


**Load Duration Table**

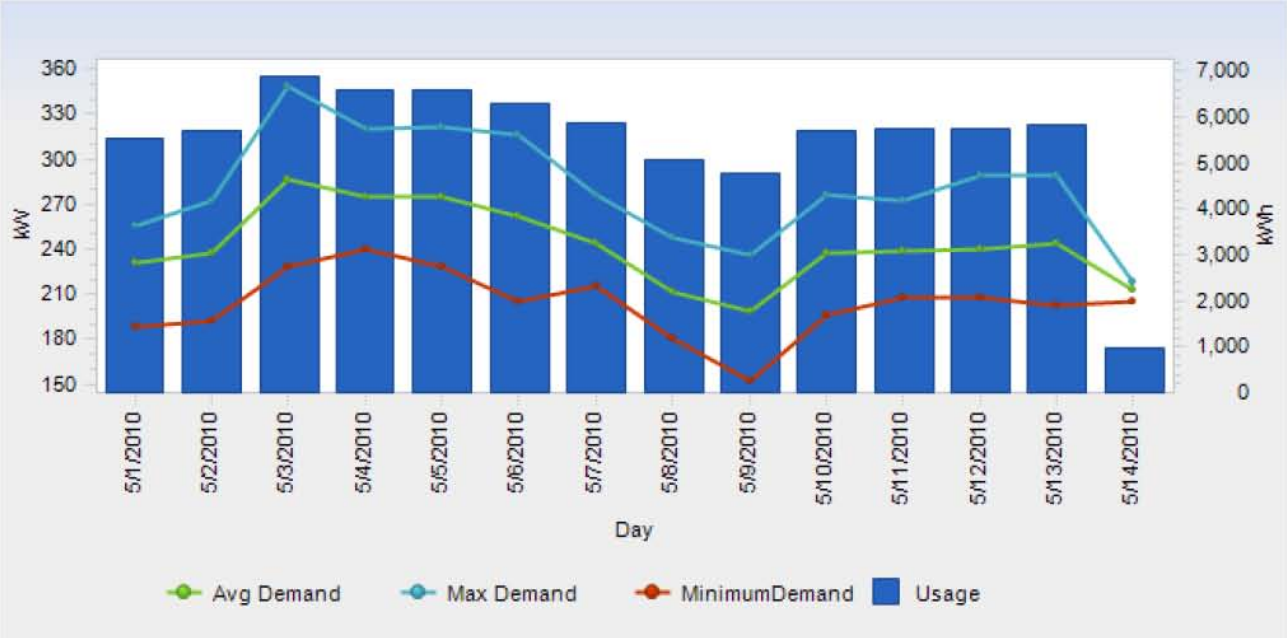
| % of Time | All Days (kW) | Weekdays (kW) | Weekends (kW) |
|---|---|---|---|
| 0 | 348 | 348 | 272 |
| 1 | 324 | 328 | 264 |
| 2 | 320 | 320 | 260 |
| 3 | 316 | 320 | 256 |
| 4 | 314 | 316 | 256 |
| 5 | 311 | 316 | 256 |
| 6 | 308 | 312 | 256 |
| 7 | 304 | 311 | 252 |
| 8 | 304 | 308 | 252 |
| 9 | 304 | 307 | 248 |
| 10 | 300 | 304 | 248 |
| 15 | 295 | 300 | 244 |
| 20 | 288 | 296 | 244 |
| 25 | 284 | 292 | 240 |
| 30 | 276 | 287 | 240 |
| 35 | 268 | 284 | 236 |
| 40 | 263 | 278 | 230 |
| 45 | 256 | 272 | 228 |
| 50 | 252 | 268 | 225 |
| 55 | 248 | 264 | 222 |
| 60 | 244 | 256 | 220 |
| 65 | 240 | 254 | 216 |
| 70 | 236 | 249 | 213 |
| 75 | 232 | 244 | 211 |
| 80 | 228 | 240 | 207 |
| 85 | 224 | 236 | 204 |
| 90 | 216 | 232 | 198 |
| 95 | 206 | 228 | 192 |
| 100 | 180 | 206 | 180 |

Usage & Variance Analysis

Usage and Variance Analysis helps you:
Characterize your energy usage (consumption) over time, by hour, day, week, month, or year.
Identify irregularities in energy use, as day-to-day, week-to-week, etc.
Compare energy usage for different time periods.
Analyze increases or decreases in energy usage for one or more meters.
Display maximum, minimum and average demand relating to a single meter or meter group's consumption.
Normalize your usage data by area, weather, or production units for standard comparison.
Usage and Variance Analysis allows multiple meters or meter groups and includes the following components:
Summary Statistics
Usage and Demand chart and table (Demand is only included for a single meter or meter group)
Usage Variance chart and table, listing usage values for each meter for each time period
The Usage and Variance Analysis can help you answer questions such as:
How do my consumption totals vary from month to month, or year to year?
Do my monthly peak demand levels correspond to the months in which my rate schedule prices are higher?
How do my consumption totals vary across the same hours and days?
Do my peak consumption hours correspond to the peak time of use price periods on my rate schedule?
Are there intermittent periods that have abnormally high energy use?


conEdison | Orange & Rockland
powered by Itron
Home
Energy Analysis
System Administration
Help
Logout
Customer: Multiple Switch
Energy Analysis » Usage & Variance Analysis
Settings
Advanced
1. Select meters
2/26/2009-5/14/2010
Select Meters
2. Select time period
Time Period
Month to date
Start Date
5/1/2010
End Date
5/14/2010
Choose comparison period for variance analysis.
Comparison Period
Prior month
Comparison start date:
4/1/2010
Previous period
Next period
3. Select usage totals
Show results by:
Day
4. Create the report
Create
Reset
Usage & Variance Analysis
Save & Schedule
Print
PDF
Excel
Usage & Variance Analysis
Report Date 5/14/2010 5:10 PM
Report Span 5/1/2010 - 5/14/2010
Comparison Span 4/1/2010 - 4/14/2010
Total Days 14
Customer CON EDISON
Meter Description 6651773
Summary Statistics
Energy Statistic
Value
Weekday Energy Usage (kWh) 56,222
Weekend Energy Usage (kWh) 21,080
Total Energy Usage (kWh) 77,302
Load Statistics
Value
Load Factor % 70
Weekend Load Factor % 81
Weekday Load Factor % 73
Avg Demand (kW) 244
Min Demand (kW) 152
Max Demand (kW) 348
Power Factor At Maximum Demand
Weekday Max Demand (kW) 348
Weekend Max Demand (kW) 272

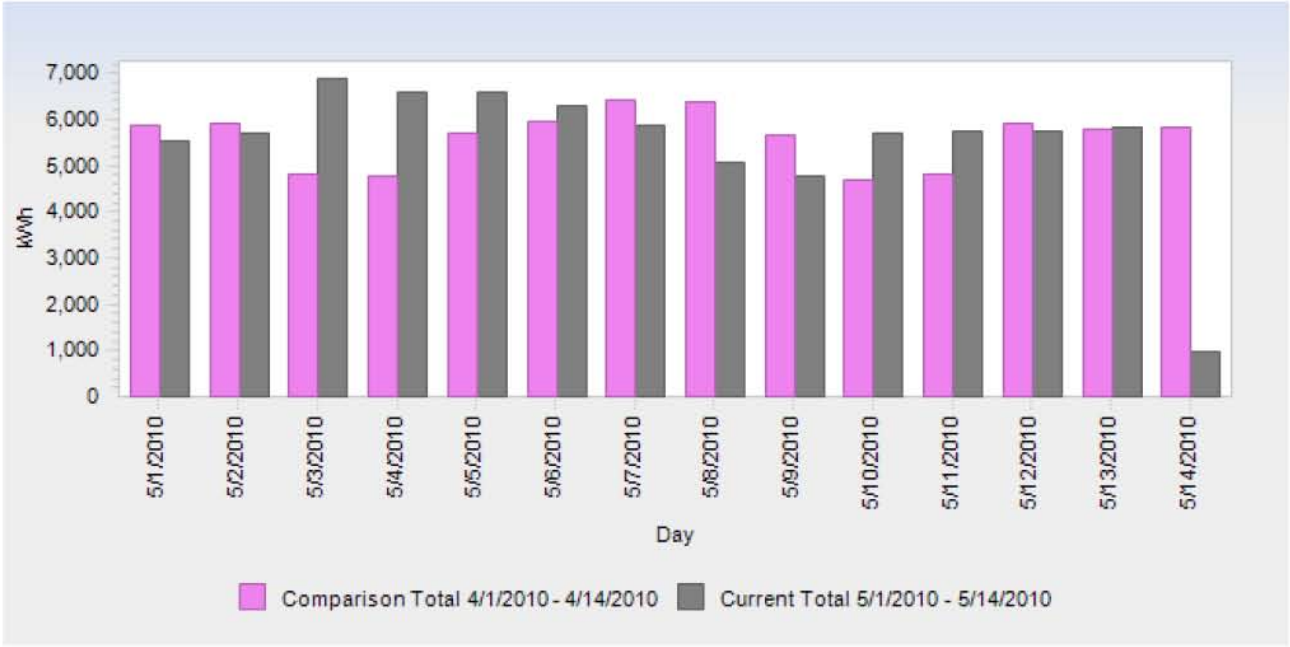
**Usage and Demand**




**Data Summary**

| Period Ending | Usage (kWh) | Min Demand (kW) | Max Demand (kW) | Avg Demand (kW) |
|---|---|---|---|---|
| 5/1/2010 | 5,530 | 188 | 256 | 230 |
| 5/2/2010 | 5,691 | 192 | 272 | 237 |
| 5/3/2010 | 6,878 | 228 | 348 | 287 |
| 5/4/2010 | 6,595 | 240 | 320 | 275 |
| 5/5/2010 | 6,602 | 228 | 322 | 275 |
| 5/6/2010 | 6,292 | 206 | 316 | 262 |
| 5/7/2010 | 5,856 | 216 | 276 | 244 |
| 5/8/2010 | 5,089 | 180 | 247 | 212 |
| 5/9/2010 | 4,770 | 152 | 236 | 199 |
| 5/10/2010 | 5,687 | 196 | 276 | 237 |
| 5/11/2010 | 5,744 | 208 | 272 | 239 |
| 5/12/2010 | 5,763 | 208 | 289 | 240 |
| 5/13/2010 | 5,847 | 202 | 290 | 244 |
| 5/14/2010 | 958 | 206 | 218 | 213 |

**Usage Variance**

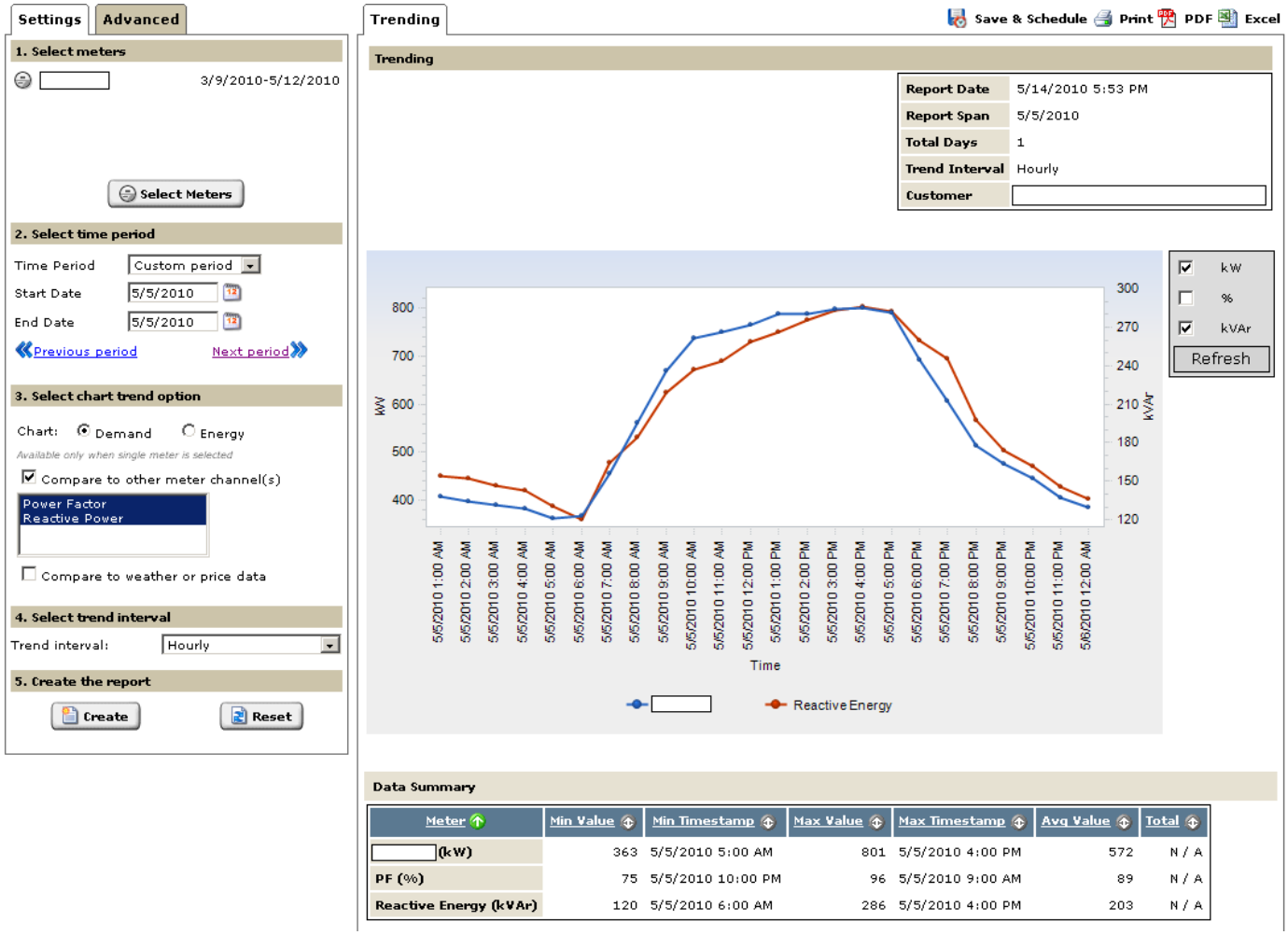



**Data Summary**

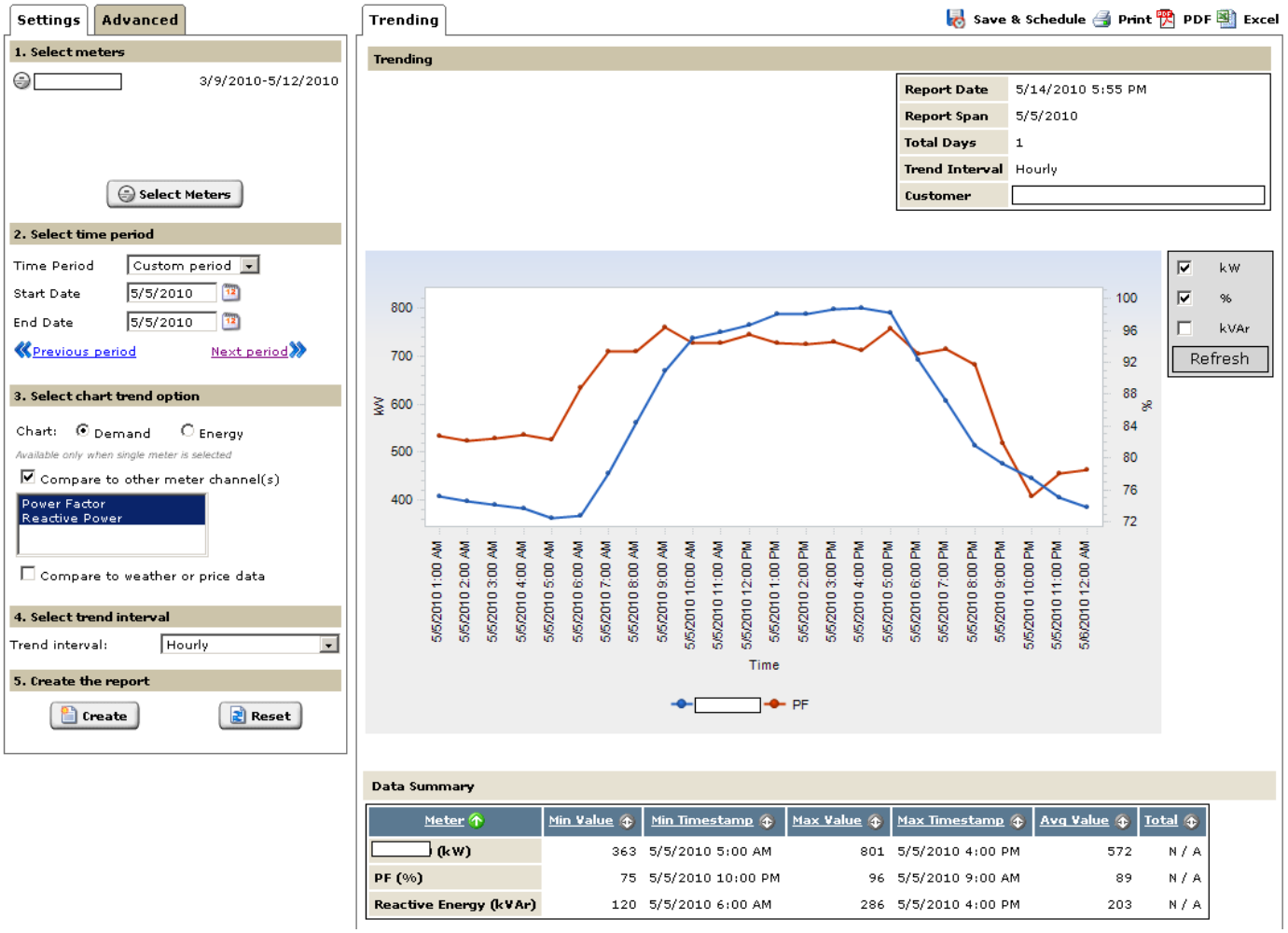
| Comparison Period | Comparison Total (kWh) | Current Period | Current Total (kWh) | Variance | Variance % |
|---|---|---|---|---|---|
| 4/1/2010 | 5,870 | 5/1/2010 | 5,530 | -340 | -6.15 |
| 4/2/2010 | 5,907 | 5/2/2010 | 5,691 | -216 | -3.80 |
| 4/3/2010 | 4,806 | 5/3/2010 | 6,878 | 2,072 | 30.13 |
| 4/4/2010 | 4,780 | 5/4/2010 | 6,595 | 1,815 | 27.52 |
| 4/5/2010 | 5,697 | 5/5/2010 | 6,602 | 905 | 13.71 |
| 4/6/2010 | 5,936 | 5/6/2010 | 6,292 | 357 | 5.67 |
| 4/7/2010 | 6,407 | 5/7/2010 | 5,856 | -552 | -9.42 |
| 4/8/2010 | 6,357 | 5/8/2010 | 5,089 | -1,268 | -24.92 |
| 4/9/2010 | 5,666 | 5/9/2010 | 4,770 | -896 | -18.78 |
| 4/10/2010 | 4,696 | 5/10/2010 | 5,687 | 991 | 17.43 |
| 4/11/2010 | 4,823 | 5/11/2010 | 5,744 | 921 | 16.04 |
| 4/12/2010 | 5,920 | 5/12/2010 | 5,763 | -157 | -2.72 |
| 4/13/2010 | 5,785 | 5/13/2010 | 5,847 | 62 | 1.06 |
| 4/14/2010 | 5,835 | 5/14/2010 | 958 | -4,877 | -508.83 |

Trending

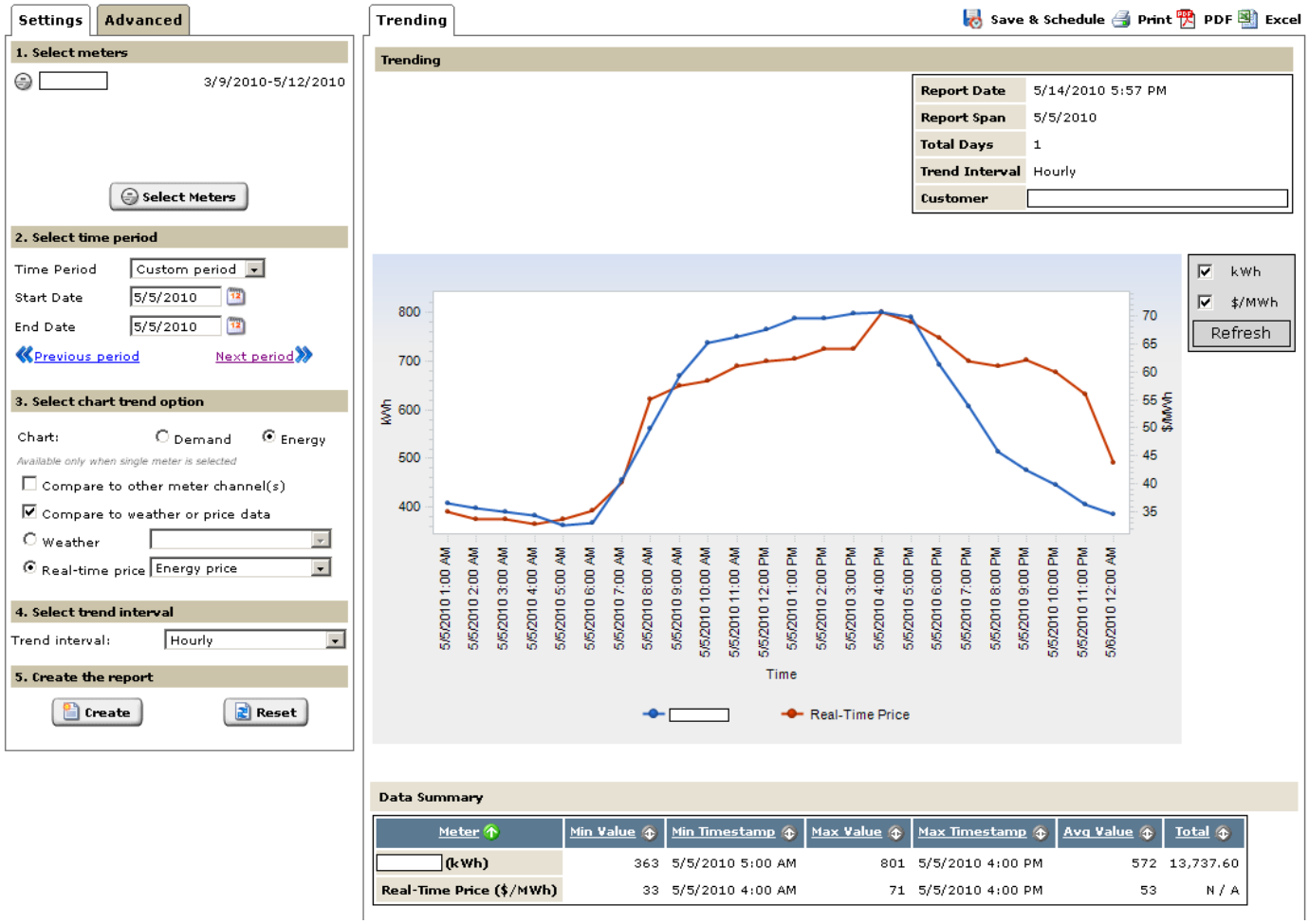
Trending helps you:
Visualize your facilities' load or energy consumption over any time period.
Display "cause and effect" correlations between energy data for a single meter and an alternative meter channel, or real-time pricing.
Compare values and trends for multiple meters on the same graph.
Trending allows selection of multiple meters or meter groups and includes the following components:
Trend chart displaying metered, hourly, or daily loads or consumption.
Summary table listing average, maximum and minimum demand, and total consumption for each meter.




*Trending Report: kW (blue), kVar (red)*



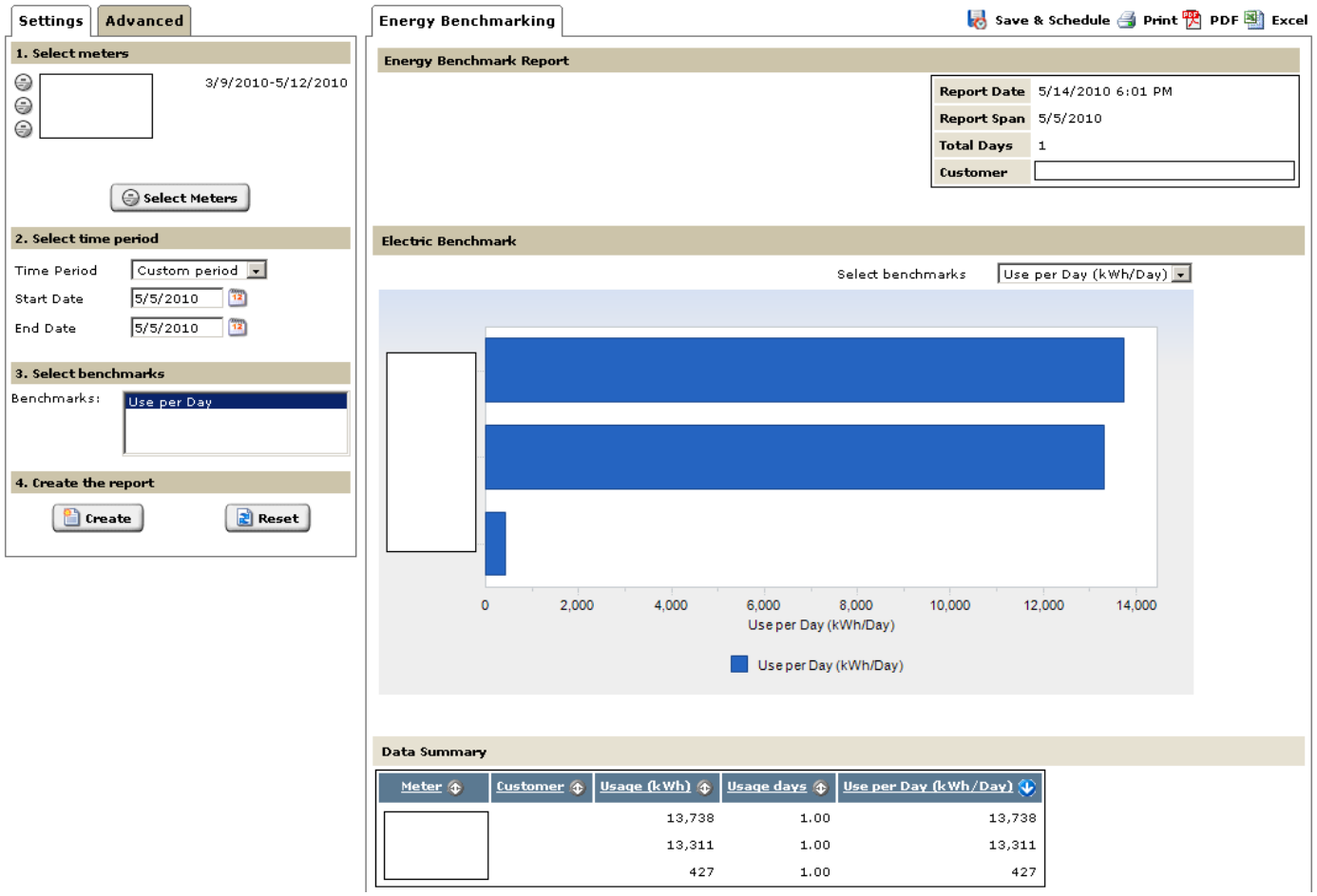

*Trending Report: kW (blue), calculated power factor (red)*




*Trending Report: kWhrs (blue), NY ISO day-ahead zonal hourly prices (red)*

Energy Benchmarking

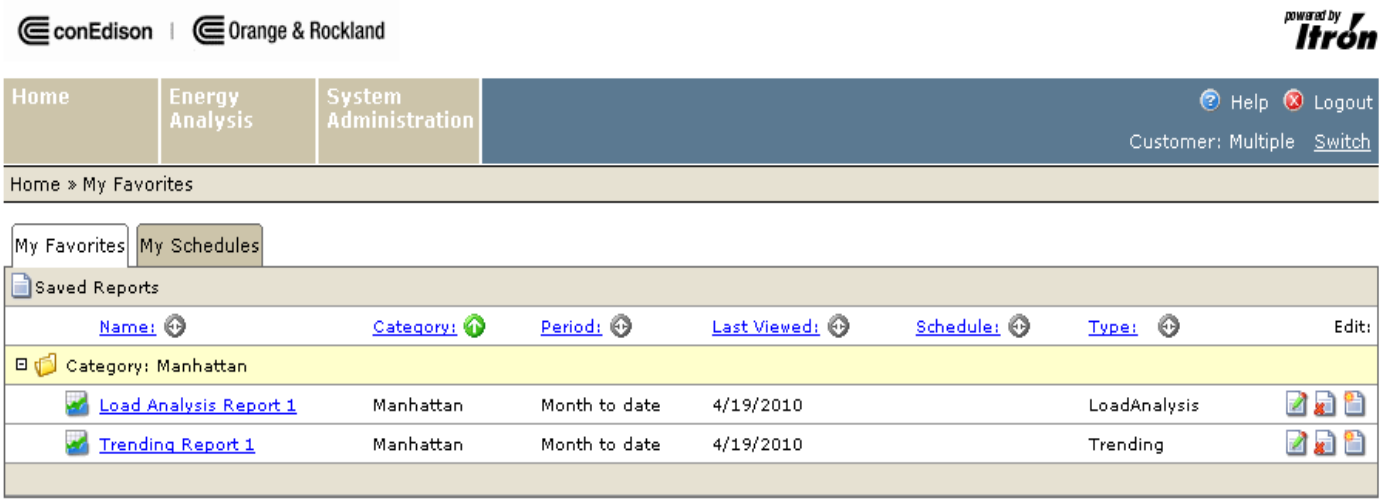
Energy Benchmarking helps you:
Rank your facilities' energy usage or demand.
Identify your best and worst performers, normalized by area, weather, or production.
Energy Benchmarking allows for selection of multiple meters and includes the following components:
Interactive ranking chart displaying benchmark of choice
Data tables from which benchmarks are selected for chart display



Home

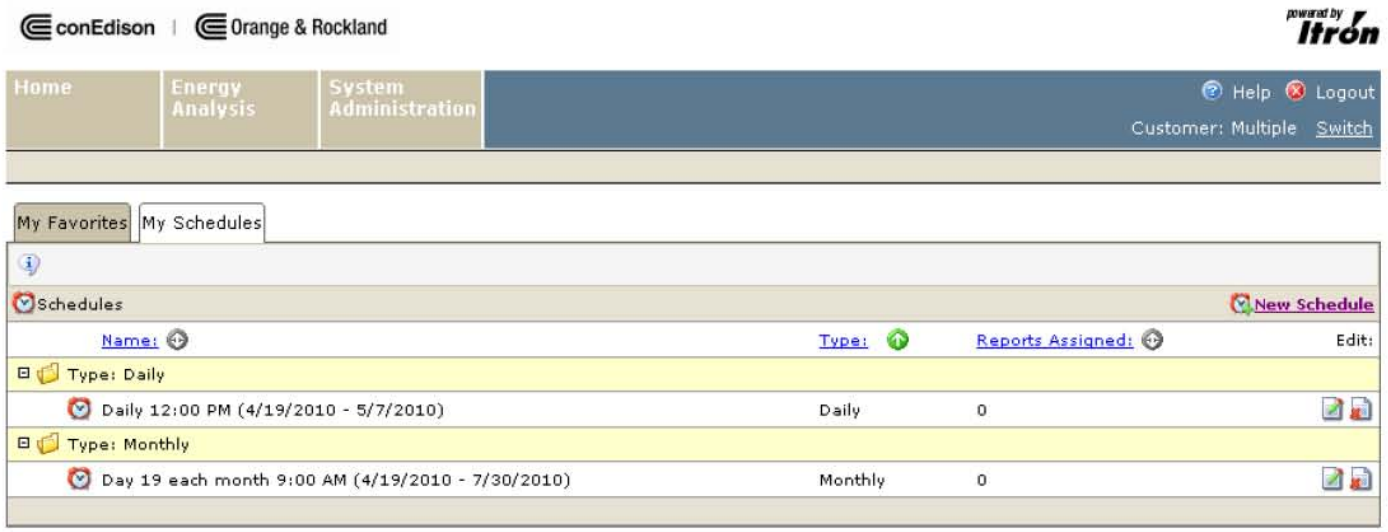
My Favorites

After you've run a report, click 'Save & Schedule', the report will be available to be re-run in the 'My Favorites' section.



