

**Comments on PSD “Vermont Comprehensive Energy Plan” draft**

Like the CEP of 2011, the guiding principle of the Plan’s “vision” is “to set Vermont on a path to “attain 90% of its energy from renewable sources by 2050.”

That document also advocated for

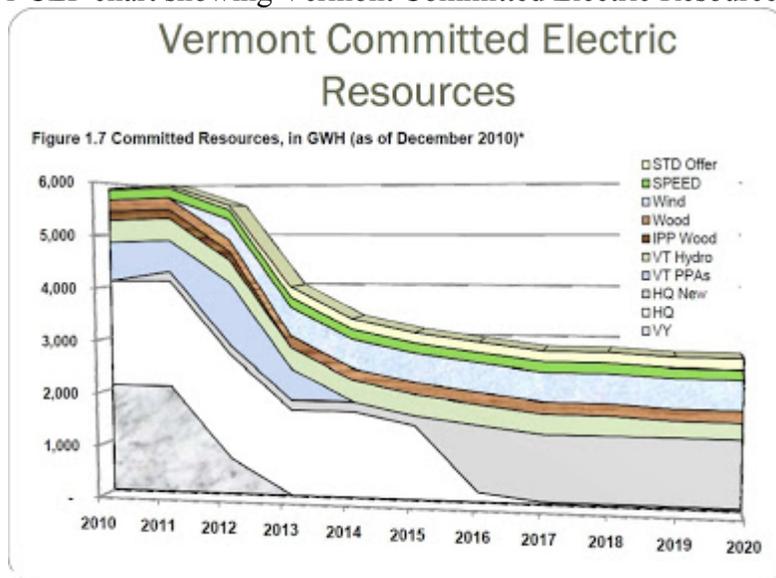
- Moving toward “energy independence” by requiring Vermonters to reduce their consumption of imported fossil fuels that then comprised two thirds of the state’s total energy consumption.
- Reducing greenhouse gas emissions to 25% below 1990 levels by 2012, and 50% below by 2050, to “lower the state’s contribution to global warming.” (Act 168 of 2006)
- Strengthening and extending the various mechanisms for effecting these goals: mandates, subsidies, controls, and directives.

**A more desirable and realistic plan would be, in our view, “to set Vermont on a path to assure safe, reliable and competitively priced energy that will make possible a strong, competitive and growing economic base, both for creation of new wealth and income for the people of the state, and for expanded tax revenues to enable the state to meet its fiscal obligations.”**

The following comments relate mainly on the electricity section of the 2015 draft Plan.

Meredith Angwin, head of the Institute’s Energy Education Project, has posted an analysis of the electricity projections at [www.yesvy.blogspot.com](http://www.yesvy.blogspot.com). It makes this key point: “The proposed Vermont Energy Plan is Basically Unworkable.”

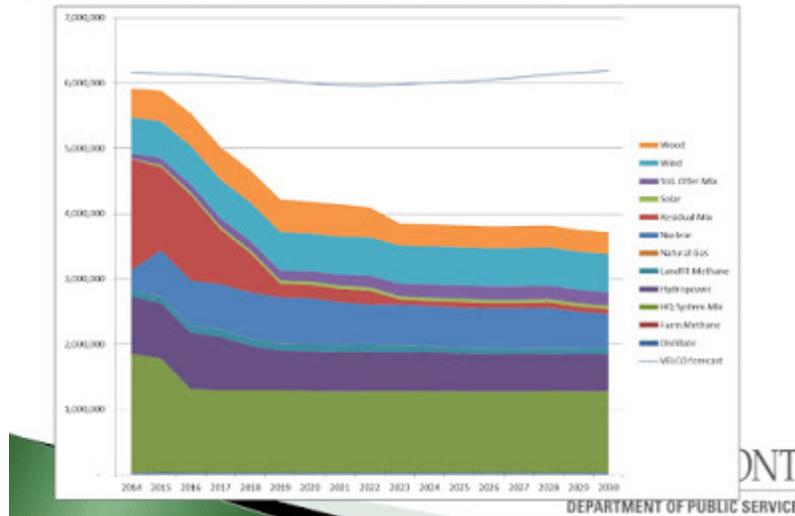
Consider the 2011 CEP chart showing Vermont Committed Electric Resources” out to 2020.



