
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

Docket No. 3790
National Grid Gas Energy Efficiency Programs

**Direct Testimony of
Timothy Woolf**

**On Behalf of
The Division of Public Utilities and Carriers**

**Regarding National Grid's
Gas Energy Efficiency Programs**

March 29, 2007

1 **Q. What is your name, position and business address?**

2 A. My name is Timothy Woolf. I am the Vice-President of Synapse Energy
3 Economics, Inc., 22 Pearl Street, Cambridge, MA 02139.

4 **Q. Please describe Synapse Energy Economics.**

5 A. Synapse Energy Economics is a research and consulting firm specializing in
6 electricity industry regulation, planning and analysis. Synapse works for a variety
7 of clients, with an emphasis on consumer advocates, regulatory commissions, and
8 environmental advocates.

9 **Q. Please describe your experience in the area of utility regulation, and in**
10 **particular energy efficiency.**

11 A. My experience is summarized in my resume, which is attached as Exhibit TW-1. In
12 my current position at Synapse, I investigate a variety of issues related to electric
13 and gas utility regulation and planning; with a focus on energy efficiency,
14 renewable resources, air quality, environmental policies, and many aspects of
15 consumer protection. Since 1987 my work has covered all aspects of energy
16 efficiency program design and implementation, including efficiency measure
17 assessment, program delivery options, program budgeting, cost-benefit analyses,
18 utility performance incentives and other relevant regulatory policies.

19 **Q. Please describe your professional experience before beginning your current**
20 **position at Synapse Energy Economics.**

21 A. Before joining Synapse Energy Economics, I was the Manager of the Electricity
22 Program at Tellus Institute, a consulting firm in Boston, Massachusetts. In that
23 capacity I managed a staff that provided research, testimony, reports and
24 regulatory support to state energy offices, regulatory commissions, consumer
25 advocates and environmental organizations in the US. Prior to working for Tellus
26 Institute, I was employed as the Research Director of the Association for the
27 Conservation of Energy in London, England. I have also worked as a Staff
28 Economist at the Massachusetts Department of Public Utilities, and as a Policy
29 Analyst at the Massachusetts Executive Office of Energy Resources. I hold a
30 Masters in Business Administration from Boston University, a Diploma in

1 Economics from the London School of Economics, a BS in Mechanical
2 Engineering and a BA in English from Tufts University.

3 **Q. On whose behalf are you testifying in this case?**

4 A. I am testifying on behalf of the Division of Public Utilities and Carriers (the
5 Division).

6 **Q. Have you testified previously before this Commission?**

7 A. Yes. Since 2003 I have represented the Division in the demand-side management
8 collaborative with Narragansett Electric Company d/b/a National Grid (the
9 Company). In that capacity I have provided oral testimony and have attended
10 several technical sessions before this Commission. Furthermore, in January 2007
11 I presented testimony on behalf of the Division regarding National Grid's
12 Renewable Energy Standard Procurement Plan.

13 **Q. Have you testified previously in this docket?**

14 A. No, I have not.

15 **Q. Have you participated in settlement discussions with the Company and other
16 stakeholders regarding the National Grid's Gas Energy Efficiency
17 Programs?**

18 A. Yes, I have actively participated in these settlement discussions, along with my
19 colleagues from the Division.

20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to address the Settlement that was reached
22 between the Company, the Division and other Rhode Island energy efficiency
23 stakeholders.

24 **Q. Does the Division support the Settlement regarding the Company's Gas
25 Energy Efficiency Programs?**

26 A. Yes, the Division has signed on to the Settlement.

1 **Q. Please provide a summary of National Grid's proposed Gas Energy**
2 **Efficiency Programs.**

3 A. National Grid currently has a gas energy efficiency surcharge of \$0.063 per
4 decatherm, applicable from January through June 2007. The Company is
5 proposing to increase this surcharge to \$0.114 per decatherm, for the period July
6 2007 through December 2008. These surcharges will provide the Company with
7 total revenues of roughly \$7.5 million, for gas efficiency programs to be
8 implemented during the 18-month period of July 2007 through December 2008.

9 National Grid proposes to offer five residential and eight commercial and
10 industrial gas efficiency programs. The programs are intended to address all the
11 key gas end-uses, and to be available to all types of gas customers. In total, the
12 gas efficiency programs are expected to save 198,908 MMBtu per year, and a
13 total of 3,078,531 MMBtu over the lifetimes of the efficiency measures. The
14 program designs are described in Attachments 1 and 2 of the Settlement.