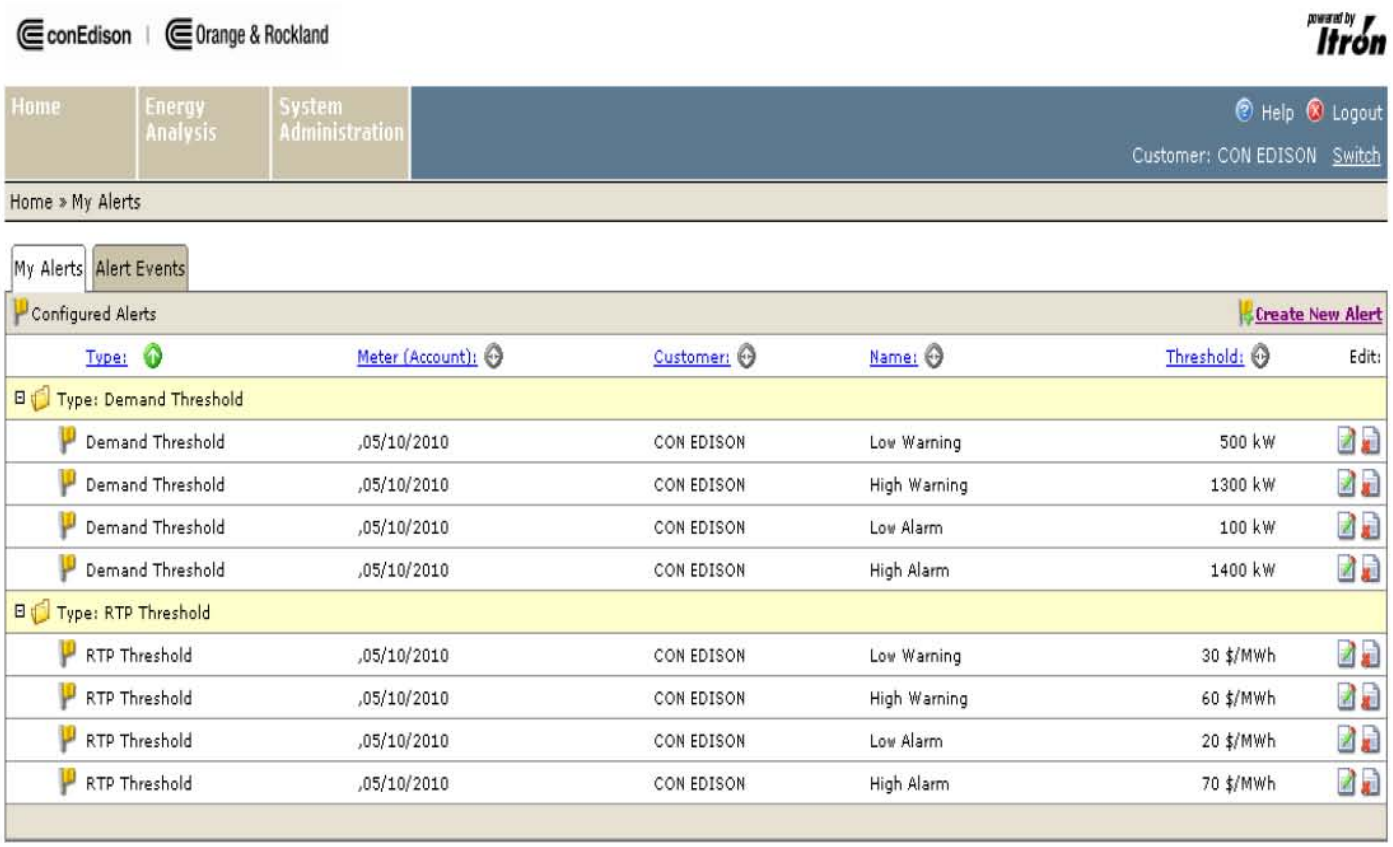
My Schedules

My Schedules lets you set up schedules for reports to run automatically on a daily, weekly or monthly basis.



My Alerts

Use My Alerts to configure customized notifications of when certain events occur, such as a meter reaching a high demand or NY Independent System Operator (NY ISO) hourly prices exceeding a certain level.



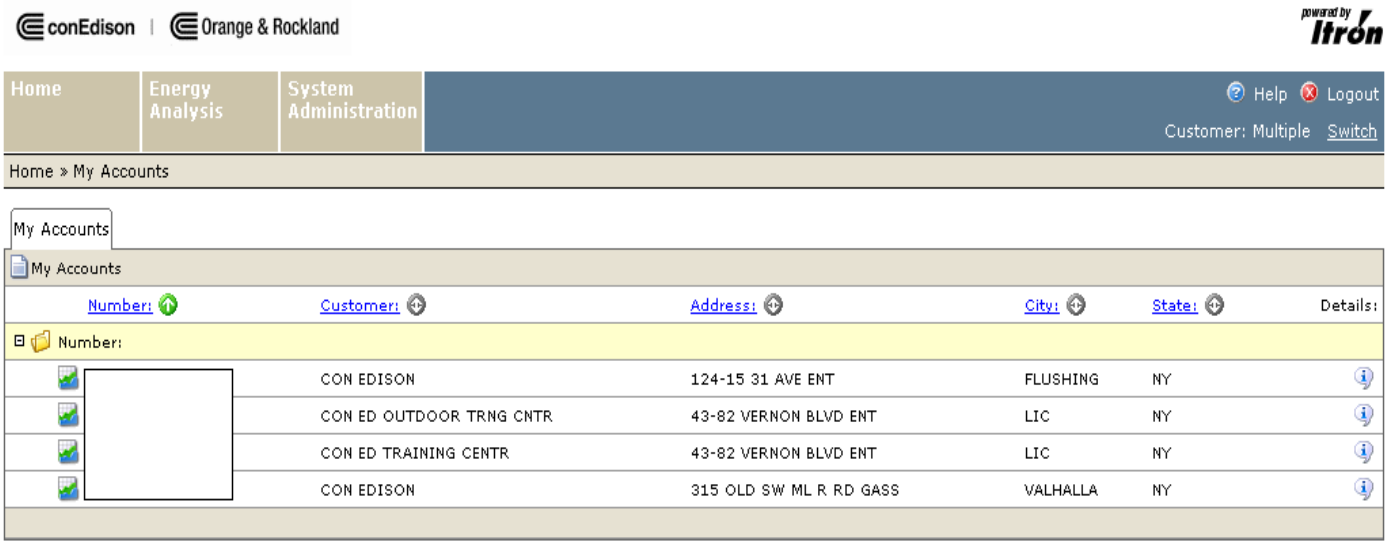

| Type: | Meter (Account): | Customer: | Name: | Threshold: | Edit: |
|---|---|---|---|---|---|
| Type: Demand Threshold | | | | | |
| Demand Threshold | ,05/10/2010 | CON EDISON | Low Warning | 500 kW | |
| Demand Threshold | ,05/10/2010 | CON EDISON | High Warning | 1300 kW | |
| Demand Threshold | ,05/10/2010 | CON EDISON | Low Alarm | 100 kW | |
| Demand Threshold | ,05/10/2010 | CON EDISON | High Alarm | 1400 kW | |
| Type: RTP Threshold | | | | | |
| RTP Threshold | ,05/10/2010 | CON EDISON | Low Warning | 30 $/MWh | |
| RTP Threshold | ,05/10/2010 | CON EDISON | High Warning | 60 $/MWh | |
| RTP Threshold | ,05/10/2010 | CON EDISON | Low Alarm | 20 $/MWh | |
| RTP Threshold | ,05/10/2010 | CON EDISON | High Alarm | 70 $/MWh | |

My Accounts

My Accounts lists the accounts associated with your user credentials. The list contains the account number, customer description, billing address, city, and state.

Click a column header to sort the accounts.

Click **Information** to view details about the account, including service address attributes, associated meters, meter ID, and meter name or description.



My Meter Groups

Use Meter Groups to run reports on the aggregate value of multiple meters.

My Settings

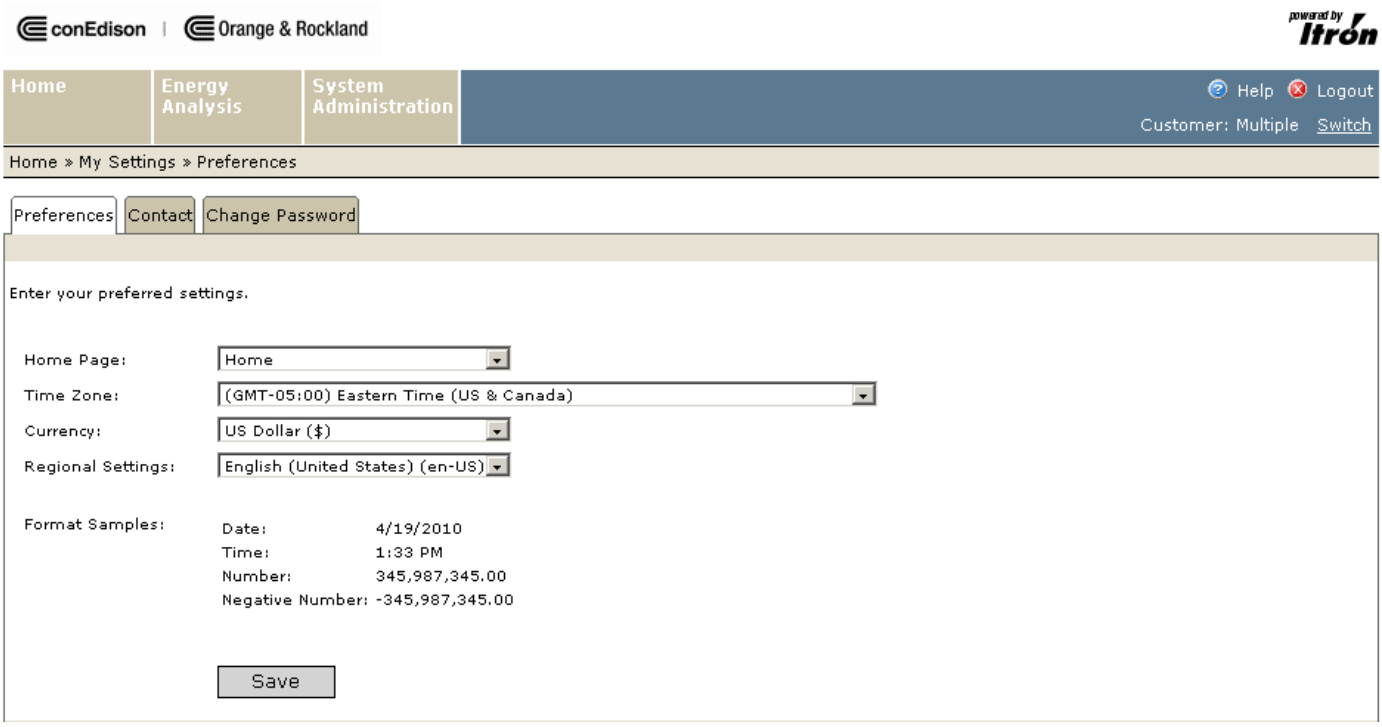
The My Settings tab lets you customize Customer Care to your preferences. It includes the following tabs:

The Preferences tab gives you control over settings throughout Customer Care. Update as needed and click Save.

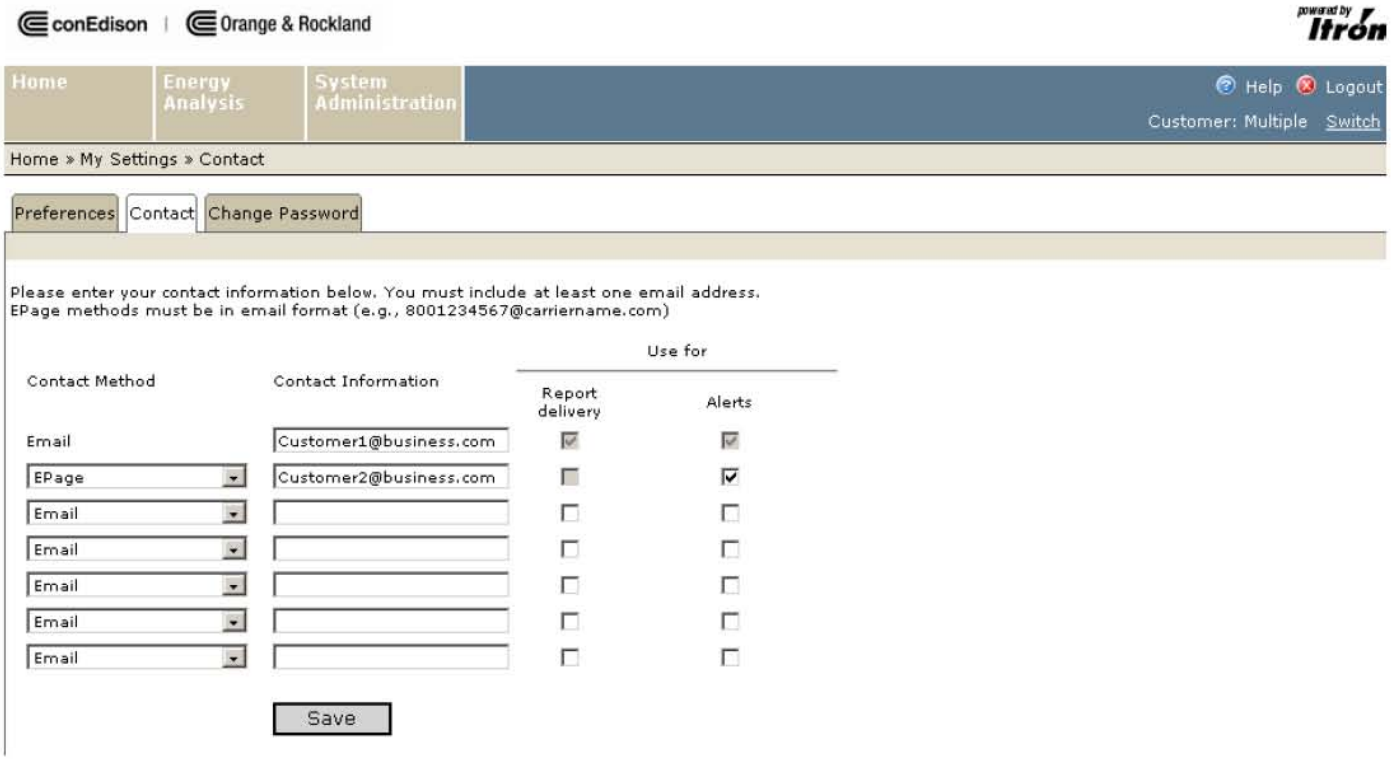
Home Page - Select any tab or sub-tab to be the default screen when you first log-in. This could be a report, the alert page, etc.

Time Zone - Select the time zone to use as the default in reports, alerts, etc.

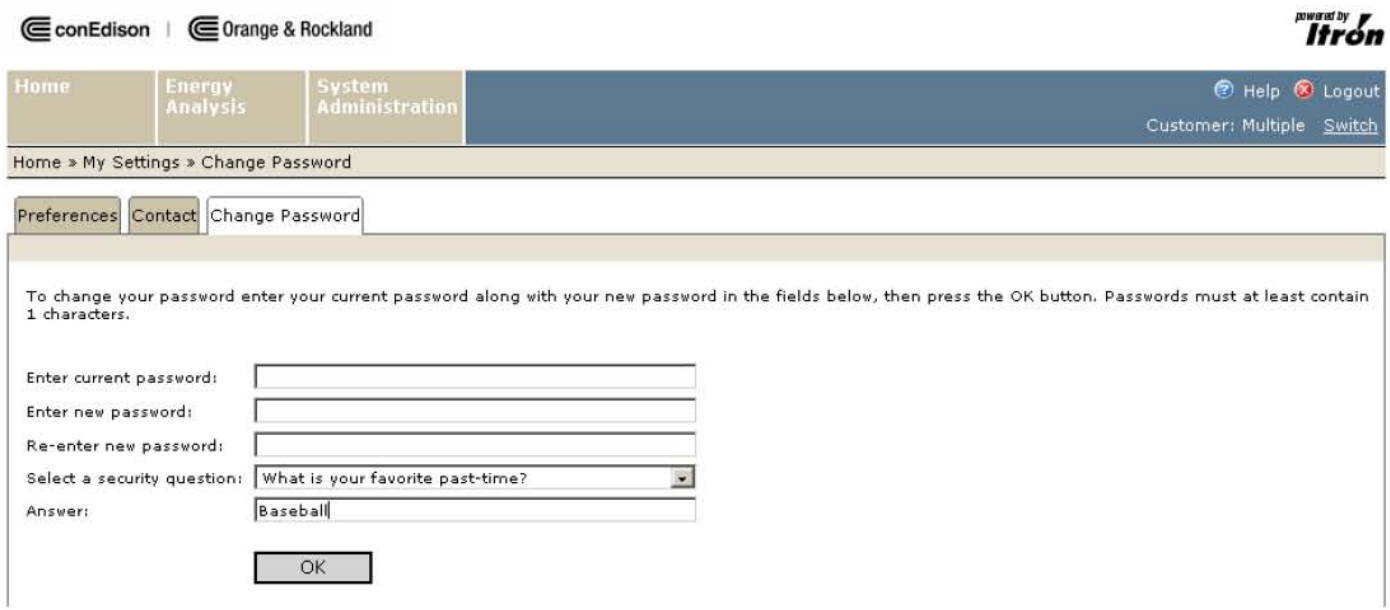
Regional Settings - Select the locale for the application and reports. The locale is identified by the standard locale code, which consists of a cultural language code and a region code. The locale code is formatted as nn-NN, where nn is the language code and NN is the region code. For example, en-US is English-United States, en-GB is English-Great Britain, and fr-CA is French-Canada.



The Contact tab allows you to keep your contact information current to ensure expected receipt of automated reports and alerts.



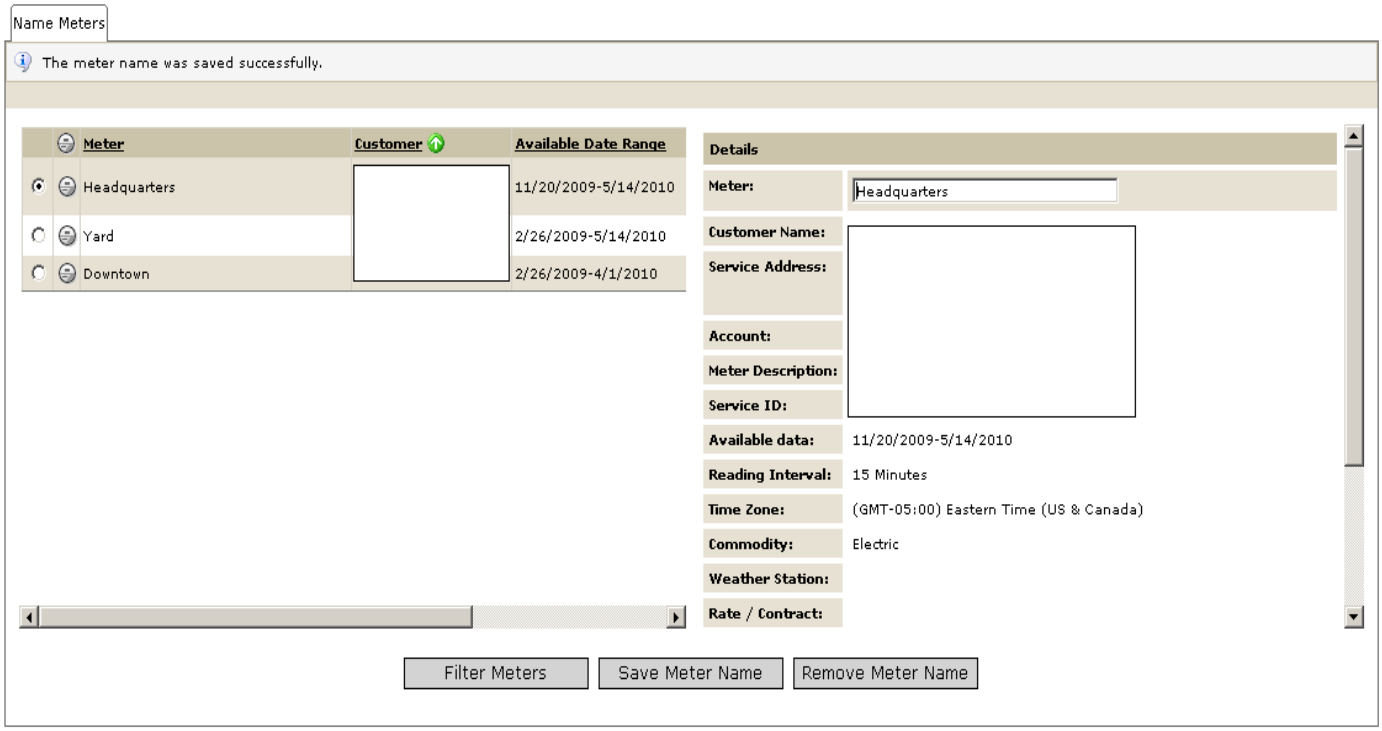
The Change Password tab allows you to do just that, and specify a security question as a reminder if you've forgotten it.



System Administration

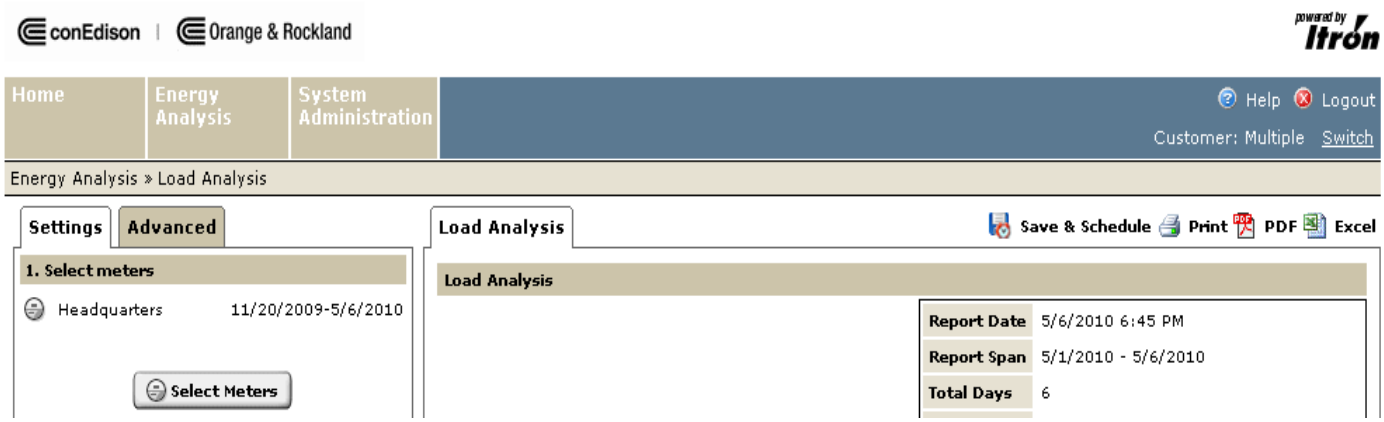
Manage Users - Add, edit and delete user profiles. Change user passwords.
Click ‘New User’ to start.  If the user is not a Con Edison employee, choose the Itron Authentication type.

Name Meters - Assign custom names to meters.
You can assign names to your meters for easier to identification in reports.
To name meters
From the System Administration tab, click Name Meters.
Click the radio button of the meter you want to name.
In the Details area, enter the name of the meter.
Click Save Meter Name.
Click Remove Meter Name to return the actual meter number.



Report Toolbar Options

Save report settings for future use or recurring delivery via email.
Print an html version of the report.
Convert the report to PDF.
Export the report to Microsoft Excel.



Calculate Reactive-Power Demand Charge

Run a trending report, including energy demand and the reactive power meter channel.

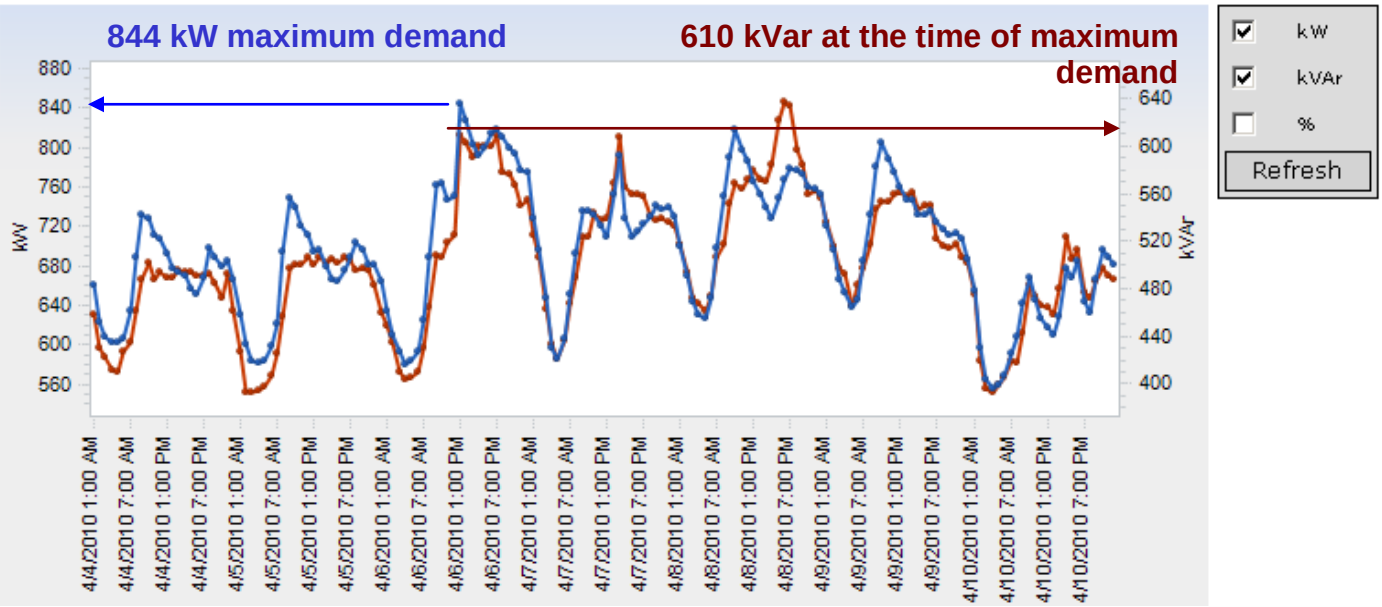
Note the maximum kW demand for the period. This can be found visually. The summary table also provides the value, date, and time.
Maximum demand in kW …….. 844

Note actual kVar at the time of the maximum kW demand. This can be found visually on the graph, or the data can be exported to Excel to find the kVar value at the date and time of the maximum kW demand.
Actual kVar at time of maximum demand ……..... 610

Allowable kVar at 95% Power Factor is the maximum kW demand divided by three.
Allowable kVar at 95% Power Factor …….. .....281.33

Billable Reactive Power demand in kVar is the result from subtracting allowable kVar at 95% Power Factor from actual kVar at the time of maximum demand in kW.
Billable Reactive Power demand in kVar ……..328.67

Reactive Power demand charge is the billable Reactive Power demand in kVar at $1.10 per kVar (in billing, $1.10 will be prorated to a 30 day charge).
Reactive Power demand charge ……..$361.53

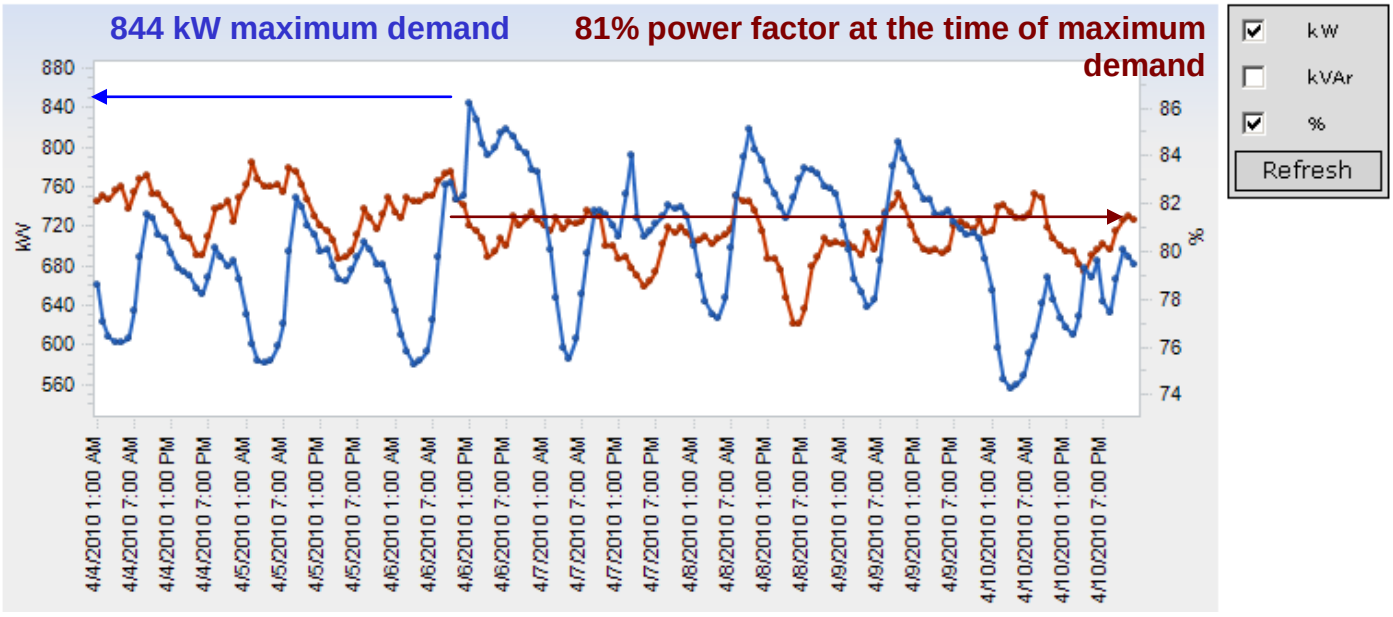



*Trending Report: kW (blue), kVar (red)*

Determine Power Factor

Uncheck the kVar check box, and check the '%' box, and refresh the report. Now you're trending kW and power factor.

