

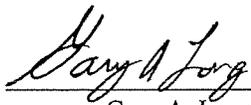
NHPUC No. 6 - ELECTRICITY DELIVERY  
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

SUPPLEMENT NO. 4  
VOLUNTARY INTERRUPTION PROGRAM  
RATE VIP

TARIFF  
for  
ELECTRIC DELIVERY SERVICE  
Applicable  
in  
Various towns and cities in New Hampshire,  
served in whole or in part.

(For detailed description, see Service Area)

Issued: August 26, 2009

Issued by:   
Gary A. Long

Effective: June 1, 2010

Title: President and Chief Operating Officer

VOLUNTARY INTERRUPTION PROGRAM  
RATE VIP

AVAILABILITY

Subject to the Terms and Conditions of the Tariff of which it is a part, this rate is for voluntary load reduction by either load interruption and/or use of customer standby generation. Service under this rate must be taken in conjunction with service provided under Primary General Delivery Service Rate GV or Large General Delivery Service Rate LG and Default Energy Service Rate DE and in accordance with the terms or conditions therein as now or hereafter effective except as may be specifically provided otherwise in this rate.

The load must be available for interruption during the summer program period commencing June 1 and ending on September 30 each year, or at the Company's option, during the winter program period commencing January 1 and ending March 31 each year.

The customer must sign a service agreement to receive service under this rate and may enroll in the summer program period and/or the winter program period when offered by the Company.

Interruptible load presently served under a Special Contract by the Company is not eligible for service under this rate. Interruptible load presently served under any other interruptible rate is not eligible for service under this rate.

The customer must have interval metering in order to participate in this program.

NOTIFICATION OF INTERRUPTION

The customer shall provide to the Company the names and telephone numbers of persons to notify to request reduction of load during Hourly Interruptible Periods. The Company shall provide the customer with up to one hour's notice of any Hourly Interruptible Period, to request that the customer reduce load. The Company will strive to provide more advance notification, if possible. The Company will also notify the customer prior to the end of the interruption.

DEFINITIONS

Hourly Interruptible Period: All clock hours designated by the Company during a particular day for which the Company requests customers to reduce or postpone the use of electricity. Hourly Interruptible Periods shall exclude those periods occurring during Scheduled Plant Shutdowns. All interruptions shall begin and end on the clock hour.

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Designated Load: An amount of load specified in the service agreement, which the customer agrees to interrupt if reasonably practicable and the Company agrees is reasonably achievable, consisting of specific pieces of equipment or processes which are normally used by the customer. Customer owned standby generation on the load side of the meter may also be utilized to supply Designated Load. The minimum amount of Designated Load that the customer may specify shall be the greater of 100 kilowatts or ten percent (10%) of the average of the customer's monthly maximum thirty-minute kilowatt demands occurring during on-peak hours.

Interrupted Demand: For each Hourly Interruptible Period, the difference between: (a) the Baseline Demand; and (b) the average integrated kilowatt demand during that Hourly Interruptible Period.

Baseline Demand: The average integrated kilowatt demand occurring during each corresponding hour, on non-holiday weekdays of the current calendar month during which Hourly Interruptible Periods were not designated, excluding those hours during Scheduled Plant Shutdowns. The Baseline Demand amount calculated above will be adjusted upward if the average of the actual usage in the two hours preceding the commencement of the particular Hourly Interruptible Periods is greater than the actual average usage during the corresponding two hours on non-holiday weekdays of the current calendar month during which Hourly Interruptible Periods were not designated, excluding those hours during Scheduled Plant Shutdowns. The adjustment to the Baseline Demand will be equal to the difference between the two average amounts described above.

Credited Interrupted Demand: The lesser of the customer's Interrupted Demand for the Hourly Interruptible Period or 125% of the customer's Designated Load.

Excess Interrupted Demand: The amount by which the customer's Interrupted Demand for the Hourly Interruptible Period exceeds 125% of the customer's Designated Load.

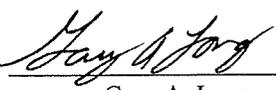
Real Time Zonal Price (RTZP): The spot market price for electric energy for the New Hampshire load zone as determined by the Independent System Operator – New England (ISO-NE) for each hour of an Hourly Interruptible Period.

Scheduled Plant Shutdown: Time periods specified by the Customer in the Service Agreement in which the Designated Load is not available for interruption.

