

ENE Comments To The New Hampshire State Energy Advisory Council On the Draft State Energy Strategy



July 25, 2014

ENE (Environment Northeast) is a non-profit clean energy research and policy organization headquartered in Maine with offices in New England and Canada. We appreciate the opportunity to participate in the stakeholder process and to provide written comments to the State Energy Advisory Council (“the Council”) and Navigant Consulting, Inc. (“Navigant”) regarding the draft state energy strategy.

The Council and Navigant have succeeded in producing a compelling energy vision, detailed baseline modeling and synthesizing stakeholder input on policy priorities for the state. The resulting draft energy strategy for the state includes many of the necessary actions to transform New Hampshire’s energy future. However, there is lack of focus on clear, specific and achievable outcomes over the next 10 years. Some of this lack of specificity is due to a lack of concrete objectives in the draft energy vision, which was discussed when it was initially presented but never remedied. We believe it is important to have clear outcomes in a 10 year strategy and a timeframe that lends itself to achievable goals. We would like to see the Advisory Council and the Office of Energy Planning take the next step of elaborating on the specific actions that will be taken over the next 10 years.

The New Hampshire State Energy Strategy can serve as a valuable policy and planning tool, and the requirement to revise the Strategy every three years affords policymakers the opportunity to constantly evaluate progress and reassess strategic choices, as well as refine and expand methodologies. Building off of this positive base, we provide comments below on the specific sections related to energy efficiency, grid modernization, renewable energy, fuel choice and transportation policies.

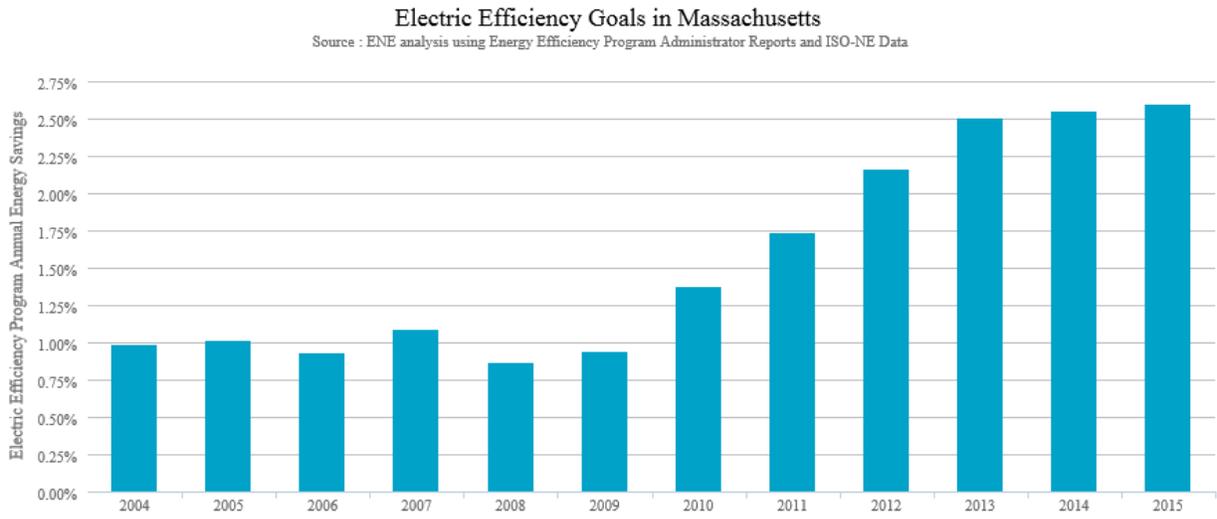
Energy Efficiency

Expanding energy efficiency for all fuels – electric, gas, and oil customers – will deliver multiple benefits to New Hampshire. Strategic investments in energy efficiency help reduce consumer and business energy costs while avoiding greenhouse gas emissions. In addition to lower energy bills, reduced energy demand means less money leaving the state to import carbon-intensive fossil fuels. Energy efficiency investments generate significant local economic benefits, including increased Gross State Product and thousands of new jobs.¹