Note actual power factor at the time of the maximum kW demand. This can be found visually, or the data can be exported to Excel to see the precise kVar value next to the maximum kW demand.
Power Factor at time of maximum demand ……..... 81.1%



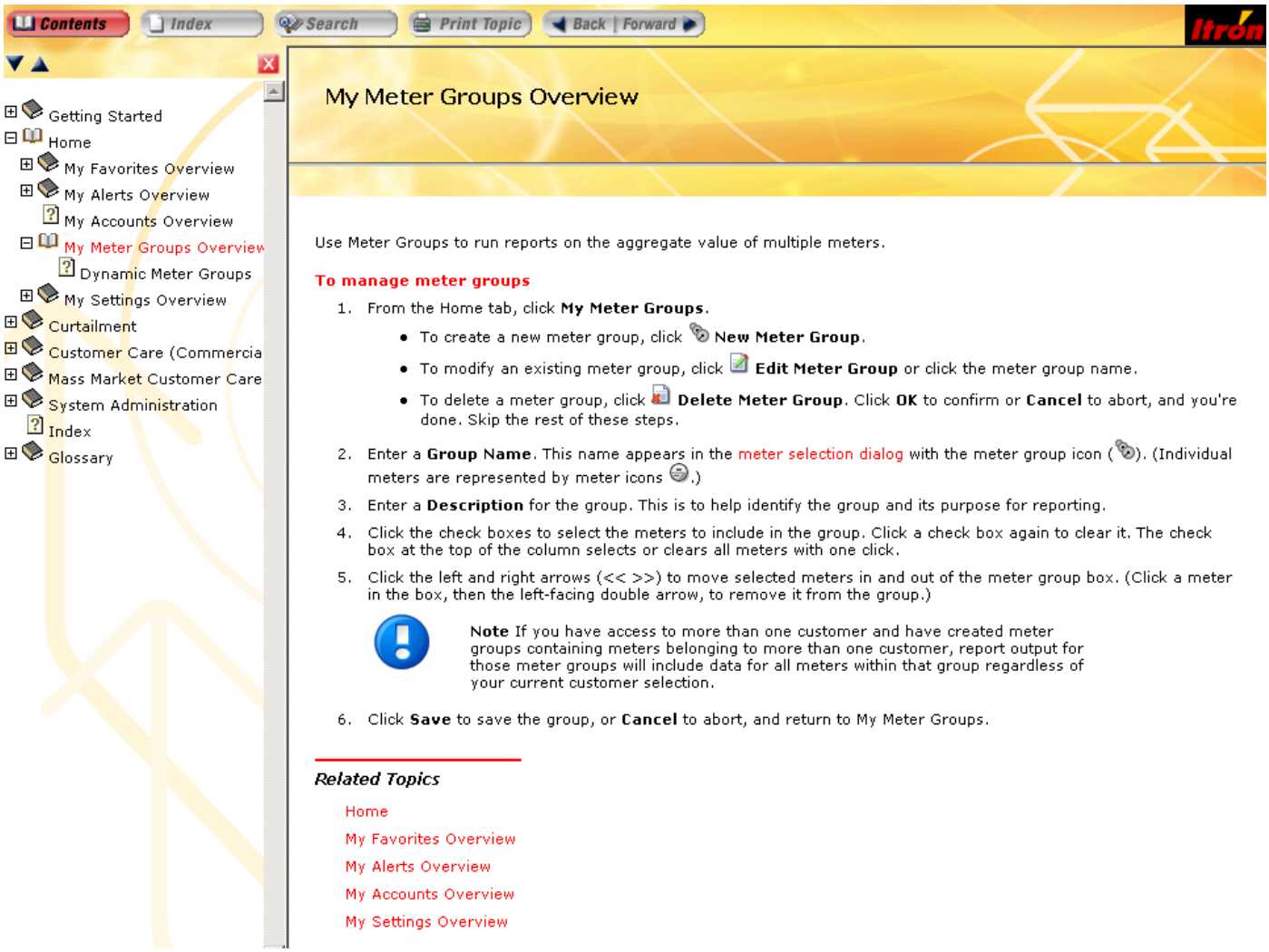

*Trending Report: kW (blue), power factor (red)*

How Demand and Consumption is determined in Customer Care

In billing at Con Edison:
Demand from profile data is the two highest consecutive 15-minute intervals, multiplied by two.
Consumption from profile data is measured from 12 noon on the start date to 12 noon on the end date.
In Customer Care:
Demand is highest interval in the period selected, multiplied by four. In this way, Customer Care demand will always be either equal to or greater than billed demand.
Consumption is from midnight of the start date to midnight of the end date.

Questions and contact

Customer Care Help
Customer Care is equipped with an extensive and step-by-step Help area.
Dynamic links enable you to surf to other related topics.
Search, index, and print features enable you to find and retain useful information.




Staff is available with any questions or issues.
Con Edison customers, email IntervalMetering@coned.com.
Orange & Rockland customers, email RogersD@oru.com.
If any additional assistance is required, you can contact Mike Gibbons at Gibbonsmi@coned.com, or 212.780.6402.

July 2010 The Plan to Meet NY Energy Needs




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# The Plan to Meet New York's Energy Needs

The 2009 New York State Energy Plan redefines how the state will approach and satisfy its energy needs. The plan's goals include reducing electricity use by 15 percent by 2015 and cutting carbon emissions significantly in the coming decades — a goal that Con Edison is actively supporting.

Working together, the Public Service Commission and all of the state's utilities have determined that charging for reactive power and implementing mandatory hourly pricing will significantly cut electric use while benefitting the environment. The changes affect large commercial customers.

## Reactive Power Charge to Begin in October 2010

A significant amount of electricity is lost when reactive power — the power needed to magnetize electric motors, transformers, and other equipment — travels along power lines. The more reactive power a customer uses, the more electricity the grid loses and the more greenhouse gases get released.

To encourage businesses to reduce their use of reactive power, a new reactive power charge will be phased in over the next two years. The charge for reactive power will be implemented in two phases, beginning October 2010. See chart on back for details. Large commercial customers will be charged when their power factor, or efficiency, is less than 95 percent.

## Hourly Pricing Program Under Way

The PSC and New York State utilities have also determined that moving large commercial enterprises to mandatory hourly pricing is needed to reduce electric use and greenhouse gas emissions. Mandatory hourly, or market-based, pricing helps ensure a reliable supply of electricity, especially when demand is high. It also gives commercial customers a better understanding of when and how their facilities use electricity, making it easier to more effectively manage energy use and lower costs.

July 2010

July 2010 How Hourly Pricing Works




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# How Hourly Pricing Works, How it Can Work for You

Electricity is a commodity, and like any commodity the price rises or falls depending on how much is available and how much is needed.

Every day the New York Independent System Operator issues hourly wholesale prices — called day-ahead prices — for the next 24-hour day. When you pay the hourly wholesale price, your costs are based on how much you use, your highest use and the time of day, and day of the week you use electricity.

## The Savings are in the Details…

And, the details are provided by a special meter called an interval meter. This sophisticated tool records how much electricity you use every 15 minutes. Once a day we retrieve the data from the meter either, through a phone line or IP address, and make the data available to you.

Be aware that, once you begin hourly pricing, your delivery charges will increase to cover the cost of the meter and our services for maintaining and reading it.

How much of an increase should you expect? Currently, the meter-related charges for a typical customer who is eligible for hourly prices average about $18, but this can vary depending on your account's service classification. Once you move to hourly pricing, meter-related charges will increase to approximately $100, but even with this increase the meter-related charges will still be less than one percent of your delivery charges.

## Our Customer Care for Energy Management Web Site: Information is Power

The Customer Care for Energy Management Web Site lets you view and analyze the data from your meter and identify practical ways to reduce electric use and costs. To access this sophisticated tool, visit **conEd.com/customercare**.

## Power*Your*Way – An Alternative to Hourly Pricing

As an alternative to mandatory hourly pricing, you can buy your electricity from an energy service company (ESCO). Our Power*Your*Way program can help you find an ESCO. To learn more, visit **poweryourway.com**. Con Edison will continue to read your meter, respond if there is a service problem, and deliver the energy you use reliably and safely.

October 2010

July 2010 Reactive Power and Power Factor




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Reactive Power and Power Factor – Terms You Need to Know

To better understand reactive power and power factor, it helps to review basic electric concepts and terms.

Most of our country's electricity is generated, transported, and used in an alternating current (AC) system. This system produces and uses two types of power — real power and reactive power.

**Real Power**

Real power actually does the work. It runs motors, lights lamps, etc., and is measured in kilowatts (kW).

**Reactive Power**

Reactive power doesn't "do" the work, but is needed to magnetize motors, transformers, and relays so they start and operate. It is measured in thousands of volt-amperes-reactive (kVAr). Utilities, such as Con Edison, must build and maintain infrastructure capable of carrying real power as well as reactive power.

**Apparent Power**

Apparent power is made up of real and reactive power, and is measured in thousand volt amperes (kVA).

**Power Factor (PF)**

Power factor is the ratio of the real power to the apparent power in a circuit. The closer a system's power factor is to one, the more efficient the system is.

**Inductive Loads**

Inductive loads are electrical devices, such as motors and certain kinds of lighting, that use current to create a magnetic field that produces the desired work.

July 2010

July 2010 Understanding Power Factor




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Understanding Power Factor Using a Horse and a Railcar

A simple analogy is the best way to understand power factor.

In Figure 1, a horse is pulling a railroad car down a railroad track. The railroad ties are uneven, so the horse must pull the car from the side of the track. The horse is pulling the railroad car at an angle to the direction of the car's travel.

$$\text{Power Factor} = \frac{\text{Real Power}}{\text{Apparent Power}}$$

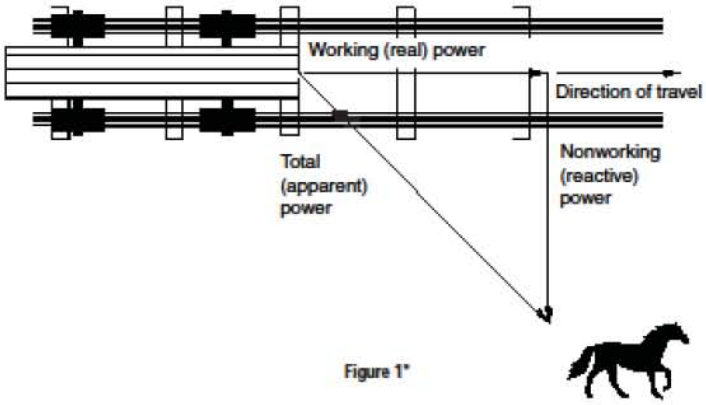



Figure 1*

The power required to move the car down the track is the working or real power (kW). The effort of the horse is the total or apparent power (kVA). Due to the angle of the horse's pull, not all of its effort is used to move the car down the track. The car will not move sideways, therefore, the sideways pull of the horse is wasted effort — the nonworking or reactive power (kVAr).

The angle of the horse's pull is related to power factor, which is defined as the ratio of real power to apparent (total) power. If the horse is led closer to the center of the track, the angle of side pull decreases and the real power approaches the value of the apparent power. Therefore, the ratio of real power to apparent power (the power factor) approaches one. As the power factor approaches one, the reactive (nonworking) power approaches zero.

July 2010

July 2010 The Cause of Low Power Factor




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# The Causes of Low Power Factor

Low power factor is caused by inductive loads such as transformers, induction motors, generators and certain lighting ballasts. In Con Edison's service area, a significant amount of the power consumed by commercial customers is comprised of inductive loads

Inductive loads require the current to create a magnetic field that produces the desired work. The result is an increase in reactive and apparent power and a decrease in the power factor, or efficiency, of a system.

The efficiency of inductive equipment — and how it affects your system's power factor — will vary depending on its manufacturer, design, size, and age. Most inductive equipment has a nameplate with operating data, including its power factor at rated load. You can use this information to identify equipment that may need to be upgraded. You may also need to invest in specialized meters or measuring devices that determine power factor.

Con Edison will upgrade meters for customers that will be charged for reactive power and this may enable you to read power factor at service.

July 2010

July 2010 Improve Your Power Factor




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Improve Your Power Factor, Reduce Your Reactive-Power Costs

Beginning January 2011, all of New York State's large electric customers will begin paying for reactive power.

**If you can raise your facility's power factor above 95 percent, you will reduce, and possibly eliminate, the new reactive-power charge.**

Raising the power factor also reduces the amount of energy used, which is especially important during times of peak demand when energy costs more. An improved power factor also increases the capacity of your system, reduces the amount of lost energy, and lowers equipment costs.

A low power factor leads to increased voltage drop as well as power losses in your distribution system. Excessive voltage drops can cause overheating and premature failure of motors, cables, and other equipment. An improved power factor minimizes voltage fluctuations.

Improved power factors also reduce the amount of electricity the grid loses, substantially reducing the carbon emissions released to the atmosphere. If all Con Edison's customers were at 95 percent power factor, the energy saved would offset 32,600 tons of carbon dioxide emissions, which is equivalent to removing 5,400 commuter vehicles from the road for one year.

**The higher the power factor, the lower the reactive-power charge.**

## Ways to Improve Power Factor

To improve or correct your facility's power factor:

- Add capacitors to your system to decrease the amount of reactive power, thus increasing its power factor.
- Turn off motors and associated transformers when not needed.
- Develop a schedule that alternates the start-up and operation of motors and other equipment, and run all equipment only when needed.
- Install controls to operate equipment more efficiently.
- Replace motors, transformers, and other equipment at the end of their lives with energy-efficient models. Even an energy-efficient motor must be operated near its rated capacity to realize the benefits of a high power-factor design.
- Shut off induction equipment during times of peak demand, when possible.
- Avoid operating equipment above its rated voltage and equipment that is not fully loaded.

October 2010

July 2010 How to Calculate Your Savings




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# How to Calculate Your Savings and Payback Period

Before deciding what investments will best improve the power factor of your equipment, you should calculate the savings and payback period. Be sure to consult the engineering professionals on your staff or a professional engineer or electrical consultant when calculating savings and payback periods.

Let's say the charge for reactive power is $1.10 per kVAr. You install a 200-kVAr capacitor in a facility with the following characteristics:

- 208 V, three-phase service
- 250 kW real power average load
- 500 kW real power peak load
- Seasonal load variation:
  — 100% of peak (June through September, inclusive)
  — 80% of peak (October through May, inclusive) = 400 kW
- Uncorrected power factor is 70% at peak load
  — 510 kVAr (June through September, inclusive)
  — 408 kVAr (October through May, inclusive)
- Internal energy loss is 2%

For your business' summer-peak month, you pay $1.10 per kVAr up to a power factor of 95%. If your equipment has a power factor of 70%, you will consume 510 kVAr and pay for 347 kVAr (510 - 163 = 347 kVAr, the amount of kVAr from 95% to 100%). So, your monthly cost for reactive power is $382.

You install 200 kVAr of capacitance and that reduces the peak reactive power (510-200 kVAr) to 310 kVAr and raises your equipment's power factor to 85%. As a result, you will only pay for 147 kVAr for a monthly cost of $162.

If the cost to install capacitors to correct the power factor is $15,000, the savings and payback period can be calculated as follows:

1. To calculate the new power factor, use the following equation to find apparent power

$kVA = sqrt(kW^2 + kVAr^2)$
$kVA = sqrt(500^2 + 310^2) = 588$ kVA

2. Use the following equation to find the corrected power factor.

PF = kW/kVA
PF = 500/588
Corrected power factor = 85%

July 2010

July 2010 Reactive Power Information


8

**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Reactive Power Information for Con Edison Bills

**Reactive Power billing determinants to be presented on bill**

| | |
|---|---|
| Demand (kW) | 3000 |
| Power Factor | 92.00% |
| Actual Reactive Power Demand (kVar) | 1,200 |
| Allowable Reactive Power Demand (kVar) at 95% Power Factor | 1,000 |
| Billable Reactive Power Demand (kVar ) | 200 |
| Reactive Power Demand Charge @ $1.10 per billable kVar | $220.00 |

**Reactive Power billing determinants to be presented on bill (no charge)**

| | |
|---|---|
| Demand (kW) | 3000 |
| Power Factor | 97.00% |
| Actual Reactive Power Demand (kVar) | 800 |
| Allowable Reactive Power Demand (kVar) at 95% Power Factor | 1,000 |
| Billable Reactive Power Demand (kVar ) | 0 |
| Reactive Power Demand Charge @ $1.10 per billable kVar | $0.00 |

July 2010

July 2010 Customer Care System Sample Information

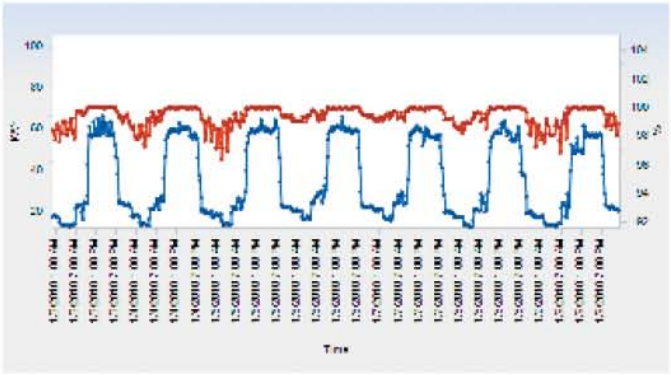



The New Reactive-Power Charge and Mandatory Hourly Pricing

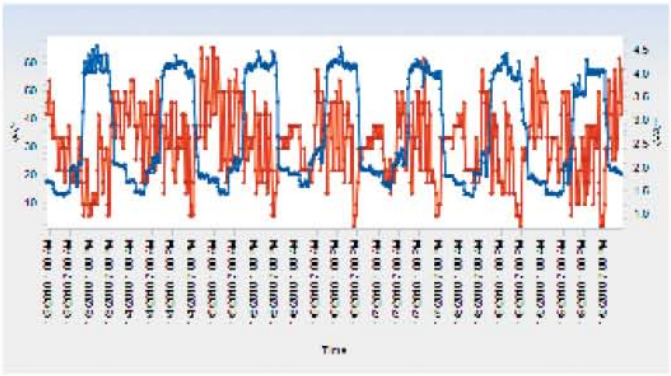
*What You Need to Know Now, and Why*

# Customer Care System Sample Information

**Meter With Good Power Factor**



**Meter With Good Power Factor**



July 2010

2010 September C&I Electric & Gas Rebate Programs




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Commercial and Industrial Energy-Efficiency Electric and Gas Rebate Programs

### Incentives

Incentives are available for purchasing and installing specific high-efficiency electric and/or gas equipment in existing facilities.

### Eligibility

A Con Edison commercial or industrial customer in an existing building who pays the applicable gas or electric Systems Benefit Charge.*

### Learn More

Learn more about the Con Edison commercial and industrial energy-efficiency programs at conEd.com/energyefficiency or call 1-877-870-6118.

**Eligible Equipment and Incentives for Electric Rebate Program**

| MEASURE | REQUIREMENT | INCENTIVE |
|---|---|---|
| Packaged terminal AC/HP | Minimum 13.1 EER | $50/ton |
| Unitary HVAC and Split Air Systems | <5.4 tons, 14 SEER | $100/ton |
| | 5.4-20 tons, 11.5 SEER | $60/ton |
| | >20-63 tons, 10.5 EER | $50/ton |
| | >63 tons, 9.7 EER | $50/ton |
| Air-to-Air Heat Pump | Split System <5.4 tons, 14 SEER 12 EER, 8.5 HSPF | $125/ton |
| | Single Package <5.4 tons, 14 SEER 11.6 EER, 8.0 HSPF | $125/ton |
| | 5.4 - 11.25 tons, 11.5 EER, 3.4 COP | $80/ton |
| | >11.25 - 20 tons, 11.5 EER, 3.2 COP | $80/ton |
| | >20 - <63 tons, 10.5 EER, 3.2 COP | $50/ton |
| Water Source Heat Pump | <20 tons 14 EER, 4.6 COP | $80/ton |
| Bi-level Control, Stairwell Lighting | 50% lighting power during unoccupied time | Up to $150 per fixture |
| HE Fixtures/Design | Exceeds ECCC | Up to $75 per fixture |
| Delamping | N/A | Up to $1.50/FT |
| LED Exit Lighting | 5 watts | Up to $15 per fixture |
| Occupancy Sensor Control, Fluorescent | Occupancy Sensor Control, Fluorescent | Remote - $50 Fixture - $50 |



(continued)

2010 September C&I Energy Efficiency Custom Program




**The New Reactive-Power Charge and Mandatory Hourly Pricing**

*What You Need to Know Now, and Why*

# Commercial and Industrial Energy-Efficiency Custom Program

## Incentives

The Custom Program offers performance-based incentives for cost-effective, energy-efficient technologies not included in the Commercial and Industrial Energy Efficiency Rebate Program. These include implementing energy-efficient electric and gas measures, and funding a portion of a comprehensive energy study for customer facilities.

## Eligibility

A Con Edison commercial or industrial customer in an existing building who pays the applicable gas or electric System Benefits Charge.*

## Learn More

Learn more about the Con Edison commercial and industrial energy-efficiency programs at conEd.com/energyefficiency, or call 1-877-870-6118.

### Electric Custom Program Structure

| | SAVINGS LEVEL | BUYBACK REBATE |
|---|---|---|
| Tier 1 | ≤ 10% | $0.08/kWh |
| Tier 2 | 11 to 20% | $0.10/kWh |
| Tier 3 | ≥ 20% | $0.12/kWh |
| Tier 4 | ≥ 5% peak demand reduction | 10% bonus |

### Gas Custom Program Structure

| | SAVINGS LEVEL | CUSTOM INCENTIVE |
|---|---|---|
| Tier 1 | ≤ 20% | $1/first year therm savings |
| Tier 2 | > 20% | $2/first year therm savings |

*The System Benefits Charge funds New York State environmental and other related public-policy programs.
Con Edison reserves the right to amend or terminate this incentive offer.

September 2010

March 2010 Smarter Energy Management Newsletter


## New York State's Energy Plan — How it Impacts Your Business!

Cutting electricity use 15 percent by 2015 is one of the goals of the 2009 New York State Energy Plan. Working together, the Public Service Commission (PSC) and all of the state's utilities have determined that charging for reactive power and implementing mandatory hourly pricing will cut electric use significantly. The changes affect our large business customers, and we are prepared to help you understand the new charges and pricing.

## Businesses to Start Paying for Reactive Power

New York's electric grid loses a significant amount of electricity when reactive power — the power needed to magnetize electric motors, transformers, and other equipment — travels along power lines. This loss costs hundreds of millions of dollars a year, with a corresponding increase in the amount of greenhouse gases released to the environment.

To encourage businesses to reduce the use of reactive power, a new reactive-power charge will be put in place beginning this year. The new charge will be phased in over the next two years, and affects large commercial customers whose operations have a power factor, or efficiency, of less than 95 percent.

The charge for reactive power will be implemented in two phases.

- Phase one will begin in October 2010 for customers whose monthly demand is 1,000 kW or higher.
- Phase two will begin in October 2011 for customers whose monthly demand is between 500 kW and 1,000 kW. The charge will also apply to customers who have induction generators that meet 1,000 kW and 500 kW thresholds.

For more information on reactive power, visit conEd.com/reactivepower.

### Attend Our Reactive Power/Hourly Pricing Info Exchange

To help you understand reactive power, the new charge, and what you can do to reduce its impact on your energy bill, we will host information exchanges beginning at 8:30 a.m. on March 18 and 22, 2010, at 4 Irving Place, New York. To attend one of these free sessions, send an e-mail with the date of the session you'd like to attend, names and titles of attendees, your organization, address, phone numbers, and e-mail addresses to rodriguezs@coned.com.

## Hourly Pricing Program Roll-Out Continues

Under the hourly pricing program, customers buy electricity supply at market-based, or hourly, prices. The PSC required this program to help ensure a reliable supply of electricity, especially when demand skyrockets, and to give business customers information that can be used to more effectively manage energy use and costs.

In November 2009, we completed phase one of the program, and phase two is under way.

**You are a phase-two customer and will move to hourly pricing in May 2011 if...**

- Your business used between 500 and 1,000 kW at any time between October 1, 2008 and September 30, 2009.
- You buy your electricity supply from Con Edison.

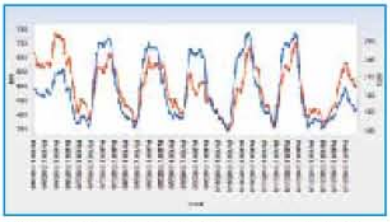
If you are a phase-two customer, a special interval meter that makes hourly pricing possible will be installed at your business before April 1, 2010. You will have access to data from this meter between April 2010 and April 2011, before hourly pricing begins in May 2011.

August 2010 Smarter Energy Management Newsletter

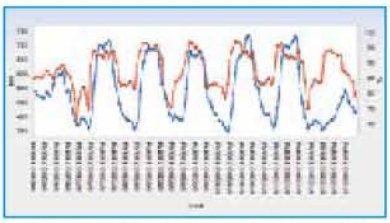

## New Web Site Helps You Control Electric Bills

Our new Customer Care Web site helps you take control of your business' energy costs this summer and all year 'round. **conEd.com/customercare** provides all the data you need to manage changes in your energy bill related to the new reactive-power charge and mandatory hourly pricing. Think of Customer Care as a tool that:

- Helps you calculate your reactive-power costs. By raising your facility's power factor, you will reduce the reactive-power charge. Achieve a power factor of 95% or higher and you avoid the reactive-power charge.
- Provides the hourly wholesale energy prices for the next 24-hour day issued by the New York Independent System Operator each day.
- Gives you a detailed analysis of your energy use, including data that shows how your use fluctuated over hours, days, and weeks.
- Analyzes your facility's load so you know when peak use and changes in patterns occur.
- Automatically updates reports, which are sent via e-mail in a format and on a schedule you choose.



Customer Care shows how much reactive power (red line) and demand (blue line) your facility uses over time.



Knowing how much your facility's power factor varies (red line) with demand (blue line) and time can help you choose more effective energy-efficiency measures.

2010 December Smarter Energy Management Newsletter


## New Start Date for Reactive-Power Charge

The date when commercial customers with a monthly demand between 1,000 kW and 1,499 kW will begin paying for reactive power has been delayed until January 1, 2011. If your facility or operation falls into this category, the postponement provides additional time to understand the new charge and to take steps to reduce the use of reactive power. For information on how reactive power will be billed, see your October, November, and December 2010 invoices.

The delay does not apply to customers with induction generators above 1,000 kW and customers with newly constructed facilities with an expected peak demand of more than 1,000 kW, who received reactive power charges on their October 2010 bill as originally scheduled.

### The new reactive-power charge will be implemented in three phases.

**PHASE ONE**

- Customers with induction generators above 1,000 kW
- Customers with newly constructed facilities with an expected peak demand of more than 1,000 kW
- Billing started in October 2010 if power factor was less than 95%
- **Customers are only charged for reactive power if their power factor is less than 95%**

**PHASE TWO**

- Customers with monthly demand between 1,000 and 1,499 kW
- Billing will begin January 1, 2011 if power factor is less than 95%
- **Customers are only charged for reactive power if their power factor is less than 95%**

**PHASE THREE:**

- Customers with a monthly demand between 500 and 999 kW
- Customers with induction generators that meet 500 and 999 kW thresholds
- Billing will start in October 2011 if power factor is less than 95%
- **Customers are only charged for reactive power if their power factor is less than 95%**

Customers with peak demand of 1,500 kW or greater will start to be billed for reactive power six months after kVar-capable metering has been installed and communications established. If your facility falls into this category we will send a letter advising of the start date. Reactive-power bill information will appear on your invoices three months before you will be charged for using reactive power.

### Reactive Power and the State's Energy Plan

The 2009 New York State Energy Plan calls for a 15 percent reduction in electricity use by 2015. The Public Service Commission and state utilities determined that charging large commercial and industrial enterprises for reactive power was necessary to meet the goal. Reactive power magnetizes electric motors, transformers, and other equipment. Each year a significant amount is lost from the grid, costing hundreds of millions of dollars annually and increasing greenhouse gas emissions.

September 2009 Smarter Energy Management Newsletter


## Manage Energy Costs, Boost Your Bottom Line

Welcome to *Smarter Energy Management*, a new quarterly newsletter for Con Edison customers who will soon move to mandatory hourly pricing and those who are already being billed according to hourly prices for their electricity supply. Each issue will feature information on how mandatory hourly pricing works — and how it creates opportunities to lower energy costs and improve your bottom line.