## INTERRUPTION CREDITS

An Interruption Credit will be calculated for Hourly Interruptible Periods during which the Customer is receiving Default Energy Service and will be applied to the customer's bill no earlier than the second bill rendered after the meter reading which includes the interruptions. The Interruption Credit will be the sum of the credits calculated for each Hourly Interruptible Period in the month. One of the following credits will apply to each kilowatt-hour of Credited Interrupted Demand during each Hourly Interruptible Period, depending upon the ratio of Credited Interrupted Demand to Designated Load:

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<u>% of Hourly RTZP Paid to Customers (per KWH)</u>	<u>Ratio of Credited Interrupted Demand to Designated Load</u>
0%	If Ratio is less than 25%
60%	If Ratio is greater than or equal to 25%, but less than 50%
80%	If Ratio is greater than or equal to 50%, but less than 75%
100%	If Ratio is greater than or equal to 75% (up to 125% of DL)

#### EXCESS INTERRUPTION CREDIT

An Excess Interruption Credit will be applied, if appropriate, to the customer's bill no earlier than the second bill rendered after the current calendar month. The Excess Interruption Credit will be the sum of the credits applied to each kilowatt-hour of Excess Interrupted Demand for each Hourly Interruptible Period. The credit applied to each kilowatt-hour of Excess Interrupted Demand will be equal to 60% of the RTZP.

#### FAILURE TO FULLY COMPLY

If the customer's Credited Interrupted Demand is less than seventy-five percent (75%) of the customer's Designated Load for more than 25% of the Daily Interruptible Periods, the Company may refuse to allow the customer to continue to take service hereunder.

#### ISO-NE DEMAND RESPONSE PROGRAMS

The Company at its option may enroll Customers in the ISO-NE Demand Response Programs ("ISO-NE Programs") as amended from time to time and approved by the Federal Energy Regulatory Commission or a Company program based on the operating procedures and guidelines of ISO-NE's 30-Minute Real-Time Demand Response Program in lieu of enrolling Customers in the Voluntary Interruption Program as defined under this rate schedule. Customers may enroll with the Company or any other NEPOOL Participant, subject to the provisions of the ISO-NE Programs in effect at the time. A Customer may not enroll with the Company under the provisions of an ISO-NE Program and the Voluntary Interruption Program at the same time. Customers will be required to meet all the criteria for the load interruptions set forth in the ISO-NE Programs and will be required to install any additional required metering software, telephone lines, internet connections and other equipment necessary to participate in the ISO-NE Program.

Issued: August 26, 2009

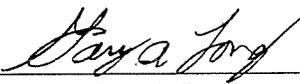
Issued by:   
Gary A. Long

Effective: June 1, 2010

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In addition, any Customer load designated as interruptible load under an ISO-NE Program must also be available for interruption during all clock hours designated by the Company. Other incremental fees and costs of the participation in the ISO-NE Program are the responsibility of the Customer. To compensate the Customer, the Company shall determine a Monthly Credit Amount in accordance with the methodology utilized by ISO-NE to calculate the amount paid by ISO-NE to a NEPOOL participant for interruptible load enrolled in an ISO-NE Program and shall credit the Customer's electric account by an amount not to exceed 75% of the Monthly Credit Amount within 45 days from the end of each calendar month. The Company at its option may limit customer enrollment based on a maximum amount of interruptible load.

Issued: August 26, 2009

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Gary A. Long

Effective: June 1, 2010

Title: President and Chief Operating Officer

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Various towns and cities in New Hampshire,  
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AVAILABILITY

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The load must be available for interruption during the summer program period commencing June 1 and ending on September 30 each year, or at the Company's option, during the winter program period commencing January 1 and ending March 31 each year.

The customer must sign a service agreement to receive service under this rate and may enroll in the summer program period and/or the winter program period when offered by the Company.

Interruptible load presently served under a Special Contract by the Company is not eligible for service under this rate. Interruptible load presently served under any other interruptible rate is not eligible for service under this rate.

The customer must have interval metering in order to participate in this program.

NOTIFICATION OF INTERRUPTION

The customer shall provide to the Company the names and telephone numbers of persons to notify to request reduction of load during Hourly Interruptible Periods. The Company shall provide the customer with up to one hour's notice of any Hourly Interruptible Period, to request that the customer reduce load. The Company will strive to provide more advance notification, if possible. The Company will also notify the customer prior to the end of the interruption.

DEFINITIONS

Hourly Interruptible Period: All clock hours designated by the Company during a particular day for which the Company requests customers to reduce or postpone the use of electricity. Hourly Interruptible Periods shall exclude those periods occurring during Scheduled Plant Shutdowns. All interruptions shall begin and end on the clock hour.

Issued: ~~July 3, 2007~~ August 26, 2009

Issued by: /s/ Gary A. Long  
Gary A. Long

Effective: ~~July 1, 2007~~ June 1, 2010

Title: President and Chief Operating Officer

**Designated Load:** An amount of load specified in the service agreement, which the customer agrees to interrupt if reasonably practicable and the Company agrees is reasonably achievable, consisting of specific pieces of equipment or processes which are normally used by the customer. Customer owned standby generation on the load side of the meter may also be utilized to supply Designated Load. The minimum amount of Designated Load that the customer may specify shall be the greater of 100 kilowatts or ten percent (10%) of the average of the customer's monthly maximum thirty-minute kilowatt demands occurring during on-peak hours.

