U.S. Senate Energy and Natural Resources Committee

Full Committee Hearing:

To Receive Testimony on Energy Efficiency Resource Standards

April 22, 2009

Testimony of David J. Manning
Executive Vice President, External Affairs, National Grid

Chairman Bingaman, Ranking Member Murkowski, and Members of the Committee, thank you for including National Grid in this very important hearing on energy efficiency resource standards.

National Grid is an international energy delivery company. In the U.S., National Grid delivers electricity to approximately 3.3 million customers in Massachusetts, New Hampshire, New York and Rhode Island, and operates the electricity transmission and distribution network on Long Island, serving an additional 1.1 million customers. We are the largest distributor of natural gas in the northeastern U.S., serving approximately 3.4 million customers in Massachusetts, New Hampshire, New York and Rhode Island. National Grid also owns and operates over 4,000 megawatts of electricity generation under contract with the Long Island Power Authority.

May I first congratulate you and your Congressional colleagues for your focus and success with important initiatives on energy efficiency, renewable energy, infrastructure such as smart grid, and other critical energy support in the American Recovery and Reinvestment Act (ARRA). The $3.1 billion in state matching grants for energy efficiency, the funding for weatherization assistance, and the funding for efficiency improvements at affordable housing units are critical steps towards moving energy efficiency to the forefront of a comprehensive national energy policy.

Over $1 billion of efficiency funding is available to the four states we serve through the ARRA. Senator Shaheen was especially helpful in shaping the ARRA weatherization and state energy program provisions. Just a few weeks ago, Senator Shaheen announced that New Hampshire will receive $23 million for weatherization assistance and $26 million for its state energy program. We at National Grid are proud to be working with New Hampshire state and local officials as well as their counterparts in New York, Massachusetts and Rhode Island on this vital effort to create jobs and help residents and businesses save money through energy efficiency.

Mr. Chairman, we also appreciate the directional approach outlined in your draft Renewable Electricity Standard (RES) bill, which creates incentives for energy efficiency and renewable energy. We have always said that we need a balanced approach to energy overall – all options must be on the table. We need more expansive, robust energy efficiency programs. We need significant new sources of renewable energy: wind, solar, biomass and geothermal. We need a comprehensive strategy to address our transmission infrastructure, including policies that will enable us to bring renewable energy resources, which are often isolated, to dense urban areas and other load centers. We need smart grid technology and smart meters to maximize the potential of current and future energy efficiency technologies to automate the most efficient use of energy and to remotely turn demand off during peak use and pricing periods. These actions, combined with clean, no- or low-emitting base-load power generation such as nuclear, hydroelectric, natural gas and emerging clean coal technologies, will lower emissions, lower customers' bills and play an important role in an effective national energy policy.

While a national energy strategy must be multifaceted, my comments today will focus on energy efficiency. National Grid stands with many other energy providers, particularly those who belong to the Clean Energy Group, and the environmental community in recognizing that energy efficiency uniquely addresses many of our nation's core energy issues – it is more cost-effective than building new power plants, has the potential to dramatically lower greenhouse gas emissions and provides consumers with long-term savings on their energy bills.

We thank this panel and the efforts of Senator Schumer with his introduction of S. 548 to shine the spotlight directly on energy efficiency. While renewable energy and an RES have rightly captured the attention and expectation of the American public, energy efficiency also deserves our focused attention. The American Council for an Energy Efficient Economy (ACEEE) estimates that Senator Schumer's EERS bill would save Americans $168 billion, create over 220,000 jobs, and reduce global warming pollution by the equivalent of removing 48 million cars from the road. In National Grid's service area alone, ACEEE projects that customers would save an additional $5.3 billion and create nearly 7,000 jobs by 2020.

National Grid's experience throughout the Northeast demonstrates that cost-effective energy efficiency measures are ready to be deployed <u>today</u> with the right mix of policies and incentives. We have decades of experience in delivering low-cost energy savings, which we believe can be replicated throughout the country. The certainty available from federal legislation, a state regulatory compact that encourages energy efficiency, the ability to rate base energy efficiency technologies in order to expedite and expand their market penetration and a tax and grant structure designed to stimulate investment will all assure the success of a concerted effort to use energy more efficiently.