## The Pricing of Your Electricity is Changing — What You Need to Know!

You are one of the Con Edison customers who will move soon to a mandatory hourly, or market-based, price for electricity.

### Why the switch to hourly pricing?

The short answer: the Public Service Commission has required it — and for some very good reasons.

Hourly pricing helps ensure a reliable supply of electricity for everyone, especially when the demand is high. It also gives you a better understanding of when and how your facilities use electricity so you can more effectively manage energy use and lower costs. Of course, being energy-efficient also protects the environment by preserving precious energy resources.

### When will the switch occur?

The switch will occur in two phases. If your maximum monthly demand exceeded 1,000 kW once between October 2007 and September 2008, hourly pricing will begin this November. If your maximum monthly demand exceeded 500 kW once between October 2008 and September 2009, hourly pricing will begin in May 2011.

**You will move to hourly pricing in November 2009 if...**

- Your business used between 1,000 and 1,500 kW at anytime from October 1, 2007 and September 30, 2008.
- We have already installed a special meter at your business that allows for hourly pricing. You will have access to the data from this meter between April and October 2009, before hourly billing begins in November 2009. After hourly pricing begins you will be able to continue viewing the data.
- You purchase your electricity supply from Con Edison.

**You will move to hourly pricing in May 2011 if...**

- Your business used between 500 kW and 1,000 kW at anytime from October 1, 2008 and September 30, 2009.
- A special meter will be installed at your business that allows for hourly pricing. You will have access to data from this meter between April 2010 and April 2011, before hourly billing begins in May 2011. After hourly pricing begins you will be able to continue viewing the data.
- You purchase your electricity supply from Con Edison.

## How Hourly Pricing Works, and How it Can Work for You

Electricity is a commodity, and like any commodity the price rises or falls depending on how much is available and how much is needed.

Every day the New York Independent System Operator issues hourly wholesale prices — called day-ahead prices — for the next 24-hour day. Our demand monitoring software will let you view the hourly prices. When you pay the hourly wholesale price, your costs are based on how much you use, your highest use, and the time of day and week you use electricity.

## 2009 September MHP Installation Letter

Dear Valued Customer:

In May 2006, the New York State Public Service Commission (PSC) required that Con Edison charge its largest electric customers (customers whose maximum monthly demand exceeded 1,500 kW at least once in a 12 month period) for electricity supply at hourly prices. This tariff is referred to as Mandatory Hourly Pricing (MHP). The PSC has now directed that all Con Edison customers whose maximum monthly demand exceeded 500 kW once in the past 12 months also be shifted to this supply pricing rate beginning in May 2011. Under MHP, customers pay a rate for each hour in which service is used that reflects the day-ahead market price of electricity. This change affects only your supply charges and not your delivery charges.

Con Edison may need to upgrade the meter that measures your electricity consumption to obtain the hourly data needed to bill your account under MHP. Based on the location of the meter, Con Edison may be able to retrieve the information wirelessly. A Con Edison representative will visit your premises to determine the best way to measure your energy use. These inspections should be finished by September 2009 and the interval meter installations completed by April 2010. Where wireless communication is not feasible, Con Edison will arrange for a telephone line to the meter.

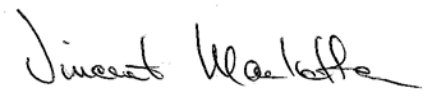
After the interval meter and telephone lines are ready, we will make the hourly data from this meter available to you for a twelve-month period, from April 2010 through April 2011, before Con Edison starts billing under MHP. You can use this information to plan an energy use strategy before the hourly pricing goes into effect in May 2011.

To learn more about price responsive electric load programs and how these programs can help you manage energy use, visit www.coned.com/dr.

Retail Choice is another option that can help customers to manage the supply-side of their energy use. To learn more about Retail Choice and for a listing of energy services companies (ESCO), visit www.poweryourway.com. You may also want to visit the PSC website at www.AskPSC.com.
If you have any questions, please contact your Senior Customer Service Representative, whose telephone number is provided on your bill.

Thank you,

Sincerely,



Vincent Marketta
Section Manager

# E. Appendix E – Customer Data

## Table 1: Off-Peak Energy by Customer Segment Full Service Customers

| NAICS Code | NAICS Industry Title | Number of Customers | kWh Off-peak Divided by Annual kWh | | | Off-peak % Difference |
|---|---|---|---|---|---|---|
| | | | 2009 | 2010 | 2011 | 2009 to 20111 |
| 0 | Not Defined | 33 | 51.50% | 51.70% | 52.50% | 0.97% |
| 23 | Const | 7 | 54.20% | 50.80% | 51.30% | -2.87% |
| 31-33 | Manufact | 16 | 35.10% | 47.70% | 46.90% | 11.75% |
| 42 | Wholesale Trade | 7 | 47.60% | 50.10% | 50.20% | 2.56% |
| 44-45 | Retail Trade | 13 | 52.60% | 49.30% | 46.10% | -6.51% |
| 48-49 | Transportation/Warehousing | 1 | NA | 56.40% | 57.70% | NA |
| 51 | Information | 14 | 56.90% | 52.80% | 53.10% | -3.82% |
| 52 | Finance and Industry | 4 | 52.40% | 52.50% | 51.90% | -0.49% |
| 53 | Real Estate, Rental, Leasing | 71 | 49.30% | 49.90% | 49.60% | 0.37% |
| 54 | Professional, Scientific, and Technical Services | 7 | 46.50% | 45.70% | 47.10% | 0.59% |
| 56 | Admin, Waste, Remediation Services | 2 | 89.00% | 54.10% | 57.10% | -31.87% |
| 61 | Educational Services | 10 | 48.90% | 50.60% | 48.60% | -0.35% |
| 62 | Health Care and Social Assistance | 19 | 55.10% | 53.70% | 53.20% | -1.95% |
| 71 | Arts, entertainment, and Recreation | 9 | 53.60% | 53.70% | 53.50% | -0.07% |
| 72 | Accommodation and Food Services | 9 | 52.50% | 54.20% | 54.50% | 2.06% |
| 81 | Other Services (except Public Administration) | 13 | 46.90% | 51.30% | 53.10% | 6.15% |
| 92 | Public Administration | 2 | NA | NA | 52.80% | NA |
| 99 | Not Classified | 35 | 55.10% | 53.50% | 53.60% | -1.48% |
| **Average of All Customers** | | **272** | **51.21%** | **51.03%** | **50.95%** | **-0.25%** |

## Table 2: Off-Peak Energy by Customer Segment Retail Access Customers

| NAICS Code | NAICS Industry Title | Number of Customers | kWh Off-peak Divided by Annual kWh | | | Off-peak % Difference |
|---|---|---|---|---|---|---|
| | | | 2009 | 2010 | 2011 | 2009 to 20111 |
| 0 | Not Defined | 84 | 52.90% | 52.00% | 51.90% | -1.01% |
| 22 | Utilies | 3 | 58.90% | 58.10% | 58.50% | -0.37% |
| 23 | Const | 51 | 48.90% | 49.70% | 49.90% | 0.98% |
| 31-33 | Manufact | 34 | 46.10% | 47.30% | 47.70% | 1.60% |
| 42 | Wholesale Trade | 33 | 48.80% | 49.00% | 49.00% | 0.14% |
| 44-45 | Retail Trade | 139 | 49.00% | 49.60% | 49.60% | 0.56% |
| 48-49 | Transportation/Warehousing | 16 | 50.60% | 52.50% | 54.10% | 3.41% |
| 51 | Information | 52 | 52.90% | 52.90% | 52.70% | -0.20% |
| 52 | Finance and Industry | 70 | 50.90% | 50.20% | 50.40% | -0.54% |
| 53 | Real Estate, Rental, Leasing | 422 | 49.90% | 50.00% | 50.10% | 0.15% |
| 54 | Professional, Scientific, and Technical Services | 78 | 48.10% | 48.00% | 48.20% | 0.08% |
| 55 | Management of Companies and Enterprises | 10 | 50.00% | 51.00% | 49.40% | -0.60% |
| 56 | Admin, Waste, Remediation Services | 46 | 47.60% | 49.10% | 49.90% | 2.30% |
| 61 | Educational Services | 48 | 52.00% | 50.40% | 50.40% | -1.67% |
| 62 | Health Care and Social Assistance | 89 | 54.50% | 53.90% | 54.10% | -0.39% |
| 71 | Arts, entertainment, and Recreation | 30 | 51.70% | 51.70% | 51.80% | 0.15% |
| 72 | Accommodation and Food Services | 71 | 51.40% | 53.10% | 53.40% | 1.97% |
| 81 | Other Services (except Public Administration) | 52 | 52.70% | 51.90% | 52.30% | -0.39% |
| 92 | Public Administration | 17 | 55.10% | 54.20% | 54.70% | -0.43% |
| 99 | Not Classified | 132 | 51.80% | 51.90% | 52.10% | 0.27% |
| **Average of All Customers** | | **1477** | **50.46%** | **50.42%** | **50.52%** | 0.06% |

## Table 3: Load Factor by Customer Segment Full Service Customers

| NAICS Code | NAICS Industry Title | Number of Customers | Load Factor | | | LF Difference |
|---|---|---|---|---|---|---|
| | | | 2009 | 2010 | 2011 | 2009 to 20111 |
| 0 | Not Defined | 33 | 53% | 48% | 48% | -5% |
| 23 | Const | 7 | 66% | 36% | 36% | -30% |
| 31-33 | Manufact | 16 | 27% | 44% | 41% | 14% |
| 42 | Wholesale Trade | 7 | 42% | 46% | 46% | 4% |
| 44-45 | Retail Trade | 13 | 52% | 41% | 36% | -15% |
| 48-49 | Transportation/Warehousing | 1 | NA | 37% | 40% | NA |
| 51 | Information | 14 | 75% | 59% | 59% | -16% |
| 52 | Finance and Industry | 4 | 62% | 57% | 58% | -5% |
| 53 | Real Estate, Rental, Leasing | 71 | 44% | 41% | 41% | -3% |
| 54 | Professional, Scientific, and Technical Services | 7 | 49% | 46% | 46% | -2% |
| 56 | Admin, Waste, Remediation Services | 2 | 0% | 4% | 5% | 4% |
| 61 | Educational Services | 10 | 6% | 46% | 31% | 25% |
| 62 | Health Care and Social Assistance | 19 | 45% | 47% | 50% | 4% |
| 71 | Arts, entertainment, and Recreation | 9 | 60% | 40% | 38% | -23% |
| 72 | Accommodation and Food Services | 9 | 52% | 58% | 55% | 3% |
| 81 | Other Services (except Public Administration) | 13 | 50% | 48% | 43% | -7% |
| 92 | Public Administration | 2 | NA | NA | 47% | NA |
| 99 | Not Classified | 35 | 52% | 51% | 49% | -3% |
| **Average of All Customers** | | **272** | **55%** | **55%** | **56%** | 2% |

## Table 4: Load Factor by Customer Segment Retail Access Customers

| NAICS Code | NAICS Industry Title | Number of Customers | Load Factor | | | LF Difference |
|---|---|---|---|---|---|---|
| | | | 2009 | 2010 | 2011 | 2009 to 20111 |
| 0 | Not Defined | 84 | 62% | 58% | 57% | -6% |
| 22 | Utilies | 3 | 16% | 30% | 27% | 12% |
| 23 | Const | 51 | 55% | 51% | 50% | -5% |
| 31-33 | Manufact | 34 | 47% | 47% | 48% | 1% |
| 42 | Wholesale Trade | 33 | 53% | 54% | 51% | -3% |
| 44-45 | Retail Trade | 139 | 47% | 51% | 51% | 4% |
| 48-49 | Transportation/Warehousing | 16 | 56% | 55% | 53% | -2% |
| 51 | Information | 52 | 67% | 61% | 61% | -6% |
| 52 | Finance and Industry | 70 | 57% | 54% | 54% | -3% |
| 53 | Real Estate, Rental, Leasing | 422 | 48% | 46% | 46% | -2% |
| 54 | Professional, Scientific, and Technical Services | 78 | 50% | 52% | 52% | 2% |
| 55 | Management of Companies and Enterprises | 10 | 45% | 54% | 51% | 6% |
| 56 | Admin, Waste, Remediation Services | 46 | 49% | 50% | 51% | 2% |
| 61 | Educational Services | 48 | 57% | 50% | 51% | -6% |
| 62 | Health Care and Social Assistance | 89 | 57% | 57% | 58% | 1% |
| 71 | Arts, entertainment, and Recreation | 30 | 52% | 48% | 47% | -5% |
| 72 | Accommodation and Food Services | 71 | 54% | 54% | 54% | 0% |
| 81 | Other Services (except Public Administration) | 52 | 49% | 48% | 48% | -1% |
| 92 | Public Administration | 17 | 53% | 47% | 43% | -10% |
| 99 | Not Classified | 132 | 35% | 36% | 37% | 2% |
| **Average of All Customers** | | **1477** | **51%** | **53%** | **53%** | **2%** |

## Table 5: Customer Metrics Full Service Customers (1 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 8 | NA | 45% | 44% | NA | 75% | 74% | 496 | 503 | 517 |
| 29 | NA | 55% | 56% | NA | 70% | 71% | NA | 645 | 598 |
| 30 | NA | 54% | 55% | NA | 74% | 74% | NA | 594 | 534 |
| 31 | NA | 55% | 55% | NA | 71% | 71% | NA | 788 | 733 |
| 38 | NA | 55% | 55% | NA | 71% | 71% | NA | 433 | 424 |
| 44 | NA | 50% | 50% | NA | 84% | 84% | NA | 480 | 518 |
| 51 | NA | 37% | 36% | NA | 68% | 62% | NA | 424 | 84 |
| 53 | 34% | 35% | 34% | 63% | 64% | 64% | 765 | 412 | 589 |
| 64 | 56% | 56% | 56% | 71% | 71% | 72% | 477 | 912 | 732 |
| 65 | 57% | 56% | 57% | 70% | 70% | 71% | 623 | 892 | 680 |
| 72 | NA | 45% | 44% | NA | 72% | 73% | NA | 757 | 577 |
| 74 | 47% | 48% | 49% | 75% | 76% | 79% | 745 | 83 | 99 |
| 75 | NA | 41% | 43% | NA | 59% | 62% | NA | 178 | 378 |
| 76 | NA | 55% | 55% | NA | 74% | 74% | NA | 677 | 604 |
| 78 | NA | 55% | 55% | NA | 75% | 74% | NA | 581 | 555 |
| 87 | 44% | 45% | 43% | 67% | 70% | 67% | 981 | 886 | 818 |
| 105 | NA | 52% | 52% | NA | 81% | 81% | 591 | 496 | 482 |
| 109 | NA | 61% | 59% | NA | 75% | 89% | NA | 537 | 99 |
| 123 | NA | 55% | 56% | NA | 83% | 84% | NA | 158 | 152 |
| 125 | NA | 56% | 56% | NA | 74% | 74% | NA | 501 | 429 |
| 126 | NA | 52% | 50% | NA | 71% | 60% | NA | 213 | 2 |
| 128 | NA | 55% | 55% | NA | 76% | 77% | NA | 608 | 512 |
| 129 | NA | 57% | 57% | NA | 75% | 76% | NA | 566 | 500 |
| 130 | NA | 55% | 56% | NA | 78% | 77% | NA | 607 | 542 |
| 141 | NA | 52% | 51% | NA | 75% | 73% | NA | 461 | 456 |
| 146 | NA | 55% | 55% | NA | 75% | 74% | NA | 559 | 564 |
| 169 | NA | 55% | NA | NA | 89% | NA | NA | 193 | NA |
| 172 | NA | 54% | 55% | NA | 86% | 87% | NA | 829 | 847 |
| 176 | NA | 53% | 54% | NA | 83% | 84% | NA | 779 | 704 |
| 186 | NA | 47% | 46% | NA | 75% | 74% | 434 | 357 | 413 |
| 190 | 38% | 36% | 41% | 48% | 58% | 68% | 82 | 120 | 76 |
| 192 | 0% | 1% | 0% | 6% | 27% | 10% | - | - | - |
| 193 | 63% | 56% | 42% | 52% | 90% | 4% | - | 1,545 | - |
| 195 | NA | 51% | 51% | NA | 81% | 81% | NA | 913 | 491 |

## Table 40: Customer Metrics Full Service Customers (2 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 196 | NA | 57% | 57% | NA | 90% | 90% | NA | 347 | 311 |
| 199 | 59% | 59% | 57% | 90% | 90% | 76% | 1,984 | 338 | 93 |
| 201 | 54% | 54% | 54% | 86% | 85% | 86% | 543 | 432 | 433 |
| 207 | 67% | 63% | 63% | 57% | 67% | 68% | 374 | 307 | 309 |
| 216 | 44% | 45% | 46% | 71% | 72% | 74% | 780 | 764 | 771 |
| 221 | NA | 54% | 54% | NA | 78% | 81% | NA | 674 | 746 |
| 222 | NA | 54% | 54% | NA | 79% | 80% | NA | 408 | 409 |
| 224 | NA | 47% | 48% | NA | 61% | 60% | NA | 301 | 343 |
| 231 | NA | 55% | 55% | NA | 74% | 74% | 249 | 278 | 253 |
| 238 | NA | 56% | 56% | NA | 79% | 79% | NA | 485 | 471 |
| 240 | 56% | 56% | 57% | 76% | 78% | 79% | 443 | 504 | 473 |
| 241 | NA | 56% | 57% | NA | 80% | 80% | NA | 527 | 480 |
| 242 | NA | 58% | 58% | NA | 80% | 80% | 447 | 601 | 551 |
| 252 | NA | 46% | 49% | NA | 75% | 77% | NA | 433 | 417 |
| 253 | NA | 55% | 55% | NA | 77% | 77% | 570 | 681 | 637 |
| 260 | NA | 58% | 58% | NA | 97% | 97% | NA | 6 | 6 |
| 262 | NA | 57% | 58% | NA | 91% | 91% | NA | 307 | 300 |
| 264 | NA | 49% | 51% | NA | 54% | 54% | NA | 180 | 44 |
| 265 | NA | 57% | 57% | NA | 84% | 82% | NA | 601 | 565 |
| 266 | NA | 57% | 58% | NA | 90% | 91% | NA | 419 | 388 |
| 271 | NA | 40% | 57% | NA | 71% | 83% | NA | 72 | 261 |
| 272 | NA | 58% | 58% | NA | 97% | 97% | NA | 504 | 175 |
| 275 | NA | 55% | 54% | NA | 88% | 85% | NA | 381 | 453 |
| 279 | NA | 55% | 54% | NA | 90% | 88% | NA | 268 | 274 |
| 281 | 43% | 42% | 42% | 71% | 66% | 66% | 1,576 | 1,716 | 1,408 |
| 284 | NA | 52% | 52% | NA | 76% | 77% | NA | 588 | 548 |
| 285 | NA | 47% | 46% | NA | 77% | 76% | NA | 1,011 | 1,011 |
| 291 | NA | 55% | 58% | NA | 78% | 92% | NA | 113 | 70 |
| 306 | NA | 38% | 39% | NA | 64% | 65% | NA | 424 | 384 |
| 320 | NA | 56% | 56% | NA | 80% | 79% | NA | 504 | 502 |
| 322 | NA | 35% | 35% | NA | 57% | 58% | 777 | 643 | 745 |
| 329 | 55% | 56% | 56% | 84% | 85% | 85% | 422 | 479 | 470 |
| 336 | NA | 45% | 44% | NA | 72% | 70% | NA | 754 | 1,088 |
| 345 | NA | 56% | 56% | NA | 88% | 87% | NA | 498 | 495 |

## Table 40: Customer Metrics Full Service Customers (3 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 363 | NA | 56% | 56% | NA | 89% | 88% | NA | 588 | 728 |
| 364 | NA | 54% | 54% | NA | 83% | 82% | NA | 493 | 465 |
| 370 | 46% | 46% | 45% | 74% | 73% | 72% | 1,614 | 1,266 | 1,174 |
| 382 | NA | 40% | 40% | NA | 67% | 67% | NA | 943 | 957 |
| 401 | 52% | 52% | 51% | 87% | 88% | 87% | 3,288 | 3,168 | 3,054 |
| 404 | NA | 56% | 57% | NA | 90% | 91% | NA | 571 | 575 |
| 439 | NA | 55% | 55% | NA | 80% | 80% | NA | 576 | 633 |
| 440 | NA | 44% | 44% | NA | 73% | 74% | NA | 575 | 533 |
| 443 | NA | 41% | 42% | NA | 67% | 68% | NA | 557 | 579 |
| 446 | NA | 39% | 39% | NA | 65% | 65% | NA | 684 | 683 |
| 451 | NA | 58% | 58% | NA | 84% | 84% | NA | 476 | 462 |
| 455 | 57% | 57% | 57% | 93% | 93% | 95% | 720 | 684 | 701 |
| 464 | NA | 57% | 57% | NA | 84% | 85% | NA | 940 | 883 |
| 475 | 53% | 48% | 46% | 88% | 80% | 77% | 4,748 | 3,933 | 4,206 |
| 481 | NA | 52% | 52% | NA | 85% | 84% | NA | 863 | 792 |
| 490 | 58% | 58% | 58% | 97% | 97% | 97% | 1,020 | 1,059 | 986 |
| 491 | NA | 53% | 52% | NA | 86% | 85% | NA | 864 | 795 |
| 494 | NA | 56% | 57% | NA | 88% | 87% | NA | 574 | NA |
| 495 | NA | 42% | 41% | NA | 67% | 67% | NA | 565 | 547 |
| 496 | NA | 54% | 100% | NA | 88% | 4% | NA | 408 | - |
| 497 | NA | 48% | 53% | NA | 80% | 83% | NA | 272 | 123 |
| 498 | NA | 54% | 56% | NA | 84% | 78% | NA | 917 | 61 |
| 499 | 53% | 52% | 56% | 86% | 86% | 83% | 615 | 492 | 10 |
| 500 | NA | 55% | 54% | NA | 90% | 85% | 456 | 338 | 111 |
| 501 | NA | 55% | 54% | NA | 93% | 88% | NA | 520 | 229 |
| 502 | NA | 52% | 53% | NA | 86% | 86% | NA | 344 | 125 |
| 505 | NA | 55% | 57% | NA | 91% | 91% | NA | 797 | - |
| 506 | 56% | 56% | 56% | 89% | 89% | 88% | 696 | 799 | 741 |
| 507 | 55% | 55% | 51% | 62% | 88% | 80% | 467 | 924 | 866 |
| 508 | 55% | 54% | 57% | 90% | 89% | 93% | 1,997 | 2,591 | 18 |
| 520 | NA | 53% | 53% | NA | 85% | 85% | NA | 543 | 618 |
| 528 | NA | 40% | 40% | NA | 63% | 63% | NA | 808 | 744 |
| 536 | NA | 55% | 0% | NA | 83% | 4% | NA | 1,004 | - |
| 537 | NA | 47% | 48% | NA | 77% | 79% | NA | 487 | 219 |

## Table 40: Customer Metrics Full Service Customers (4 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 539 | NA | 45% | 45% | NA | 76% | 75% | NA | 1,229 | 1,234 |
| 549 | NA | 40% | 40% | NA | 67% | 68% | NA | 1,370 | 1,190 |
| 550 | NA | 52% | 52% | NA | 84% | 85% | NA | 489 | 576 |
| 556 | 51% | 55% | 58% | 82% | 91% | 95% | 1,848 | 414 | 176 |
| 557 | 56% | 56% | 59% | 91% | 92% | 95% | 3,353 | 283 | 91 |
| 581 | NA | 47% | 51% | NA | 75% | 82% | NA | 436 | 567 |
| 590 | NA | 50% | 49% | NA | 75% | 72% | NA | 638 | 763 |
| 597 | 47% | 48% | 49% | 78% | 78% | 81% | 605 | 584 | 587 |
| 598 | NA | 56% | 57% | NA | 89% | 90% | NA | 547 | 550 |
| 603 | NA | 53% | 54% | NA | 86% | 88% | NA | 525 | 474 |
| 623 | NA | 55% | 55% | NA | 91% | 92% | NA | 607 | 601 |
| 624 | NA | 45% | 43% | NA | 70% | 69% | 486 | 405 | 531 |
| 625 | NA | 54% | 54% | NA | 77% | 77% | 610 | 753 | 723 |
| 627 | NA | 55% | 54% | NA | 83% | 79% | NA | 627 | 575 |
| 641 | NA | 58% | 57% | NA | 99% | 90% | 1,562 | 790 | 215 |
| 648 | NA | 50% | 49% | NA | 79% | 77% | 752 | 748 | 840 |
| 651 | NA | NA | 51% | NA | NA | 85% | NA | 654 | 598 |
| 653 | 50% | 50% | 50% | 79% | 80% | 79% | 826 | 711 | 1,045 |
| 654 | NA | 53% | 53% | NA | 84% | 83% | NA | 459 | 384 |
| 659 | 50% | 50% | 52% | 84% | 83% | 82% | 574 | 570 | 107 |
| 666 | NA | 44% | 44% | NA | 75% | 75% | NA | 1,312 | 1,370 |
| 669 | NA | 50% | 50% | NA | 80% | 79% | NA | 474 | 470 |
| 671 | NA | 53% | 54% | NA | 88% | 89% | NA | 969 | 992 |
| 687 | NA | 52% | 52% | NA | 79% | 79% | NA | 507 | 520 |
| 696 | NA | 40% | 48% | NA | 71% | 76% | NA | 556 | 69 |
| 703 | NA | 55% | 55% | NA | 91% | 90% | NA | 832 | 855 |
| 707 | 54% | 53% | 54% | 84% | 84% | 84% | 245 | 1,149 | 1,132 |
| 708 | NA | 50% | 50% | NA | 82% | 80% | NA | 1,227 | 1,581 |
| 711 | NA | 44% | 46% | NA | 63% | 66% | NA | 108 | 181 |
| 712 | NA | 45% | 46% | NA | 58% | 63% | 65 | 52 | 95 |
| 725 | 52% | 52% | 52% | 70% | 71% | 70% | 433 | 481 | 453 |
| 726 | 55% | 55% | 54% | 81% | 81% | 81% | 883 | 975 | 1,032 |
| 727 | NA | 53% | 52% | NA | 75% | 72% | 585 | 528 | 517 |
| 739 | 44% | 46% | 45% | 70% | 73% | 73% | 737 | 653 | 651 |

## Table 40: Customer Metrics Full Service Customers (5 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 743 | NA | 54% | 54% | NA | 90% | 90% | NA | 957 | 927 |
| 744 | NA | 45% | 45% | NA | 70% | 71% | NA | 1,157 | 1,133 |
| 746 | NA | NA | 41% | NA | NA | 69% | NA | NA | 1,851 |
| 755 | NA | 56% | 55% | NA | 78% | 78% | NA | 580 | 538 |
| 756 | NA | 54% | 54% | NA | 78% | 79% | NA | 643 | 561 |
| 764 | NA | 54% | 54% | NA | 87% | 87% | NA | 818 | 823 |
| 767 | 56% | 57% | 57% | 85% | 85% | 85% | 364 | 404 | 373 |
| 771 | NA | 46% | 46% | NA | 77% | 75% | NA | 1,420 | 1,233 |
| 775 | NA | 43% | 43% | NA | 64% | 64% | NA | 424 | 469 |
| 777 | NA | 27% | 27% | NA | 50% | 50% | NA | 612 | 630 |
| 779 | NA | 39% | 38% | NA | 63% | 63% | 509 | 430 | 479 |
| 791 | NA | 43% | 45% | NA | 72% | 75% | NA | 435 | 445 |
| 796 | 37% | 38% | 38% | 62% | 64% | 64% | 1,557 | 1,405 | 1,447 |
| 799 | NA | 35% | 35% | NA | 59% | 58% | NA | 590 | 640 |
| 817 | NA | 56% | 56% | NA | 79% | 79% | NA | 722 | 706 |
| 827 | NA | 40% | 41% | NA | 64% | 65% | NA | 474 | 449 |
| 842 | NA | 37% | 37% | NA | 58% | 58% | NA | 478 | 472 |
| 849 | 44% | 45% | 44% | 70% | 72% | 71% | 770 | 901 | 873 |
| 852 | NA | 57% | 56% | NA | 93% | 90% | NA | 103 | 1,345 |
| 853 | 46% | 48% | 47% | 78% | 80% | 79% | 2,010 | 1,708 | 1,703 |
| 854 | 49% | 49% | 50% | 83% | 81% | 83% | 3,489 | 3,186 | 2,709 |
| 885 | NA | 42% | 44% | NA | 67% | 69% | NA | 564 | 537 |
| 905 | NA | 51% | 51% | NA | 82% | 83% | NA | 1,584 | 1,718 |
| 914 | NA | 55% | 56% | NA | 90% | 92% | NA | 537 | 516 |
| 927 | 56% | 56% | 57% | 85% | 54% | 80% | - | 2 | 2 |
| 934 | 57% | 58% | 58% | 87% | 89% | 89% | 222 | 267 | 265 |
| 951 | NA | 40% | 40% | NA | 68% | 68% | NA | 949 | 935 |
| 955 | NA | 42% | 40% | NA | 67% | 66% | 825 | 856 | 831 |
| 964 | NA | 46% | 46% | NA | 74% | 75% | 643 | 751 | 762 |
| 973 | 46% | 45% | 45% | 75% | 74% | 74% | 1,456 | 1,170 | 1,162 |
| 982 | NA | NA | 51% | NA | NA | 78% | NA | NA | 699 |
| 992 | NA | 56% | 57% | NA | 75% | 77% | NA | 391 | 456 |
| 997 | 51% | 50% | 50% | 86% | 84% | 84% | 4,037 | 4,289 | 4,243 |
| 998 | 39% | 38% | 38% | 59% | 58% | 58% | 915 | 725 | 832 |