**Interrupted Demand:** For each Hourly Interruptible Period, the difference between: (a) the Baseline Demand; and (b) the average integrated kilowatt demand during that Hourly Interruptible Period.

**Baseline Demand:** The average integrated kilowatt demand occurring during each corresponding hour, on non-holiday weekdays of the current calendar month during which Hourly Interruptible Periods were not designated, excluding those hours during Scheduled Plant Shutdowns. The Baseline Demand amount calculated above will be adjusted upward if the average of the actual usage in the two hours preceding the commencement of the particular Hourly Interruptible Periods is greater than the actual average usage during the corresponding two hours on non-holiday weekdays of the current calendar month during which Hourly Interruptible Periods were not designated, excluding those hours during Scheduled Plant Shutdowns. The adjustment to the Baseline Demand will be equal to the difference between the two average amounts described above.

**Credited Interrupted Demand:** The lesser of the customer's Interrupted Demand for the Hourly Interruptible Period or 125% of the customer's Designated Load.

**Excess Interrupted Demand:** The amount by which the customer's Interrupted Demand for the Hourly Interruptible Period exceeds 125% of the customer's Designated Load.

**Real Time Zonal Price (RTZP):** The spot market price for electric energy for the New Hampshire load zone as determined by the Independent System Operator – New England (ISO-NE) for each hour of an Hourly Interruptible Period.

**Scheduled Plant Shutdown:** Time periods specified by the Customer in the Service Agreement in which the Designated Load is not available for interruption.

## INTERRUPTION CREDITS

An Interruption Credit will be calculated for Hourly Interruptible Periods during which the Customer is receiving Default Energy Service and will be applied to the customer's bill no earlier than the second bill rendered after the meter reading which includes the interruptions. The Interruption Credit will be the sum of the credits calculated for each Hourly Interruptible Period in the month. One of the following credits will apply to each kilowatt-hour of Credited Interrupted Demand during each Hourly Interruptible Period, depending upon the ratio of Credited Interrupted Demand to Designated Load:

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Title: President and Chief Operating Officer

<u>% of Hourly RTZP Paid to Customers (per KWH)</u>	<u>Ratio of Credited Interrupted Demand to Designated Load</u>
0%	If Ratio is less than 25%
60%	If Ratio is greater than or equal to 25%, but less than 50%
80%	If Ratio is greater than or equal to 50%, but less than 75%
100%	If Ratio is greater than or equal to 75% (up to 125% of DL)

#### EXCESS INTERRUPTION CREDIT

An Excess Interruption Credit will be applied, if appropriate, to the customer's bill no earlier than the second bill rendered after the current calendar month. The Excess Interruption Credit will be the sum of the credits applied to each kilowatt-hour of Excess Interrupted Demand for each Hourly Interruptible Period. The credit applied to each kilowatt-hour of Excess Interrupted Demand will be equal to 60% of the RTZP.

#### FAILURE TO FULLY COMPLY

If the customer's Credited Interrupted Demand is less than seventy-five percent (75%) of the customer's Designated Load for more than 25% of the Daily Interruptible Periods, the Company may refuse to allow the customer to continue to take service hereunder.

#### ISO-NE DEMAND RESPONSE PROGRAMS

The Company at its option may enroll Customers in the ISO-NE Demand Response Programs ("ISO-NE Programs") as amended from time to time and approved by the Federal Energy Regulatory Commission or a Company program based on the operating procedures and guidelines of ISO-NE's 30-Minute Real-Time Demand Response Program in lieu of enrolling Customers in the Voluntary Interruption Program as defined under this rate schedule. Customers may enroll with the Company or any other NEPOOL Participant, subject to the provisions of the ISO-NE Programs in effect at the time. A Customer may not enroll with the Company under the provisions of an ISO-NE Program and the Voluntary Interruption Program at the same time. Customers will be required to meet all the criteria for the load interruptions set forth in the ISO-NE Programs and will be required to install any additional required metering software, telephone lines, internet connections and other equipment necessary to participate in the ISO-NE Program.

Issued: ~~July 3, 2007~~ August 26, 2009

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In addition, any Customer load designated as interruptible load under an ISO-NE Program must also be available for interruption during all clock hours designated by the Company. Other incremental fees and costs of the participation in the ISO-NE Program may also be are the responsibility of the Customer. To compensate the Customer, the Company shall determine a Monthly Credit Amount in accordance with the methodology utilized by ISO-NE to calculate the amount paid by ISO-NE to a NEPOOL participant for interruptible load enrolled in an ISO-NE Program and shall credit the Customer's electric account by an amount not to exceed 75% of the Monthly Credit Amount within 45 days from the end of each calendar month. The Company at its option may limit customer enrollment based on a maximum amount of interruptible load. The Company shall compensate the Customer by crediting the Customer's electric account by the amount paid to the Company by the ISO-NE in accordance with the provisions of the ISO-NE Program. Credits will be applied within 45 days of the date of the Company's receipt of payment from ISO-NE.

