SB191 State Energy Advisory Council (SEAC) Meeting
Meeting Notes

Location: LOB 308
Date: February 21, 2014
Time: 1:30 to 3:45 pm

Council Members in Attendance:

- Meredith Hatfield, Director of the Office of Energy and Planning, SEAC Chair
- Tom Burack, Commissioner of the Department of Environmental Services
- Amy Ignatius, Commissioner of the Public Utilities Commission
- Senator Martha Fuller Clark
- Representative Beatrice Pastor
- Representative Charles Townsend
- Representative Herbert Vadney

Other agency staff in attendance:

- Mike Fitzgerald, Department of Environmental Services
- Brandy Chambers, OEP

1:35 Welcome & Introductions

1:45 Navigant—Straw-man Energy Vision

Focus on where you want to be in 2025—ideal vision, don't be hindered by where we are today or try to address current issues facing us; the next step is for Navigant to prepare the resource potential study when we can look at specific strategies, but the focus today is not how we're going to get there, but rather where we want to be.

To get here, the Navigant team went through 3-step process

1. What are the factors that shape the future of energy in NH?
2. What are the extremes of each?
3. Which does NH has a highest level of influence over, and which have the greatest impact?

Navigant identified 8 key factors based on all information and inputs to date; 5 are high impact and NH has ability to influence them:

1. Energy Efficiency
2. Renewables Mix
3. Alternative Fuels
4. Transportation Options
5. Modernized Grid

Then Navigant developed a straw man based on what they heard from the SEAC, stakeholders, and existing NH policies and where they thought NH wanted to be. Today, they want to get feedback on that.

Navigant gave the SEAC & audience a few minutes to read through and think about the Energy Vision, and then asked the Council, and then the public, to respond to the key questions for each topic.

Security:

- Rep. Pastor: I liked that the vision talked about *energy systems* instead of just the electric grid. So I find the 1st key question to be one that should come later, after questions we haven't even asked. If we think about energy systems, to include thermal, it forces us to think about other issues. Reliability isn't just about grid outages, it's about our total energy supply, where it comes from, how we deal with it.
- Commissioner Ignatius: I don't disagree, but I do think we don't want to lose track of the outage responsiveness issues. We really need to be encouraging smart systems, etc. I think we'll get there prior to 2025, but it should still be specifically noted in the strategy.
- Rep. Townsend: Local energy storage should also be better integrated.
- Senator Fuller Clark: We need to shift the paradigm and talk first about what are the energy resources that we will have available to us in 2025?
- Rep. Vadney: To the first question, we need to think about what we'll have for micro-grids, etc., things that will enable us to respond to outages better. But above that, we have to think about how we can build the system big enough to back up the customer-generators and other distributed generation.

2nd question—engaging consumers in outage response

- Mike F.: I think there are two major areas here; first is communication and information—consumers need to be kept informed about how large outages are, how long they're expected to last, etc. Some type of individual storage that could help people bridge the outage times.
- Rep. Townsend: I would support a smart metering system that would immediately provide feedback on outage issues to the utilities (and then in turn to customers)
- Dir. Hatfield: I think that giving consumers more control over their own usage more generally would be helpful, and that a two-way communication system could contribute to a different future even aside from the outage issues.
- Rep. Pastor: What about non-grid vulnerabilities? Want to ensure that we have worked to address the large disparities we currently have in relation to access to different thermal sources such as natural gas. Today there are big differences depending on where you are in the state.
    - Ben: So would a greater ability to engage in fuel switching address that? Or perhaps localized distribution systems.
    - Pastor: That would certainly help, but we need to take into account the constraints that exist, for example on natural gas.

    - Commissioner Ignatius: I don't know if fuel switching is the right answer, but rather a more robust distribution system to improve availability of all types.

3rd question

- Rep. Townsend: Consumer needs to know what information is being carried through the grid (or pipelines, or anything) to protect privacy.
- Rep. Pastor: Is grid security more of a federal, rather than state, matter?
- Commissioner Ignatius: It may be a long time before the feds take action, and we aren't waiting for them—we need to ensure that we're protecting against cyber and physical threats, and that the providers themselves must commit to a robust effort to maintain a protected system.
- Rep. Vadney: We have a history of expecting 100% reliability; this is a bit tongue in check, but maybe we should start turning the power off every Thursday so people get used to it—people would find workarounds and be creative.

4th

- Senator: If you have more locally-distributed energy, then you're less vulnerable to a major energy disruption.
- Rep. Townsend: A lot of our energy usage could be time of day scheduled, to better match when energy is available. For example, if our dishwasher knew when to come on based on energy prices and availability.
- Mike Fitzgerald: Energy storage in electric vehicles seems like an area with big potential.

5th

- This was addressed already, but any other thoughts?
- Director Hatfield: I would like to see us be more self-sufficient, but perhaps on a neighborhood or town basis so that we are more connected—right now every house is an island.
- Rep. Pastor: Develop local sources as much as possible, along with distributed generation.
- Mike Fitzgerald: We need to take a harder look at our market system, and change the incentives so that lowest cost isn't the only driver.
- Rep. Townsend: A key piece of resiliency is weatherization, and having buildings that are better able to withstand outages.