Let me begin with the simple facts on the cost-effectiveness of energy efficiency. Energy efficiency can cost as little as 3 cents per kWh saved, while electricity costs 6 to 12 cents per kilowatt hour. Thus, energy efficiency measures are often the most effective way to avoid unnecessary energy supply investments and lower customers' energy bills on a sustainable basis. Despite the obvious advantages of energy efficiency, we spend about $215 billion annually in the United States on the production of electricity, but invest only $3.2 billion in securing electricity savings through efficiency programs. The savings are similar for natural gas, where efficiency measures cost $1 to $2 per thousand cubic feet (Mcf), compared to a typical market cost ranging from $6 to $8 per Mcf. Yet we spend approximately $91 billion annually on natural gas supplies and only $530 million annually on natural gas efficiency.

A recent study by the Electric Power and Research Institute shows the potential for realizing energy efficiency savings. By analyzing the impact of codes and standards, as well as market driven efficiency, the study shows measurable reductions in energy consumption. Opportunities in the EPRI study range from commercial lighting to massive reductions in consumption through residential appliances and standby wattage. The full EPRI study can be found at http://my.epri.com/portal/server.pt?Abstract_id=000000000001016987.

Energy efficiency is also a critical tool for addressing climate change. National Grid, in partnership with other leading energy companies such as PG&E, DTE, Honeywell and Shell, and environmental groups such as the Natural Resources Defense Council and Environmental Defense, worked with McKinsey & Co to evaluate the potential for energy efficiency in the U.S. The landmark study "Reducing U.S. Greenhouse Gases: How Much, At What Cost?" found that the U.S. can make substantial emission reductions by 2030 without damaging the economy with the help of energy efficiency. A chart summarizing the study is attached, and the report itself is available via www.mckinsey.com/mgi/publications/Curbing_Global_Energy/executive_summary.asp.

National Grid knows first hand that the benefits of energy efficiency are real. For example, National Grid has efficiency programs in place that are saving customers over $300 million annually, after an expenditure of more than $1.5 billion on efficiency technologies – an excellent investment with a rapid 5-year payback. As a result of these programs, more than 4.7 million National Grid customer projects have been completed to date, often with a payback period of five years or less, and saving more than $3.6 billion in energy costs. This includes converting almost all of Boston's public schools from oil to natural gas, helping cash strapped schools focus their limited resources on education, and residential boiler conversions that reduce CO_2 and other emissions by up to 40%. In 2007 alone, our gas programs saved 4.6 million therms and avoided 27,000 tons of CO_2 and our electricity program saved 380,000 megawatt-hours, avoiding 218,000 tons of CO_2. The total carbon emissions equate to 48,000 cars off the road for a year.

We expect National Grid's efficiency programs to enjoy significant growth during the next several years as we expand our New England and downstate New York programs and develop new programs in Upstate New York. Our spending on efficiency is forecast to more than double over the next five years, reaching approximately $700 million in 2014. This increase reflects our commitment to energy efficiency, as well as the supportive regulatory environment in the states we serve. The Regional Greenhouse Gas Initiative signals the commitment of the northeastern states to address climate change and pursuing energy efficiency is a major component of meeting the new requirements. State legislation is also driving energy efficiency investment, with New York, Rhode Island, and Massachusetts all adopting groundbreaking energy efficiency policies and programs over the last few years, and New Hampshire continuing to build upon the efficiency goals of its comprehensive energy plan. These changes have enabled us to pursue new approaches, such as partnering in solar initiatives and offering efficiency programs which integrate the delivery of electric and gas efficiency for the first time.

While spending on energy efficiency is increasing, it remains but a small fraction of what the total country spends on energy requirements, effectively leaving billions of dollars in potential savings on the table. This country must take better advantage of this opportunity and prioritize energy efficiency. National Grid supports the concept of federal energy efficiency resource standard legislation as one of the strategies that will pave the way towards a more energy efficient future.

All four states in which National Grid operates have adopted energy efficiency standards or requirements and our experience to date has been positive. For example, New York adopted its Energy Efficiency Portfolio Standard (EEPS) in June 2008. The EEPS will reduce electricity consumption 15 percent below projected levels by 2015, equivalent to a 7.5 percent reduction from current levels. National Grid has responded by launching a new electricity efficiency program in Upstate New York. Based on our extremely successful Upstate gas programs, we expect our electricity programs to be similarly effective in helping New York achieve the EEPS requirements

Rhode Island has adopted a least cost procurement requirement that requires investment in energy efficiency before investing in higher-cost supply increases. These requirements, which may effectively reduce energy use by up to 20%, push cost-effective energy efficiency investment to the forefront and drive additional investment. In Rhode Island National Grid has saved over 12 billion kilowatt-hours of electricity and 2.2 million therms of natural gas, saving consumers over $1.3 billion and we look forward to increasing our energy efficiency programs in the state.