Issued: August 26, 2009 Issued by: /s/ Gary A. Long  
Gary A. Long  
Effective: June 1, 2010 Title: President and Chief Operating Officer

**THE STATE OF NEW HAMPSHIRE  
before the  
PUBLIC UTILITIES COMMISSION**

Public Service Company of New Hampshire

Voluntary Interruptible Program

Docket No. DE 09-XXX

**PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE  
TO MODIFY ITS PEAKSMARTPLUS PROGRAM  
AND REQUEST FOR EXPEDITED APPROVAL OF TARIFF CHANGES AND  
PROGRAM DESIGN MODIFICATIONS**

Public Service Company of New Hampshire ("PSNH" or "the Company") hereby petitions and requests the New Hampshire Public Utilities Commission ("Commission") to approve a tariff supplement applicable to the Company's Voluntary Interruptible Program Rate VIP, and certain program design changes on less than thirty (30) days' notice to the public. PSNH proposes to revise its Rate VIP to continue the ISO New England Demand Program Option of Rate VIP ("PeakSmartPlus Program") beyond May 31, 2010 through the use of a modified program, administered more directly by PSNH, and funded by Forward Capacity Market revenues PSNH already receives from the Independent System Operator for New England ("ISO New England"). In support of this Petition and Request, PSNH says the following:

1. PSNH's Voluntary Interruptible Program ("VIP") is offered to large commercial and industrial customers having the capability to interrupt load or replace load with backup generation when contacted by PSNH and requested to reduce or interrupt the load designated in the approved VIP application. Under one section of the tariff rate, the Company at its option may enroll customers in the ISO New England Demand Response Programs. It is this section of the Rate VIP tariff that PSNH is proposing to change. Without the change, the ISO Demand option will terminate on May 31, 2010 by its own terms for lack of funding. PSNH proposes to continue the option using revenues PSNH receives from ISO for conservation measures previously installed and already bid into the Forward Capacity Market. Previously PSNH merely flowed through to participating

customers the payments it received from ISO New England, net of incremental program costs, by participating in the 30 Minute Demand Response Program.

2. If approved by the Commission, PSNH will continue to conduct a demand response program beyond May 31, 2010 which will closely follow the operating procedures and guidelines of ISO-New England's 30-Minute Real-Time Demand Response Program. With timely approval of this approach and program design changes by October 1, 2009, even by an Order *Nisi*, PSNH will proceed to secure commitments from customers to participate in the demand response program after May 31, 2010. Continued participation by PSNH and its large commercial and industrial customers in a demand response program has the benefit of being ready to curtail load during a New England system peak. Many of the costs allocated by ISO New England are determined based upon the individual member's contribution to system peak load.

3. In addition to the tariff change, PSNH requests permission to make program modifications as follows:

- A. PSNH will base its program on ISO-NE's 30-Minute Real-Time Demand Response Program.
- B. PSNH will have the flexibility to call for load reductions when PSNH anticipates ISO-NE will reach a system peak.
- C. PSNH will pay participating customers who interrupt load when called upon 75% of the Adjusted Clearing Price.
- D. PSNH will fund the program with Forward Capacity Market (FCM) revenues paid to PSNH in exchange for the capacity reductions resulting from the CORE Programs.

These program modifications are more specifically detailed and supported in the enclosed Technical Statement of Gilbert E. Gelineau, Jr.

4. At least a thirty day notice is required before any change in rates, fares, charges or prices, with such notice to the public as the Commission shall direct, unless otherwise ordered by the Commission. N. H. RSA 378:3. The Commission's rules similarly require the filing of a proposed tariff change 30 days before the effective date of the tariff pages. N. H. Code Admin. Rule Puc §1603.07(a) (1). The Commission may

waive any of its rules if the waiver would be in the public interest. N. H. Code Admin. Rule Puc §201.05. PSNH believes there is good cause to waive the thirty day notice standard, to grant a waiver as being in the public good and to approve the proposed tariff change before October 1, 2009.

5. Although the proposed effective date for the tariff change is June 1, 2010, PSNH needs know now that it can continue offering the ISO Demand Response Program option under Rate VIP in its proposed format beyond May 31, 2010. PSNH needs this approval before October 1, 2009 in order to enroll customers beyond May 31, 2010. Absent approval by October 1, 2009, PSNH would request a decision by December 1, 2009 so that its customers may make arrangements with other, third party demand response program operators.

WHEREFORE, PSNH respectfully requests that the Commission

- A. Approve the proposed Supplement No. 4 to Tariff NHPUC No. 6 – Electric Delivery,
- B. Approve the proposed design changes to the PeakSmartPlus Program, and or
- C. Order such further relief as may be just and equitable.