## Table 40: Customer Metrics Full Service Customers (6 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 1011 | NA | 31% | 31% | NA | 52% | 52% | 742 | 410 | 613 |
| 1016 | NA | 33% | 33% | NA | 55% | 55% | 739 | 343 | 551 |
| 1017 | NA | 45% | 46% | NA | 73% | 74% | 824 | 781 | 689 |
| 1018 | NA | 55% | 55% | NA | 87% | 86% | NA | 1,023 | 1,166 |
| 1020 | NA | 50% | 47% | NA | 77% | 73% | NA | 564 | 814 |
| 1025 | NA | 47% | 47% | NA | 78% | 78% | NA | 1,100 | 1,204 |
| 1026 | NA | 45% | 46% | NA | 73% | 74% | NA | 1,285 | 1,244 |
| 1027 | 52% | 52% | 51% | 87% | 87% | 86% | 8,497 | 8,832 | 9,244 |
| 1031 | 43% | 42% | 44% | 69% | 69% | 70% | 890 | 718 | 486 |
| 1032 | NA | 56% | 55% | NA | 87% | 87% | NA | 523 | 501 |
| 1063 | NA | 40% | 41% | NA | 64% | 66% | 609 | 508 | 490 |
| 1072 | NA | 53% | 54% | NA | 83% | 84% | NA | 599 | 593 |
| 1078 | NA | 40% | 41% | NA | 69% | 69% | NA | 566 | 471 |
| 1081 | 38% | 39% | 39% | 61% | 61% | 61% | 1,563 | 1,303 | 1,283 |
| 1089 | 54% | 54% | 55% | 88% | 89% | 89% | 550 | 632 | 637 |
| 1093 | NA | 56% | 57% | NA | 87% | 90% | NA | 584 | 599 |
| 1095 | 50% | 52% | 52% | 80% | 84% | 84% | 1,065 | 975 | 1,057 |
| 1099 | NA | 43% | 44% | NA | 67% | 68% | NA | 412 | 487 |
| 1110 | 57% | 57% | 57% | 89% | 89% | 89% | 619 | 757 | 782 |
| 1126 | 52% | 52% | 51% | 81% | 82% | 82% | 837 | 937 | 1,048 |
| 1127 | 39% | 40% | 44% | 63% | 66% | 71% | 977 | 974 | 1,064 |
| 1135 | NA | NA | 59% | NA | NA | 81% | NA | NA | 1,083 |
| 1136 | NA | 58% | 59% | NA | 80% | 80% | 358 | 401 | 375 |
| 1137 | NA | 56% | 58% | NA | 87% | 89% | NA | 396 | 380 |
| 1161 | NA | 55% | 56% | NA | 87% | 88% | NA | 887 | 866 |
| 1162 | NA | 57% | 58% | NA | 85% | 84% | NA | 594 | 548 |
| 1164 | NA | 53% | 53% | NA | 87% | 86% | NA | 1,477 | 1,648 |
| 1185 | NA | 57% | 57% | NA | 91% | 92% | NA | 484 | 600 |
| 1188 | NA | 57% | 57% | NA | 85% | 75% | NA | 590 | 557 |
| 1197 | NA | 56% | 56% | NA | 74% | 74% | NA | 309 | 328 |
| 1201 | 54% | 52% | 53% | 81% | 78% | 82% | 510 | 494 | 481 |
| 1203 | NA | 55% | 55% | NA | 82% | 82% | NA | 569 | 495 |
| 1227 | NA | 55% | 55% | NA | 83% | 82% | NA | 588 | 518 |
| 1228 | NA | 35% | 35% | NA | 60% | 60% | NA | 473 | 442 |

## Table 40: Customer Metrics Full Service Customers (7 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 1241 | NA | 56% | 56% | NA | 80% | 80% | NA | 543 | 486 |
| 1257 | 57% | 56% | 56% | 90% | 90% | 90% | 505 | 475 | 563 |
| 1277 | NA | 41% | 42% | NA | 66% | 67% | NA | 719 | 700 |
| 1278 | NA | 55% | 55% | NA | 86% | 86% | NA | 883 | 864 |
| 1288 | NA | 53% | 53% | NA | 79% | 79% | 579 | 637 | 597 |
| 1289 | NA | 50% | 52% | NA | 79% | 81% | NA | 330 | 161 |
| 1290 | 47% | 48% | 48% | 76% | 77% | 77% | 1,621 | 1,326 | 1,229 |
| 1291 | NA | 43% | 44% | NA | 69% | 70% | 709 | 680 | 713 |
| 1309 | NA | 39% | 39% | NA | 62% | 61% | NA | 643 | 727 |
| 1316 | NA | 56% | 55% | NA | 87% | 91% | NA | 299 | 2,965 |
| 1321 | NA | 45% | 47% | NA | 77% | 78% | NA | 661 | 675 |
| 1322 | NA | NA | 36% | NA | NA | 61% | NA | NA | 474 |
| 1335 | NA | 55% | 55% | NA | 91% | 91% | NA | 1,329 | 1,342 |
| 1351 | NA | NA | 55% | NA | NA | 85% | NA | NA | 2,097 |
| 1354 | NA | 51% | 52% | NA | 75% | 75% | NA | 1,797 | 2,569 |
| 1355 | NA | 55% | 55% | NA | 89% | 90% | NA | 207 | 234 |
| 1367 | 55% | 55% | 55% | 87% | 87% | 87% | 1,577 | 1,457 | 1,629 |
| 1401 | 56% | 56% | 56% | 90% | 90% | 90% | 921 | 818 | 669 |
| 1402 | NA | 52% | 53% | NA | 84% | 86% | 588 | 539 | 510 |
| 1412 | NA | 47% | 46% | NA | 60% | 57% | NA | 465 | 463 |
| 1436 | 89% | 46% | 68% | 26% | 34% | 36% | - | - | - |
| 1443 | NA | 56% | 56% | NA | 82% | 82% | 498 | 604 | 611 |
| 1465 | 51% | 50% | 48% | 86% | 85% | 85% | 1,303 | 1,170 | 630 |
| 1473 | NA | 56% | 56% | NA | 79% | 78% | NA | 632 | 552 |
| 1474 | NA | 55% | 57% | NA | 78% | 80% | NA | 632 | 616 |
| 1476 | NA | 56% | 56% | NA | 78% | 79% | NA | 963 | 864 |
| 1477 | NA | 53% | 52% | NA | 78% | 76% | NA | 517 | 477 |
| 1488 | NA | 48% | 47% | NA | 73% | 73% | NA | 251 | 193 |
| 1496 | NA | 48% | 47% | NA | 74% | 73% | NA | 610 | 499 |
| 1497 | 54% | 55% | 54% | 79% | 78% | 78% | 744 | 911 | 848 |
| 1504 | NA | 58% | 58% | NA | 98% | 98% | NA | 1,074 | 1,069 |
| 1505 | NA | 54% | 52% | NA | 83% | 83% | NA | 482 | 537 |
| 1507 | NA | NA | 54% | NA | NA | 83% | NA | NA | 659 |
| 1517 | 50% | 53% | 57% | 67% | 81% | 91% | NA | 295 | 479 |

## Table 40: Customer Metrics Full Service Customers (8 of 8)

| Customer ID | kWh Off-peak Divided by Annual kWh | | | Load Factor | | | Coincident NYCA System Peak (kW) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 1526 | NA | 39% | 40% | NA | 39% | 41% | NA | 58 | 63 |
| 1539 | NA | 36% | 37% | NA | 61% | 62% | NA | 491 | 432 |
| 1544 | NA | 50% | 50% | NA | 78% | 79% | NA | 518 | 602 |
| 1553 | NA | 53% | 52% | NA | 66% | 40% | NA | - | - |
| 1554 | NA | 54% | 55% | NA | 69% | 70% | NA | 195 | 562 |
| 1558 | NA | 52% | 54% | NA | 68% | 77% | NA | 687 | 910 |
| 1560 | NA | NA | 53% | NA | NA | 84% | NA | NA | 2,732 |
| 1562 | 53% | 54% | NA | 79% | 80% | NA | 1,131 | 1,254 | NA |
| 1573 | NA | 57% | 58% | NA | 82% | 81% | NA | 501 | 450 |
| 1574 | NA | 57% | 58% | NA | 81% | 80% | NA | 565 | 533 |
| 1584 | NA | 59% | 59% | NA | 78% | 80% | NA | 52 | 329 |
| 1604 | NA | 56% | 56% | NA | 75% | 74% | NA | 664 | 616 |
| 1605 | NA | 56% | 56% | NA | 72% | 72% | NA | 670 | 578 |
| 1606 | NA | 55% | 56% | NA | 73% | 74% | NA | 715 | 619 |
| 1607 | NA | 56% | 56% | NA | 73% | 72% | NA | 641 | 595 |
| 1608 | NA | 56% | 56% | NA | 73% | 73% | NA | 635 | 576 |
| 1609 | NA | 56% | 56% | NA | 73% | 72% | NA | 668 | 636 |
| 1616 | NA | 48% | 48% | NA | 73% | 72% | NA | 595 | 279 |
| 1628 | 56% | 56% | 57% | 92% | 92% | 91% | 176 | 165 | 164 |
| 1634 | NA | 51% | 51% | NA | 82% | 84% | 857 | 826 | 899 |
| 1667 | NA | 53% | 55% | NA | 76% | 77% | NA | 361 | 348 |
| 1678 | NA | 54% | 54% | NA | 80% | 79% | NA | 551 | 556 |
| 1681 | NA | 52% | 56% | NA | 67% | 69% | NA | 170 | 405 |
| 1686 | NA | 47% | 46% | NA | 77% | 77% | NA | 511 | 373 |
| 1693 | NA | 30% | 27% | NA | 41% | 42% | NA | 36 | 48 |
| 1694 | NA | 57% | 58% | NA | 82% | 81% | NA | 538 | 487 |
| 1703 | NA | NA | 56% | NA | NA | 79% | NA | 498 | 532 |
| 1705 | 56% | 56% | 56% | 76% | 77% | 77% | 453 | 545 | 534 |
| 1712 | NA | 54% | 55% | NA | 89% | 90% | NA | 1,013 | 1,668 |
| 1715 | 56% | 56% | 56% | 93% | 93% | 92% | 2,179 | 2,063 | 2,070 |
| 1717 | NA | 55% | 55% | NA | 79% | 82% | NA | 584 | 298 |
| 1729 | 54% | 54% | 54% | 80% | 81% | 80% | 628 | 418 | 516 |
| 1730 | NA | 54% | 54% | NA | 86% | 85% | NA | 1,077 | 877 |
| 1733 | NA | 57% | 58% | NA | 93% | 94% | NA | 449 | 452 |
| **Total MHP** | **52%** | **51%** | **51%** | **83%** | **80%** | **79%** | **1,017** | **716** | **704** |

## Table 6: Customer Segmented Price Elasticity Full Service Customers

| NAICS Industry Title Code | NAICS Industry Title | Number of Customers | Modeled kWh with MHP | Modeled kWh without MHP | Percent Difference in kWh | MHP Energy Cost | Without MHP Energy Cost | Percent Cost Savings |
|---|---|---|---|---|---|---|---|---|
| 0 | Not Defined | 31 | 249,866,294 | 248,875,590 | 0.4% | 12,417,387 | 12,398,339 | 0.2% |
| 23 | Const | 7 | 33,782,509 | 33,748,320 | 0.1% | 1,752,383 | 1,764,623 | -0.7% |
| 31-33 | Manufact | 16 | 33,667,109 | 33,614,456 | 0.2% | 1,713,524 | 1,703,756 | 0.6% |
| 42 | Wholesale Trade | 7 | 32,813,657 | 32,728,916 | 0.3% | 1,731,842 | 1,719,724 | 0.7% |
| 44-45 | Retail Trade | 13 | 132,991,543 | 132,965,109 | 0.0% | 6,620,750 | 6,565,595 | 0.8% |
| 48-49 | Transportation/Warehousing | 1 | 1,428,326 | 1,419,746 | 0.6% | 68,135 | 66,793 | 2.0% |
| 51 | Information | 13 | 64,186,128 | 64,041,097 | 0.2% | 3,272,861 | 3,330,308 | -1.7% |
| 52 | Finance and Industry | 4 | 74,309,541 | 74,290,497 | 0.0% | 3,731,205 | 3,733,159 | -0.1% |
| 53 | Real Estate, Rental, Leasing | 71 | 320,342,768 | 319,845,120 | 0.2% | 16,624,760 | 16,216,074 | 2.5% |
| 54 | Professional, Scientific, and Technical Services | 7 | 31,214,254 | 31,209,846 | 0.0% | 1,594,214 | 1,564,969 | 1.9% |
| 56 | Admin, Waste, Remediation Services | 1 | 1,372,342 | 1,372,337 | 0.0% | 64,391 | 66,149 | -2.7% |
| 61 | Educational Services | 9 | 25,395,663 | 25,263,036 | 0.5% | 1,337,556 | 1,306,708 | 2.4% |
| 62 | Health Care and Social Assistance | 18 | 156,068,025 | 155,804,268 | 0.2% | 7,947,219 | 7,964,054 | -0.2% |
| 71 | Arts, entertainment, and Recreation | 9 | 19,467,542 | 19,445,993 | 0.1% | 1,010,754 | 998,994 | 1.2% |
| 72 | Accommodation and Food Services | 9 | 42,735,244 | 42,723,990 | 0.0% | 2,203,870 | 2,218,775 | -0.7% |
| 81 | Other Services (except Public Administration) | 12 | 56,746,136 | 56,682,027 | 0.1% | 2,999,154 | 2,955,020 | 1.5% |
| 92 | Public Administration | 2 | 19,900,625 | 19,896,586 | 0.0% | 1,030,226 | 1,024,410 | 0.6% |
| 99 | Not Classified | 34 | 139,319,940 | 139,131,637 | 0.1% | 7,139,140 | 7,132,182 | 0.1% |
| **Average of All Customers** | | **264** | **165,273,220** | **164,957,006** | **0.2%** | **8,472,490** | **8,356,378** | **0.9%** |

## Table 7: Customer Segmented Price Elasticity Retail Access Customers

| NAICS Industry Title Code | NAICS Industry Title | Number of Customers | Modeled kWh with MHP | Modeled kWh without MHP | Percent Difference in kWh | MHP Energy Cost | Without MHP Energy Cost | Percent Cost Savings |
|---|---|---|---|---|---|---|---|---|
| 0 | Not Defined | 84 | 983,260,398 | 981,449,115 | 0.2% | 49,916,409 | 49,531,308 | 0.8% |
| 22 | Utilies | 3 | 6,471,202 | 6,467,616 | 0.1% | 340,571 | 353,302 | -3.6% |
| 23 | Const | 51 | 749,340,478 | 748,777,756 | 0.1% | 38,086,350 | 37,635,221 | 1.2% |
| 31-33 | Manufact | 34 | 219,558,766 | 219,378,881 | 0.1% | 11,082,139 | 11,005,993 | 0.7% |
| 42 | Wholesale Trade | 33 | 397,846,632 | 396,873,084 | 0.2% | 20,464,209 | 20,141,480 | 1.6% |
| 44-45 | Retail Trade | 139 | 995,304,909 | 993,916,826 | 0.1% | 51,151,776 | 50,360,794 | 1.6% |
| 48-49 | Transportation/Warehousing | 16 | 150,306,599 | 150,223,816 | 0.1% | 7,640,003 | 7,649,226 | -0.1% |
| 51 | Information | 52 | 1,248,382,276 | 1,241,953,664 | 0.5% | 61,769,320 | 61,899,349 | -0.2% |
| 52 | Finance and Industry | 70 | 1,358,660,447 | 1,357,208,601 | 0.1% | 69,039,465 | 68,750,372 | 0.4% |
| 53 | Real Estate, Rental, Leasing | 423 | 4,273,106,156 | 4,269,055,433 | 0.1% | 220,608,057 | 216,988,866 | 1.7% |
| 54 | Professional, Scientific, and Technical Services | 78 | 1,268,535,833 | 1,267,184,339 | 0.1% | 64,492,328 | 63,656,342 | 1.3% |
| 55 | Management of Companies and Enterprises | 10 | 205,575,285 | 205,508,106 | 0.0% | 10,422,374 | 10,386,110 | 0.3% |
| 56 | Admin, Waste, Remediation Services | 46 | 533,104,932 | 532,642,302 | 0.1% | 27,288,756 | 26,819,803 | 1.7% |
| 61 | Educational Services | 48 | 335,836,319 | 335,521,015 | 0.1% | 17,237,796 | 17,128,929 | 0.6% |
| 62 | Health Care and Social Assistance | 89 | 1,417,145,854 | 1,412,129,019 | 0.4% | 70,366,287 | 70,848,543 | -0.7% |
| 71 | Arts, entertainment, and Recreation | 30 | 259,523,888 | 258,130,503 | 0.5% | 13,601,574 | 13,347,766 | 1.9% |
| 72 | Accommodation and Food Services | 71 | 841,826,653 | 839,605,798 | 0.3% | 42,670,387 | 42,536,722 | 0.3% |
| 81 | Other Services (except Public Administration) | 52 | 552,641,415 | 550,716,766 | 0.3% | 28,022,729 | 27,899,254 | 0.4% |
| 92 | Public Administration | 17 | 460,298,617 | 457,949,259 | 0.5% | 22,790,309 | 22,642,152 | 0.7% |
| 99 | Not Classified | 132 | 1,090,554,654 | 1,087,625,201 | 0.3% | 55,531,494 | 55,269,980 | 0.5% |
| **Average of All Customers** | | 1,478 | 1,871,152,532 | 1,868,528,760 | 0.2% | 95,991,318 | 94,751,292 | 1.0% |

## Table 8: Customer Price Elasticity Results Full Service Customers (1 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 8 | 1,569,057 | 1,565,688 | 0.2% | $79,879 | $77,986 | $1,892 | -2.4% |
| 29 | 1,548,401 | 1,545,479 | 0.2% | $79,490 | $76,565 | $2,925 | -3.8% |
| 30 | 1,507,611 | 1,504,994 | 0.2% | $76,996 | $74,189 | $2,807 | -3.8% |
| 31 | 1,892,873 | 1,889,938 | 0.2% | $97,684 | $93,526 | $4,158 | -4.4% |
| 38 | 1,194,482 | 1,193,118 | 0.1% | $61,459 | $59,474 | $1,985 | -3.3% |
| 44 | 2,366,227 | 2,358,771 | 0.3% | $115,952 | $117,194 | -$1,242 | 1.1% |
| 51 | 263,619 | 263,619 | 0.0% | $14,168 | $13,894 | $274 | -2.0% |
| 53 | 1,517,629 | 1,516,661 | 0.1% | $82,251 | $76,289 | $5,962 | -7.8% |
| 64 | 6,976,997 | 6,976,943 | 0.0% | $369,222 | $363,513 | $5,709 | -1.6% |
| 65 | 6,810,380 | 6,808,542 | 0.0% | $360,288 | $354,703 | $5,585 | -1.6% |
| 72 | 9,984,356 | 9,981,371 | 0.0% | $532,355 | $521,678 | $10,677 | -2.0% |
| 74 | 2,003,900 | 1,997,214 | 0.3% | $97,829 | $97,574 | $255 | -0.3% |
| 75 | 1,088,615 | 1,088,503 | 0.0% | $57,272 | $54,902 | $2,371 | -4.3% |
| 76 | 1,606,956 | 1,604,584 | 0.2% | $83,085 | $80,197 | $2,888 | -3.6% |
| 78 | 1,447,380 | 1,445,258 | 0.2% | $74,542 | $72,130 | $2,412 | -3.3% |
| 87 | 7,582,213 | 7,582,171 | 0.0% | $409,719 | $398,028 | $11,690 | -2.9% |
| 105 | 1,968,062 | 1,962,566 | 0.3% | $98,006 | $98,205 | -$198 | 0.2% |
| 109 | 5,912,981 | 5,912,913 | 0.0% | $308,969 | $321,039 | -$12,071 | 3.8% |
| 123 | 924,194 | 916,495 | 0.8% | $43,082 | $42,351 | $731 | -1.7% |
| 125 | 1,274,057 | 1,272,012 | 0.2% | $65,222 | $63,598 | $1,624 | -2.6% |
| 126 | 444,692 | 443,626 | 0.2% | $24,276 | $22,698 | $1,578 | -7.0% |
| 128 | 1,594,852 | 1,592,207 | 0.2% | $81,534 | $79,524 | $2,010 | -2.5% |
| 129 | 1,560,828 | 1,557,485 | 0.2% | $78,329 | $77,611 | $719 | -0.9% |
| 130 | 1,634,915 | 1,632,743 | 0.1% | $83,185 | $81,476 | $1,709 | -2.1% |
| 141 | 1,114,464 | 1,114,103 | 0.0% | $60,126 | $58,669 | $1,458 | -2.5% |
| 146 | 1,460,921 | 1,458,952 | 0.1% | $75,761 | $73,474 | $2,288 | -3.1% |
| 169 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 172 | 3,349,608 | 3,349,332 | 0.0% | $163,678 | $165,621 | -$1,943 | 1.2% |
| 176 | 2,953,075 | 2,953,041 | 0.0% | $146,820 | $148,031 | -$1,211 | 0.8% |
| 186 | 1,823,691 | 1,821,827 | 0.1% | $90,011 | $90,034 | -$23 | 0.0% |
| 190 | 1,324,139 | 1,314,539 | 0.7% | $62,751 | $61,640 | $1,110 | -1.8% |
| 192 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 193 | 8,124,892 | 8,123,006 | 0.0% | $662,538 | $658,771 | $3,767 | -0.6% |
| 195 | 3,638,634 | 3,637,918 | 0.0% | $179,992 | $180,726 | -$734 | 0.4% |

## Table 9: Customer Price Elasticity Full Service Customers (2 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 196 | 1,488,367 | 1,478,573 | 0.7% | $71,259 | $73,200 | -$1,942 | 2.7% |
| 199 | 79,238,259 | 79,231,908 | 0.0% | $5,211,411 | $5,405,831 | -$194,420 | 3.6% |
| 201 | 2,004,451 | 1,984,584 | 1.0% | $95,870 | $96,069 | -$199 | 0.2% |
| 207 | 6,495,697 | 6,494,136 | 0.0% | $322,035 | $342,433 | -$20,398 | 6.0% |
| 216 | 9,512,506 | 9,476,393 | 0.4% | $503,139 | $486,481 | $16,658 | -3.4% |
| 221 | 2,318,023 | 2,317,829 | 0.0% | $116,113 | $116,191 | -$78 | 0.1% |
| 222 | 1,509,047 | 1,507,741 | 0.1% | $76,523 | $76,242 | $281 | -0.4% |
| 224 | 2,166,917 | 2,165,807 | 0.1% | $106,142 | $108,898 | -$2,755 | 2.5% |
| 231 | 1,046,980 | 1,042,670 | 0.4% | $50,652 | $50,787 | -$135 | 0.3% |
| 238 | 1,415,095 | 1,411,559 | 0.3% | $72,261 | $70,527 | $1,734 | -2.5% |
| 240 | 1,491,484 | 1,489,732 | 0.1% | $75,477 | $74,055 | $1,422 | -1.9% |
| 241 | 1,499,076 | 1,497,231 | 0.1% | $75,983 | $74,534 | $1,449 | -1.9% |
| 242 | 1,749,161 | 1,748,305 | 0.1% | $86,867 | $86,425 | $442 | -0.5% |
| 252 | 1,421,517 | 1,421,006 | 0.0% | $71,310 | $70,662 | $648 | -0.9% |
| 253 | 1,948,020 | 1,943,248 | 0.3% | $99,033 | $95,834 | $3,199 | -3.3% |
| 260 | 2,679,462 | 2,678,495 | 0.0% | $125,459 | $131,463 | -$6,004 | 4.6% |
| 262 | 1,256,288 | 1,256,288 | 0.0% | $60,465 | $59,961 | $504 | -0.8% |
| 264 | 573,289 | 569,511 | 0.7% | $25,525 | $26,201 | -$676 | 2.6% |
| 265 | 2,279,211 | 2,271,320 | 0.4% | $112,331 | $111,962 | $369 | -0.3% |
| 266 | 1,719,703 | 1,716,489 | 0.2% | $81,281 | $80,616 | $665 | -0.8% |
| 271 | 1,291,742 | 1,282,489 | 0.7% | $63,976 | $64,679 | -$703 | 1.1% |
| 272 | 1,048,860 | 1,046,005 | 0.3% | $48,810 | $50,520 | -$1,709 | 3.4% |
| 275 | 1,223,538 | 1,223,190 | 0.0% | $62,070 | $61,884 | $186 | -0.3% |
| 279 | 147,608 | 147,189 | 0.3% | $5,400 | $5,505 | -$105 | 1.9% |
| 281 | 16,207,984 | 16,195,141 | 0.1% | $861,649 | $824,368 | $37,281 | -4.5% |
| 284 | 1,474,346 | 1,472,951 | 0.1% | $76,717 | $73,318 | $3,399 | -4.6% |
| 285 | 8,566,720 | 8,560,433 | 0.1% | $451,345 | $444,852 | $6,492 | -1.5% |
| 291 | 288,587 | 288,295 | 0.1% | $12,966 | $13,171 | -$205 | 1.6% |
| 306 | 1,021,409 | 1,021,013 | 0.0% | $54,002 | $51,120 | $2,882 | -5.6% |
| 320 | 1,374,392 | 1,373,354 | 0.1% | $70,210 | $68,713 | $1,497 | -2.2% |
| 322 | 1,470,774 | 1,469,785 | 0.1% | $81,955 | $73,942 | $8,013 | -10.8% |
| 329 | 2,354,455 | 2,348,240 | 0.3% | $113,106 | $112,788 | $318 | -0.3% |
| 336 | 3,699,051 | 3,665,617 | 0.9% | $183,704 | $176,745 | $6,959 | -3.9% |
| 345 | 1,584,198 | 1,584,198 | 0.0% | $79,729 | $80,212 | -$483 | 0.6% |

**Table 30: Customer Price Elasticity Full Service Customers (3 of 8)**

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 363 | 2,702,256 | 2,697,175 | 0.2% | $131,937 | $130,765 | $1,172 | -0.9% |
| 364 | 2,186,257 | 2,180,384 | 0.3% | $105,092 | $103,601 | $1,491 | -1.4% |
| 370 | 37,017,583 | 37,015,378 | 0.0% | $2,440,089 | $2,392,853 | $47,236 | -2.0% |
| 382 | 6,700,691 | 6,700,651 | 0.0% | $365,884 | $351,616 | $14,269 | -4.1% |
| 401 | 105,895,516 | 105,888,642 | 0.0% | $6,857,561 | $6,890,719 | -$33,159 | 0.5% |
| 404 | 2,429,204 | 2,429,204 | 0.0% | $118,355 | $120,486 | -$2,131 | 1.8% |
| 439 | 1,726,338 | 1,725,313 | 0.1% | $89,683 | $86,931 | $2,752 | -3.2% |
| 440 | 1,976,673 | 1,974,977 | 0.1% | $100,709 | $97,356 | $3,352 | -3.4% |
| 443 | 1,898,755 | 1,890,744 | 0.4% | $97,187 | $92,844 | $4,344 | -4.7% |
| 446 | 1,659,708 | 1,659,272 | 0.0% | $88,378 | $83,313 | $5,065 | -6.1% |
| 451 | 1,875,724 | 1,875,724 | 0.0% | $91,676 | $92,358 | -$682 | 0.7% |
| 455 | 11,809,059 | 11,742,211 | 0.6% | $592,780 | $606,329 | -$13,550 | 2.2% |
| 464 | 1,559,461 | 1,558,942 | 0.0% | $63,127 | $63,547 | -$420 | 0.7% |
| 475 | 179,546,560 | 179,533,584 | 0.0% | $12,274,658 | $12,315,452 | -$40,793 | 0.3% |
| 481 | 2,384,714 | 2,379,354 | 0.2% | $121,445 | $120,273 | $1,172 | -1.0% |
| 490 | 16,610,152 | 16,560,479 | 0.3% | $833,889 | $857,079 | -$23,190 | 2.7% |
| 491 | 2,966,133 | 2,952,007 | 0.5% | $145,654 | $145,087 | $568 | -0.4% |
| 494 | 580,375 | 600,608 | -3.4% | $26,589 | $27,873 | -$1,283 | 4.6% |
| 495 | 1,325,310 | 1,324,067 | 0.1% | $70,671 | $66,150 | $4,521 | -6.8% |
| 496 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 497 | 340,372 | 388,384 | -12.4% | $14,071 | $16,583 | -$2,513 | 15.2% |
| 498 | 322,179 | 322,097 | 0.0% | $16,419 | $16,147 | $272 | -1.7% |
| 499 | 63,509 | 63,408 | 0.2% | $2,996 | $2,997 | -$1 | 0.0% |
| 500 | 348,266 | 347,489 | 0.2% | $16,580 | $16,734 | -$154 | 0.9% |
| 501 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 502 | 619,083 | 615,734 | 0.5% | $29,698 | $29,881 | -$182 | 0.6% |
| 505 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 506 | 2,598,620 | 2,598,555 | 0.0% | $129,298 | $129,626 | -$328 | 0.3% |
| 507 | 5,513,785 | 5,438,853 | 1.4% | $295,903 | $291,305 | $4,599 | -1.6% |
| 508 | 28,135,052 | 28,133,243 | 0.0% | $1,618,436 | $1,607,615 | $10,821 | -0.7% |
| 520 | 1,785,034 | 1,785,034 | 0.0% | $91,537 | $90,948 | $589 | -0.6% |
| 528 | 1,478,250 | 1,477,839 | 0.0% | $80,108 | $74,476 | $5,632 | -7.6% |
| 536 | 1,996,405 | 1,994,368 | 0.1% | $116,998 | $113,170 | $3,827 | -3.4% |
| 537 | 1,078,350 | 1,072,441 | 0.6% | $52,513 | $51,773 | $740 | -1.4% |

