

## **Interview with Department of Public Service Commissioner Elizabeth Miller**

These questions are a condensed representation of many of the questions that VECAN conference attendees asked of Commissioner Miller but time limitations failed to allow her to answer. Many thanks to Commissioner Miller for following up and answering these questions.

For more information on the DPS, the energy plan or to follow up on anything specific, check out the DPS web site at <http://www.vtenergyplan.vermont.gov/> or contact Commissioner Miller at <http://publicservice.vermont.gov/about-dps/staff-directory.html>.

*The CEP sets a big goal of meeting 90 percent of Vermont's energy needs from renewable energy by 2050. Are there points in the next 40 years when the plan will be reevaluated, where the public can have a voice how the plan is implemented? And how often will the reevaluation occur?*

'Review, revise repeat' is key to energy policy because it can be both fast paced as well as somewhat controversial. Making sure the state reviews its goals and progress frequently and engages the public in that process is something we are committed to doing. Statute requires an update every five years, but the CEP suggests check-ins more frequently. We are considering ways to do that routine review and are committed to public involvement in the process.

*Do you foresee the development of more detailed technical roadmaps on how we're going to reach the vision and goals?*

As progress is made in any given area (or not), more detailed plans should be put in place. The CEP is a set of recommendations, but more detailed roadmaps are needed to achieve good progress. But the recommendations are important for getting us there: the best example for what's possible is on the electricity front. I don't think a decade ago we would have expected the detailed policy and accompanying progress we've been able to achieve on the electric efficiency front. Every step forward has allowed for that progress. In the CEP, the biggest transformation will have to occur in transportation. Luckily, VTTrans and others who worked on this aspect of the CEP did set very specific goals on transportation energy usage and each goal will be backed up by planning to get to that goal.

*How do we incentivize good private sector renewable energy development while also maintaining quality, open public input and environmental restrictions?*

We are striving for that balance. Vermont does have a robust statewide process, but we have heard the concerns that public input should be improved. Meanwhile, we have heard from developers that feel Vermont's processes take significantly longer than some of our neighboring states. Energy siting is difficult and can be controversial but the purpose of the statewide siting process is to allow for significant public input while also

giving a uniform process to developers. The process needs to be respected by all parties, and public engagement in that process is important. Regions and communities are an integral part of that process; clear regional and town plans with thoughtful consideration of energy siting can help.

*We need leadership to shift tax policy – to stimulate demand for efficiency, cushion against future price shocks, etc. When can we expect a carbon tax and this associated shift?*

That's an often-heard question. And it's something that requires deep leadership regionally and nationally. Climate change deserves more attention nationwide; Vermonters understand the challenge, but the extent to which Vermont can act alone in economic policies to address climate change is limited. But there may be opportunities with regional support and the support of other states such as California to explore options like this. If Vermont moves alone on a carbon tax, we need to understand that we might be doing to harm ourselves instead of make the kind of progress that will serve us both environmentally and for our long-term economic prosperity. Regardless, regional initiatives such as RGGI deserve greater support.

*How do you think interested Vermonters might use the CEP to inspire the actions necessary to meet the goals of the plan? And then, how will the state support us?*

The CEP recognizes that Outreach and Education is one of the pillars supporting change. I hope all interested Vermonters will do a few things: join a local energy committee; host a forum on the CEP's goals; spread the word on the reasons why it is important to meet our goals (...and see the CEP's Volume 1 summary for the answers!); and engage in a local energy or efficiency project. Change starts small and starts local – we all need to raise awareness of the energy challenges that face us. The Climate Cabinet is reviewing ways in which the state can provide support for this local action; the CEP also commits the Department to attending local and regional meetings on how best to update regional energy plans.