2010 Known Electric Resources from PSD from CEP 2011

Asa Hopkins, Director the Planning and Energy Resources Division of the PSD, offered this updated chart at a PSD meeting on June 30, projected to 2030.

## Known electric sources



2015 Known Vermont Electric Sources from PSD

HydroQuebec, the big green part at the bottom, falls off somewhat as the old contracts expire, but its contribution remains steady. Above it is the steady purple of Vermont and New York State hydropower, and the increased level of nuclear (medium blue) as the Seabrook contracts begin. Then there's that huge red part, "residual mix" (aka "buying from the grid or short-term contracts") that is supposed to diminish, and in fact disappear.

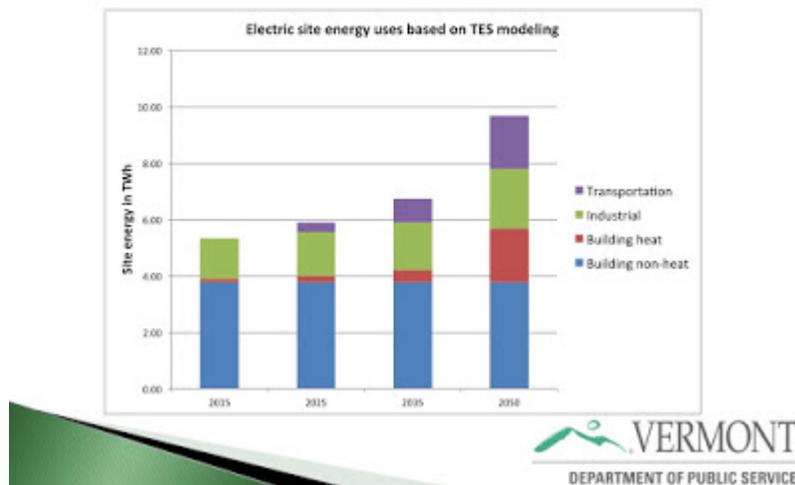
With the nuclear purchase in place, in order to meet the stated goal we can't buy a single electron from the grid, and we can't expand our use of natural gas. All that white space at the top right must be filled with renewables.

The last few slides in the presentation show how the PSD addresses this problem. A slide labelled "Question #1 background cont." includes the following: *"Expected identified resources ....leave 46% of the electric portfolio undetermined."* What kind of comprehensive energy plan leaves 46% of the electricity "undetermined"?

Angwin notes that the line at the top of the 2015 chart (how much electricity Vermont is projected to require) slopes up gently to the right. On that chart, the Vermont electricity *requirement* number seems to hang right around 6,000,000 MWh (6 TWh) for fifteen years.

But the Vermont projected electricity use from the PSD's TES (Total Energy Study) included all sectors of energy use, and predicted that Vermont can lower total energy use significantly. However, to do this, Vermonters will have to use considerably more electricity (notably electric vehicles and heat pumps). The chart below sums this up.

## TES-based electric site energy



Future Vermont Electricity Use, from Total Energy Study and DPS presentation

In this chart, as building heat (electric heat pumps) and transportation (electric vehicles) kick in, Vermont energy use goes from around 5 TWh in 2015 to around 9 TWh in 2050.

In other words, the Known Electric Resources chart ended in 2030, with just a gentle uptick in demand, as shown by the top line of the chart. For that top line, PSD used a VELCO projection of energy use, instead of referring to their own PSD studies. (We don't know what study they used for the "46% of the portfolio" number.)

However, if Vermonters are required to run all sectors on renewable electricity, we are going to need much more electricity than estimated by VELCO. Vermont electricity use practically doubles by 2050. If "46% of the portfolio.... is undetermined", the new Plan is sucking wind.

Where will we get all that additional renewable electricity? Not from solar PV and net metering. Hydro Quebec seems the only realistic option. What became of the 2011 CEP's insistence on more "energy independence"? Vermont will have to be much more dependent on HQ to deliver terawatts to (Canadian-owned) Green Mountain Power. In return, HQ will be in a strong position to demand favorable contract terms and perhaps expanded power corridors through Vermont.

Other material provided by PSD – not in the Plan - projects that the electric load will be essentially flat at 6,000 Gwhrs/yr from 2012 through 2025. In that latter year its "high efficiency and renewables" scenario requires that the fraction contributed by renewables will rise from the present 1,667 Gwhrs/yr (27%) to 4,606 (75%).