## Table 30: Customer Price Elasticity Full Service Customers (4 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 539 | 10,965,489 | 10,951,136 | 0.1% | $582,075 | $569,288 | $12,787 | -2.2% |
| 549 | 9,518,127 | 9,518,070 | 0.0% | $513,970 | $494,514 | $19,455 | -3.9% |
| 550 | 2,090,485 | 2,090,485 | 0.0% | $103,153 | $103,721 | -$568 | 0.5% |
| 556 | 401,918 | 401,916 | 0.0% | $15,433 | $15,750 | -$318 | 2.0% |
| 557 | 8,620,059 | 8,620,037 | 0.0% | $459,375 | $469,879 | -$10,503 | 2.2% |
| 581 | 1,818,764 | 1,818,265 | 0.0% | $88,783 | $88,924 | -$141 | 0.2% |
| 590 | 2,080,140 | 2,072,136 | 0.4% | $107,462 | $102,645 | $4,817 | -4.7% |
| 597 | 2,048,569 | 2,047,582 | 0.1% | $103,585 | $102,101 | $1,485 | -1.5% |
| 598 | 1,954,146 | 1,947,289 | 0.4% | $96,034 | $95,444 | $589 | -0.6% |
| 603 | 140,162 | 140,158 | 0.0% | $5,362 | $5,487 | -$125 | 2.3% |
| 623 | 2,686,529 | 2,684,760 | 0.1% | $129,941 | $133,202 | -$3,261 | 2.4% |
| 624 | 1,275,461 | 1,275,478 | 0.0% | $67,537 | $64,122 | $3,414 | -5.3% |
| 625 | 1,976,776 | 1,975,296 | 0.1% | $102,199 | $99,159 | $3,039 | -3.1% |
| 627 | 1,330,627 | 1,329,190 | 0.1% | $71,404 | $69,478 | $1,926 | -2.8% |
| 641 | 1,981,068 | 1,914,824 | 3.5% | $95,391 | $94,744 | $647 | -0.7% |
| 648 | 2,612,630 | 2,612,582 | 0.0% | $130,197 | $129,026 | $1,171 | -0.9% |
| 651 | 2,205,939 | 2,205,003 | 0.0% | $108,183 | $108,788 | -$604 | 0.6% |
| 653 | 8,004,168 | 8,004,116 | 0.0% | $421,228 | $419,745 | $1,482 | -0.4% |
| 654 | 1,728,681 | 1,728,670 | 0.0% | $83,803 | $84,687 | -$884 | 1.0% |
| 659 | 1,314,827 | 1,288,283 | 2.1% | $57,952 | $57,982 | -$30 | 0.1% |
| 666 | 10,646,618 | 10,643,893 | 0.0% | $575,330 | $556,173 | $19,157 | -3.4% |
| 669 | 1,349,853 | 1,349,853 | 0.0% | $69,308 | $66,405 | $2,903 | -4.4% |
| 671 | 6,556,930 | 6,554,814 | 0.0% | $332,540 | $336,796 | -$4,256 | 1.3% |
| 687 | 1,498,315 | 1,497,505 | 0.1% | $77,080 | $74,334 | $2,746 | -3.7% |
| 696 | 157,792 | 157,022 | 0.5% | $7,798 | $7,561 | $237 | -3.1% |
| 703 | 3,386,108 | 3,386,108 | 0.0% | $164,535 | $167,632 | -$3,097 | 1.8% |
| 707 | 11,717,287 | 11,716,707 | 0.0% | $618,802 | $611,244 | $7,557 | -1.2% |
| 708 | 18,510,595 | 18,502,702 | 0.0% | $963,776 | $960,215 | $3,560 | -0.4% |
| 711 | 600,350 | 599,932 | 0.1% | $30,504 | $29,630 | $874 | -3.0% |
| 712 | 473,515 | 472,861 | 0.1% | $22,538 | $22,493 | $45 | -0.2% |
| 725 | 1,231,754 | 1,229,722 | 0.2% | $65,762 | $63,010 | $2,751 | -4.4% |
| 726 | 9,141,832 | 9,139,900 | 0.0% | $485,699 | $478,874 | $6,825 | -1.4% |
| 727 | 1,342,556 | 1,340,530 | 0.2% | $71,487 | $68,619 | $2,868 | -4.2% |
| 739 | 1,970,708 | 1,969,863 | 0.0% | $102,054 | $98,492 | $3,562 | -3.6% |

## Table 30: Customer Price Elasticity Full Service Customers (5 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 743 | 4,002,632 | 4,002,632 | 0.0% | $195,618 | $198,404 | -$2,786 | 1.4% |
| 744 | 1,108,536 | 1,108,536 | 0.0% | $43,448 | $43,063 | $386 | -0.9% |
| 746 | 6,667,332 | 6,664,782 | 0.0% | $338,174 | $326,581 | $11,593 | -3.5% |
| 755 | 1,393,088 | 1,391,756 | 0.1% | $72,042 | $70,071 | $1,972 | -2.8% |
| 756 | 1,379,011 | 1,378,131 | 0.1% | $72,192 | $69,812 | $2,380 | -3.4% |
| 764 | 3,029,266 | 3,029,266 | 0.0% | $152,006 | $152,551 | -$545 | 0.4% |
| 767 | 1,275,138 | 1,271,219 | 0.3% | $63,099 | $63,065 | $35 | -0.1% |
| 771 | 11,910,573 | 11,910,496 | 0.0% | $637,502 | $621,607 | $15,894 | -2.6% |
| 775 | 1,075,388 | 1,074,882 | 0.1% | $58,030 | $54,790 | $3,240 | -5.9% |
| 777 | 1,019,657 | 1,019,539 | 0.0% | $57,849 | $50,902 | $6,948 | -13.6% |
| 779 | 1,132,473 | 1,132,244 | 0.0% | $61,316 | $57,008 | $4,308 | -7.6% |
| 791 | 1,328,856 | 1,327,487 | 0.1% | $67,393 | $66,172 | $1,221 | -1.8% |
| 796 | 18,462,686 | 17,947,221 | 2.9% | $1,216,348 | $1,114,870 | $101,479 | -9.1% |
| 799 | 1,335,154 | 1,335,094 | 0.0% | $73,941 | $66,758 | $7,183 | -10.8% |
| 817 | 1,966,481 | 1,963,941 | 0.1% | $99,311 | $97,022 | $2,289 | -2.4% |
| 827 | 1,243,494 | 1,241,846 | 0.1% | $65,746 | $62,122 | $3,624 | -5.8% |
| 842 | 1,103,563 | 1,103,505 | 0.0% | $59,938 | $55,389 | $4,549 | -8.2% |
| 849 | 2,121,916 | 2,121,916 | 0.0% | $113,695 | $107,832 | $5,863 | -5.4% |
| 852 | 4,970,516 | 4,920,232 | 1.0% | $260,229 | $258,798 | $1,431 | -0.6% |
| 853 | 50,491,065 | 50,487,672 | 0.0% | $3,405,791 | $3,338,684 | $67,107 | -2.0% |
| 854 | -99 | -99 | -9900.0% | -$99 | -$99 | $0 | 0.0% |
| 885 | 1,457,108 | 1,456,553 | 0.0% | $76,174 | $73,017 | $3,157 | -4.3% |
| 905 | 20,525,623 | 20,455,208 | 0.3% | $1,058,681 | $1,049,687 | $8,995 | -0.9% |
| 914 | 2,500,411 | 2,497,557 | 0.1% | $120,366 | $122,744 | -$2,378 | 1.9% |
| 927 | 930,444 | 922,365 | 0.9% | $47,625 | $50,195 | -$2,570 | 5.1% |
| 934 | 1,205,342 | 1,198,721 | 0.6% | $56,102 | $55,488 | $614 | -1.1% |
| 951 | 7,211,955 | 7,203,724 | 0.1% | $393,344 | $378,779 | $14,565 | -3.8% |
| 955 | 2,101,131 | 2,101,131 | 0.0% | $109,457 | $105,785 | $3,673 | -3.5% |
| 964 | 2,136,587 | 2,130,871 | 0.3% | $110,887 | $107,040 | $3,847 | -3.6% |
| 973 | 3,849,848 | 3,849,842 | 0.0% | $195,713 | $189,791 | $5,922 | -3.1% |
| 982 | 1,981,952 | 1,978,027 | 0.2% | $102,012 | $100,408 | $1,604 | -1.6% |
| 992 | 1,967,720 | 1,963,294 | 0.2% | $95,011 | $95,120 | -$109 | 0.1% |
| 997 | 118,843,813 | 118,836,219 | 0.0% | $7,648,946 | $7,637,584 | $11,362 | -0.1% |
| 998 | 6,315,667 | 6,314,534 | 0.0% | $345,451 | $328,479 | $16,972 | -5.2% |

## Table 30: Customer Price Elasticity Full Service Customers (6 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 1011 | 1,464,641 | 1,463,936 | 0.1% | $79,700 | $72,715 | $6,984 | -9.6% |
| 1016 | 1,248,326 | 1,248,326 | 0.0% | $68,127 | $62,163 | $5,965 | -9.6% |
| 1017 | 2,209,251 | 2,205,191 | 0.2% | $112,148 | $109,375 | $2,774 | -2.5% |
| 1018 | 7,796,115 | 7,793,839 | 0.0% | $421,067 | $420,090 | $977 | -0.2% |
| 1020 | 7,011,323 | 6,980,195 | 0.5% | $368,716 | $362,615 | $6,101 | -1.7% |
| 1025 | 10,203,636 | 10,203,566 | 0.0% | $544,383 | $535,298 | $9,085 | -1.7% |
| 1026 | 3,760,970 | 3,760,970 | 0.0% | $194,082 | $187,637 | $6,445 | -3.4% |
| 1027 | 156,114,266 | 155,644,714 | 0.3% | $7,903,209 | $7,898,876 | $4,333 | -0.1% |
| 1031 | 4,714,617 | 4,714,361 | 0.0% | $257,609 | $248,890 | $8,719 | -3.5% |
| 1032 | 1,894,037 | 1,894,037 | 0.0% | $94,473 | $93,897 | $576 | -0.6% |
| 1063 | 1,212,754 | 1,212,400 | 0.0% | $64,400 | $61,002 | $3,399 | -5.6% |
| 1072 | 1,382,440 | 1,381,527 | 0.1% | $73,030 | $71,290 | $1,740 | -2.4% |
| 1078 | 1,076,461 | 1,076,346 | 0.0% | $57,534 | $54,674 | $2,860 | -5.2% |
| 1081 | 27,671,687 | 27,669,514 | 0.0% | $1,920,229 | $1,809,735 | $110,494 | -6.1% |
| 1089 | 2,529,883 | 2,523,710 | 0.2% | $122,833 | $124,385 | -$1,552 | 1.2% |
| 1093 | 2,508,898 | 2,507,509 | 0.1% | $121,332 | $123,706 | -$2,374 | 1.9% |
| 1095 | 11,750,880 | 11,747,556 | 0.0% | $611,951 | $614,628 | -$2,677 | 0.4% |
| 1099 | 1,356,720 | 1,355,699 | 0.1% | $70,797 | $67,896 | $2,901 | -4.3% |
| 1110 | 2,914,300 | 2,914,300 | 0.0% | $143,169 | $142,833 | $336 | -0.2% |
| 1126 | 11,589,746 | 11,589,682 | 0.0% | $609,084 | $605,647 | $3,436 | -0.6% |
| 1127 | 8,541,604 | 8,534,935 | 0.1% | $463,893 | $446,996 | $16,896 | -3.8% |
| 1135 | 10,140,240 | 10,140,165 | 0.0% | $547,593 | $535,098 | $12,496 | -2.3% |
| 1136 | 1,516,791 | 1,511,991 | 0.3% | $72,812 | $71,707 | $1,104 | -1.5% |
| 1137 | 1,428,326 | 1,419,746 | 0.6% | $68,135 | $66,793 | $1,343 | -2.0% |
| 1161 | 2,806,912 | 2,802,478 | 0.2% | $140,430 | $140,940 | -$510 | 0.4% |
| 1162 | 1,675,049 | 1,673,503 | 0.1% | $84,086 | $82,960 | $1,126 | -1.4% |
| 1164 | 18,147,596 | 18,147,454 | 0.0% | $947,191 | $950,094 | -$2,903 | 0.3% |
| 1185 | 2,226,561 | 2,224,906 | 0.1% | $108,038 | $110,658 | -$2,621 | 2.4% |
| 1188 | 7,480,868 | 7,480,806 | 0.0% | $406,337 | $402,754 | $3,583 | -0.9% |
| 1197 | 1,279,734 | 1,276,578 | 0.3% | $61,847 | $60,592 | $1,255 | -2.1% |
| 1201 | 2,090,340 | 2,084,268 | 0.3% | $101,156 | $100,892 | $264 | -0.3% |
| 1203 | 1,496,498 | 1,496,149 | 0.0% | $76,971 | $75,127 | $1,844 | -2.5% |
| 1227 | 7,328,070 | 7,327,990 | 0.0% | $398,412 | $385,842 | $12,570 | -3.3% |
| 1228 | 929,110 | 927,955 | 0.1% | $51,104 | $46,559 | $4,545 | -9.8% |

## Table 30: Customer Price Elasticity Full Service Customers (7 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 1241 | 1,464,135 | 1,464,135 | 0.0% | $74,307 | $73,278 | $1,029 | -1.4% |
| 1257 | 2,384,328 | 2,374,482 | 0.4% | $115,029 | $117,107 | -$2,079 | 1.8% |
| 1277 | 1,896,482 | 1,895,062 | 0.1% | $100,025 | $94,411 | $5,614 | -5.9% |
| 1278 | 4,735,225 | 4,732,390 | 0.1% | $227,142 | $230,486 | -$3,345 | 1.5% |
| 1288 | 5,890,016 | 5,889,984 | 0.0% | $315,964 | $309,180 | $6,784 | -2.2% |
| 1289 | 742,896 | 736,425 | 0.9% | $35,649 | $35,524 | $126 | -0.4% |
| 1290 | 4,570,169 | 4,564,382 | 0.1% | $238,314 | $233,531 | $4,783 | -2.0% |
| 1291 | 1,633,895 | 1,632,854 | 0.1% | $84,785 | $81,545 | $3,240 | -4.0% |
| 1309 | 1,479,751 | 1,479,363 | 0.0% | $79,188 | $74,336 | $4,852 | -6.5% |
| 1316 | 12,173,653 | 11,995,060 | 1.5% | $584,389 | $585,577 | -$1,188 | 0.2% |
| 1321 | 2,706,745 | 2,703,876 | 0.1% | $134,369 | $132,915 | $1,454 | -1.1% |
| 1322 | 1,180,746 | 1,179,947 | 0.1% | $63,564 | $59,343 | $4,221 | -7.1% |
| 1335 | 5,914,286 | 5,912,326 | 0.0% | $285,077 | $290,664 | -$5,587 | 1.9% |
| 1351 | 23,116,216 | 22,957,609 | 0.7% | $1,129,361 | $1,139,821 | -$10,460 | 0.9% |
| 1354 | 26,670,750 | 26,668,687 | 0.0% | $1,392,405 | $1,409,872 | -$17,467 | 1.2% |
| 1355 | 1,372,342 | 1,372,337 | 0.0% | $64,391 | $66,149 | -$1,758 | 2.7% |
| 1367 | 52,298,464 | 51,907,673 | 0.8% | $3,540,469 | $3,528,498 | $11,971 | -0.3% |
| 1401 | 12,388,933 | 12,388,093 | 0.0% | $681,547 | $688,075 | -$6,528 | 0.9% |
| 1402 | 2,196,804 | 2,196,804 | 0.0% | $115,557 | $116,653 | -$1,096 | 0.9% |
| 1412 | 1,089,402 | 1,088,798 | 0.1% | $58,920 | $57,427 | $1,493 | -2.6% |
| 1436 | 2,512,274 | 11,120,196 | -77.4% | $119,686 | $297,651 | -$177,965 | 59.8% |
| 1443 | 1,924,556 | 1,922,703 | 0.1% | $102,050 | $100,003 | $2,047 | -2.0% |
| 1465 | 6,357,012 | 6,335,557 | 0.3% | $324,684 | $321,804 | $2,880 | -0.9% |
| 1473 | 1,860,871 | 1,857,376 | 0.2% | $98,513 | $96,632 | $1,881 | -1.9% |
| 1474 | 1,773,810 | 1,772,095 | 0.1% | $96,071 | $94,159 | $1,912 | -2.0% |
| 1476 | 2,856,192 | 2,855,975 | 0.0% | $152,112 | $149,471 | $2,641 | -1.8% |
| 1477 | 1,352,753 | 1,351,057 | 0.1% | $73,243 | $72,060 | $1,183 | -1.6% |
| 1488 | 1,243,977 | 1,243,835 | 0.0% | $65,330 | $63,574 | $1,757 | -2.8% |
| 1496 | 2,926,881 | 2,926,718 | 0.0% | $153,497 | $154,187 | -$690 | 0.4% |
| 1497 | 6,793,497 | 6,756,788 | 0.5% | $383,871 | $385,901 | -$2,031 | 0.5% |
| 1504 | 15,932,054 | 15,931,887 | 0.0% | $855,219 | $880,123 | -$24,904 | 2.8% |
| 1505 | 3,028,661 | 3,018,064 | 0.4% | $152,113 | $154,832 | -$2,719 | 1.8% |
| 1507 | 2,662,232 | 2,662,232 | 0.0% | $138,457 | $140,377 | -$1,919 | 1.4% |
| 1517 | 1,949,821 | 1,949,616 | 0.0% | $94,159 | $93,928 | $231 | -0.2% |

## Table 30: Customer Price Elasticity Full Service Customers (8 of 8)

| Customer ID | Modeled kWh with MHP | Modeled kWh without MHP | % Diff kWh | MHP Energy Cost | Without MHP Energy Cost | Change in Bill from Base | % Cost Savings |
|---|---|---|---|---|---|---|---|
| 1526 | 1,206,636 | 1,200,666 | 0.5% | $60,356 | $60,300 | $56 | -0.1% |
| 1539 | 1,089,800 | 1,089,305 | 0.1% | $60,501 | $57,223 | $3,278 | -5.7% |
| 1544 | 2,082,016 | 2,082,006 | 0.0% | $111,843 | $110,919 | $924 | -0.8% |
| 1553 | 327,439 | 327,286 | 0.1% | $18,148 | $17,387 | $761 | -4.4% |
| 1554 | 1,267,803 | 1,264,374 | 0.3% | $65,814 | $64,984 | $831 | -1.3% |
| 1558 | 16,497,877 | 16,462,221 | 0.2% | $889,897 | $881,018 | $8,879 | -1.0% |
| 1560 | 17,918,673 | 17,918,559 | 0.0% | $928,214 | $924,003 | $4,212 | -0.5% |
| 1562 | 39,902,295 | 39,899,071 | 0.0% | $2,715,976 | $2,699,989 | $15,987 | -0.6% |
| 1573 | 1,626,867 | 1,608,647 | 1.1% | $79,565 | $77,826 | $1,739 | -2.2% |
| 1574 | 1,855,207 | 1,853,223 | 0.1% | $91,599 | $90,299 | $1,300 | -1.4% |
| 1584 | 1,883,721 | 1,872,906 | 0.6% | $89,562 | $92,085 | -$2,523 | 2.7% |
| 1604 | 1,605,494 | 1,604,152 | 0.1% | $83,144 | $80,821 | $2,323 | -2.9% |
| 1605 | 1,666,766 | 1,664,674 | 0.1% | $85,277 | $82,958 | $2,319 | -2.8% |
| 1606 | 1,604,405 | 1,601,933 | 0.2% | $82,935 | $80,386 | $2,549 | -3.2% |
| 1607 | 1,613,249 | 1,611,140 | 0.1% | $82,276 | $80,181 | $2,095 | -2.6% |
| 1608 | 1,664,513 | 1,662,048 | 0.2% | $85,162 | $83,190 | $1,972 | -2.4% |
| 1609 | 1,723,924 | 1,721,525 | 0.1% | $88,490 | $85,909 | $2,581 | -3.0% |
| 1616 | 2,379,324 | 2,354,020 | 1.1% | $113,594 | $114,951 | -$1,357 | 1.2% |
| 1628 | 855,008 | 851,820 | 0.4% | $39,493 | $39,165 | $328 | -0.8% |
| 1634 | 3,834,483 | 3,822,592 | 0.3% | $187,502 | $188,964 | -$1,462 | 0.8% |
| 1667 | 1,250,847 | 1,245,662 | 0.4% | $61,612 | $60,565 | $1,047 | -1.7% |
| 1678 | 1,708,444 | 1,706,999 | 0.1% | $87,013 | $86,720 | $293 | -0.3% |
| 1681 | 583,087 | 581,021 | 0.4% | $22,370 | $22,598 | -$228 | 1.0% |
| 1686 | 1,377,523 | 1,376,898 | 0.1% | $68,948 | $67,513 | $1,436 | -2.1% |
| 1693 | 837,427 | 836,296 | 0.1% | $43,112 | $40,172 | $2,939 | -7.3% |
| 1694 | 1,707,214 | 1,703,049 | 0.2% | $84,472 | $83,760 | $712 | -0.9% |
| 1703 | 886,234 | 884,818 | 0.2% | $39,308 | $39,163 | $144 | -0.4% |
| 1705 | 1,416,594 | 1,414,821 | 0.1% | $72,041 | $70,219 | $1,822 | -2.6% |
| 1712 | 17,699,601 | 17,697,784 | 0.0% | $920,475 | $936,286 | -$15,812 | 1.7% |
| 1715 | 78,834,998 | 78,829,893 | 0.0% | $4,981,005 | $5,087,982 | -$106,978 | 2.1% |
| 1717 | 2,418,633 | 2,411,750 | 0.3% | $114,091 | $116,137 | -$2,045 | 1.8% |
| 1729 | 2,112,969 | 2,112,409 | 0.0% | $105,822 | $106,737 | -$914 | 0.9% |
| 1730 | 7,573,888 | 7,573,435 | 0.0% | $405,686 | $407,524 | -$1,838 | 0.5% |
| 1733 | 2,120,855 | 2,120,864 | 0.0% | $101,030 | $104,184 | -$3,153 | 3.0% |

## Table 10: Future Customers Energy Use by Segment Full Service Customers

| Full Service Customers | | | | | | | |
|---|---|---|---|---|---|---|---|
| NAICS Industry Code | NAICS Industry Title | Number of Customers | Average of Billing kWh | Average of Bill Amount | Average of Estimated kWh on MHP | Average of Estimated Bill on MHP | Average of Dollars Saved on MHP |
| 0 | Not Defined | 59 | 1,396,241 | $ 259,849 | 1,405,146 | $ 260,274 | $ (425) |
| 23 | Const | 11 | 1,464,425 | $ 282,899 | 1,471,070 | $ 287,067 | $ (4,169) |
| 31-33 | Manufact | 11 | 1,440,267 | $ 258,557 | 1,443,001 | $ 262,641 | $ (4,084) |
| 42 | Wholesale Trade | 11 | 1,323,319 | $ 260,600 | 1,329,114 | $ 258,240 | $ 2,360 |
| 44-45 | Retail Trade | 22 | 1,506,737 | $ 280,193 | 1,508,942 | $ 287,836 | $ (7,643) |
| 48-49 | Transportation/Warehousing | 2 | 1,406,600 | $ 291,080 | 1,415,101 | $ 296,933 | $ (5,852) |
| 51 | Information | 12 | 1,123,700 | $ 234,797 | 1,125,308 | $ 235,795 | $ (998) |
| 52 | Finance and Industry | 8 | 1,363,695 | $ 272,101 | 1,363,997 | $ 268,805 | $ 3,296 |
| 53 | Real Estate, Rental, Leasing | 110 | 1,307,492 | $ 251,163 | 1,309,332 | $ 259,137 | $ (7,974) |
| 54 | Professional, Scientific, and Technical Services | 3 | 1,153,241 | $ 233,877 | 1,153,639 | $ 238,382 | $ (4,506) |
| 56 | Admin, Waste, Remediation Services | 12 | 1,778,847 | $ 317,389 | 1,778,853 | $ 308,955 | $ 8,434 |
| 61 | Educational Services | 13 | 1,154,650 | $ 210,729 | 1,157,352 | $ 213,651 | $ (2,922) |
| 62 | Health Care and Social Assistance | 22 | 1,344,438 | $ 257,594 | 1,345,928 | $ 260,358 | $ (2,764) |
| 71 | Arts, entertainment, and Recreation | 6 | 1,311,041 | $ 256,358 | 1,313,210 | $ 261,133 | $ (4,775) |
| 72 | Accommodation and Food Services | 12 | 1,644,500 | $ 301,713 | 1,645,647 | $ 300,586 | $ 1,128 |
| 81 | Other Services (except Public Administration) | 20 | 1,280,919 | $ 250,849 | 1,283,205 | $ 252,726 | $ (1,877) |
| 92 | Public Administration | 7 | 1,750,008 | $ 300,655 | 1,753,480 | $ 305,458 | $ (4,803) |
| 99 | Not Classified | 48 | 1,542,883 | $ 240,601 | 1,545,914 | $ 241,360 | $ (758) |
| **Total/ Average for All Customers** | | **389** | **1,393,282** | **$ 257,759** | **1,396,607** | **$ 261,015** | **$ (3,255)** |

## Table 11: Future Customers Energy Use by Segment Retail Access Customers

| Retail Access Customers | | | | | | | |
|---|---|---|---|---|---|---|---|
| NAICS Industry Code | NAICS Industry Title | Number of Customers | Average of Billing kWh | Average of Bill Amount | Average of Estimated kWh on MHP | Average of Estimated Bill on MHP | Average of Dollars Saved on MHP |
| 0 | Not Defined | 83 | 1,932,132 | $ 189,988 | 1,934,467 | $ 190,872 | $ (884) |
| 22 | Utilies | 2 | 1,488,560 | $ 123,409 | 1,491,049 | $ 122,503 | $ 906 |
| 23 | Const | 45 | 1,377,421 | $ 133,922 | 1,378,824 | $ 133,389 | $ 532 |
| 31-33 | Manufact | 28 | 1,269,141 | $ 127,775 | 1,271,589 | $ 129,490 | $ (1,715) |
| 42 | Wholesale Trade | 29 | 1,523,862 | $ 147,817 | 1,525,666 | $ 147,206 | $ 611 |
| 44-45 | Retail Trade | 106 | 1,778,321 | $ 164,633 | 1,781,169 | $ 167,420 | $ (2,787) |
| 48-49 | Transportation/Warehousing | 10 | 1,673,611 | $ 168,775 | 1,674,357 | $ 165,949 | $ 2,826 |
| 51 | Information | 20 | 1,642,990 | $ 149,498 | 1,644,725 | $ 149,605 | $ (108) |
| 52 | Finance and Industry | 22 | 1,577,356 | $ 156,272 | 1,578,495 | $ 158,975 | $ (2,703) |
| 53 | Real Estate, Rental, Leasing | 220 | 1,431,189 | $ 145,766 | 1,432,703 | $ 149,868 | $ (4,101) |
| 54 | Professional, Scientific, and Technical Services | 31 | 1,602,614 | $ 151,356 | 1,604,335 | $ 154,505 | $ (3,149) |
| 55 | Management of Companies and Enterprises | 3 | 1,366,667 | $ 129,531 | 1,371,995 | $ 133,204 | $ (3,673) |
| 56 | Admin, Waste, Remediation Services | 26 | 1,470,214 | $ 160,418 | 1,472,063 | $ 161,337 | $ (919) |
| 61 | Educational Services | 46 | 1,373,458 | $ 132,656 | 1,374,860 | $ 134,356 | $ (1,700) |
| 62 | Health Care and Social Assistance | 46 | 1,580,150 | $ 151,042 | 1,583,367 | $ 150,802 | $ 240 |
| 71 | Arts, entertainment, and Recreation | 25 | 1,393,731 | $ 138,449 | 1,395,475 | $ 138,681 | $ (232) |
| 72 | Accommodation and Food Services | 63 | 1,446,360 | $ 139,455 | 1,447,637 | $ 138,640 | $ 815 |
| 81 | Other Services (except Public Administration) | 60 | 1,347,196 | $ 140,788 | 1,347,545 | $ 141,869 | $ (1,081) |
| 92 | Public Administration | 3 | 907,600 | $ 142,266 | 908,107 | $ 144,164 | $ (1,899) |
| 99 | Not Classified | 139 | 1,541,634 | $ 150,133 | 1,543,554 | $ 151,386 | $ (1,253) |
| **Total/ Average for All Customers** | | **1007** | **1,533,660** | **$ 150,778** | **1,535,476** | **$ 152,474** | **$ (1,696)** |

## Table 12: Max Demand and Coincident Peak for Surveyed Customers (1 of 3)

| MHP | Non-Coincident Peak (kW) | | | Coincident Peak (kW) | | |
|---|---|---|---|---|---|---|
| Customer ID | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 16 | NA | 586 | 627 | 555 | NA | 583 |
| 24 | NA | 1,861 | 1,875 | NA | 1,811 | 1,625 |
| 32 | 586 | 623 | 511 | 429 | 485 | 350 |
| 38 | NA | 501 | 522 | NA | 433 | 424 |
| 41 | NA | 576 | 552 | 50 | 49 | 58 |
| 44 | NA | 666 | 674 | NA | 480 | 518 |
| 45 | 685 | 638 | 627 | 502 | 478 | 577 |
| 48 | 595 | 649 | 649 | 395 | 278 | 404 |
| 75 | NA | 799 | 720 | NA | 178 | 378 |
| 92 | NA | 1,295 | 1,260 | NA | 924 | 662 |
| 100 | NA | 946 | 905 | NA | 706 | 472 |
| 120 | NA | 846 | 878 | NA | 786 | 799 |
| 141 | NA | 568 | 564 | NA | 461 | 456 |
| 146 | NA | 666 | 651 | NA | 559 | 564 |
| 182 | 504 | 472 | 477 | 457 | 417 | 454 |
| 185 | 706 | 676 | 689 | 591 | 564 | 619 |
| 193 | 1,876 | 2,289 | 326 | 0 | 1,545 | 0 |
| 195 | NA | 1,011 | 1,112 | NA | 913 | 491 |
| 196 | NA | 400 | 401 | NA | 347 | 311 |
| 203 | NA | 906 | 941 | NA | 438 | 421 |
| 216 | 1,111 | 1,277 | 1,163 | 780 | 764 | 771 |
| 222 | NA | 560 | 528 | NA | 408 | 409 |
| 279 | NA | 528 | 582 | NA | 268 | 274 |
| 291 | NA | 791 | 534 | NA | 113 | 70 |
| 311 | 2,926 | 2,768 | 2,666 | 2,856 | 2,705 | 2,599 |
| 319 | NA | 1,346 | 1,343 | 1,309 | 991 | 931 |
| 331 | NA | 687 | 695 | 666 | 440 | 499 |
| 430 | 6,026 | 6,105 | 5,647 | 5,859 | 5,646 | 5,366 |
| 434 | 1,520 | 1,676 | 1,423 | 1,437 | 1,117 | 1,078 |
| 435 | 1,794 | 1,832 | 1,721 | 1,758 | 1,737 | 1,284 |
| 436 | 2,096 | 2,042 | NA | 1,868 | 1,821 | NA |

