



February 24, 2014

Meredith Hatfield, Director
New Hampshire Office of Energy and Planning
Johnson Hall, 3rd Floor
107 Pleasant Street
Concord, NH 03301

Dear Ms. Hatfield,

Thank you for this opportunity to provide comments regarding New Hampshire's State Energy Strategy, the visioning process, and ultimately our energy future. The Jordan Institute is pleased that New Hampshire has embarked on this process and that the Office of Energy and Planning leads this effort.

The Jordan Institute is a non-profit organization, based in Concord, New Hampshire. We advance public, environmental, and economic health by improving energy performance and resiliency in how buildings are designed, built, renovated, operated, and financed. We seek to achieve the most resilient and sustainable quality of life possible by transforming the energy and built landscape in our region.

Our mission and vision connect directly to the 2025 Straw Man Vision floated by this project's consultant, Navigant: ambitious, progressive, and realistic. We know from experience that many of the concepts highlighted in this Straw Man are technically feasible now and/or are already being implemented. Moreover, we recognize that improving the way we use and think about energy will have far-reaching benefits related to the well-being of our state and our people. We also know that public policies and public buy-in must eliminate barriers which have blocked the private market from more significant advances.

Most importantly, we recognize that resolute, unwavering, and consistent leadership will be required to scale-up this effort, and that this strategy effort is a unique opportunity. These

solutions are nonpartisan and benefit everyone in New Hampshire and all sectors. In many cases, these solutions are less expensive than our current choices and can leverage very limited public funds. We highly recommend that as costs of implementing this vision are analyzed and discussed, that they be framed in perspective for public consumption. All too often, alarm bells sound as soon as any dollar amount is suggested, regardless of context.

We recommend prioritizing energy efficiency and resiliency when framing this strategy and these solutions. Energy efficiency – in buildings, appliances, vehicles, transmission lines – is cost effective and builds resilience. Resilience is forward thinking and a crucial priority in planning for surprises. In fact, the New Hampshire Department of Health and Human Services has convened a work group to address climate and health solutions, and is framing their work under the umbrella of Resiliency. The Jordan Institute participates in this work group to help interconnect energy solutions to climate and health. The group’s working definition of Resiliency is “an ability and capacity to anticipate, prepare for, respond to, and recover from significant threats with minimum damage to human health and well-being, the economy, and the environment.” We want our energy future to be able to similarly respond.

Indeed, solving New Hampshire’s energy challenges will ease myriad other economic, environmental, and health problems. Transition is not easy, but it happens whether we are active or passive. This State Energy Strategy, when completed, will provide a framework, guidance, and a touchstone for policy makers. It should be a plan that catalyzes a remarkable decade of growth, prosperity, and sustainability.

The Jordan Institute would like to take this opportunity to respond directly to questions posed by Navigant.

Please place yourself in the year 2025 and consider the following questions:

1. How does the grid respond to extreme weather events in 2025?

In 2025, the “grid” will still operate as a network of wires and poles and buried pipes, but it will also be more responsive to disruption and energy moving in multiple directions. Micro grids, smart meters, and group net metering will be background business as usual and charging stations for electric vehicles will be ubiquitous. We will still have problems with the grid and it will still be vulnerable to weather events, cyber-attacks, and deferred maintenance. Eleven years is too short a time to expect dramatic changes. More important than how the grid responds, is how people respond to extreme weather events. With buildings that are more durable, resilient, insulated, and generating their own energy, short outages should be non-events. Anti-islanding technology for distributed generation systems is already available. Those who invest in such systems will be able to withstand and quickly recover from grid disruption.

2. How are consumers engaging in outage response?

Through “smart” technology – computers, phones, meters, mental telepathy – not sure what innovations will be available – consumers will be able to communicate with utilities if necessary. That said, in eleven years, utilities should be positioned to know immediately when, where, and why outages have occurred, and they should not have to rely on a “call” from a consumer.

3. Is the grid less vulnerable to security threats (cyber security and others) in 2025?

The grid will always be vulnerable to security threats. If New Hampshire has implemented policies and programs to improve the way we use energy, then everyone - residents, businesses, and municipalities - will be a lot less vulnerable to security threats.