Fifty eight percent of this increase (1,733 Gwhrs/yr) is attributed to HydroQuebec, which until a few years ago was not "renewable" until the legislature redefined "renewable" to include what is now our leading electricity supplier. New wind turbines will contribute 230, currently proposed wind 299, FIT solar farms 108, net metered PV 21, new biomass 426, and large hydro (presumably not HQ) 123, total increase 2940.

To produce this result, the State will have to pursue some combination of ratepayer and taxpayer subsidies - tax credits, rebates, government financing, mandates, Feed In Tariffs, Renewable Portfolio Standards, and outright capital subsidies. How many acres of solar panels? How many more 450 foot wind turbines? How many gas-fired backup plants to keep grid load reasonably level? How soon will these have to

come on line? Will the resulting price of that electricity keep Vermont businesses competitive and residences affordable? This information is not included in the Plan.

The CEP showed great enthusiasm for electrical energy conservation and efficiency, for which the ratepayers have been forced to pay \$237 million over the past eleven years. It expected that Efficiency Vermont would weatherize 8,200 homes a year – 22 a day for nine years. This will hit up ratepayers for an astonishing \$85 million a year by 2020.

The 2011 Plan declared a five to one return on such investments. Query: if such fabulous returns can be achieved through conserving energy, and pocketed by the favored home or business owner, why is it necessary for the rate payers to pay for it? Why don't the home or business owners invest and pay for the energy improvements, and use their savings on their power bills to pay off their investment, without sending those bills to their neighbors?

The CEP stated that Efficiency Vermont “helped the largest commercial users in the state save 7.5% annually through a commercial energy efficiency challenge.” The Plan did not explain why the state’s ratepayers were taxed \$50,000 (at least) to produce savings for Green Mountain Coffee Roasters. Why couldn’t this billion-dollar company, and others, finance their energy investments themselves, and pay themselves back with the energy savings achieved?

As for the alleged five to one return, the CEP offered no comparison with the return that might have been realized by the state’s economy had the state not taxed the \$237 million away from ratepayers.

As our frequently-ignored Constitution aptly observes, “previous to any law being made to raise a tax, the purpose for which it is to be raised ought to appear evident to the Legislature to be of more service to [the] community than the money would be if not collected.” (Ch I Art 9<sup>th</sup>).

In the past decade the passion for “renewables” has produced a long list of costly incentives, notably

- Feed In Tariffs (standard offers), which require the utilities to buy up to 50 Mw of renewable power at prices from three to five times the current market price.
- Clean Energy Development Fund, funded until 2012 by imposing special taxes on the state’s one nuclear plant, to distribute tax credits – and later, up front cash – to subsidize renewable energy installations, notably those stimulated by one of the Fund’s original board members.
- RESET, the Renewable Portfolio Standard legislation (2015) that mandates utilities to purchase increasing percentages of renewable electricity

There is no question but what a state can achieve the decreed “90% by 2050” – if its political leaders can persuade its taxpayers and ratepayers to provide the enormous subsidies, and submit to the ever increasing mandates, that reaching that goal will require.

Whether the taxpayers and ratepayers could do more good for the people and economy of this state by making their own decisions on how to spend their own money (see Ch I Art 9<sup>th</sup> above) is an important question, which of course the Plan, like the 2011 CEP, will assiduously avoid.

In short, the CEP’s – and certainly the new Plan’s - vision of a state with 90% of its total energy produced by renewables by 2050 can only be achieved by heroic, costly government intervention into the energy market, over the growing protests of taxpayers and ratepayers called upon to finance the ever expanding renewable industrial complex.

It is significant that the “90% renewable energy by 2050” goal is not state law. It was simply decreed by Gov. Shumlin. It does not appear in 30 VSA 8001 as one of the goals of the state’s electricity policy. The “90% by 2050” goal was mentioned in Sec. 13 of Act 170 of 2014, but the fact remains that our elected

representatives have never been called to vote on it. Because of the potentially enormous costs of achieving that goal, and the flood of taxes, mandates and regulations being put in place to achieve it, we recommend that the general assembly be asked to give this decree democratic legitimacy by a record vote in each chamber.

The CEP was rightly enthusiastic about distributed generation, as preferable to large central power stations and long transmission lines. What the Plan conspicuously refused to consider is a fleet of 100-200Mw factory-built modular nuclear plants, making use of new failsafe Generation 4 technology, on a dozen sites around the state. Such plants aren't likely to be on the market before 2020 (unless the Chinese produce an exportable package before then), but a few states will be ready for them, and Vermont ought to among them.