Respectfully submitted,  
Public Service Company of New Hampshire

August 27, 2009  
Date

By: Gerald M. Eaton  
Gerald M. Eaton  
Senior Counsel  
780 North Commercial Street  
Post Office Box 330  
Manchester, New Hampshire 03105-0330  
(603) 634-2961

CERTIFICATE OF SERVICE

I hereby certify that, on the date written below, I caused the attached Petition of Public Service Company of New Hampshire to Modify Its PeakSmartPlus Program and Request for Expedited Approval to be served pursuant to N.H. Code Admin. Rules Puc §203.02 and §203.11.

August 27, 2009

Date

Gerald M. Eaton

Gerald M. Eaton

**THE STATE OF NEW HAMPSHIRE**  
**before the**  
**PUBLIC UTILITIES COMMISSION**

**Public Service Company of New Hampshire**  
**Voluntary Interruptible Program**

**Docket No. DE 09-XXX**

**TECHNICAL STATEMENT**

**of**

**GILBERT E. GELINEAU, JR.**

**I. Introduction and Purpose**

PeakSmartPlus is a demand response program based on ISO-NE's 30 Minute Real-Time Demand Response Program. Public Service Company of New Hampshire ("PSNH" or "the Company") offers PeakSmartPlus to eligible customers as part of the Voluntary Interruptible Program, Rate VIP. As of July 31, 2009, a total of 24 customers with a combined capacity reduction of 10.279 MW were enrolled in the program.

Customers are compensated for their participation in the program through payments funded by ISO-NE's Forward Capacity Market. However, the funding mechanism which supports PeakSmartPlus is scheduled to end on May 31, 2010. The purpose of this testimony is to review the current funding mechanism, to examine alternatives, and to recommend an approach that can be used after May 31, 2010.

**II. Background**

In April 2008, PSNH implemented PeakSmartPlus based on ISO-New England's 30 Minute Real-Time Demand Response Program. As of July 31, 2009, PSNH has enrolled 8 customers with 2.762 MW of demand response assets ("Real-Time Demand Response" assets) and 16 customers with 7.517 MW of emergency generation ("Real-Time Emergency Generation" assets), for a total of 10.279 MW.

Customers are compensated for the capacity they provide through load reductions or operation of their emergency generation. Once enrolled in the program and prior to the calling of a curtailment event by ISO-NE, program participants are compensated based on their committed load reduction (or emergency generator capacity). After a curtailment event, participant

payments are based on actual performance during curtailment. Payments are funded through the Forward Capacity Market (FCM). More specifically, payments are based on a fixed fee schedule established for the FCM's Transition Period which runs from December 1, 2006, through May 31, 2010. During the Transition Period, the ISO-NE is recognizing all qualified assets and compensating the assets in accordance with a published fee schedule.

Beginning June 1, 2010, demand response assets must have obtained a capacity supply obligation via a Forward Capacity Auction (FCA) in order to receive payment and the amount paid for demand reductions will vary depending on the results of the auction. PSNH introduced PeakSmartPlus in April 2008, although not as part of the first and second FCAs. As a result, neither the current funding mechanism available during the Transition Period, nor its successor mechanism, the FCA, will be available to support PeakSmartPlus participation beyond May 31, 2010.

### **III. Program Operation During the Transition Period**

PSNH offers PeakSmartPlus to its large commercial and industrial customers capable of providing at least 100 kW during an ISO-New England load reduction event. The ISO-New England 30 Minute Real-Time Demand Response Program is available to all qualifying customers who have installed digital data recorders. Installed by an independent Internet Based Communication System (IBCS) provider approved by ISO-NE, these data recorders capture and transmit the ISO-NE required five-minute kW demand interval values during ISO-NE interruption periods.

In accordance with program rules, ISO-NE determines the customer's actual capacity contribution during a curtailment event. For customers reducing load, the capacity contribution is determined by comparing actual usage to a calculated baseline. For customers using emergency generation, the capacity contribution is based on the actual measured output of the customer's emergency generation. In accordance with the ISO-NE rules, the customer's monthly payment is determined based on the capacity contribution plus a "Reserve Margin" adder which is a percentage of the capacity payment. The Reserve Margin adder is determined by ISO-NE and varies each month. In 2009 the Reserve Margin has ranged between 15% and 60% and has averaged approximately 45%. The following table depicts the monthly payment for a customer credited with a 100 kW reduction during an ISO-NE curtailment event:

Quantity	Rate	Monthly Payment
100 kW	\$4.10 / kW	\$410.00
Reserve Margin	45%	\$184.50
Total Monthly Payment		\$594.50

The example cited here serves to illustrate the magnitude of the monthly payment a customer would receive for a 100 kW capacity contribution.

Customers with larger capacity contributions would receive proportionately larger monthly payments. However, it oversimplifies the details of the monthly payment calculations. For example, after enrollment and prior to an actual curtailment event, customer capacity contribution is based upon the customer's agreed upon contribution at the time of enrollment. In another example, there are modifications to the above calculations in cases where there are multiple curtailment events in a single month.