In New Hampshire our energy efficiency efforts have benefited enormously from Senator Shaheen's work as governor to create programs that have saved New Hampshire families and businesses over $400 million and we look forward to significantly increasing our energy efficiency investments in the state.

As you consider EERS approaches, we would like to share some of the lessons that we have learned and some of the potential issues we see in moving to a national program. First, creating the right baseline for measuring energy savings can often raise difficult design issues. Certainty over the baseline used in calculating a company's energy savings is critical to planning and the overall success of the program. "Business as usual" (BAU) forecasts can be difficult to define when you are projecting into an uncertain future. EERS legislation should contain a careful and clear definition of BAU, including what factors are to be included, the data that will be used, the period of time for the projection and scope of coverage (e.g. national, state, or utility).

A national policy should recognize that many utilities, like National Grid, have already invested heavily in energy efficiency and no longer have the low-hanging fruit available in other parts of the country. A one-size fits all approach could unfairly penalize early actors and we urge you to consider ways to equitably credit early actors.

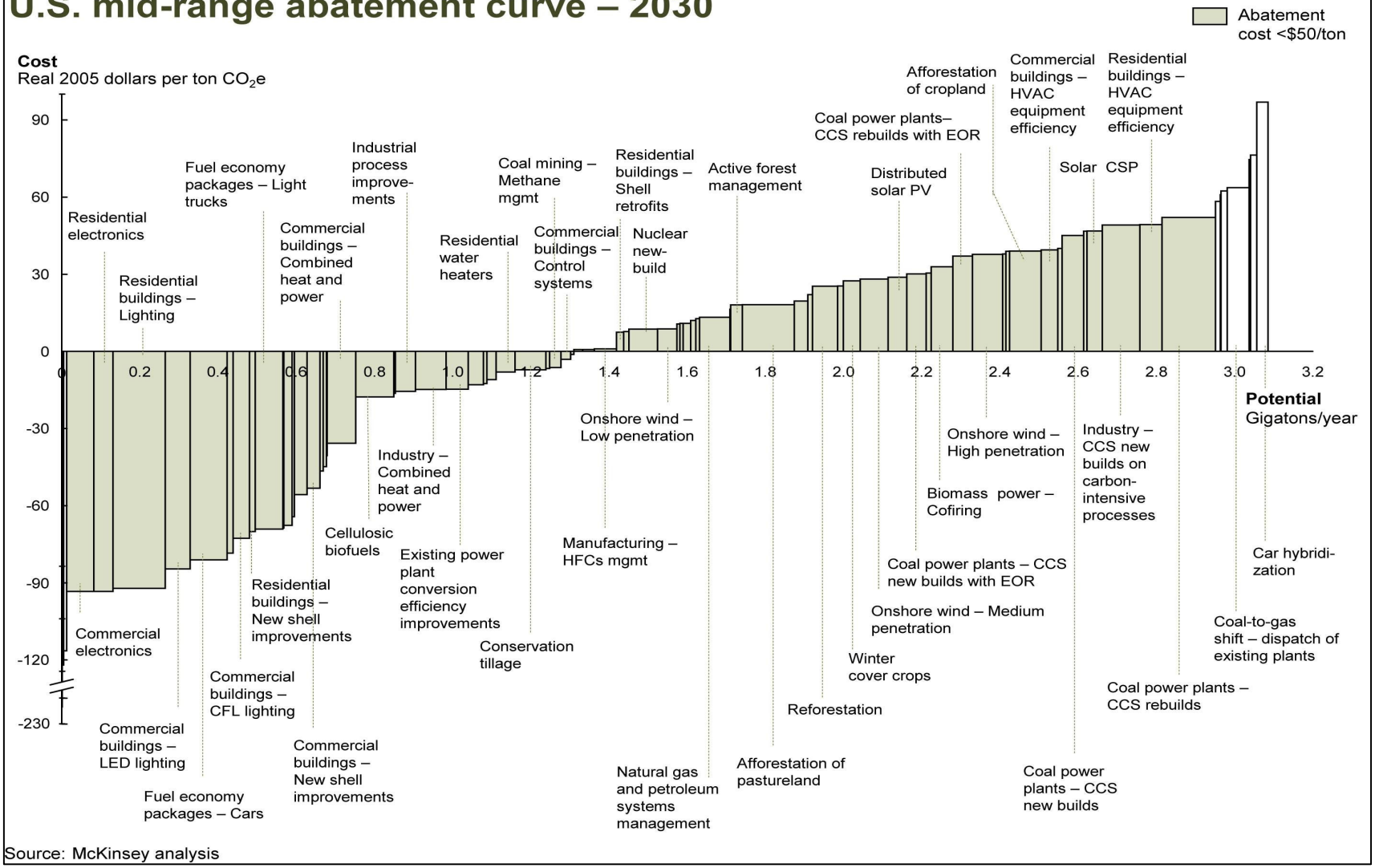
An EERS should also be combined with appropriate rate-setting mechanisms, such as decoupling, to address the inherent tension between utility companies' financial interest in encouraging their customers to use more energy and those customers' own interest in lowering their utility bills through energy efficiency actions. Decoupling benefits customers by alleviating this tension and it works in combination with energy efficiency programs to help consumers lower their monthly utility bills.