**Recommendations:** the 2011 CEP included some useful proposals, including more net metering, ride sharing, local energy committees, state building efficiency improvements, smart grid investments, the voluntary local Property Assessed Clean Energy program, and maintaining an effective energy information clearing house.

But overall the CEP resolutely headed off in the wrong direction, anticipating enormous taxpayer and ratepayer costs, ever growing bureaucracies, and ever more extensive controls over the choices of the ordinary Vermonter, all to send Vermonters galloping after a wrong-headed goal of "90% renewable energy by 2050".

Here are our 19 specific policy recommendations for the successor Plan.

1. Abandon the "vision" of this Plan that state government must use its coercive powers to see that Vermont gets 90% of its energy from renewable sources by 2050 or any other date – at least until the General Assembly votes on the record to make themselves accountable to the voters who will bear the burdens.
2. Replace that vision with this: **"to set Vermont on a path to assure safe, reliable and competitively priced energy that will make possible a strong, competitive and growing economic base, both for creation of new wealth and income for the people of the state, and for expanded tax revenues to enable the state to meet its fiscal obligations."**
3. Repeal the requirement that Vermonters be forced to reduce their greenhouse gas emissions to 50% below the 1990 baseline by 2028, or any other year. (Act 168 of 2006).
4. Repeal the state's "climate action plan", inasmuch as nothing the people of Vermont can do, even at crippling economic cost, will ever have any detectable effect on any metric of "climate change" (formerly "global warming").
5. Repeal the RESET mandate that utilities meet a fraction of their demand with high priced renewables.
6. Repeal the Feed In Tariff (Standard Offer) mandate that requires ratepayers to pay far above market prices to the producers of government-favored renewable electricity.
7. Repeal the small business solar tax credit.
8. Stop looking for inventive new ways to suck money into the Clean Energy Development Fund, such as a "compliance fee" levied on non-renewable energy (heating oil, truck and auto fuel, propane, natural gas etc.). When its current subsidy commitments are exhausted, abolish the Fund.
9. Abandon the idea of authorizing issuance of Qualified Energy Conservation Bonds unless the entire risk of default rests with the enterprise favored by the financing (in which case the issue probably can't be sold.).

10. Repeal the ratepayer-financed PSB energy efficiency program, and let businesses and homes that wisely invest in energy conservation recover their costs from their own savings, instead of sending the tab to other ratepayers.

11. Abandon the idea of instituting a carbon tax – a “climate pollution tax” to its backers. Such a tax, levied on gasoline, diesel, natural gas, home heating oil and propane, would, its backers say, include a rebate of 90% of the proceeds to people and businesses burdened by the tax; the remaining 10% would finance more renewable adventures like the CEDF. Opening an (eventual) \$700 million a year revenue source would be an irresistible temptation to legislators to solve their chronic budget problems, not their constituents’ energy cost burdens.

12. Abandon any temptation to subsidize any form of passenger rail in Vermont, especially after Gov. Dean’s \$28 million Champlain Flyer boondoggle.

13. Abandon any notion of requiring buildings to be “net zero” (100% energy self-sufficient) by 2030.

14. Abandon any notion of restricting or taxing single occupancy vehicles (SOVs) driven by Vermonters.

15. Abandon any notion of using land use controls to force Vermonters into downtown centers or other government-favored locations in the name of energy efficiency.

16. Assess electric vehicle owners, who pay no fuel tax, a charge for using the state’s highways, instead of making gasoline and diesel fueled vehicles absorb all the costs. Require that publicly installed EV charging stations charge EV owners enough to at least cover the energy they are drawing.

17. Continue to require utilities to purchase electricity offered through net metering connections, up to the point that grid stability becomes a problem; but set the rate of kwhr credit for net metering vendors so that they do their part in covering the fixed cost of maintaining power grid service.

18. Consistently remind yourself that markets work, and that ordinary people usually turn out to make better use of their resources than what is prescribed for them by the experts who prepare “comprehensive energy plans.”

19. Read Ch. I Art. 9<sup>th</sup> of our Constitution again, and post it in plain view at PSD headquarters. (Send copies over to the State House and the Governor’s office.)

Thank you for this opportunity to comment on the draft Energy Plan.

For the Ethan Allen Institute,

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