Certain program expenses are netted against these monthly payments. These include the equipment and installation costs of the data recorders and communications gear, a monthly monitoring fee, and if required, annual telephone/data transmission charges. For a typical customer with a single monitoring point, the one-time equipment charges are approximately \$3,300 and the ongoing monthly charges are \$150.

In summary, after paying off the one-time equipment costs, program participants with a 100 kW capacity contribution would receive approximately \$450 each month under the current program. Customers with larger capacity contributions receive proportionately larger monthly payments. Under the current program, the average customer is paid \$2,500 each month less expenses as discussed above. The total annual capacity payments for the entire program before expenses is \$722,000.

#### IV. Going Forward Customer Payments

As stated earlier, PSNH introduced PeakSmartPlus in April 2008, although not as part of the first and second FCAs. However, had PSNH successfully participated, the following table depicts the clearing prices for demand response and emergency generation in the first two auctions:

Adjusted Clearing Prices

Asset Type	FCA #1	FCA #2
Demand Response (RTDR)	\$5.2513/kW-Mo	\$3.9109/kW-Mo
Emergency Generation (RTEG)	\$3.6021/kW-Mo	\$3.0933/kW-Mo

The prices depicted here are based on the auction clearing price, but they also include adjustments for any excess capacity which cleared in the auction, losses, and reserve margin. Appendix A provides additional detail as to how these figures were determined.

The significance of these clearing prices is that they represent the most that a demand resource could expect to be paid from ISO-NE during the commitment periods for the first and second auctions – June 1, 2010 through May 31, 2011, and June 1, 2011 through May 31, 2012, respectively.

Under the current program, PSNH is passing along 100% of the Transition Period equivalent to these clearing prices. Under the Transition Period rules, both demand response and emergency generation are paid \$5.94/kW-Mo. To allow customers to recover their program incremental costs and have the financial incentive to participate in the program, PSNH is recommending the following schedule of payments:

Recommended Payment Schedule

Asset Type	6/1/10 - 5/31/11	6/1/11 – 5/31/12
Demand Response (RTDR)	\$3.9385/kW-Mo	\$2.9332/kW-Mo
Emergency Generation (RTEG)	\$2.7016/kW-Mo	\$2.3200/kW-Mo

This payment schedule is based on 75% of the Adjusted Clearing Price. This payment schedule is being proposed as a starting point. PSNH plans to monitor customer interest at these pricing points and, if appropriate or necessary, recommend changes based on actual customer participation.

**V. Recommended Program for the Post Transition Period**

PSNH is seeking Commission approval to offer a modified PeakSmartPlus Program beyond the May 31, 2010, cutoff for the Transition Period. Specifically, PSNH proposes to:

- Base the program on ISO-NE's 30 Minute Real-Time Demand Response Program under the operating procedures for Real-Time Demand Response and Real-Time Emergency Generation assets as detailed in ISO-NE Market<sup>1</sup> Rule 1. ISO-NE will initiate load interruptions during Operating Procedure (OP) 4, Actions 6 for demand response assets and Action 12 for emergency generators.
- Allow PSNH the flexibility to also initiate load reductions when PSNH anticipates ISO-NE will reach a system peak. During a load interruption called by PSNH, only customers with demand response assets will be asked to curtail unless participating emergency generators have a permit that allows them to operate their emergency generation during times other than OP 4, Action 12.
- Pay program participants 75% of the Adjusted Clearing Price as detailed in Section IV above. Program expenses would be netted against these payments as is done now under the current program.

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<sup>1</sup> ISO-NE Market Rule 1, ISO-NE, Holyoke, MA.  
([http://www.iso-ne.com/regulatory/tariff/sect\\_3/index.html](http://www.iso-ne.com/regulatory/tariff/sect_3/index.html))

- ❑ Fund the program with Forward Capacity Market (FCM) revenues paid to PSNH in exchange for the capacity reductions resulting from the CORE Programs. Based on current projections, PSNH anticipates these revenues to be sufficient to fully fund PeakSmartPlus; however, to the extent there is a shortfall, PSNH proposes to fund the deficit through the System Benefits Charge.

In addition to these primary funding sources, PSNH is exploring the possibility of supplementary funding sources related to the FCM including: obtaining capacity supply obligations in the annual Forward Capacity Auctions, participating in reconfiguration auctions, and implementing bilateral agreements. Any proceeds from these transactions would be used to supplement capacity payments resulting from the CORE Programs. At this point, PSNH does not have an estimate of the potential proceeds from these options. Furthermore, the financial risks associated with these options may not be worth the potential benefits.

- ❑ Limit the liability for PeakSmartPlus payments by placing a ceiling on the number of MWs that can participate in the PSNH program. PSNH proposes a ceiling enrollment of 20 MW subject to periodic review. Establishing a ceiling determines the maximum payout for the program for all enrolled demand response assets. Under this proposal a 20 MW ceiling, assuming a 50/50 split between demand response and emergency generation, would cap total program liability at \$797,000 for the period June 1, 2010 to May 31, 2011 and \$630,400 between June 1, 2011 and May 31, 2012.