*If Vermont meets all its renewable energy goals by 2050, what will be the effect on the state's climate and environment? [I think I did answer this at the forum; it was Steve Wright's question...If you want me to answer it again let me know; I think I said something like 'well it depends upon the resource mix and location but I can tell you that we will be better off if we meet our goals than if we don't.']*

*Why is 2050 the timeline – does it really have to take ≈40 years?*

I would love for progress to be made even more quickly but believe the goal we set is achievable -ambitious but achievable. Particularly in the transportation sector, which is our largest contributor to GHG emissions and over a third of our total energy usage, change will not happen quickly; the goal was set with all sectors in mind.

*Are there any state programs supporting original research and development efforts?*

Agency of Agriculture supports some research in biofuels; generally, though, R&D support happens at the federal level. We do not have specific state programs for these efforts. Vermont has not typically deeply funded research and development, as opposed to applied projects. We are a small state, so we need to use our dollars wisely and carefully, knowing that they are limited. Some states, like New York, have expanded their programs to include R&D; there may be areas where R&D at the state level is appropriate, and we remain open to it.

*We need micro-hydro – what is the future of it in VT?*

We heard many comments asking for greater progress on in-state hydro electric generation. Greater efficiencies and outputs at current sites is where we see the easiest and best potential for hydro. There are certainly opportunities for micro hydro in waste streams and in industrial waste processes too. In addition, we may be able to follow the path of Colorado and work with the federal agencies on small-scale, low impact hydro permitting. The CEP recommends that any new micro hydro development be consistent with Low Impact Hydro Institute standards. ANR is charged with ensuring Vermont projects respect the environment.

*It is great to talk about wind, solar, and hydro but of these renewable resources only hydro has good storage possibilities. What is being done to confront the problem with not generating electricity when electricity is needed?*

Great question. The short answer is that energy storage and two-way communication with the grid will help with balancing intermittent renewable energy technologies. When you look at acceleration curves in technology, energy storage will be a place where we see great progress in the coming decade, I believe. For instance, Dynapower in Vermont has a project where it will have an energy storage pilot (using battery technology) co-located with small wind (using a Northern Power Turbine), and near a solar installation. This will provide good data on the possibilities allowed by storage. While pumped or ponded hydro is thought of as the easiest renewable storage technique, other methods such as the customer heating blocks in use in the Northwest also may find wide application. These are just some examples of the kind of innovation that could really help address that issue.

*The amount of electricity necessary to really shift to PEV transportation statewide is significant. How can we promote using so much electricity and expect to produce it? Not to mention, rolling out infrastructure to support it etc.*

We need to first work on demand and reduce demand for current uses so that we have some headroom for new uses. We also need to ensure we don't just measure the value of energy efficiency programs by the amount of load reduction, but also by the amount it frees energy up for other uses. Smart grid technology will help balance loads, extending our current infrastructure as charging occurs during off-peak hours. Having said that, the transportation challenge posed by PEV is significant but promising. If the CEP goals

hold, and I hope they do, we will need more electric generation. Some parts of that need can be met regionally (we have excess right now on the regional grid, with more generation in the offing), but energy efficiency and distributed generation here in Vermont is key. One of the reasons that the CEP focuses on transportation is because we have a chance to identify these challenges and plan for them now – to stay ahead of the curve on PEV deployment.

*Electric vehicle infrastructure requires cooperation from EV makers – any role VT can play?*

Vermont has to be a voice as electric vehicle technology and infrastructure gets rolled out regionally and it will also require regional collaboration when we work on infrastructure. What we know is that Vermont can't be an island when comes to EV infrastructure; we have to work with our neighbors. That regional cooperation will also help Vermont have a voice when it comes to the manufacturers; we need a system that is as convenient and interchangeable as our current gasoline-centered infrastructure. This is a significant and important challenge in the coming decade.