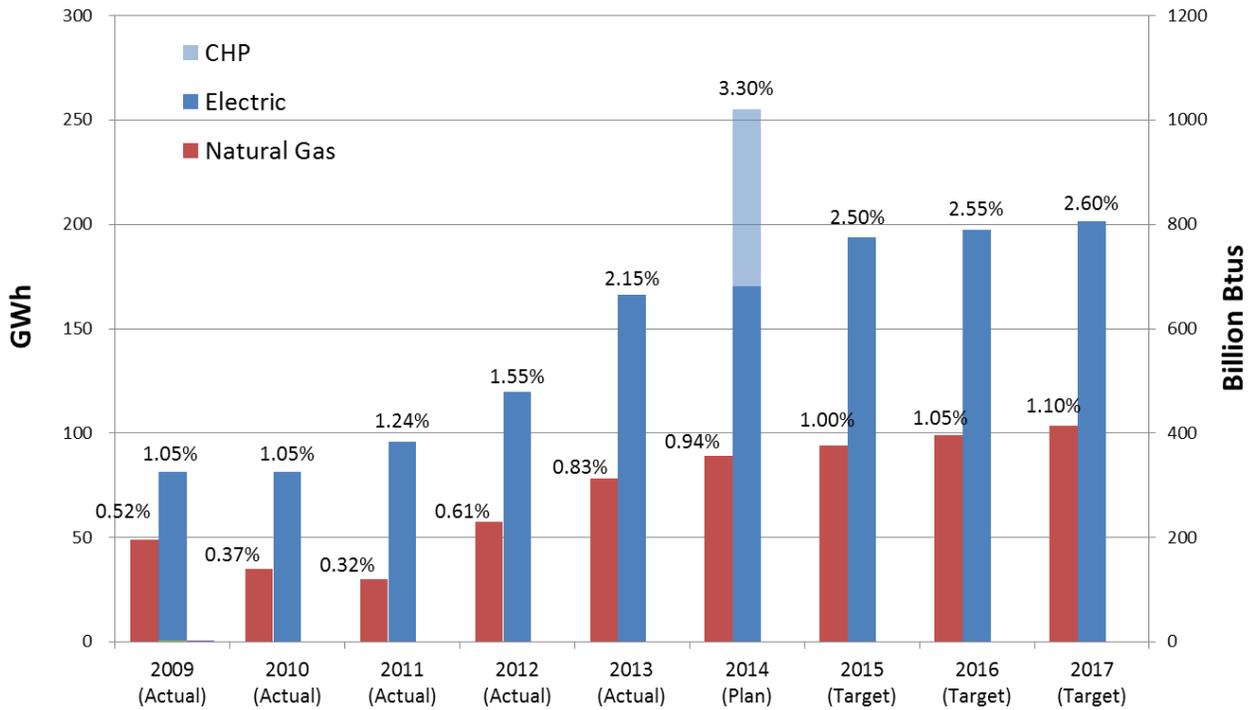
New Hampshire should adopt multi-year energy savings targets, as a percent of annual sales, for the utilities’ customer energy efficiency programs. Electric and natural gas savings targets should be established on a statewide basis, and subject to approval by the Public Utilities Commission (PUC). Utility program administrators would be required to meet the targets. Multi-year targets provide greater market certainty for sustained energy efficiency investments. The following charts depict the multi-year energy savings goals in place in Massachusetts and Rhode Island for electricity, natural gas, and combined heat and power (CHP).

¹ <http://www.env-ne.org/resources/open/p/id/964>

Massachusetts Electric Energy Savings Targets²



Rhode Island Electric, Natural Gas, and CHP Energy Savings Targets³



² <http://eneclimatevision.org/policy-successes/energy-efficiency-investments>

³ “2015-2017 Savings Targets Recommendations” presentation by the Rhode Island Energy Efficiency & Resource Management Council, Rhode Island Public Utilities Commission Technical Session, February 25, 2014.