## VI. Program Benefits

### Participant Benefits

Program participants are compensated based on their performance as detailed above in Sections III and IV. The following table summarizes current and proposed payments to participants through May 31, 2012.

Participant Payment Schedule

Asset Type	Thru 5/31/10	6/1/10 – 5/31/11	6/1/11 – 5/31/12
RTDR	\$5.9450/kW-Mo	\$3.9385/kW-Mo	\$2.9332/kW-Mo
RTEG	\$5.9450/kW-Mo	\$2.7016/kW-Mo	\$2.3200/kW-Mo

All participant incremental expenses would be netted against these payments.

### Non-Participant Benefits

By modifying the program to allow PSNH to initiate curtailment events, the Company hopes to increase the likelihood that customers not participating in the program will also benefit. Non-participants can benefit in two ways: the

first is by lowering PSNH's Installed Capacity requirement and the second is by the lowering the New Hampshire Zonal Locational Marginal Price. Each of these is discussed in more detail below.

Installed Capacity Savings

PSNH's Installed Capacity (ICAP) requirement is based on the degree to which PSNH Energy Service customers contribute to the ISO-NE system peak. PSNH's ICAP requirement is calculated by the ISO-NE based on PSNH's customers' contribution to the ISO-NE peak load during the preceding power year<sup>2</sup>. To the extent that either ISO-NE or PSNH calls for a reduction coincident with the ISO-NE system peak, ICAP savings are realized.

PSNH has requested that the Company be allowed to initiate curtailments in order to maximize the potential of calling for a reduction during the pool's annual peak. During a PSNH-initiated load reduction, only demand response assets will be called to interrupt, unless the participants have permits allowing them to operate their emergency generators outside of an OP 4, Action 12 event.

The following table illustrates the potential benefits that would accrue to non-participants through lower Energy Service rates. Two sets of scenarios are presented: the first illustrates the potential benefits based on current program enrollment of 10.279 MW and the second depicts program enrollment at 20 MW.<sup>3</sup> Each scenario is presented both with and without emergency generation.

Non-Participant Potential Benefits

Total (MW)	RTDR (MW)	RTEG (MW)	Thru 5/31/10	6/1/10 – 5/31/11	6/1/11 – 5/31/12
10.279	2.762	7.517	\$505,727	\$555,066	\$444,053
2.762	2.762	0	\$135,890	\$149,148	\$119,318
20	10	10	\$984,000	\$1,080,000	\$864,000
10	10	0	\$492,000	\$540,000	\$432,000

It is by no means a certainty that the ISO-NE or PSNH will call for a reduction at the time of system peak; however, the Company has had some success in the past. In the summers of 2006 and 2007, PSNH successfully implemented load reductions at the time of the ISO-NE system coincident peak through its Voluntary Interruption Program. For 2008, PSNH achieved capacity savings of nearly \$371,000 with a load curtailment of 6.23 MW in 2006 and 6.73 MW in 2007.

<sup>2</sup> The Power Year starts on June 1.

<sup>3</sup> Assumes transition period capacity price per kW-month of \$4.10 thru 5/31/10, FCA clearing prices of \$4.50 from 6/1/10 to 5/31/11 and \$3.60 from 6/1/11 to 5/31/12.

### Transmission Savings

Transmission costs borne by Northeast Utilities (NU) are allocated to the individual operating companies, including PSNH. Each operating company's share of the costs is based on the relative contribution of each operating company peak to the NU system monthly peak transmission demand. To the extent a curtailment reduces PSNH's share of the NU system peak, savings will accrue to PSNH customers through the Transmission Cost Adjustment Mechanism (TCAM). Inasmuch as these costs are recovered through the Delivery Tariff, a reduction in these costs benefits all PSNH customers. PSNH has estimated that the impact of a 10 MW curtailment in each of the months of June, July, and August 2008 would result in a total estimated savings of \$225,000 in 2009.

### NH Zonal Locational Marginal Price Savings

A curtailment not only reduces capacity requirements, but also reduces the Company's energy purchases – typically during a time of high prices. These savings are passed along to customers through the Energy Service rate. As compared to the savings associated with lowering the ICAP requirement, these savings are very modest. For example, a 10 MW curtailment for three hours during which the NH Zonal Price is \$200 results in gross savings of \$6,000.<sup>4</sup>

### Other Benefits

Certain significant benefits accrue to both the participants and non-participants in PSNH's demand response program. On a market-wide basis, demand response results in lower wholesale market prices because demand response may avoid the need to use the most high-priced power plants during periods of high demand. On a longer term basis, sustained demand response lowers capacity requirements, therefore allowing utilities and other retail suppliers to buy or build less new capacity. Demand response also lowers the possibility of system outages that has its own set of financial implications and inconvenience on the customers. All these savings and benefits are passed on to all energy service customers.