*Could the state consider raising the tax on transportation fossil fuels to foster and fund renewable fuel development? How about incentives to lead people away from single-occupancy vehicle commuting?*

During the CEP public engagement process, we heard many Vermonters asking about raising the gas tax to fund efficiency or renewable energy development. The concern, of course, is cost. Vermont costs for fossil fuels (all types) typically run a bit higher than our New England neighbors already; we also pay a higher total tax on fuels than some of our neighbors. And those who live farther from work or have not been able to purchase more efficient vehicles bear the brunt of any increase. Having said that, putting policies in place that make it easier for Vermonters to get out of their cars or to avoid solo trips would not only save fuel and help our environment – it would also save Vermonters money. Development policies that encourage us to live closer to where we work and shop; greater rural transportation options (including ride share and people-powered options); and infrastructure to support these options (park and rides; bike and rec paths) are very important. I am proud that the CEP recognized these intersecting concerns and attempted to address transportation and land use energy policies, rather than focusing only on electricity and heating.

*Are there any incentives for a landowner to donate large tracts of land for solar or wind that would benefit the neighboring homes (towns)?*

Interesting. I will think about this one further; we support in the CEP the development of community-owned energy facilities. One way to contribute to the ownership would be through ownership of the land. Some developers are partnering with landowners now to create leased energy facilities, where the energy delivery is wrapped into the project costs. We also have worked with the Tax Department on the property tax valuation of

small-scale solar projects, recommending a simple, project-friendly capacity-based tax in order to encourage such developments (and thereby increase the tax base).

*Is there any advanced planning for “plug in” stations for electric cars as they become more mainstream?*

We are already working regionally on PEV infrastructure because we want to have a common approach with our neighbors in recognition of the interstate nature of transportation. The Climate Cabinet also expects to form an interagency taskforce to keep up progress on this issue – there are a number of regulatory and other changes, small and large, that can help prepare Vermont for PEVs. In addition, Vermont Energy Investment Corporation is launching “Project Get Ready,” to bring together public and private actors on this issue.

*Do you feel your agency was able to do the work of the people of Vermont and follow state law in permitting GMP’s Lowell Mt. wind project?*

I do, but I recognize that the project has generated significant disagreement, particularly since construction has started. The project went through a lengthy Section 248 process with multiple parties and viewpoints heard; ultimately the Board approved the project with a number of conditions. An appeal to the Supreme Court is still pending. It will be important to see the many conditions placed upon the project fulfilled, and the promised economic and ratepayer benefits achieved.

*What is the single most effective change citizens can make to reduce energy consumption and CO<sub>2</sub>, without spending \$ - in fact only saving \$?*

Conservation! Use less, save money. Think of your electric usage like you think of water – turn it off when you aren’t using it; don’t let the faucet run.

*Will Vermont hold to its promise and better support its new energy codes, perhaps the best energy efficiency tool?*

We certainly hope so. I am proud that the Department was able to complete and release both residential and commercial energy code updates in 2011. The Department is completing an energy code compliance report right now, and it will make recommendations on how Vermont may achieve even greater compliance going forward. We also are committed to continuing the energy codes assistance hotline: 1-855-887-0673.

*How does the CEP address thermal energy building codes?*

Please see the thermal energy section of the CEP for detailed information. In addition to completing the compliance report mentioned earlier, we recommend continuing updates of our codes at least at the pace of the international code; we also recommend steps to increase EnergyStar rated homes. We believe Vermont can set a responsible and

achievable path to net zero new construction by 2030, and efficiency is the most important component in getting there.

*What's the Total Energy Standard about?*

Right now, Vermont sets renewable energy goals for electricity, and has targets for thermal renewable energy and for efficiency. But Vermont does not have a single, uniform method for measuring various energy uses (and efficiencies) against one another in order to compare and track renewables progress over time on an apples-to-apples basis. Using a common measurement unit (such as BTUs or KWh) would start to get us there, but it is a difficult task because of different energy intensities, capacity factors, etc. For the CEP, we performed this sort of calculation in determining that Vermont presently uses nearly a quarter renewable sources for its energy (including large hydro and projects where RECs are sold out of state). The CEP recommends that the state spend the time investigating a Total Energy Standard so that we can have a robust and common way to track progress over time in all energy sectors, not just electricity.