Audience:

- Rep. Mann: The system may not be any better in 2025 than it is now, so I like the idea of being able to use multiple fuels, or cross-use fuels (e.g. run your fridge off of your Prius). I think self-reliant houses are the answer, because it's too complicated and expensive to try to achieve perfection in the grid. We need to have a system that is flexible as energy sources change.
- John Mainard: A lot of this discussion has focused on the grid, but we have a tremendous reliance on other energy sources, and we need to talk more about building resiliency into those thermal systems.
- More distributed base load to reduce loss over lines.

- Dick Henry: The past is not an indicator of the future, particularly for meteorology, we are going to see much more extreme weather that will impact all of the systems. I think that distributed thermal systems are much more resilient, durable, and efficient. It makes more sense to rely on distributed systems first and use the grid as backup, rather than what we do now.
- Clay Mitchell: It would be interesting to see if there's existing technology and apps that we use for things like mapping places that we need to drive that could be adapted for the grid.
- PSNH: Certainly agree that we envision a future with a more educated and engaged customer, and we are making investments toward that.
- Townsend: Granting that utilities have made a lot of improvement in communicating with the crews, there's a lot of room for improvement between companies—perhaps Liberty trucks could fix PSNH lines if they're already in the area?
- Taylor Caswell: A lot of these technologies already exist, they just need to be used at a much larger scale—we need to enable that.

Economics

1st

- Hatfield: I would love to have real-time information on the electricity and natural gas about how much I'm using and what it's costing, as well as what's happening on the rest of the system. Maybe there could be third party vendors who can provide energy management systems for people, similar to a security system model.
- Ignatius: It would be great to have the ability to program your house to say "if the system is stressed, reduce my power usage"—automatic action based on your set conditions.
- Hatfield: I would like to have the public more engaged in helping manage the systems we're connected to. Why is the ISO's LAST step going out to the public in times of tight conditions? People need to be more connected to what's going on.
- Burack: I would love to be able to tell the system that I don't want to spend more than $50 a month on my electric bill, and then help me figure out what to do to stay within that.
- Rep. Townsend: Echoing that, but stressing that it could be automatic, consumers usually don't have time to do minute-by-minute monitoring.
- Burack: I think what Meredith just said is very important, that there is a disconnect between consumers and the energy system, and we tend to take it for granted. Need to understand the consequences of our use.

2nd Is the state willing, in 2025, to increase spending in order to invest in systems that enable us to reduce expenditures long term?

- Burack: Vitally important to reduce spending on energy—whatever we spend on that is money we don't have to spend on something else.

- Ignatius: Transportation savings could be an enormous component of reducing energy expenditures.
- Vadney: Half of your bill is delivery system, and it will remain expensive, so we have to be aware of the limits.
- Pastor: Expenditures per capita doesn't tell you about the disparities, we need to know where vulnerable populations are. The reason disparity is important isn't just about energy or costs, it's about economic development.
- Fitzgerald: Per capita costs as a percent of income is also extremely important.

3rd

- Pastor: How is this going to be measured?
    - Lisa: That's our next step after today. For now, think more about the end state.
- Burack: I'd like to think that we could be a leader in this arena—why shouldn't we be? It may require more significant investment, but it's worth it. Across all sectors.
- Senator: I think I'd like a change in mindset, so that people become more focused on how they can lower their demand for energy. We talked about this a little earlier with the discussion about taking it for granted.
- Townsend: In 2025, all of our citizens, regardless of wealth or background, to improve the efficiency of their homes and choices about how they use energy.
- Pastor: Efficiency cuts across everything, we need to make it easier

4th

- Townsend: Energy prices shouldn't be higher than anywhere else, so that business are attracted here.
- Burack: Cost is certainly one of the factors, but predictability and resiliency are important as well. Additionally, I would like to think that there is thought given to the environmental impact of these sources, and promote low-impact sources.
- Fitzgerald: When talking about costs and expenditures, we need to make sure we're talking about bills, not rates.

Audience

- Jeff Kelly, NH Home Builders – Many of the technologies that we're discussing to empower consumers already exist, the question should be more what are the cost barriers to getting these tools in place here.
- Charlie Niebling – I would like to suggest that there be a category of 'Wealth Retention'—aside from our absolute consumption or efficiency, using in-state fuels has an enormous economic impact.
- Laura Richardson – I would like consumers across the board to understand what the equation is for energy, and include the externalities—hope that consumers would understand the health costs of some fuels, of the macro economic impacts, etc. The big driver in terms of business relocation will be water more even than energy—that's the next big shortage.