Finally, we want to make sure that the benefits of natural gas are fairly perceived within the efficiency debate. While it is a carbon fuel, natural gas has a substantially lower emission intensity than either coal or oil and is broadly available domestically. A significant expansion of combined heat and power technology utilizing natural gas would offer a leading opportunity to generate electricity more efficiently and reduce our carbon footprint. Similarly, climate change policy will push the country away from petroleum transportation fuels and towards electricity, resulting in growing demand for electric vehicles. Shifts towards combined heat and power, electric vehicles and other beneficial switches should be consistently encouraged in our nation's energy policy, including an EERS.

Mr. Chairman and Members of the Committee, we do not believe that any of these issues are insurmountable and we look forward to working with the committee to address them. We believe the current economic downturn provides a real opportunity to respond to a multitude of challenges in our economy. Driving economic activity in the energy sector can create significant employment, all here at home, while reducing our dependence on foreign fuels and the release of harmful emissions into our atmosphere. Energy efficiency should act as a foundation of our national energy policy as we take other key steps to develop and implement innovative investments to ensure a reliable low carbon and efficient energy strategy for America. Importantly, these programs can be quickly expanded to provide much needed jobs and energy savings in the near term. The existing programs are not nearly sufficient and we look forward to working with you on developing an EERS and other energy efficiency policies that will help us to reorder our economy for a greener future.

We commend your work and we thank you for the opportunity to answer your questions.

U.S. mid-range abatement curve – 2030



Source: McKinsey analysis

boston.com The Boston Globe

TOM KING AND MINDY LUBBER

Energy bill: like finding free money

By Tom King and Mindy Lubber | April 20, 2009

IF YOU SAW $10 on the sidewalk, would you pick it up? Of course. And if doing so would help the economy and the environment, you might be even quicker.

A proposal before Congress offers businesses and consumers the chance to pocket the money, while creating jobs and helping ease global warming.

The proposal would set mandatory national goals for creating energy-efficiency programs to reduce the power we waste. It would strengthen the efforts states are already making to cut energy use. By 2020, the program would save Americans $168 billion, create over 220,000 jobs, and reduce global warming pollution by the equivalent of removing 48 million cars from the road, according to a study by the American Council for an Energy Efficient Economy.

The plan would require utilities to reduce electricity demand by 15 percent and natural gas demand by 10 percent over the next decade by helping their customers save energy. This is not a new idea: 19 states already have adopted similar strategies.

Americans are the most inefficient energy users in the world. Per-capita, we use twice as much energy as the British, Germans, or Japanese. Virtually every study shows that we can become more efficient - and some states are already doing so. In California, efficiency measures have kept electricity demand nearly flat since the 1970s despite a 30 percent growth in population. The McKinsey Global Institute believes efficiency could cut global energy demand growth by at least half by 2020 if the necessary investments are made.

National Grid, an energy delivery company in Massachusetts, New Hampshire, New York, and Rhode Island, has already seen the benefits of energy-saving programs. These programs over the past two decades have helped the company's 5 million customers save upward of $3.8 billion by reducing energy use. They've also cut customers' greenhouse gas emissions by an amount equal to the emissions from three coal-fired power plants.