## Table 33: Max Demand and Coincident Peak for Surveyed Customers (2 of 3)

| MHP | Non-Coincident Peak (kW) | | | Coincident Peak (kW) | | |
|---|---|---|---|---|---|---|
| Customer ID | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 455 | 1,001 | 852 | 877 | 720 | 684 | 701 |
| 458 | NA | NA | 570 | NA | NA | 0 |
| 464 | NA | 1,147 | 1,124 | NA | 940 | 883 |
| 475 | 5,409 | 4,527 | 4,761 | 4,748 | 3,933 | 4,206 |
| 507 | 15,728 | 1,268 | 1,113 | 467 | 924 | 866 |
| 583 | NA | 1,230 | 1,172 | NA | 1,068 | 1,123 |
| 620 | NA | 502 | 468 | NA | 372 | 444 |
| 623 | NA | 683 | 632 | NA | 607 | 601 |
| 661 | NA | 1,092 | 974 | NA | 999 | 942 |
| 672 | 8,225 | 8,883 | 8,708 | 7,133 | 8,435 | 8,316 |
| 707 | 328 | 1,278 | 1,223 | 245 | 1,149 | 1,132 |
| 737 | 904 | 972 | 948 | 851 | 835 | 814 |
| 739 | 775 | 727 | 767 | 737 | 653 | 651 |
| 764 | NA | 882 | 907 | NA | 818 | 823 |
| 767 | 591 | 630 | 575 | 364 | 404 | 373 |
| 771 | NA | 1,508 | 1,354 | NA | 1,420 | 1,233 |
| 780 | 1,003 | 990 | 991 | 966 | 918 | 798 |
| 787 | 507 | 507 | 513 | 434 | 447 | 439 |
| 817 | NA | 802 | 823 | NA | 722 | 706 |
| 823 | NA | NA | 2,058 | NA | NA | 1,911 |
| 848 | 1,947 | 1,782 | 1,826 | 1,339 | 1,457 | 1,265 |
| 858 | NA | 508 | 522 | NA | 449 | 464 |
| 860 | NA | 1,746 | 1,753 | NA | 1,670 | 1,671 |
| 902 | 993 | 1,135 | 1,141 | 918 | 1,009 | 993 |
| 908 | NA | 647 | 581 | NA | 546 | 511 |
| 960 | NA | 1,215 | 1,236 | NA | 1,077 | 1,212 |
| 961 | NA | 915 | 853 | NA | 280 | 356 |
| 989 | 4,177 | 4,175 | 4,491 | 3,918 | 3,695 | 4,082 |
| 998 | 971 | 963 | 980 | 915 | 725 | 832 |
| 1002 | 1,755 | 1,840 | 1,815 | 1,378 | 1,138 | 1,064 |
| 1018 | NA | 1,166 | 1,216 | NA | 1,023 | 1,166 |

## Table 33: Max Demand and Coincident Peak for Surveyed Customers (3 of 3)

| MHP | Non-Coincident Peak (kW) | | | Coincident Peak (kW) | | |
|---|---|---|---|---|---|---|
| Customer ID | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| 1027 | 9,116 | 9,280 | 9,473 | 8,497 | 8,832 | 9,244 |
| 1102 | 1,203 | 1,281 | 1,242 | 1,187 | 1,133 | 1,129 |
| 1117 | NA | 372 | 145 | NA | 221 | 127 |
| 1135 | NA | NA | 2,831 | NA | NA | 1,083 |
| 1161 | NA | 917 | 895 | NA | 887 | 866 |
| 1171 | NA | 1,255 | 1,393 | NA | 1,213 | 1,309 |
| 1177 | NA | 801 | 776 | NA | 758 | 666 |
| 1188 | NA | 688 | 975 | NA | 590 | 557 |
| 1247 | 3,830 | 3,480 | 3,562 | 3,297 | 2,535 | 2,606 |
| 1264 | 1,650 | 1,710 | 1,680 | 1,580 | 1,600 | 1,560 |
| 1278 | NA | 996 | 964 | NA | 883 | 864 |
| 1300 | 2,610 | 2,935 | 3,073 | 2,184 | 2,141 | 1,916 |
| 1335 | NA | 1,630 | 1,569 | NA | 1,329 | 1,342 |
| 1354 | NA | 5,393 | 4,254 | NA | 1,797 | 2,569 |
| 1399 | NA | 521 | 506 | NA | 380 | 128 |
| 1427 | NA | 606 | 327 | NA | 495 | 150 |
| 1436 | 5,440 | 5,360 | 5,352 | 0 | 0 | 0 |
| 1443 | NA | 692 | 675 | 498 | 604 | 611 |
| 1454 | NA | 1,024 | 1,002 | NA | 969 | 900 |
| 1477 | NA | 546 | 552 | NA | 517 | 477 |
| 1504 | NA | 1,103 | 1,084 | NA | 1,074 | 1,069 |
| 1505 | NA | 892 | 896 | NA | 482 | 537 |
| 1520 | NA | 789 | 839 | NA | 251 | 234 |
| 1539 | NA | 556 | 545 | NA | 491 | 432 |
| 1559 | 3,999 | 4,190 | NA | 3,296 | 3,331 | NA |
| 1570 | 1,027 | 1,060 | 1,088 | 995 | 1,015 | 1,073 |
| 1613 | NA | 714 | NA | NA | 697 | NA |
| 1639 | NA | 1,081 | 1,100 | NA | 1,039 | 1,033 |
| 1712 | NA | 1,801 | 1,816 | NA | 1,013 | 1,668 |
| 1731 | NA | 366 | 343 | 335 | 306 | 325 |
| 1735 | 765 | 798 | 642 | 652 | 170 | 46 |
| **Totals** | **98,396** | **138,014** | **131,854** | **71,184** | **107,030** | **102,565** |

# F. Appendix F – CECONY MHP Interview Guide

# CECONY MHP Program Evaluation Interview Guide

**Verbal introduction to interviewee:** Our goal in this interview is to gather information on the role that you have in the development and delivery of the MHP Program. In addition, we are looking to further understand the process of how this program is delivered, any strengths and weaknesses of the program that you see, things that have been learned since its inception, and ways in which the program's delivery methods and procedures could be further modified, if any.

This interview session is an opportunity for you to voice your opinions and your particular experiences with this program. This will also be a chance for you to share ideas about further increasing the program effectiveness and delivery to your customers.

The questions here are neutral, and meant to be open-ended. There are no expectations of any right or wrong answers. Feel free to embellish; details and examples are most welcome.

Because this is an interview guide that goes across various positions, some questions may be less relevant than others, or even unrelated to your position. You are welcome to ask to skip any of those questions.

All answers are strictly confidential. Our notes are not shared with anyone else at CECONY or outside the utility. In our report, anecdotal answers are either paraphrased or cited in a generic way, ex. "several respondents said…", "one respondent noted…", etc.

After we complete the interview, we will later transcribe our notes on a separate sheet and send them back to you to review. This will give you an opportunity to correct or clarify anything we recorded.

## A. Background

1. Can you please first briefly describe your current professional position – title and general responsibilities?

2. a) What is your current role and level of involvement with the program?

3. Did you have a role or other involvement in the development of the marketing and sales plan? IF YES > What was that?

4. What involvement if any did you have in information sessions which are designed to help the customer understand how this program should work ?

**B. Program Delivery**

5. From what you know, what typically are the primary barriers, concerns, or challenges that major account customers have towards moving into a real time pricing tariff?

6. a. How were customers first notified and informed about the pending MHP tariff?

   b. How were follow-ups completed to ensure the correct contact people understood and recognized the pertinent facts about Rider M, and the choice they could make between that and Retail Access?

   c. What are the steps taken or indications checked to ensure that a customer is fully informed, satisfied, and comfortable with the level of information and support given by CECONY for this or any other new initiative?

7. For the customers who transitioned into the MHP in 2010 & 2011:

a) How often are they normally visited or contacted by their respective CECONY account representative?

b) What resources of time were planned up and beyond this normal level in order to properly communicate the changes concerning MHP?

8. What were the initial reactions or concerns from customers when they were first notified? How did you or CECONY address those concerns?

9. a. What specific goals were established for each of the elements detailed in the Marketing, Outreach, and Education Plan? How much are these elements, once implemented, are recorded, tracked and compared to the goals?

- mailings
- access and use of DMS
- seminars
- direct contact

b. Specifically for the partnership strategy: what trade associations and industry organizations were reached? Were these relationships all previously established? What specifically was conducted with each of these entities?

10. What were the typical successes you achieved in the transition to Rider M? Are there specific examples?

11. What were the typical challenges that arose in the transition to Rider M? What are specific examples?

12. What amount, and what kinds, of customers have used CECONY services to assess choices for staying with Rider M or moving to Retail Access?

13. How well has DMS worked for you and for the customers who have accessed it? What kinds of additional informational support have customers asked for?

14. What has been your general interaction and experience with the Customer Care website?

15. What has the general experience been from customers since the Customer Care website was launched?

16. From what you have seen or learned: what customers have utilized their own internal resources towards assessing the choices between MHP and Retail Access? What kind of internal resources have these been?

17. Again, from what you have seen or learned: what customers utilized external services to assess choices (apart from CECONY staff or the DMS)? What kind of external services have been used?

18. Were you involved with the customer presentations for MHP? IF YES > What tangible outcomes became evident, especially from those who attended?

19. To ensure that we covered all of your thoughts, are there any other specific improvements and recommendations that you have on marketing, outreach, and education for MHP?

20. There may be other issues that you would like to talk about that were not addressed above..If so, what are they, and what would you like to say about them?

# G. Appendix G – Customer Survey Results

## Respondent Information

### Table 13: Importance of Facility Energy Efficiency[1]

| Group | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|
| Full Service (n=34) | 0% | 3% | 12% | 18% | 68% | **4.5** |
| Retail Access (n=72) | 0% | 0% | 6% | 28% | 67% | **4.6** |
| **Overall (n=106)** | **0%** | **1%** | **8%** | **25%** | **67%** | **4.6** |

### Table 14: Importance of Electricity Cost[2]

| Group | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|
| Full Service (n=34) | 0% | 3% | 29% | 24% | 44% | **4.1** |
| Retail Access (n=73) | 0% | 4% | 14% | 34% | 48% | **4.3** |
| **Overall (n=107)** | **0%** | **4%** | **19%** | **31%** | **47%** | **4.2** |

### Table 15: Current Enrollment in MHP[3]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=34) | 56% | 0% | 44% |
| Retail Access (n=73) | 0% | 93% | 7% |
| **Overall (n=107)** | **18%** | **64%** | **19%** |

**Why did your organization decide to stay in the MHP Program?**

When asked why their organizations decided to stay with the MHP rate structure, five customers reported that there was not much savings to be had by switching to an ESCO. Three other customers reported that they did not have a choice but to stay on the MHP rate structure. Other responses are as follows:

- Lack of reliability with ESCOs.
- Lack of other viable options.
- Feel more in control in the Program.
- Didn't like the idea of purchasing in advance.
- Didn't want to be locked into a price.
- Didn't get offered anything else.
- Didn't like the ESCOs prices.

[1] Q: R5. How important is energy efficiency at your facility on a scale of 1 to 5, where 1 in not important and 5 is very important?
[2] Q: R6. In the success of your business, how important is the cost of electricity, on a scale of 1 to 5, where 1 in not important to 5 very important?
[3] Q: R7. Is your organization currently enrolled in the Mandatory Hourly Pricing (MHP) Program?

**Table 16: Currently Enrolled with an ESCO[4]**

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=34) | 0% | 88% | 12% |
| Retail Access (n=73) | 84% | 7% | 10% |
| **Overall (n=107)** | **57%** | **33%** | **10%** |

**What information did you receive and how helpful was it?**

- No information has been received (n=5)
- How it operates (n=2)
- "I didn't know about the Customer Care Website."
- "Program details and PowerPoint presentation."
- "Received information on a seminar but couldn't attend."
- "The fact that they're no longer part of the energy generation business."
- "The seminar times were not good and I don't know what I could do with the information."
- "This goes back to 2007; just the structure and how it's going to affect energy demand, how purchases will be made, and how it's designed to work."
- "We had one meeting with CECONY. It was helpful but we need to take more steps to do more on our end. We dropped the ball because there were higher priorities."
- "They told me that I was a high energy user."

**Table 17: Types of Billing Price Structure[5]**

| Group | Market Rate | Hourly Pricing | Average Monthly Price | Fixed Price | Other | Don't Know |
|---|---|---|---|---|---|---|
| Full Service (n=34) | 0% | 0% | 3% | 0% | 0% | 97% |
| Retail Access (n=73) | 11% | 1% | 3% | 64% | 8% | 12% |
| **Overall (n=107)** | **7%** | **1%** | **3%** | **44%** | **6%** | **39%** |

Customers who reported that they are billed under an "other" pricing structure provided the following detail:

- "50% market / 50% fixed."
- "Blend of market and fixed."
- "Combination of fixed price and hedge price."
- "Day ahead pricing."

[4] Q: R8. Is your organization currently enrolled with an ESCO?
[5] Q: R9. What type of pricing structure are you currently being billed under?

- "Fixed mostly but it's a blend for natural gas; we pay a percentage."
- "Metered-demand delivery."

**Respondent Information**

**Table 18: Understanding Commodity Price Calculations[6]**

| Group | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|
| Full Service (n=34) | 24% | 15% | 35% | 12% | 15% | **2.8** |
| Retail Access (n=73) | 21% | 14% | 19% | 29% | 18% | **3.1** |
| **Overall (n=107)** | **21%** | **14%** | **24%** | **23%** | **17%** | **3.0** |

**Table 19: Annual Electric Operating Costs[7]**

| Group | 0% to 25% | 26% to 50% | 51% to 75% | 76% to 100% | Other | Don't Know | Average* |
|---|---|---|---|---|---|---|---|
| Full Service (n=32) | 41% | 6% | 3% | 3% | 25% | 22% | 16.0% |
| Retail Access (n=72) | 43% | 10% | 4% | 3% | 28% | 13% | 17.6% |
| **Overall (n=104)** | **42%** | **9%** | **4%** | **3%** | **27%** | **15%** | **17.1%** |

***** Averages were calculated using the midpoint of each of the ranges.

[6] Q**:** R10. How well do you understand the calculations for the commodity price on your utility bill, on a scale of 1 to 5, where 1 means you don't understand at all the calculations for commodity price on your utility bill and 5 means you completely understand the calculations?

[7] Q**:** R11. What percent of your organization's total annual operating costs do your electricity costs represent?

**Table 20: Discussions with a Consultant or ESCO [8]**

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=10) | 50% | 50% |
| Tier 2 (n=8) | 63% | 38% |
| Tier 3 (n=16) | 50% | 50% |
| **Overall (n=34)** | **53%** | **47%** |

**Table 21: Consideration of Purchasing Energy From an ESCO [9]**

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 60% | 30% | 10% |
| Tier 2 (n=8) | 75% | 25% | 0% |
| Tier 3 (n=16) | 56% | 31% | 13% |
| **Overall (n=34)** | **62%** | **29%** | **9%** |

**Table 22: Shifting Operations in Response to Hourly Pricing [10]**

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=10) | 40% | 60% |
| Tier 2 (n=8) | 13% | 88% |
| Tier 3 (n=16) | 38% | 63% |
| Non-Residential (n=26) | 42% | 58% |
| Residential (n=8) | 0% | 100% |
| **Overall (n=34)** | **32%** | **68%** |

[8] Q: V1. Have you spoken with a consultant or ESCO about hourly pricing or other options available to you?
[9] Q: V2. Did you consider purchasing energy from an alternate supplier?
[10] Q: V3. Does your facility have the flexibility to shift operations in response to hourly prices?

**Table 23: Daily Monitoring of Hourly Pricing [11]**

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=10) | 40% | 60% |
| Tier 2 (n=8) | 13% | 88% |
| Tier 3 (n=16) | 38% | 63% |
| Non-Residential (n=26) | 42% | 58% |
| Residential (n=8) | 0% | 100% |
| **Overall (n=34)** | **32%** | **68%** |

**Table 24: Desirability to View Day Ahead Hourly Pricing [12]**

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 40% | 50% | 10% |
| Tier 2 (n=8) | 63% | 38% | 0% |
| Tier 3 (n=16) | 31% | 63% | 6% |
| Non-Residential (n=26) | 50% | 42% | 8% |
| Residential (n=8) | 13% | 88% | 0% |
| **Overall (n=34)** | **41%** | **53%** | **6%** |

**Table 25: Necessary Information about Hourly Pricing [13]**

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 40% | 40% | 20% |
| Tier 2 (n=8) | 50% | 50% | 0% |
| Tier 3 (n=16) | 6% | 94% | 0% |
| Non-Residential (n=26) | 35% | 58% | 8% |
| Residential (n=8) | 0% | 100% | 0% |
| **Overall (n=34)** | **26%** | **68%** | **6%** |

**Table 26: Have Received Information about MHP[14]**

[11] Q: V4. Does your facility have someone who tracks and checks hourly prices on a daily basis?
[12] Q: V5. Do you feel it is helpful to be able to view hourly commodity prices a day in advance?
[13] Q: V6. Do you feel you have the necessary information to develop a strategy for responding to hourly pricing?

| Group | Have not received any information on MHP | CECONY | ESCO | NYSERDA | NYISO website | Industry association or consultant | Media or trade publication | Don't Know |
|---|---|---|---|---|---|---|---|---|
| Tier 1 (n=10) | 20% | 20% | 0% | 0% | 0% | 20% | 0% | 40% |
| Tier 2 (n=8) | 25% | 50% | 0% | 0% | 0% | 25% | 0% | 0% |
| Tier 3 (n=16) | 69% | 19% | 6% | 0% | 0% | 0% | 0% | 6% |
| **Overall (n=34)** | **44%** | **26%** | **3%** | **0%** | **0%** | **12%** | **0%** | **15%** |

Some of the customers who reported that they had not received any information on the MHP program provided responses such as: “Didn’t know about this until today” and “This is the first that I am hearing of this”.

**Table 27: Fully Informed about MHP[15]**

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 40% | 20% | 40% |
| Tier 2 (n=8) | 38% | 38% | 25% |
| Tier 3 (n=16) | 19% | 13% | 69% |
| **Overall (n=34)** | **29%** | **21%** | **50%** |

**Table 28: Participated in Outreach and Education[16]**

| Group | Received and read customer letters, newsletters, emails | Attend customer forums | Visit the Con Ed rates site at Coned.com/rates | Sign up for the Customer Care for Energy Management website | Contact customer service | None of the above | Other* | Don't Know |
|---|---|---|---|---|---|---|---|---|
| Tier 1 (n=10) | 0% | 0% | 10% | 0% | 20% | 60% | 10% | 0% |
| Tier 2 (n=8) | 0% | 0% | 0% | 0% | 0% | 63% | 0% | 38% |
| Tier 3 (n=16) | 6% | 0% | 0% | 0% | 6% | 81% | 0% | 6% |
| **Overall (n=34)** | **3%** | **0%** | **3%** | **0%** | **9%** | **71%** | **3%** | **12%** |

***Other denotes:** “Contact our CECONY account executive”.

[14] Q: V6a. Have you received information about Mandatory Hourly Pricing from…?
[15] Q: V7. Did your organization take any steps to ensure that you were fully informed and comfortable with information you received from CECONY regarding the MHP program since the program began?
[16] Q: V7a. Did your organization…? [Read from the following topics listed in the table]

**Table 29: Engagement of Seminars, Workshops, or Utilities[17]**

| Group | Yes, Seminar | Yes, Workshop | Yes, spoke with utility | None of the above | Other* | Don't Know |
|---|---|---|---|---|---|---|
| Tier 1 (n=10) | 0% | 10% | 10% | 60% | 20% | 0% |
| Tier 2 (n=8) | 0% | 13% | 0% | 75% | 13% | 0% |
| Tier 3 (n=16) | 0% | 0% | 0% | 88% | 13% | 0% |
| **Overall (n=34)** | **0%** | **6%** | **3%** | **76%** | **15%** | **0%** |

***Other denotes the following responses:**

- "Energy management website."
- "No direct involvement, that would be too time consuming. Just call them."
- "The new pricing going into effect, develop a report with them, and how to get info on their coned.com website."
- "I spoke with someone at CECONY, we started to look into it but I got side tracked."
- Customer could not elaborate.

**V8a. What information did you receive and how helpful was it?**

- No information has been received (n=5)
- How it operates (n=2)
- "I didn't know about the Customer Care Website."
- "Program details and PowerPoint presentation."
- "Received information on a seminar but couldn't attend."
- "The fact that they're no longer part of the energy generation business."
- "The seminar times were not good and I don't know what I could do with the information."
- "This goes back to 2007; just the structure and how it's going to affect energy demand, how purchases will be made, and how it's designed to work."
- "We had one meeting with CECONY. It was helpful but we need to take more steps to do more on our end. We dropped the ball because there were higher priorities."
- "They told me that I was a high energy user."

## Participant Actions

[17] Q: V8. Have you attended a seminar, workshop or speak with anyone from your utility since the change to mandatory hourly pricing?

**Table 30: Operational Maximum Price Target** [18]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 10% | 90% | 0% |
| Tier 2 (n=8) | 0% | 100% | 0% |
| Tier 3 (n=16) | 0% | 100% | 0% |
| **Overall (n=34)** | **3%** | **97%** | **0%** |

*Note: The customer who reported having a targeting a maximum hourly price threshold for reducing consumption refused to provide exactly what that threshold is.*

**Table 31: Considered a Operational Maximum Price Target** [19]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 25% | 69% | 6% |
| Tier 2 (n=8) | 25% | 63% | 13% |
| Tier 3 (n=16) | 0% | 80% | 20% |
| **Overall (n=34)** | **18%** | **71%** | **12%** |

[18] Q**:** A1. Do you have a maximum hourly price threshold that you target for reducing energy consumption?

[19] Q**:** A1b. If no, have you thought about developing a maximum price?

**Table 32: Comparison of Previous Energy Consumption with Hourly Pricing**[20]

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=10) | 40% | 60% |
| Tier 2 (n=8) | 38% | 63% |
| Tier 3 (n=16) | 6% | 94% |
| **Overall (n=34)** | **24%** | **76%** |

**Table 33: Engage in Energy Reduction in Response to Day-Ahead Prices**[21]

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=10) | 20% | 80% |
| Tier 2 (n=8) | 0% | 100% |
| Tier 3 (n=16) | 0% | 100% |
| **Overall (n=34)** | **6%** | **94%** |

**Table 34: Energy Reduction Strategies During High Pricing Events**[22]

| Group | No, cannot reduce energy for high pricing periods | Utilize EMS controls for reducing energy | Reduce HVAC | Fuel Switching | Reduce Lighting | Reduce or Shift Processes | Other* Strategy | Don't Know |
|---|---|---|---|---|---|---|---|---|
| Tier 1 (n=10) | 70% | 20% | 0% | 0% | 0% | 0% | 10% | 0% |
| Tier 2 (n=8) | 50% | 13% | 0% | 0% | 0% | 13% | 13% | 13% |
| Tier 3 (n=16) | 38% | 50% | 0% | 0% | 6% | 0% | 0% | 6% |
| Non-Residential (n=26) | 58% | 23% | 0% | 0% | 0% | 4% | 8% | 8% |
| Residential (n=8) | 25% | 63% | 0% | 0% | 13% | 0% | 0% | 0% |
| **Overall (n=34)** | **50%** | **32%** | **0%** | **0%** | **3%** | **3%** | **6%** | **6%** |

[20] Q: A2. Do you compare hourly pricing with previous energy consumption to understand the potential impact to your energy costs?
[21] Q: A3. By knowing the day-ahead prices, do you make plans for energy reduction if you see hourly pricing that you feel is excessive?
[22] Q: A4. Are you able to reduce your energy usage (or consumption) for high pricing periods? If yes, what strategies are implemented?

***Other responses included:**

- "We can do simple things like shut down an elevator."
- "Basically we go through the building to eliminate waste; we're on a curtailment program with GCS (Generation Curtailment Services) to contribute to energy savings."

**Table 35: Awareness of Automated Alerts**[23]

| Group | Yes, and I have alerts established | Yes, but I have not yet established alerts | No, I did not know that functionality was available, but I am not interested | No, I did not know that functionality was available, but I am interested in using it | Don't Know |
|---|---|---|---|---|---|
| Full Service (n=34) | 3% | 32% | 24% | 35% | 6% |
| Tier 1 (n=10) | 0% | 30% | 40% | 20% | 10% |
| Tier 2 (n=8) | 13% | 0% | 25% | 63% | 0% |
| Tier 3 (n=16) | 0% | 50% | 13% | 31% | 6% |
| Non-Residential (n=26) | 4% | 23% | 31% | 35% | 8% |
| Residential (n=8) | 0% | 63% | 0% | 38% | 0% |
| Elastic (n=3) | 0% | 0% | 67% | 33% | 0% |
| Non-Elastic (n=28) | 4% | 39% | 14% | 39% | 4% |
| Not Enough Data to Determine (n=3) | 0% | 0% | 67% | 0% | 33% |
| **Overall (n=34)** | **3%** | **32%** | **24%** | **35%** | **6%** |

[23] Q**:** A5. Did you know that the Customer Care for Energy Management website can send you automated email alerts if your demand or next day's price per kWh are above or below your customized threshold?

**Table 36: Load Shift Barriers**[24]

| Group | Insufficient resources to pay attention to hourly prices | Inflexible labor schedule | Managing electricity use is not a priority in my organization | The cost of responding outweighs the savings | Negative previous experience with day-ahead hourly pricing | No barriers have been encountered | All of the above barriers mentioned | Other | Don't Know |
|---|---|---|---|---|---|---|---|---|---|
| Tier 1 (n=10) | 20% | 20% | 10% | 10% | 0% | 0% | 0% | 0% | 40% |
| Tier 2 (n=8) | 63% | 0% | 0% | 13% | 0% | 0% | 0% | 25% | 0% |
| Tier 3 (n=14) | 0% | 14% | 14% | 0% | 0% | 0% | 14% | 14% | 43% |
| **Overall (n=32)** | **22%** | **13%** | **9%** | **6%** | **0%** | **0%** | **6%** | **13%** | **31%** |

**Table 37: Active Use of the Customer Care for Energy Management Website**[25]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 30% | 70% | 0% |
| Tier 2 (n=8) | 25% | 75% | 0% |
| Tier 3 (n=16) | 6% | 88% | 6% |
| Non-Residential (n=26) | 23% | 73% | 4% |
| Residential (n=8) | 0% | 100% | 0% |
| Elastic (n=3) | 67% | 33% | 0% |
| Non-Elastic (n=28) | 11% | 86% | 4% |
| Not Enough Data to Determine (n=3) | 33% | 67% | 0% |
| **Overall (n=34)** | **18%** | **79%** | **3%** |

[24] Q: A6. What barriers has your facility experienced in responding to hourly electricity supply prices?
[25] Q: A7. Have you used the Customer Care for Energy Management online tool at www.coned.com/customercare ?

**Table 38: Usage Frequency of the Customer Care for Energy Management Website**[26]

| Group | Daily | Weekly | Monthly | Less than once a month | Other | Don't Know |
|---|---|---|---|---|---|---|
| Tier 1 (n=3) | 0% | 67% | 0% | 33% | 0% | 0% |
| Tier 2 (n=2) | 0% | 0% | 50% | 50% | 0% | 0% |
| Tier 3 (n=1) | 0% | 0% | 0% | 0% | 100% | 0% |
| **Overall (n=6)** | **0%** | **33%** | **17%** | **33%** | **17%** | **0%** |

**Table 39: Is the Customer Care Website Useful**[27]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=3) | 33% | 33% | 33% |
| Tier 2 (n=2) | 50% | 50% | 0% |
| Tier 3 (n=1) | 100% | 0% | 0% |
| Elastic (n=2) | 0% | 50% | 50% |
| Non-Elastic (n=3) | 100% | 0% | 0% |
| Not Enough Data to Determine (n=1) | 0% | 100% | 0% |
| **Overall (n=6)** | **50%** | **33%** | **17%** |

**Which features do you use?**

- Interval data (n=3)
- Energy analysis, load trending, and usage variance
- Hourly profiles
- "Just what the day-ahead pricing is and the trending they have available and what the prices are in the zone we are in."
- Our demand

[26] Q: A7a. If yes, how often do you use it?

[27] Q: A7b. Do you find the tools useful?

**Table 40: Have Experienced Problems with the Customer Care Website**[28]

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=3) | 67% | 33% |
| Tier 2 (n=2) | 50% | 50% |
| Tier 3 (n=1) | 0% | 100% |
| Elastic (n=2) | 100% | 0% |
| Non-Elastic (n=3) | 0% | 100% |
| Not Enough Data to Determine (n=1) | 100% | 0% |
| **Overall (n=6)** | **50%** | **50%** |

**Table 41: Will Continue to Use Customer Care Website**[29]

| Group | Yes | No |
|---|---|---|
| Tier 1 (n=3) | 100% | 0% |
| Tier 2 (n=2) | 50% | 50% |
| Tier 3 (n=1) | 0% | 100% |
| **Overall (n=6)** | **50%** | **50%** |

**Table 42: Would like more Information about Customer Care Website**[30]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=6) | 67% | 33% | 0% |
| Tier 2 (n=6) | 50% | 33% | 17% |
| Tier 3 (n=14) | 79% | 14% | 7% |
| Non-Residential (n=18) | 78% | 22% | 0% |
| Residential (n=8) | 50% | 25% | 25% |
| **Overall (n=26)** | **69%** | **23%** | **8%** |

**Table 43: Have Used IntervalMetering@coned.com**[31]

[28] Q: A7d. Have you had any problems with the tool?
[29] Q: A7e. Will you continue to use it in the future?
[30] Q: A7f. Would you like more information on the tool?

| Group | Yes I have | No, I haven't had the need to | No, I didn't know that email address was in place | Don't Know |
|---|---|---|---|---|
| Tier 1 (n=6) | 0% | 33% | 67% | 0% |
| Tier 2 (n=6) | 17% | 33% | 33% | 17% |
| Tier 3 (n=14) | 0% | 43% | 57% | 0% |
| **Overall (n=26)** | **4%** | **38%** | **54%** | **4%** |

**Table 44: Active Implementation Strategies**[32]

| Activities | Reported Past Activities Total | Percent of All Respondents | Future Planned Activities Total | Percent of All Respondents |
|---|---|---|---|---|
| Management website (n=30) | 0 | 0% | 16 | 53% |
| Energy audit (n=31) | 8 | 26% | 6 | 19% |
| Participate in Con Ed energy efficiency program(s) (n=29) | 0 | 0% | 12 | 41% |
| Improve energy efficiency (n=31) | 1 | 3% | 10 | 32% |
| Switch to electricity supplier other than local utility (n=29) | 1 | 3% | 9 | 31% |
| Technical Assessment (n=30) | 5 | 17% | 4 | 13% |
| Install on-site or distributed generation (n=29) | 5 | 17% | 2 | 7% |
| Shift electricity demand (n=30) | 1 | 3% | 6 | 20% |
| Participate in NYISO load mgt programs (n=29) | 1 | 3% | 5 | 17% |
| Use load management software (n=30) | 2 | 7% | 3 | 10% |

**Table 45: Active Implementations Strategies while on MHP Rate Structure**[33]

[31] Q**:** A7g. Have you contacted IntervalMetering@coned.com for further access to Customer Care or for other MHP related questions?