4. How has resource intermittency been addressed in NH’s energy system?

In 2025, inverters, energy storage systems (electric vehicles, compressed air, pumping), and combined heat and power systems will have improved to address intermittency. While intermittency may still be an issue that is being resolved, market forces will have made tremendous strides.

5. How is NH responding to fuel shortages or supply disruptions in 2025?

Fuel shortages and supply disruptions will still be an issue in New Hampshire and elsewhere. However, if New Hampshire has implemented policies and programs to improve the way we use energy, then everyone - residents, businesses, and municipalities - will be a lot less vulnerable to such disruptions. With more efficient buildings requiring less energy and a growing percentage of energy coming from renewable, fuel-free, and local sources, New Hampshire will be less reliant on fossil fuels. Additionally, a diverse portfolio of fuels and distributed generation will minimize disruptions. Again, eleven years is a short period of time, and this vision will only be realized if policies are implemented in the near term.

6. Are consumers empowered to manage their energy bills?

Consumers who want to manage their energy bills are already empowered to do so. Such management will be commonplace for many, but not all in 2025.

7. Has the state lowered its per capita energy expenditures?

The majority of homeowners and businesses will better understand the costs involved in energy – the whole equation including externalities – and will be empowered to manage and lower their costs as desired. Energy rates are predicted to continue to rise, but significant improvements to the way energy is used will mean that regardless of energy rates, energy bills will be lower.

8. In 2025, where is NH ranked among its peers regarding energy efficiency, cost, or emissions?

New Hampshire could be considered a leader regarding energy efficiency, energy costs, and emissions. We can learn from the experiences of others, invest in technologies which are now significantly less expensive than just a few years ago, and leap-frog into a leadership role. However, other states started this type of effort more than a decade ago and have community buy-in. New Hampshire leading will require significant political dexterity.

9. Do businesses and individuals actively seek to locate operations and settle in NH because of its energy policy? If so, what is the main driver of this?

Businesses and individuals already actively seek to settle in New Hampshire for many reasons unrelated to energy policy – environment, skilled work force, health, et cetera. In

2025, many other states will have also improved their energy policies. However, we will have access to clean and abundant water, which will surely become a most precious resource. This will lure many businesses and individuals to the state.

10. What role does NH play in the creation and development of new energy-related technology?

Unless significant investment is made in the very short term, New Hampshire's role in energy-related technology will be about average. However, we have a skilled workforce and innovation hubs that are focused in other areas but could be redirected to create and develop such technology.

11. Are alternative fuels in both the thermal and transportation sectors helping to reduce harmful emissions and increasing the use of in-state resources?

Biomass and biofuels will no longer be considered "alternative" fuels for thermal and transportation applications and will be drivers for fuel diversity, local economic development, and superior forest management. Additionally, fuels derived from waste – methane from farms and landfills, construction and demolition materials, and trash will meet higher emissions standards.

12. Are transportation consumption patterns aligned with business and neighborhood development to reduce emissions and improve air quality?

In 2025, this conversation will still be in its infancy, although patterns may be in the early stages of shifting. New Hampshire's rural nature and independent streak will still conflict with smart growth.

13. How does NH use advances in technology to protect its natural resources?

New Hampshire has always understood and benefited from the connections between technology, natural resources, and economic development. We hope that an improved energy policy landscape will further connect these priorities.

14. Do siting requirements in 2025 protect both the atmosphere and landscape?

Siting requirements for energy project development in 2014 already consider and protect New Hampshire's atmosphere and landscape. As New Hampshire's citizenry become more educated about energy issues, balancing goals and needs and preferences will be better established.

The Jordan Institute is convinced that by adopting the Straw Man Vision and pursuing the steps to achieve it, New Hampshire will flourish and thrive, but only through significant will-power and persistence. Thank you for this opportunity. Please feel free to contact me with questions or comments. I look forward to working with everyone to make this vision a reality.

Sincerely,

Laura Richardson
Executive Director

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