## **VII. Program Alignment With Policy**

PSNH believes it should continue to offer PeakSmartPlus in response to policy directives at both the national and state level. On the national level, the Energy Policy Act of 2005, Sec. 1252(f) states, "It is the policy of the United States that time-based pricing and other forms of demand response...shall be encouraged, the deployment of such technology and devices...shall be facilitated, and unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated."

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<sup>4</sup> The savings would be reduced by the loss of Energy Service revenues.

On the State level, the Commission has shown its support for demand response through the following orders:

- ❑ In PSNH's "Petition for Approval of Delivery Service Rates", NHPUC Order No. 24,750 dated May 25, 2007 states: "The deteriorating load factor of PSNH, a characteristic seen throughout New Hampshire and New England, will require solutions beyond the scope of this proceeding. Nonetheless, PSNH should be taking all reasonable steps to improve its load factor in a cost-effective manner."
- ❑ PSNH, National Grid, Unitil and the NH Coop's "Investigation into Advanced Customer Metering and Demand Response by Electric Distribution Companies," NHPUC Order No. 24,263 dated January 9, 2004, approved the Stipulation and Settlement Agreement which includes:

"Parties and Staff agree that the Parties shall include a Load response Program in their tariff offerings to large Commercial and Industrial Customers. For purposes of this Stipulation and Settlement, "Load Response Program" means the Independent System Operator of New England (ISO-NE) Load Response Programs, including the demand response programs and the price response programs, or a combination of both, or PSNH's Rate VIP or its successor rate."

### VIII. Schedule

Were a decision to be reached by October 1, 2009, on this request to offer a modified PeakSmartPlus Program, the Company would be in a position to participate in the third Forward Capacity Auction (FCA) which takes place in early October. PSNH has filed a Show of Interest and is prepared to participate in the auction. The benefit of participating is the possibility of offsetting or eliminating the need to fund the program with FCM revenues resulting from capacity reductions associated with the CORE Programs. It should be noted that participation in the auction is not without significant risks and the potential for financial penalties.

Should the October 1, 2009, date prove unworkable, PSNH requests a decision on this matter be rendered no later than December 1, 2009. This would allow sufficient time for the Company to notify customers and for customers to make alternative arrangements with other demand response providers should the Commission not approve this request.

### Forward Capacity Auction Results

The 1<sup>st</sup> Forward Capacity Auction (FCA) resulted in a clearing price of \$4.50/kW-month. Since there was excess supply, participants of obligation capacity were asked to either prorate their MW commitments or take a lower effective price. For those participants who chose to take a lower price, the effective price after adjustment is \$4.254/ kW-month. Non-emergency generators participating in the auction are limited up to 600 MW and since there was over 874 MW participating, the effective price for emergency generators was further adjusted down to \$2.918/kW-month.

The capacity that cleared the 1<sup>st</sup> Forward Capacity Auction will also be increased by Transmission and Distribution Losses of 8% and also adjusted for a Reserve Margin of 14.3%. This is in accordance with ISO-NE FCM rules.

The 2<sup>nd</sup> FCA resulted in a clearing price of \$3.60/kW-month. As with the 1<sup>st</sup> FCA, there was excess supply at the end of the auction, and participants had the option of prorating their MW obligation or take a lower effective price for non-emergency generation assets at \$3.119/kW-month. The same limit of 600 MW was also applicable to emergency generators in the 2<sup>nd</sup> FCA. With nearly 759 MW of emergency generation clearing the auction, the effective price for emergency generators is \$2.467/kW-month.

The capacity that cleared the second auction will also be increased by Transmission and Distribution Losses of 8% and adjusted for a Reserve Margin of 16.1%.

Had PSNH been able to participate in FCA1 and FCA2, PSNH's current enrolled 10.279 MW (2.762 MW of demand response assets and 7.517 MW of emergency generation) would have received the following capacity payments:

	<u>FCA 1</u>	<u>FCA 2</u>
<b>Demand Response</b>	\$ 174,049	\$ 129,621
<b>Emergency Generators</b>	\$ 324,923	\$ 279,030
<b>TOTAL</b>	\$ 498,973	\$ 408,651
Clearing price for load response	\$ 4.5000	\$ 3.6000
Clearing price for load response (adjusted)	\$ 4.254	\$ 3.1190
Clearing price for emergency generation (adjusted)	\$ 2.9180	\$ 2.4670
Transmission & Distribution Losses	8%	8%
Reserve Margin	14.3%	16.1%
Effective Price/kW-month (RTDR)	\$ 5.2513	\$ 3.9109
Effective Price/kW-month (RTEG)	\$ 3.6021	\$ 3.0933

The 3<sup>rd</sup> FCA is scheduled for October 2009.