- Dick Sweat – Following Charlie's comment, 2/3 of our fuel is currently purchased from out of state, we should have an objective of obtaining our resources from in state.
- Ellen Hawes, ENE – In terms of efficiency, it's more important to aim for capturing all cost effective efficiency than worry about rankings.
- Ken Grossman – We're coming from behind on efficiency, and it's about changing the mindsets not just of consumers but also of policymakers.
- JP Hammill – As a specific metric, our buildings should be much better than code, especially on the residential side. But make codes more flexible.
- Taylor Caswell – There should not be an assumption that public dollars have to fund everything we're talking about here. There is a huge private sector interested in this.
- Dick Henry – Making a lot of this happen will require creative private financing. I would set a goal that every public dollar is leveraged by at least 10 private. Additionally, metrics must all be performance metrics, rather than technology-specific.
- Mike McQueeny, TRC – I think there's an opportunity to provide proactive feedback to consumers that suggests specific programs based on their energy consumption.
- PSNH – NH should absolutely be aspirational in moving the EE needle and there's no reason why it should take a decade to become a leader. We also work in CT, and we INVEST in EE, the economics of EE are very compelling. PSNH is excited to work with NH to get you on the map that way. We worked closely with CT developing their Green Bank, we can offer on-bill financing.

Sustainability

1st

- Burack: I hope our goal would be to generate power with as little environmental impact as possible, and as sustainable as possible to maintain our natural resources for future generations.
- Pastor: On transportation, the idea of widespread charging stations is very appropriate.
- Ignatius: It's hard to know what an "alternative" fuel is in 2025, so we might want to define what we want our primary fuels to be or be clear that we want to encourage the new ones as they come along.
- Fitzgerald: Definition of sustainability should include economic sustainability.

2nd

- Burack: There was a lot of thought given to this topic in the work that was done on the Climate Action Plan, so we don't need or want to reinvent the wheel.

3rd

- Burack: May sound paradoxical, but sometimes the best way to protect our resources is to ensure that we're using them sustainably. Using the term 'protect' may be too narrow.
    - Townsend: For example, expressing a preference for rooftop rather than field-level PV is protecting our resources.

4th

- Ignatius: The goal in all of these siting decision is balancing environmental protection with the needs that development creates.
- Senator: It would be important to leave siting requirements open to allow for new technologies, we don't know what might come along and who it might serve.
- Fitzgerald: That question seems a little bit of a no-brainer, that is already the objective and should continue to be.

Other thoughts on the vision:

Hatfield: I would suggest that perhaps we should have a greater emphasis on finding solutions for low-income customers, affordability is touched upon but just once in the straw man. Also, can we figure out how to send the right economic signals to get the results we want from both regulated and non-regulated industries? We focus on regulated utilities because we can get them to the table, but what do oil and other deliverable fuel companies want to be in 2025?

Senator: We should have a higher percentage of private industry investing in efficiency and other clean technologies.

Pastor: Would like to see a public transportation plan.

Townsend: I would like to see an understanding of the value of sunk energy in existing buildings and products and how to better look at lifecycle energy costs.

Ignatius: I would like to see more emphasis on market signals.

Fitzgerald: It would be good for the state to look at new mechanisms such as tax policies, rather than direct state investment.

Audience

- Gary Garfield, American Council of Engineering Companies—Relative to public transportation, we should encourage renewable energy in the design of transportation-related maintenance sheds, etc. There are also vacant DOT right of ways that could have large-scale solar installations, etc.
- JP – Transportation is tough in NH because of the rural areas, but maybe within our more densely populated areas we could have bike lanes, etc. Renewable energy should include small scale hydro.

- ENE - I know there's difficulty in addressing land use planning issues through this process, but I just wanted to stress the importance of looking at the impact of our forests in mitigating our emissions. We support using our forests as an energy source, but make sure to do so as efficiently as possible (e.g. as thermal source, not electric).
- Doug Whitbeck—I live in an old house in a rural town; we're at the end of the grid, we'll never have public transportation—so make sure to consider solutions for homeowners like me.
- Laura Richardson—My vision of energy in 2025 is that it's no longer a partisan issue.

Rep. Vadney: These comments boil down to being a search for a holy grail, and those don't tend to go well. Seems like a lot of solutions are for 'other people'—need to find solutions that we're actually willing to implement.

Lisa: I think everyone wants to preserve the high quality of life in NH. Fitzgerald: I think that what we're talking about is giving people more choices, so they can decide where they fit on that spectrum. And we can give people incentives to more in a certain direction, but nothing forces them to do it, it's a choice.

Hatfield: In particular, there's evidence that young people DO want that type of lifestyle, and if NH doesn't offer it to them, they won't stay.

Townsend: I would like to see a greatly increased use of telecommuting and a reduction of unnecessary (and particularly dangerous-weather) traveling.

Senator: When you're writing this vision, who are you writing it for? Who is the audience going forward?

Ben: Imagine someone further down the road, well beyond 2025, picking up a book about NH that describes what NH looked like in 2025, and that's the vision. It should be generally understandable.

Vadney: 10 years isn't a very long term goal. One goal should be to integrate the maximum reasonable amount of solar, wind, etc. but figure out how to pay the grid costs.

Lisa: Yes, that is an important, ongoing conversation nationally, lots of people are focused on it. But your legislation calls for a 10 year strategy.

3:30 -- Director Hatfield presented a revised schedule for the remainder of the project, which will be finalize at the next meeting.

The meeting was adjourned at 3:45.