[32] Q**:** A8. In your response to the hourly electricity pricing program, I'm going to ask you about what actions you have already taken during the past 24 months, or anticipate taking during the next 12 months?

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=10) | 30% | 70% | 0% |
| Tier 2 (n=8) | 38% | 63% | 0% |
| Tier 3 (n=13) | 38% | 62% | 0% |
| **Overall (n=31)** | **35%** | **65%** | **0%** |

**If yes, what have you done?**

- "We have talked with some ESCO's looked at their rates, but MHP has been very low, I didn't think there is anything more competitive then MHP on the open market at least for our current situation."
- "Will be vacating this space in the next 2-3 months."
- "Simply notify tenants of the need to reduce usage maybe turn off an AC unit."
- "Staging our chiller during summer months and reducing wattage on lighting."
- "Hired a consultant to exploring our option

**Table 46: Awareness of NYSERDA Energy Efficiency Incentives**[34]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=33) | 70% | 30% | 0% |
| Retail Access (n=73) | 86% | 11% | 3% |
| Non-Residential (n=89) | 79% | 19% | 2% |
| Residential (n=17) | 94% | 6% | 0% |
| ***Overall (n=106)** | **81%** | **17%** | **2%** |

*Denotes one participant did not respond out of the total 107 responses

**Table 47: Previous Participation in a NYSERDA Energy Efficiency Program**[35]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=32) | 31% | 34% | 34% |
| Retail Access (n=72) | 56% | 35% | 10% |
| **Overall (n=104)** | **48%** | **35%** | **17%** |

[33] Q: A9. Have you taken any OTHER actions in response to the hourly electricity pricing program since you have been enrolled in it?

[34] Q: A10. Are you aware that NYSERDA offers incentives for qualifying energy efficiency measures?

[35] Q: A11. Have you participated in a NYSERDA program?

**Table 48: NYSERDA Recommended Facility Improvements**[36]

| Improvements Made | % of Respondents (n=44) | % of Responses (n=70) |
|---|---|---|
| Lighting | 68.2% | 42.9% |
| Solar panels | 11.4% | 7.1% |
| Air Conditioning | 9.1% | 5.7% |
| Envelope | 9.1% | 5.7% |
| VFDs | 9.1% | 5.7% |
| Occupancy Sensors | 6.8% | 4.3% |
| Boiler | 4.5% | 2.9% |
| Chiller | 4.5% | 2.9% |
| Cogeneration Facility | 4.5% | 2.9% |
| Refrigeration | 4.5% | 2.9% |
| Air Flow Management | 2.3% | 1.4% |
| Appliances | 2.3% | 1.4% |
| Benchmarking initiative | 2.3% | 1.4% |
| Cooling Tower | 2.3% | 1.4% |
| Custom | 2.3% | 1.4% |
| Demand Response | 2.3% | 1.4% |
| EMS | 2.3% | 1.4% |
| HVAC | 2.3% | 1.4% |
| LEED certification | 2.3% | 1.4% |
| Motors | 2.3% | 1.4% |
| Temperature control | 2.3% | 1.4% |
| Wind Power | 2.3% | 1.4% |

[36] Q: A11a. Please describe what improvements you made at this facility by working with NYSERDA.

**Table 49: Previous Participation in a CECONY Energy Efficiency Program**[37]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=33) | 21% | 70% | 9% |
| Retail Access (n=71) | 34% | 58% | 8% |
| Non-Residential (n=87) | 36% | 55% | 9% |
| Residential (n=17) | 0% | 94% | 6% |
| **Overall (n=104)** | **30%** | **62%** | **9%** |

**Table 50: CECONY Recommended Facility Improvements**[38]

| Improvements Made | % of Respondents (n=23) | % of Responses (n=38) |
|---|---|---|
| Lighting | 65.2% | 39.5% |
| Occupancy Sensors | 26.1% | 15.8% |
| VFDs | 17.4% | 10.5% |
| Motors | 13.0% | 7.9% |
| Air Conditioning | 8.7% | 5.3% |
| Curtailment | 8.7% | 5.3% |
| Boiler | 4.3% | 2.6% |
| Cooling Tower | 4.3% | 2.6% |
| Demand Response | 4.3% | 2.6% |
| Demand vent controls | 4.3% | 2.6% |
| Envelope | 4.3% | 2.6% |
| HVAC | 4.3% | 2.6% |

[37] Q: A12. Have you participated in a CECONY energy efficiency program?
[38] Q: A12a. Please describe what improvements you made at this facility by working with CECONY.

**Table 51: Consideration of Energy Assessments**[39]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=31) | 48% | 42% | 10% |
| Full Service Tier 1 (n=10) | 60% | 40% | 0% |
| Full Service Tier 2 (n=7) | 29% | 43% | 29% |
| Full Service Tier 3 (n=14) | 50% | 43% | 7% |
| Retail Access (n=71) | 45% | 54% | 1% |
| Retail Access Tier 1 (n=27) | 48% | 52% | 0% |
| Retail Access Tier 2 (n=9) | 22% | 67% | 11% |
| Retail Access Tier 3 (n=35) | 49% | 51% | 0% |
| Non-Residential (n=87) | 49% | 47% | 3% |
| Residential (n=15) | 27% | 67% | 7% |
| **Overall (n=102)** | **46%** | **50%** | **4%** |

**Table 52: Interested in Receiving more Information about Energy Assessments**[40]

| Group | Yes | No |
|---|---|---|
| Full Service (n=32) | 72% | 28% |
| Full Service Strata 1 (n=10) | 80% | 20% |
| Full Service Strata 2 (n=8) | 50% | 50% |
| Full Service Strata 3 (n=14) | 79% | 21% |
| Retail Access (n=71) | 70% | 30% |
| Retail Access Strata 1 (n=27) | 56% | 44% |
| Retail Access Strata 2 (n=9) | 67% | 33% |
| Retail Access Strata 3 (n=35) | 83% | 17% |
| Elastic (n=9) | 89% | 11% |
| Non-Elastic (n=79) | 72% | 28% |
| Not Enough Data to Determine (n=15) | 53% | 47% |
| **Overall (n=103)** | **71%** | **29%** |

**Table 53: Would Energy Efficiency Incentives Motivate Implementation**[41]

[39] Q: A13. Are you considering an energy audit or technical evaluation to identify load management strategies to facilitate responding to pricing signals?

[40] Q: A14. Are you interested in receiving more information about energy efficiency or energy audits from CECONY?

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Full Service (n=32) | 78% | 3% | 19% |
| Full Service Strata 1 (n=10) | 60% | 10% | 30% |
| Full Service Strata 2 (n=8) | 88% | 0% | 13% |
| Full Service Strata 3 (n=14) | 86% | 0% | 14% |
| Retail Access (n=71) | 86% | 6% | 8% |
| Retail Access Strata 1 (n=27) | 96% | 4% | 0% |
| Retail Access Strata 2 (n=9) | 67% | 22% | 11% |
| Retail Access Strata 3 (n=35) | 83% | 3% | 14% |
| **Overall (n=103)** | **83%** | **5%** | **12%** |

**Retail Access Participants Only**

**Table 54: Daily Operational Change**[42]

| Group | Continued on MHP for a test period then switched to an alternative energy supplier after test period | Switched to an ESCO for energy supply immediately | Switched to an alternative energy supplier immediately | Other | Don't Know |
|---|---|---|---|---|---|
| Retail Access Strata 1 (n=22) | 5% | 18% | 0% | 45% | 32% |
| Retail Access Strata 2 (n=8) | 0% | 0% | 0% | 63% | 38% |
| Retail Access Strata 3 (n=28) | 11% | 14% | 0% | 50% | 25% |
| Non-Residential (n=50) | 4% | 14% | 0% | 54% | 28% |
| Residential (n=8) | 25% | 13% | 0% | 25% | 38% |
| **Overall (n=58)** | **7%** | **14%** | **0%** | **50%** | **29%** |

**"Other" responses included:**

- Already with an ESCO (n=21).
- Already with an alternative energy supplier (n=10).
- "We don't qualify for MHP because our usage is too low."
- "Did not affect us."

**Table 55: Business Response After MHP Rate Structure Went Into Effect**[43]

[41] Q**:** A15. If incentives were available for making any changes that were recommended from an energy audit or technical evaluation, would you apply for them?

[42] Q: ESCO1. What did your organization do when the Mandatory Hourly Pricing tariff went into effect?

| Group | Unable to shed load during high pricing periods | Insufficient resources to pay attention to hourly prices | Costs would be too high | Inability to shift load and react to pricing signals | Bad Experience with prior programs or service | My account has been enrolled with an ESCO prior to my eligibility for MHP | All reasons mentioned above | Other | Don't Know | Refused |
|---|---|---|---|---|---|---|---|---|---|---|
| Retail Access Strata 1 (n=19) | 5% | 0% | 37% | 5% | 0% | 16% | 0% | 16% | 21% | 0% |
| Retail Access Strata 2 (n=8) | 0% | 0% | 13% | 0% | 0% | 25% | 0% | 50% | 13% | 0% |
| Retail Access Strata 3 (n=29) | 3% | 3% | 21% | 0% | 0% | 34% | 0% | 17% | 17% | 3% |
| **Overall (n=56)** | **4%** | **2%** | **25%** | **2%** | **0%** | **27%** | **0%** | **21%** | **18%** | **2%** |

**"Other" responses included:**

- Better prices/incentives elsewhere (n=5).
- "Didn't understand it (MHP)".
- "ESCO provides different pricing product options, fixed partial load or spot market rates. Most ESCO offers similar index pricing as well as fixed/index options."
- "Already in ESCO; MHP too much a of a risk."
- "Not enough information."
- "CECONY couldn't tell us the economic impact of the MHP program so we saw it as an incentive to go to an ESCO. New York State Public Service Commission portrayed it as an incentive."
- "Didn't qualify (for MHP)."

**Why did your organization choose to enroll with an ESCO provided program?**

- Better price/incentives elsewhere (n=46)
- Fixed price is more desirable (n=8)
- "Was already in place when we took over the building."
- "There are many buildings, and a few engineers are not aware of how to calculate energy efficiency."
- "Already enrolled."
- "ConEd couldn't tell us the economic impact of the MHP program, so we saw it as an incentive to go to an ESCO. New York state public service commission portrayed it as an incentive."
- "Too risky."
- "Consistency and transparency."
- "We don't have the infrastructure to do real close monitoring."
- "Difficult to shift loads to react to prices; the tenants in this building do not have hourly meters - the reads are just an estimate; so MHP is kind of a joke."
- "Proven to be more competitive and it's available to us.
-

[43] Q: ESCO2. What did your organization do when the Mandatory Hourly Pricing tariff went into effect?

**Full Service Participants Only**

**Table 56: Daily Operational Change**[44]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 0% | 100% | 0% |
| Tier 2 (n=8) | 0% | 100% | 0% |
| Tier 3 (n=13) | 8% | 69% | 23% |
| **Overall (n=30)** | **3%** | **87%** | **10%** |

**What changes have you experienced?**

- "Outsourcing high energy using equipment such as laundry."

**Table 57: Experienced Operational Shut Down**[45]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 0% | 100% | 0% |
| Tier 2 (n=8) | 0% | 100% | 0% |
| Tier 3 (n=13) | 15% | 62% | 23% |
| **Overall (n=30)** | **7%** | **83%** | **10%** |

**What caused you to shut down your operations?**

- "There have been curtailments through EnerNOC and I have been enrolled with them for the past 3 years. I shut because of the requirements suggested by EnerNOC and shut down from the grid but I have my own generation so it keeps me running."
- "When we were called."

**Table 58: Increase in Operations During Off-Peak Hours**[46]

| Group | Yes | No, it's the same | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 0% | 100% | 0% |

[44] Q: P1. Since participating in MHP, did you experience changes in your daily operations?
[45] Q: P2. Have you had to shut down your operations?
[46] Q: P3. Since participating in MHP, has your business increased operations during off-peak hours?

| | | | |
|---|---|---|---|
| Tier 2 (n=8) | 0% | 100% | 0% |
| Tier 3 (n=13) | 0% | 77% | 23% |
| **Overall (n=30)** | **0%** | **90%** | **10%** |

**Table 59: Installation or Increase of Distributive Generation**[47]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 0% | 100% | 0% |
| Tier 2 (n=8) | 13% | 88% | 0% |
| Tier 3 (n=13) | 15% | 62% | 23% |
| **Overall (n=30)** | **10%** | **80%** | **10%** |

**How so?**

- "Yes, I installed (2) 500kW and a 50kW Solar generator as a try out that we have on the roof."
- "In the interest to conserve and reduce our carbon foot print we installed a 400kW fuel cell plant but it's not related to MHP we were planning to do this prior to participating in the program."
- "PV System."

**Table 60: Hours of Operation**[48]

| Group | Increased/decreased hours of operation | Maintained the same hours of operation | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 22% | 78% | 0% |
| Tier 2 (n=8) | 0% | 100% | 0% |
| Tier 3 (n=13) | 15% | 62% | 23% |
| **Overall (n=30)** | **13%** | **77%** | **10%** |

**By how many hours has your business increased/decreased its hours of operation?**

- "Increased by 10%."
- "Increased load about 15%."

**Table 61: Have Used Energy Consultants**[49]

| Group | Yes | No | Don't Know |
|---|---|---|---|

[47] Q: P4. Since participating in MHP, has your business installed or increased distributive generation?
[48] Q: P5. Has your business increased or decreased your hours of operation since participating in MHP, or maintained the same hours of operation since participating in MHP?
[49] Q: P7. Has your business brought in 3rd party energy expertise (energy consultants)?

| | | | |
|---|---|---|---|
| Tier 1 (n=9) | 56% | 44% | 0% |
| Tier 2 (n=8) | 75% | 25% | 0% |
| Tier 3 (n=13) | 38% | 38% | 23% |
| **Overall (n=30)** | **53%** | **37%** | **10%** |

**Why did your business bring in that expertise?**

- To save money. (n=4)
- To assess energy savings opportunities. (n=3)
- To help determine the best ways to operate the building and conserve energy. (n=2)
- "Unhappy with the cost of bills."
- "Explore pricing options."
- "We decided against it."
- "Manage procurement and efficiency projects."
- "To help identify equipment that is drawing the largest amount of energy."

**Table 62: Use of an Energy Management System**[50]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=9) | 56% | 44% | 0% |
| Tier 2 (n=8) | 38% | 50% | 13% |
| Tier 3 (n=13) | 23% | 54% | 23% |
| Non-Residential (n=24) | 46% | 38% | 17% |
| Residential (n=6) | 0% | 100% | 0% |
| **Overall (n=30)** | **37%** | **50%** | **13%** |

**Table 63: Ability to Control the** [51]

| Group | Air Conditioning Units | Air Handling Units | Ventilation Units | Heating Systems | Lighting | Pumping Equipment | Other | Don't Know |
|---|---|---|---|---|---|---|---|---|
| Tier 1 (n=4) | 75% | 75% | 75% | 75% | 75% | 50% | 0% | 0% |

[50] Q: P8. Has your business installed or enhanced its energy management system?
[51] Q: P8a. If yes, does it have the ability to control any of the following? (Multiple responses allowed)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tier 2 (n=3) | 67% | 67% | 67% | 67% | 33% | 0% | 0% | 0% |
| Tier 3 (n=3) | 67% | 67% | 67% | 67% | 33% | 33% | 33% | 0% |
| **Overall (n=10)** | **70%** | **70%** | **70%** | **70%** | **50%** | **30%** | **10%** | **0%** |

"Other" response: "A Chiller."

**Table 64: Consideration to Shift Load Off of Peak Periods**[52]

| Group | Yes | No | Don't Know |
|---|---|---|---|
| Tier 1 (n=8) | 50% | 50% | 0% |
| Tier 2 (n=7) | 14% | 86% | 0% |
| Tier 3 (n=13) | 31% | 38% | 31% |
| Non-Residential (n=22) | 36% | 45% | 18% |
| Residential (n=6) | 17% | 83% | 0% |
| **Overall (n=28)** | **32%** | **54%** | **14%** |

**If yes, why are you thinking and/or considering these policies?**

- Reduce costs (n=7)
- "Yes, not shifting load (hours) away but load."
- "The primary reason is evaluating the price for which we are selling energy, the price has decrease and to load up and have everyone working particular during peak times doesn't always pay off."

## Program Satisfaction

**Table 65: Sliding Scale of Satisfaction of the Customer Care Website**[53]

| Group | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|
| Full Service Strata 1 (n=3) | 0% | 33% | 33% | 33% | 0% | **3.0** |
| Full Service Strata 2 (n=2) | 0% | 50% | 0% | 0% | 50% | **3.5** |
| Full Service Strata 3 (n=1) | 0% | 0% | 0% | 100% | 0% | **4.0** |
| **Overall (n=6)** | **0%** | **33%** | **17%** | **33%** | **17%** | **3.3** |

**Table 66: Satisfaction of CECONY Customer Service Regarding MHP**[54]

[52] Q: P9. Is your business thinking and/or considering policies to shift load away from peak periods?
[53] Q: S1. On a scale of 1 to 5, where 1 is "not at all satisfied" and 5 is "very satisfied" how satisfied are you with CECONY Customer Care for Energy Management website?

| Group | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|
| Full Service Strata 1 (n=8) | 0% | 0% | 50% | 13% | 38% | **3.9** |
| Full Service Strata 2 (n=6) | 17% | 0% | 33% | 33% | 17% | **3.3** |
| Full Service Strata 3 (n=11) | 45% | 18% | 36% | 0% | 0% | **1.9** |
| **Overall (n=25)** | **24%** | **8%** | **40%** | **12%** | **16%** | **2.9** |

**Table 67: How Hourly Rate Structure has Affected Your Business**[55]

| Group | Positively | Not very much at all | Negatively | Don't Know |
|---|---|---|---|---|
| Tier 1 (n=10) | 20% | 60% | 10% | 10% |
| Tier 2 (n=8) | 0% | 75% | 25% | 0% |
| Tier 3 (n=14) | 29% | 50% | 21% | 0% |
| **Overall (n=32)** | **19%** | **59%** | **19%** | **3%** |

**Positive comments**

- "Because I may be able to save some, play with my EMS that I can save during those [peak] hours and I think the results would be positive but like I said I need more information to go about this but I guess I have enough tools to make MHP much more affordable and reduce my consumption."
- "Since we moved over our bills have been lower."
- "Keeping track of history of usage and pricing of electricity. They haven't noticed huge jumps in the energy usage in comparison to pricing. Energy usage has been constant compared to cost."

**Negative comments**

- "It's the reason we're moving out of this location."
- "It doesn't make economical sense to run 2-3 shifts and through peak times we're considering cutting back on our labor force and delaying the operations."
- "Because we're running our machines, 24/7 we don't have other options like running at different times of the day."
- "Because electricity is a significant portion of our budget."

[54] Q: S2. On a scale of 1 to 5, where 1 is "not at all satisfied" and 5 is "very satisfied" how satisfied are you with your ability to contact CECONY and receive information on MHP?
[55] Q: S4. How do you think hourly pricing has affected or will affect your business?

**Q: S5. What do you like best about the program?**

- Don't know enough about it. (n=9)
- Don't know. (n=6)
- It hasn't had much of an impact on our budget. (n=2)
- "I like that giving consumers the day ahead option on pricing structure allows them to plan ahead to shift their load, there is flexibility and freedom."
- "That it didn't significantly increase our bills."
- "It's stable."
- "The potential to reduce energy costs."
- "The transparency of it, if we need info it's very easy to get and very useful."
- "Staying with the program has given me better pricing then the ESCO market rate, but once we get the building renovated will establish a baseline and assess if the program is still offers the best rates."
- "Potential to save."

**Q: S6. What, if anything, could CECONY do to improve the MHP program?**

- Provide more information. (n=6)
- Don't know enough about it. (n=5)
- Nothing. (n=5)
- Improve the website. (n=3)
- Explain it better. (n=3)
- Send a representative to us. (n=2)
- "Residential if it involves shutting things off, there is not much hope for residential. It's unfortunate but true."
- "This phoned call."
- "I have more information, go to website, and check out bill, how much is my demand if I had that from ConEd live I could come up with dollars and cents. I need more help from ConEd. I may need some equipment installed at the meter to get this on my computer."
- "Reminding us of the rates, previous and include a forecast or projection on a monthly basis on the average expected as previous rates per kWh."

**Q: S7. Are there any other specific improvements and recommendations you have on marketing, outreach and education that would be helpful in managing your facility with respect to hourly pricing?**

- No. (n=6)
- Don't know enough about it (n=4)
- "Email is good because they did respond to the messages on curtailment or a fax."
- "Educate our staff; reach out to us when we're enrolled in the program."
- "Mailing would be most effective with this company, calls tend not to get answered."
- "Getting information is a start."
- "Tell us that you have programs."
- "The original letter we received was confusing; it didn't tell you how to use it or to go to the website every day. I have never looked at since I originally created a user ID. The program is not user friendly and doesn't tell us how this program helps. The jargon and terms are not in laymen's language. Furthermore it doesn't tell us what our magic number [targeted to reduce consumption] should be. We never felt this program was beneficial to us. The times they offered the seminars were not convenient."
- "I think it has to take into consideration the possibility are in res applications as opposed to commercial and how to reach the tenants and how to really implement a change of behaviors."
- "I need more help."

## Firmographics

**Table 68: Sample Peak Demand[56]**

| Range (MW) | % of respondents (n=36) |
|---|---|
| 0.0-2.0 | 58.3% |
| 2.1-10.0 | 25.0% |
| 10.1-50.0 | 8.3% |
| 50.1-150.0 | 5.6% |
| >150.0 | 2.8% |
| **Stat** | **Result (MW)** |
| Minimum | 0.249 |
| Maximum | 299.2 |
| Average | 17.7 |

**Table 69: Sample Monthly Load[57]**

| Group | 1,500kW or larger | 1,000kW to 1,499kW | 500kW to 999kW |
|---|---|---|---|
| Full Service (n=34) | 29% | 24% | 47% |
| Retail Access (n=73) | 37% | 14% | 49% |
| Non-Residential (n=90) | 39% | 18% | 43% |
| Residential (n=17) | 12% | 12% | 76% |
| **Overall (n=107)** | **35%** | **17%** | **49%** |

**Table 70: Number of Employees[58]**

[56] Q: F1. What is the annual peak demand of the facility?
[57] Q: F2. What is the monthly load for your organization?

| Range | % of respondents (n=94) |
|---|---|
| 0-100 | 39.4% |
| 101-500 | 31.9% |
| 501-1,000 | 10.6% |
| 1,001-2,500 | 10.6% |
| 2,501-10,000 | 4.3% |
| >10,000 | 3.2% |
| **Stat** | **Result** |
| Minimum | 3 |
| Maximum | 45,000 |
| Average | 1,267 |

**Table 71: Number of units in Residential Facilities[59]**

| Range | % of respondents (n=14) |
|---|---|
| 0-250 | 28.6% |
| 251-500 | 50.0% |
| 501-750 | 14.3% |
| >750 | 7.1% |
| **Stat** | **Result** |
| Minimum | 184 |
| Maximum | 1,318 |
| Average | 406 |

[58] Q: F3. How many employees work at your facility?
[59] Q: F4. (Residential Only) How many units are at your facility?

**Table 72: Number of tenants in Residential Facilities[60]**

| Range | % of respondents (n=11) |
|---|---|
| 0-250 | 9.1% |
| 251-500 | 18.2% |
| 501-750 | 18.2% |
| 751-1,000 | 36.4% |
| >1,000 | 9.1% |
| **Stat** | **Result** |
| Minimum | 200 |
| Maximum | 3,954 |
| Average | 959 |

**Table 73: Sample Square Footage[61]**

| Range | % of respondents (n=84) |
|---|---|
| 0-25,000 | 2.4% |
| 25,001-50,000 | 4.8% |
| 50,0001-100,000 | 10.7% |
| 100,001-250,000 | 26.2% |
| 250,001-500,000 | 29.8% |
| 500,001-1,000,000 | 19.0% |
| >1,000,000 | 7.1% |
| **Stat** | **Result** |
| Minimum | 280 |
| Maximum | 1,600,000 |
| Average | 416,780 |

[60] Q: F4a. (Residential Only) How many tenants are at your facility?
[61] Q: F5. What is the square footage of your facility?

**Table 74: Sample Facility Type[62]**

| Group | Full Service (n=33) | Retail Access (n=72) | Overall (n=105) |
|---|---|---|---|
| Commercial Office Building | 6.1% | 33.3% | 24.8% |
| Residential Housing | 33.3% | 15.3% | 21.0% |
| Hospital/ Health Care | 6.1% | 13.9% | 11.4% |
| Lodging/ Entertainment | 12.1% | 5.6% | 7.6% |
| Manufacturing | 9.1% | 5.6% | 6.7% |
| Other | 12.1% | 4.2% | 6.7% |
| Warehouse/ Distribution | 3.0% | 5.6% | 4.8% |
| Retail | 0.0% | 6.9% | 4.8% |
| Data Center | 6.1% | 4.2% | 4.8% |
| Education College/ University | 6.1% | 2.8% | 3.8% |
| Power Generator | 6.1% | 0.0% | 1.9% |
| Refused | 0.0% | 2.8% | 1.9% |

**Other**

- Commercial Real Estate
- Outpatient Center
- Multi-tenant office property
- Empty building
- Subway tunnel
- Tunnel construction project
- Three-shift transportation

[62] Q F6: What description best reflects your organization?

# H. Appendix H – Common Load Reduction Strategies

**HVAC Strategies (15 – 30 minutes to implement)**

1. Pre – Cooling & Temperature Modification: Cool the facility down early to a temperature below the normal set point and allow the building to float through the high priced hours without running the cooling equipment.
2. Temperature Modification: Raise the cooling set points 6° F (typically from 72° F to 78° F).
3. HVAC Scheduling: Use alternative fuel chillers such as natural gas engine chillers or absorption chillers to switch some peak-cooling load from the electric chillers.
4. Other HVAC Strategies
   a. Raise chilled water supply temperatures.
   b. VAV systems – Decrease supply and return fan speeds.
   c. CAV systems – Short duration cycling of supply and return fans.
   d. Window AC units – Shut off or turn down units.

**Lighting Strategies (15 minutes)**

1. Shut off large blocks of non-essential lighting such as perimeter lights or lobbies/atriums with sufficient ambient light.
2. Switch off a percentage of corridor lighting.
3. Curtail lighting in unoccupied areas that would normally remain on.
4. Curtail overhead lighting in occupied areas where task lighting can be used.

**Shift Production Schedules (Planned actions take effect immediately)**

1. Move some first shift production into the second or third shift and shut down applicable production lines.
2. At campus type facilities investigate consolidating activities to fewer buildings so that lightly used buildings can be shut down.

**Turn Off Discretionary Equipment (15 minutes)**

1. Turn off half of the building's elevators or escalators.
2. Turn off pumps for ornamental fountains.
3. Shut off lighting (not previously discussed) such as lighted signs or exterior lighting.

**Displace Load Using Properly Permitted Back-Up Generators (15 minutes)**

1. Identify actual connected load carried by generator.
2. Make sure that the generators have the proper permits to run during high price periods.
3. Make sure that all electrical switch gear and transfer switches connected to the generators are functional.

# I. Appendix I – Benchmarking Study

A 2004 study by Barbose, Goldman and Neenan, et al compiled results from voluntary real-time pricing programs across North America and found that 15 of 42 programs surveyed had no participants as of 2003. These groups of customers are different from the MHP group because they actively selected to be on a real-time pricing rate and, presumably, they had some ability to shift load.

"Among programs with more than 10 participants, price response typically begins to materialize at a threshold below $0.20/kWh, and the three largest programs reported that price response occurs at, or below, $0.10/kWh. Program managers frequently reported that much of the price response at these relatively low prices consists of customers operating onsite generation. For example, in Duke's and Georgia Power's tariffs, such customers are reported to begin responding when prices reach $0.07-$0.08/kWh, and in Dominion's program, customers with diesel-fired backup generators were assumed to operate these units when prices reached $0.10/kWh. For a handful of programs, several of which have fewer than ten participants, customers apparently do not begin responding until prices reach $0.30 to $0.80/kWh. In most of these cases, participants' response is reportedly limited to periods when marginal capacity/outage cost adders (or similar pricing components) are imposed. These adders often constitute the most significant source of price variability, and several programs provide explicit notification (e.g., phone calls or email alerts) when such adders are to be applied."

Clearly these customers are not comparable to the MHP customers because they begin to respond to prices that are lower than the mean price for MHP, they use on-site generation, they receive notice of high price events and there are adder costs included in the price that were not explicitly stated but would increase the actual cost above the levels reported for price response.

# J. Appendix J – Glossary of Terms

| Acronym | Definition |
|---|---|
| BOC | Building Operator Certification |
| CAV | Constant Air Volume |
| CECONY | Consolidated Edison Company of New York |
| DMS | Demand Monitoring System |
| EMS | Energy Management System |
| ESCO | Energy Service Company |
| HVAC | Heating, Ventilation and Air Conditioning |
| MHP | Mandatory Hourly Pricing |
| NAC | Normalized Annualized Consumption |
| NAICS | North American Industry Classification System |
| NYISO | New York Independent System Operator |
| NYSPSC | New York State Public Service Commission |
| NYCA | New York Control Area |
| NYSERDA | New York State Energy Research and Development Authority |
| OLS | Ordinary Least Squares |
| RFP | Request for Proposal |
| RMSE | Root Mean Square Error |
| RTU | Rooftop Unit |
| SAE | Statistically Adjusted Engineering model |
| TOU | Time-of-Use |
| VAV | Variable Air Volume |
| WLS | Weighted Least Squares |