A national efficiency standard would lead to bigger savings. In National's Grid's service area alone, it would save customers about $5.3 billion and create nearly 7,000 jobs by 2020. Nearly $1 billion of those cost savings and 1,200 of those new jobs would be in Massachusetts.

Opponents contend the standard is too prescriptive and would increase costs for utility companies, which in many states lose money when their customers save energy. This problem can easily be fixed by changing the way utilities get paid so that they no longer lose money when energy use is cut.

Implementing a national plan would require some effort - which means job creation. We need workers to check old homes and buildings for energy leaks, and other workers to insulate and seal them. We need salesmen promoting efficient appliances, and plumbers replacing old furnaces with new, super-efficient ones. We need electricians to install meters that tell consumers how much energy they are using, and architects and construction crews to create new airtight buildings.

All of these jobs will come with cash savings to consumers and businesses through using - and paying for - less energy. What's more, every dollar invested in energy efficiency is repaid many times over in savings. Programs that reduce energy use cost about 3 cents per kilowatt-hour saved. To provide that kilowatt-hour through coal or natural gas power plants would cost about 6 to 11 cents, and that's not counting the costs of the pollution.

That's why legislative leaders have called for a national Energy Efficiency Resource Standard. Representative Edward Markey of Massachusetts has introduced a House version of the plan, and New York Senator Charles Schumer has put a similar version onto the Senate floor. California Representative Henry Waxman's new climate bill also includes an efficiency standard. There can be no clearer example of how our economic recovery can and should go hand-in-hand with helping ease the stress on our environment, and can save us money in the end. It's as obvious as money on the sidewalk.

Tom King is president of National Grid's US business, which provides service in New York and New England. Mindy Lubber is president of Ceres, a coalition of investors and environmental groups working on sustainability challenges such as climate change. ■

nationalgrid

David J. Manning, Q.C.

Current Title:
Executive Vice President, U.S. External Affairs

Date Joined: April 1999 (KeySpan)

Responsible for:
David leads National Grid's US External Affairs Team, with responsibility for federal relations and issues. He is also central to the company's US and UK teams, handling all issues and functions external to the company from climate change to communications.

Experience:
After several years in private law practice in Canada (awarded a Queen's Council designation), from 1988 to 1993 David was resident in New York, as Senior International Trade Counsel for the government of Alberta focusing on International trade and energy issues. Following an intense effort to achieve the passage of the Canada - US trade agreement, David focused on efforts to significantly increase the flow of natural gas from resource rich Alberta to the underserved US Northeast.

Mr. Manning returned to Canada to be Deputy Minister of Energy for the Province of Alberta, Canada, the largest energy producing region in North America. He held this post from 1993 to 1995, a critical period in the development of Alberta's Oil Sands these deposits are the largest and most strategic resource available to the US and now the focus of significant environmental issues and initiatives.

Mr. Manning then was selected to lead the Canadian Association of Petroleum Producers, a national trade association representing all significant oil and gas producers nationally and internationally. CAPP moved early in climate change response, initiating the first voluntary action recognition program in Canada in the early 90's. Mr. Manning was a delegate to the Kyoto conference on climate change in that capacity, in 1997.

More recently, Mr. Manning has served as Executive Vice President and Chief Environmental Officer of KeySpan, New York State's largest power generator and one of the largest gas distributors in the U.S. In that capacity, he was central to a "system repowering" of the Ravenswood power station (New York's largest) with the addition of combined-cycle capacity. Following KeySpan's acquisition by National Grid, Mr. Manning joins as EVP a company which has already achieved a 37% reduction towards its Kyoto targets and has mandated an 80% reduction in CO_2 emissions by 2050.

Mr. Manning remains active in the communities served by National Grid, including: Past Chair, Brooklyn Chamber of Commerce, and sits on the Boards of the New York City Police Foundation, Audubon New York, Long Island Housing Partnership, Citizen Budget Commission, and the New York League of Conservation Voters.

Education:
David was educated in law and has Bachelor of Arts and Bachelor of Laws degrees from the University of Alberta. He did post-graduate study in international law at Australian National University as a Rotary Foundation Fellow. He is a member of the Law Society of Alberta, the Canadian Bar Association, and is eligible for admission to the New York Bar.

Personal:
Mr. Manning is married to Jacqueline Siben, a lawyer in New York, and they have four daughters.

Telephone: 718-403-3323 Email: david.manning@us.ngrid.com