

ENE Comments To The New Hampshire State Energy Advisory Council On Navigant's Straw-Man Energy Vision



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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 provide written comments to the State Energy Advisory Council and Navigant Consulting, Inc. regarding the draft energy vision.

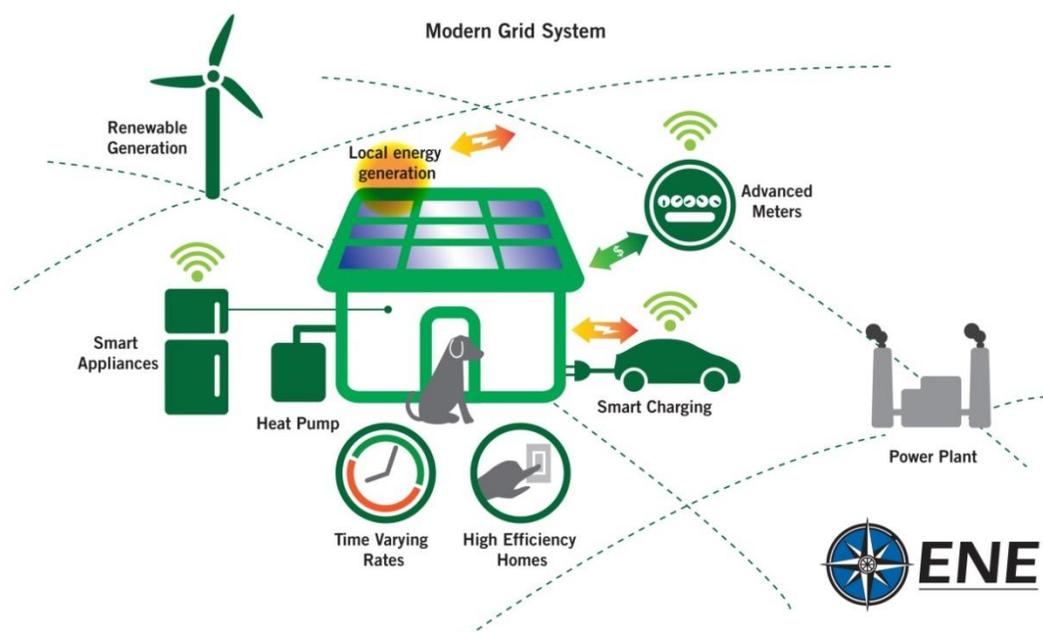
The draft presents a compelling vision for a cleaner and more secure energy future for New Hampshire. It will help guide the transition to a smart and efficient energy system that embraces new consumer-oriented energy technologies, advances economic benefits and is low-carbon. Achieving these long-term goals will require a new approach that:

- 1) capitalizes on emerging electricity-based consumer technologies;
- 2) accelerates the uptake of clean power sources;
- 3) reforms the way we plan and pay for our energy grid;
- 4) maximizes cost-effective energy efficiency and
- 5) reduces emissions across the state economy.

A vision for the state will be focused on:

A Modernized Grid

With modern technology and revised planning frameworks, our electric system is capable of delivering greater consumer and economic benefits, improved system resiliency, and significant GHG reductions. In order to realize these benefits we must move beyond the outdated model of centralized power stations sending one-way electricity flows to homes and businesses. Instead, we must develop a Modern Grid System using an array of technologies and multi-directional power flows to meet our energy needs.



A modernized grid system in New Hampshire will include:

- Utility business models that incentivize the deployment of advanced metering infrastructure, smart consumer technologies, and investments in the distribution system to support two-way power flow for distributed generation, electric vehicles, and other energy storage devices.
- Utility rate design that will provide financial incentives to customers to invest in energy efficiency and smart, integrated technologies capable of reducing costs and emissions.
- Utility, state, and regional planning processes that fully incorporate the potential for distributed resources, energy efficiency, and storage in order to avoid unnecessary investments in more costly transmission and distribution resources.

Maximized Energy Efficiency

In 2025, New Hampshire will have reformed utility incentives to favor energy efficiency over capital expenditures. Reducing energy consumption is the most cost-effective way to meet our energy needs and reduce GHG emissions. Saving energy costs less than increasing supply, and lower energy consumption translates into less pollution and fewer dollars leaving the state to pay for imported fossil fuels. Investments in energy efficiency programs – CORE Electric Programs create \$7.00 in savings for every \$1 invested – can also reduce the need for expensive new electricity infrastructure. In the electric sector, using less energy also facilitates achievement of renewable and alternative energy requirements at lower costs. An ENE analysis, *Energy Efficiency in New Hampshire: Engine of Economic Growth*¹, found that increasing efficiency program investments to levels needed to capture all cost-effective electric efficiency over 15 years would increase economic activity in the state by \$14 billion.

Electrified Buildings and Transportation

Replacing fossil fuel use with electricity in buildings and automobiles would generate significant GHG emission reductions and cost savings. In addition to sustainably harvested forest-based fuels, the energy vision should address electrified heating options in order to provide a proper framework for policy prioritization. In buildings, cold-climate air and ground source heat pumps are now capable of meeting the majority of space and water heating needs, even on the coldest winter days. Heat pumps are also capable of cooling buildings in the summer more efficiently than traditional air conditioners. Due to their higher efficiency and use of electricity rather than fossil fuels, heat pumps reduce emissions and heating and cooling costs. Electric vehicles likewise can reduce transportation emissions by over 60% using the current New England power pool mix. Compared to similarly-sized conventional vehicles, electric vehicles also benefit from 60% to 70% lower operating costs.

Increased Renewable Energy

Utilizing renewable energy reduces use of fossil fuels that emit GHGs and whose prices have proven to be historically volatile. Small-scale distributed generation using renewable sources provides the additional benefits of reducing reliance on the grid, reducing losses from transmitting and distributing energy, and increasing resiliency. It can also promote a thriving clean energy market in the state.

¹ Previously submitted to the SEAC, available at <http://www.env-nh.org/resources/detail/energy-efficiency-engine-of-economic-growth-nh-results>

Lower Economy-wide Carbon Emissions

ENE would like to see an energy vision that more specifically addresses the goal of having clean, low carbon energy. In 2025, New Hampshire will have reduced emissions across all sectors in the state. This will be accomplished in the most cost-effective manner, taking advantage of the flexibility and speed of markets, and leveraging impacts through collaboration with other states when desirable.

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.