Multi-year targets should be complemented by a requirement for utilities to procure all cost-effective energy efficiency that is less expensive than supply. Energy efficiency investments deliver real energy savings that can displace generation from supply-side resources. An all cost-effective efficiency requirement would require a utility to consider all available energy resources, including energy efficiency, and to invest in efficiency whenever it is cheaper than traditional supply. Energy efficiency can also play an important role in addressing grid reliability and high fuel prices. Regional electricity prices closely track natural gas prices, thus escalating natural gas prices and pipeline constraints affect both electric and natural gas customers. Energy efficiency is a resource that can be quickly deployed to reduce system price and reliability challenges, and can be targeted to specific geographic areas to defer expensive system upgrades and lessen seasonal peaks.

Financing mechanisms should not be considered standalone alternatives to comprehensive energy efficiency programming. Property Assessed Clean Energy (PACE) funding, revolving loan programs, and other financing vehicles are a complementary element of comprehensive energy efficiency programs. Financing alone will not capture all cost-effective energy efficiency, and will not deliver the same results as well-designed energy efficiency programs.

ENE supports increasing the range of financing options available to support efficiency programs, but cautions against immediately establishing a “Green Bank” in New Hampshire. These types of institutions are still in their infancy and in states larger than New Hampshire. There are many examples of energy efficiency financing programs that utilize private capital at competitive rates without the administrative expense of establishing a new entity. The residential HEAT loan in Massachusetts had a loan volume of over \$88 million dollars last year, supporting home energy retrofits in that state. While marketed under a single brand by the MassSAVE efficiency programs, the loans servicing and capital is provided by over 50 local banks and credit unions. The Small Business Energy Advantage loan program in Connecticut has offered on-bill loans for many years, which have improved the uptake of energy efficiency measures for smaller customers. While traditionally funded with utility capital, the program is currently transitioning to a single private capital source with a lower interest rate, while still maintaining the desirable use of utility bill payment history for qualification and on-bill repayment features. New Hampshire should monitor the progress of the handful of nascent green banks around the country as they develop to discern the ultimate costs and benefits of such an approach as they emerge.

ENE recommends establishing a stakeholder council to oversee and guide the development of statewide energy savings targets, and ensure the program administrators are pursuing all cost-effective energy efficiency that is cheaper than supply. The stakeholder council would not diminish the authority of the PUC, but would rather serve as an advisory body throughout the planning and implementation phases. The stakeholder council would include key parties who are engaged in energy policy in the state. Ideally, council decisions would be consensus-based and informed by objective analysis. Three states at the top of the American Council for an Energy-Efficient Economy’s *2013 State Energy Efficiency Scorecard* – Massachusetts (#1), Connecticut (#5), and Rhode Island (#6) – have efficiency stakeholder councils in place.

New Hampshire should explore revenue decoupling mechanisms that eliminate the utilities’ financial incentive to promote electric and gas sales to make them stronger allies in promoting efficiency.

New Hampshire should adopt the most recent edition of the International Energy Conservation Code (IECC) for residential and commercial buildings. In addition, ENE recommends a legislative requirement to adopt each new IECC edition within one year of its publication. Updated on a three-year cycle, each new edition of the IECC builds upon the efficiency requirements of the prior version. The

2012 IECC is approximately 30% more efficient than the 2006 IECC edition. The 2015 IECC raises efficiency requirements by 45-50% over the 2006 IECC.⁴

