

March 29, 2011

**VIA HAND DELIVERY & ELECTRONIC MAIL**

Luly E. Massaro, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket 4202 – Electric and Natural Gas Least Cost Procurement Efficiency Savings  
Targets for Years 2012 - 2014 in Compliance with R.I.G.L. §39-1-27.7**

Dear Ms. Massaro:

Enclosed please find ten (10) copies of the Energy Efficiency and Resource Management Council's response to the Division's Data Request submitted on March 17, 2011 in Docket 4202. Please feel to contact me at (401) 824-5150 if I or the Council can be of further assistance.

Respectfully submitted,

THE RHODE ISLAND ENERGY EFFICIENCY AND  
RESOURCES MANAGEMENT COUNCIL

By its attorney,

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Certificate of Service

I hereby certify that a copy of the cover letter and/or any foregoing attachments accompanying this certificate were electronically submitted, hand delivered, and/or mailed to the individuals listed below.

//s// R. Daniel Prentiss  
R. Daniel Prentiss

March 29, 2011  
Date

**Docket No. 4202 – RI Energy Efficiency and Resource Management Council (“EERMC”) –  
Electric and Natural Gas Least Cost Procurement Efficiency Savings Targets for Years  
2012 - 2014 in Compliance with R.I.G.L. §39-1-27.7 Service List updated on 10/13/10**

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STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION

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IN RE: R.I. ENERGY EFFICIENCY AND RESOURCE	)	DOCKET NO. 4202
MANAGEMENT COUNCIL'S PROPOSED ELECTRIC	)	
AND NATURAL GAS SAVINGS TARGETS	)	

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**Response of the Rhode Island Energy Efficiency and Resource Management Council to the  
Public Utilities Commission's 2<sup>nd</sup> Data Request Dated March 17, 2011**

**Commission Data Request:** Please provide full and complete copies of all analyses, reports or studies, including without limitation charts, graphs or tables, or any other records or documentation of any kind, whether technical or otherwise, which formed the basis of the gas efficiency savings targets presented to the Commission on September 1, 2010.

**EERMC Response:** The proposed performance-based natural gas energy savings targets are based on the research and investigation of the cost-effective energy efficiency potential in Rhode Island that costs less than supply and an evaluation of the natural gas energy efficiency programs to date. Over the course of three months, the EERMC's expert consultants from VEIC, Inc. and Optimal Energy researched natural gas potential studies and targets set by other New England states to determine reasonable targets for cost-effective natural gas energy efficiency that are consistent with other states' experiences and potential studies.

In researching potential natural gas savings, the EERMC consultant team drew on the experience of Vermont Gas Systems (VGS) generally, and in particular the 2008 and 2009 VGS Annual Reports, and "An Assessment of All Cost-Effective Electric and Gas Savings: Energy Efficiency and Combined Heat and Power," a report to the Massachusetts Energy Efficiency Advisory Council (EEAC) prepared by its consultants in July, 2009.

The following table summarizes the information compiled by the EERMC consultants from the sources described above:

State	Annual Natural Gas Savings as Percent of Load					Source
	2010	2011	2012	2013	2014	
Massachusetts	0.65%	0.90%	1.16%	TBD	TBD	MA DPU approved targets in January 2010
Vermont	1.5%	N/A	N/A	N/A	N/A	Estimated levels supplied by Vermont Gas Systems representative for 2010; assumption for level maintenance 2011-2014; Percentage in 2008 was 1.8% and 1.0% in 2009
Connecticut	1.7%	1.7%	1.7%	1.7%	1.7%	Average annual percentages based on 10-year potential study conducted in 2009
New Hampshire	2.1%	2.1%	2.1%	2.1%	2.1%	Average annual percentages based on 10-year potential study conducted in 2009
New York	1.9%	1.9%	1.9%	1.9%	1.9%	Average annual percentages based on 10-year potential study conducted in 2006
Rhode Island	0.30%	0.57%	0.75%	1.0%	1.2%	EERMC proposed percentages to RI PUC for 2012-2014; 2010 and 2011 from annual program filings by National Grid

The 2009 report to the Massachusetts EEAC reviewed “potential studies” for cost-effective natural gas energy efficiency finding that the cost-effective savings potential ranged from 1.7 to 2.1 percent of load in Connecticut, New York, and New Hampshire. This data was used by the Massachusetts EEAC and Department of Public Utilities to propose and approve natural gas efficiency targets reaching 1.16 percent by 2012. Data was also available from Vermont Gas Systems indicating that Vermont achieved cost-effective savings of 1.8 and 1.1 percent of firm sales in 2008 and 2009, respectively, and preliminary data indicate that Vermont achieved cost-effective savings of 1.5 percent of load for 2010.

The attached appendices include the data and information used by the EERMC consultant team to inform the EERMC’s development of the natural gas energy savings targets.

## Appendix A

All portions relevant to natural gas: “An Assessment of All Cost Effective Electric and Gas Savings: Energy Efficiency and Combined Heat and Power” Report to the Massachusetts Energy Efficiency Advisory Committee, July 2009

### All Available Cost-Effective Gas Energy Efficiency Program Savings

Based on the data collected and presented to the Council on May 26<sup>th</sup>, the Consultants have determined that a reasonable estimate for available cost-effective gas savings from energy efficiency programs is about 2.0 percent per year.

The Consultants selected three of the four studies reviewed and summarized for the Council as most representative of the available savings in Massachusetts. These are summarized in the following table:

State	Year of Study	Analysis Period (yrs.)	Achievable * (% of total forecast load)	Average Annual Achievable** (% of total forecast load)	Source	Notes
Connecticut	2009	10	17.0%	1.7%	KEMA	Final draft. Gas efficiency only. Total achievable including codes & standards estimated at 22%.
New Hampshire	2009	10	21.1%	2.1%	GDS	Ignored most retrofit (early retirement) savings. Typically retrofit measures account for a large portion of EE opportunities over 10 years.
New York	2006	10	19.0%	1.9%	OEI	Conservative estimate of max achievable based on 67% of economic, without detailed analysis.
Averages		10.0	19.0%	1.9%		Mean of data available.

The only study excluded from those initially considered did not present an achievable potential estimate. The remaining studies:

- Included achievable potential<sup>6</sup> estimates, though we believe the studies understate the potential rather than overstate it, based on known factors discussed above and in Appendix A, and
- Were performed by three different entities.

The average annual achievable potential reported by these studies is approximately 1.9 percent per year. In addition to the general discussion above and in Appendix A about study results tending to be conservative, there are several specific reasons why these studies are likely to have understated the efficiency potential.

- The New Hampshire study excluded most retrofit measures, and is therefore likely highly conservative, as retrofit opportunities typically account for the majority of potential.
- The New York Study reported only economic potential, from which the Consultants derived achievable potential using a conservative factor of 67 percent. This is the same ratio of achievable potential to economic potential estimated by the Connecticut gas potential study, and lower than that from the three electric potential studies which reported both economic and achievable potential (i.e., 80, 78 and 68 percent).

Because these studies are likely to understate achievable potential, the Consultants estimated that about 2.0 percent per year is a reasonable estimate of all available cost-effective natural gas savings from energy efficiency programs in Massachusetts.

## **Appendix B**

Vermont Gas Systems, Inc. Annual Report 2008 (see attached)

## **Appendix C**

Vermont Gas Systems, Inc. Annual Report 2009 (see attached)