15 Each of the programs is estimated to be cost-effective, with benefit-cost ratios
16 exceeding one. On average, the residential programs are estimated to have a
17 benefit-cost ratio of 3.25, and the commercial and industrial programs are
18 estimated to have a benefit cost ratio of 3.68. The programs are expected to result
19 in total benefits of \$22.8 million, and net benefits (after subtracting out costs) of
20 roughly \$16 million.¹ The benefit-cost analysis is presented in Attachment 8 of
21 the Settlement.

22 **Q. Please explain why the Division supports the Company's Gas Efficiency**
23 **Programs.**

24 A. There are many reasons why the Division supports the Company's Gas Efficiency
25 Programs:

26 First, the program funding levels are consistent with the Comprehensive Energy
27 Conservation, Efficiency and Affordability Act of 2006 (2006 Act). The Act
28 allows the Company to implement a surcharge of up to \$0.15 per decatherm.

¹ Both of these figures are in present value dollars.

1 While the surcharges for 2007 and 2008 are somewhat lower than this maximum
2 amount, they have been set to provide the Company with as much funding as is
3 needed for this initial 18-month period. New energy efficiency programs
4 typically require several years to ramp up to a mature level, and the Company
5 estimates that the proposed budgets are all that they could efficiently spend during
6 this initial ramp-up period.

7 Second, the gas efficiency program budgets are properly balanced across
8 customer classes, where the programs budgets for each sector (residential versus
9 commercial/industrial) are roughly equal to the amount of revenues contributed
10 by the that sector. Furthermore, within the residential sector a considerable
11 portion of the program funds have been dedicated to programs serving low-
12 income customers – i.e., the *EnergyWise* program and the Single Family Low
13 Income program.

14 Third, several of the Company’s gas efficiency programs are offered through
15 GasNetworks, a regional collaborative of natural gas distribution companies that
16 coordinate natural gas efficiency programs throughout Maine, Massachusetts,
17 New Hampshire and, now, Rhode Island. This is a very sensible approach to
18 offering gas programs in Rhode Island, as it builds upon the experience developed
19 in other states and it creates efficiencies through regional coordination.

20 Fourth, several of the Company’s gas efficiency programs are already being
21 provided by KeySpan Energy Delivery (KeySpan). Furthermore, the Company
22 will employ KeySpan staff to assist with the development and implementation of
23 the gas efficiency programs. KeySpan has several years of experience in offering
24 gas efficiency programs in other states, and is recognized as a leader in gas
25 efficiency programs in the region. Again, this is a sensible approach that will
26 increase the effectiveness of the Company’s new gas efficiency programs.

27 Fifth, to the extent possible the gas efficiency programs will be coordinated with,
28 and offered in conjunction with, the Company’s electric efficiency programs.
29 This coordination will make both the gas and electric programs more effective
30 and more efficient. This coordination is especially important for those programs

1 that involve home energy audits (for the residential customers) or technical
2 assessments (for commercial and industrial customers), where all cost-effective
3 energy efficiency improvements can be identified and provided with financial
4 support, regardless of whether the end-use requires electricity or natural gas.

5 Finally, the programs are designed to address all key gas end-uses, and to be made
6 available to all customer types. This is important to ensure that gas efficiency
7 services are comprehensive, and to promote customer equity across the efficiency
8 programs.

9 **Q. Does the Settlement include any provisions regarding shareholder incentives**
10 **for energy efficiency activities?**

11 A. Yes. The proposed shareholder incentive is similar to that which is in place for
12 the National Grid electric efficiency programs. The Company must achieve 60%
13 of the savings goal before it can earn any shareholder incentive, and then it will be
14 able to earn up to a maximum of 4.4% of the eligible gas efficiency program
15 budget if it reaches 100% of the efficiency savings goal.

16 **Q. How is the gas efficiency program shareholder incentive mechanism different**
17 **from the electric efficiency program mechanism?**

18 A. There are two important differences. First, there are no metrics associated with
19 the gas efficiency programs. In our settlement discussions, none of the parties
20 proposed specific gas efficiency metrics for this 18-month ramp-up period.

21 Second, the Company is not eligible to earn shareholder incentives beyond those
22 associated with 100% of the efficiency savings goal. This is different from the
23 electric efficiency shareholder incentive mechanism that allows for additional
24 shareholder incentives for “exemplary” performance between 100% and 125% of
25 savings goals. The Division does not support the exemplary shareholder
26 performance incentive for the gas efficiency programs as this time, because the
27 Company does not have sufficient experience to define exemplary performance in
28 this area.