Grid Modernization and Utility Rate Design

ENE recommends that New Hampshire adopt policies and incentives that reward utilities for taking a comprehensive and coordinated approach to improving the efficient use of the distribution grid and prioritizing high-value “non-wires alternatives” (NWAs) over traditional infrastructure upgrades. While the Draft Energy Strategy includes a recommendation to address utility incentives through rate redesign, ENE believes that policy makers should consider a more specific and comprehensive set of reforms to level the playing field for NWAs, through the following approach:

The state should require that state energy efficiency and demand-side policies are fully incorporated into long term system planning models and processes to right-size the distribution grid and reduce the risk of over-building. It should also mandate that utilities systematically identify customer-side resources that are cost-effective compared to traditional supply options.⁵ Non-wires alternatives should be included in distribution system planning on an equal footing with supply options. Distribution system reliability needs should be identified and then solutions of all types should be solicited from the market.

Reforms should also ensure that customer and end-use data enable better assessments for the potential for NWAs to serve as distribution resources in general, and perhaps more important, in specific geographic areas. Guidance should be given to utilities to conduct a full accounting of the utility and societal costs and benefits of traditional and NWA resources, including environmental, health, and economic impacts. Consistent valuation of energy resources will help level the playing field and correct for systematic under-deployment of NWAs. Solutions should be compared on an equal, net present value basis and the lowest cost solution that is also consistent with New Hampshire’s energy, environmental, and consumer goals should be chosen.

Regulators should direct utilities to incorporate a wide range of benefits and costs, to the extent allowable by law, including: electric delivery costs; generation supply costs; changes in fuel prices (including demand-reduction induced price effects); reliability benefits; savings from switching to electric end-uses for heating and transportation; and changes in greenhouse gas emissions. Policy makers or regulators should change utility incentives in order to make utilities partners in delivering a lower cost and more diversified energy system. It is critical to provide comparable financial treatment for NWAs, such as providing equal payments from properly structured markets for grid solutions. New Hampshire should take steps to re-focus utilities on delivering energy services rather than maximizing capital investments, including shifting some of the utility’s financial opportunity from investments in equity to rewards for increasing the net benefits realized by consumers through the deployment of clean, cost-effective NWAs.⁶

⁴ U.S. Department of Energy, Energy Efficiency & Renewable Energy, Building Technologies Program. “Building Energy Codes – IECC 2012 and Beyond.”

http://apps1.eere.energy.gov/buildings/publications/pdfs/corporate/ns/webinar_residential_energy_codes_20110222.pdf

⁵ Rhode Island General Law § 39-1-27.7 requires standards and guidelines for “system reliability” that includes the “procurement of energy supply from diverse sources,” including, but not limited to, renewable energy resources, distributed generation, including but not limited to, renewable resources and cost-effective combined heat and power systems, and demand response, designed to, among other things, provide local system reliability benefits through load control or using on-site generating capability. The “Standards for Least Cost Procurement and System Reliability Planning” are available from: http://www.ripuc.ri.gov/eventsactions/docket/4443-EERMC-LCPrevision_3-18-14.pdf

⁶ This may take the form of a shared-savings mechanism with policies that encourage deployment of NWAs in high-cost areas. By concentrating NWAs in high-cost areas, cost savings can offset revenue losses and net savings are available to

Regarding rate redesign, utility regulators should address long-term rate design in a holistic manner, aligning incentives in a way that minimizes the costs of grid updates and avoids additional reliance on fixed customer charges. Before making determinations about advanced metering investments, utilities and regulators should undertake a full analysis of the extent of opportunities for justifying advanced metering infrastructure AMI investments. For consumers with AMI, time-varying rates should be the default for generation supply. This better aligns the price of both electricity consumption and distributed generation with the costs of power generation in the wholesale markets. Time-varying rates for distribution could be implemented on a mandatory basis as a broad proxy for the coincident peaks that drive distribution system infrastructure costs.

Current planning and incentive structures that assume that only a few customers will have distributed energy resources on-side should be over-turned and rates should be designed on the assumption that most customers will have distributed energy resources. Stand-by rates should be eliminated in the long run. In the medium-term, regulators should use administrative solutions to accurately price distributed generation. Concepts like the ‘Value of Solar’ tariff, being implemented in Austin and Minnesota, can accurately compensate distributed generation and eliminate cross-subsidies between customers. Fixed monthly customer charges work against clean energy goals, such as energy efficiency, distributed generation, and other clean energy technologies.

Renewable Power Generation

New Hampshire’s Energy Strategy should reflect the important role of renewable energy in the state’s energy vision. New Hampshire’s existing Renewable Portfolio Standard (RPS) should be extended and expanded from current requirements in order to provide financial support for sustainable, low-carbon power sources that can help the state meet climate targets while promoting economic growth. In order to provide clarity to investors, RPS targets should be increased to at least 75% renewable energy by 2050, with potential revisions to 2025 and other interim targets to support the 2050 goal. New Hampshire’s Alternative Compliance Payment (ACP) rates are among the lowest in New England and should be revised to better align with the ACP rates of other states in the region.

Streamlined solar permitting and interconnection should be a higher priority in the final Energy Strategy. Different tiers of permitting and interconnection requirements should be established based on system size and type in order minimize barriers and set clear expectations for solar developers. Streamlining these processes will make the New Hampshire solar market more attractive to solar installers and developers.

Finally, New Hampshire currently allows long-term contracting for renewables, but does not have a minimum requirement. The state should consider legislation requiring electric distribution companies to solicit long-term contracts for renewables to provide 3% of each utilities' total electricity sales. Adding a minimum requirement would encourage utility-scale solar and wind.

Fuel Choice

While Navigant has been receptive to comments on the changing potential of cold-climate air source heat pumps, we believe technology is advancing so rapidly that basing projections on historic shares will be inaccurate. Furthermore, multiple mini-splits, or new systems with multiple heads are coming online, so the assumption that customers need ductwork or can only put in one mini-split may be limiting the perceived potential.

use in a targeted, shared-savings scheme to reward utilities for innovation and cost reductions and ensure that consumers benefit.

Transportation

As the Strategy notes, New Hampshire is the only state in New England that has not adopted the most recent California Low Emission Vehicle (CA-LEV) standards, and all but New Hampshire and Maine have also adopted the California Zero Emission Vehicle (ZEV) standard. Adopting CA LEV II and/or ZEV would be great steps toward bringing electric vehicles (EVs) to New Hampshire, and one that ENE fully supports, but the state should not rule out other incentive measures.

The Massachusetts Offers Rebates for Electric Vehicles program (MOR-EV) will include evaluations after six months, which can inform New Hampshire efforts. Other options such as time-varying rates also function as an incentive because EV owners can charge at home at low-cost hours.

The Strategy recommends the state “Install and support widespread EV charging infrastructure”; however, how this strategy would be implemented and who would be funding the installation is unclear. If state funds are going to be expended, ENE believes a better policy would be EV rebates. The state should implement policies to promote private investment in public charging infrastructure, while ensuring appropriate consumer protections. This would include: 1) clarifying that charging stations are exempt from utility regulations; 2) ensuring that charging stations aren’t hit with unnecessary demand charges; 3) adopting NIST standards when finalized⁷; and 4) requiring public stations be truly open to the public, with access by credit card, and disclosure of station information to a public database.

While Amtrak expansion may not be realistic in the state, we believe a more specific focus on light rail as a mass transit option should be further explored.

We appreciate the opportunity to comment.

Respectfully submitted,

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ENE is a nonprofit organization that researches and advocates innovative policies that tackle our environmental challenges while promoting sustainable economic development. ENE is at the forefront of state and regional efforts to combat global warming with solutions that promote clean energy, clean air and healthy forests.

⁷ U.S. National Work Group on Measuring Systems for Electric Vehicle Fueling and Submetering
<http://www.nist.gov/pml/wmd/usnwg-evfs.cfm>