1 **Q. Does the Division support the shareholder incentive mechanism proposed in**
2 **the Settlement?**

3 A. Yes. The Division believes that the shareholder incentive mechanism proposed in
4 the Settlement strikes the appropriate balance between (a) providing the Company
5 management with the proper to incentive to conduct successful efficiency
6 programs, and (b) maintaining as much of the available efficiency funds as
7 possible for the purpose of achieving gas efficiency savings and reducing
8 customers' gas bills.

9 **Q. Are there other elements to the Settlement?**

10 A. Yes. One important additional element pertains to "self-directed" energy
11 efficiency programs. The 2006 Act allows the Commission to exempt gas used
12 for manufacturing processes from the energy efficiency surcharge where the
13 customer has established a self-directed energy efficiency program. The parties to
14 the Settlement request that the Commission establish an administratively simple
15 procedure to allow eligible manufacturers to submit a self-directed energy
16 efficiency program for its approval. . The parties to the Settlement have
17 developed proposed guidelines for self-directed energy efficiency programs, in
18 order to assist the Commission on this issue. These guidelines are provided in
19 Attachment 5 of the Settlement.

20 **Q. Does this conclude your testimony at this time?**

21 A. Yes.

22

Timothy Woolf

Vice President
Synapse Energy Economics
22 Pearl Street, Cambridge, MA 02139
(617) 661-3248 ext. 223 • fax: (617) 661-0599
www.synapse-energy.com
twoolf@synapse-energy.com

PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. Vice President, 1997-present.
Conducting research, writing reports, and presenting expert testimony pertaining to consumer, environmental, and public policy implications of electricity industry regulation. Primary focus of work includes electricity industry regulation and restructuring, electric power system planning, energy efficiency programs and policies, renewable resources and related policies, power plant performance and economics, air quality, and many aspects of consumer and environmental protection.

Tellus Institute, Boston, MA. Senior Scientist, Manager of Electricity Program, 1992-1997.
Responsible for managing six-person staff that provided research, testimony, reports and regulatory support to consumer advocates, environmental organizations, regulatory commissions, and state energy offices throughout the US.

Association for the Conservation of Energy, London, England. Research Director, 1991-1992.
Researched and advocated legislative and regulatory policies for promoting integrated resource planning and energy efficiency in the competitive electric industries in the UK and Europe.

Massachusetts Department of Public Utilities, Boston, MA. Staff Economist, 1989-1990.
Responsible for regulating and setting rates of Massachusetts electric utilities. Drafted integrated resource planning regulations. Evaluated utility energy efficiency programs.

Massachusetts Office of Energy Resources, Boston, MA. Policy Analyst, 1987-1989.
Researched and advocated integrated resource planning regulations. Participated in demand-side management collaborative with electric utilities and other parties.

Energy Systems Research Group, Boston, MA. Research Associate, 1983-1987.
Performed critical evaluations of electric utility planning and economics, including production cost modeling and assessment of power plant costs and performance.

Union of Concerned Scientists and Massachusetts Public Interest Research Group, Cambridge and Boston, MA. Energy Analyst, 1982-1983. Analyzed environmental and economic issues related to nuclear plants, renewable resources and energy efficiency.

EDUCATION

Masters, Business Administration. Boston University, Boston, MA, 1993.
Diploma, Economics. London School of Economics, London, England, 1991.
B.S., Mechanical Engineering. Tufts University, Medford, MA, 1982.
B.A., English. Tufts University, Medford, MA, 1982.

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South Dakota Public Utilities Commission (Docket No. EL04-016). Direct testimony regarding the avoided costs of the Java Wind Project. On behalf of the South Dakota Public Utilities Commission Staff. February 18, 2005.

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Maryland Public Utilities Commission (Case No. 8973). Oral testimony regarding proposals for the PJM Generation Attributes Tracking System. On behalf of the Maryland Office of People's Counsel. December 3, 2003.

Rhode Island Public Utilities Commission (Docket No. 3463). Oral testimony regarding the settlement of Narragansett Electric Company's 2004 Demand-Side Management Programs. On behalf of the Division of Public Utilities and Carriers. November 21, 2003.

California Public Utilities Commission (Rulemaking 01-10-024). Direct testimony regarding the market price benchmark for the California renewable portfolio standard. On behalf of the Union of Concerned Scientists. April 1, 2003.

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Efficiency, Renewables and Gas: Restructuring As if Climate Mattered, The Electricity Journal, Vol. 11, No. 1, January/February, 1998.

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