Rob Pforzheimer
Category: Wind

Comments: Link to article, Alternative To Wind: VEC Eyes Geothermal Energy (http://caledonianrecord.com/main.asp?SectionID=180&SubSectionID=778&ArticleID=86754) plus comment, "David Hallquist sees geothermal as a better alternative than wind. It doesn't kill birds and bats or ruin peoples quality of life and property values either."

11/14/2012 8:44:00 AM

Alternative To Wind: VEC Eyes Geothermal Energy

Robin Smith
Staff Writer

+ click to enlarge

PHOTO BY ROBIN SMITH

Dave Hallquist, CEO of Vermont Electric Cooperative, talks at the Derby Planning Commission meeting last week about the energy section of the town plan.

A battle over wind power is raging in parts of Vermont -- a battle over a part of an energy picture that only has a small impact on the state's carbon footprint.

Dave Hallquist, CEO of Vermont Electric Cooperative, says the real focus should be on the big causes of Vermont's carbon production: the reliance on oil to heat and cool homes and gasoline to run vehicles.

The VEC board of directors has asked Hallquist to focus in 2013 on how electric utilities can actually reduce that dependence on oil and gas and create a renewable energy resource at home that reduces the state's carbon footprint.

Hallquist is looking at geothermal energy, the result of tapping into the warmer rock beneath our feet.

Geothermal energy could heat and cool Vermont homes and provide electricity for hybrid cars to reduce the demand for both oil and gasoline.

Utilities, Hallquist said, would benefit from the creation of a new renewable energy source that runs homes and cars and creates a local source of renewable, reliable energy.

VEC already has enough renewable energy sources to meet current state mandates, he said. He would ask the Legislature not to demand more right now.

In the meantime, the state could tap Efficiency Vermont and other sources to create incentives for more geothermal systems and hybrid vehicles.

The price of geothermal systems are coming down, he said, and approaching the cost of home heating oil, at $3.81 per gallon according to the price of oil sold Tuesday in Derby.

"We think it's right on the edge," Hallquist said.

Wind Controversy

The battle in parts of the state over wind projects, pitting one environmentalist against another, doesn't have to happen, Hallquist said.

Electricity used in Vermont makes up only about 4 percent of the state's carbon footprint, compared to the carbon footprint from heating and cooling homes and businesses at almost 50 percent, he said.

Running vehicles on gasoline makes up more than a third of the rest of the carbon footprint generated in Vermont.

Hallquist said it just makes sense to focus on the real causes of Vermont's carbon production

-- oil and gasoline -- than burn so much political energy battling over wind and solar energy.

Both are much higher in cost than the market rates for electricity today, and both carry a high cost in dividing communities that would otherwise be supportive of a less-intrusive energy source like geothermal, Hallquist said.

He has listened to anti-wind opponents and say they have some "very sound arguments" that need to be considered when talking about wind projects in Vermont. And solar is so much more expensive still, he said.

"I can't get too charged up talking about wind and solar. I can get charged up about solving heating and cooling," he said.

Everyone knows that oil and gasoline are the real sources of carbon production, he said.

"Let's work on that together," he said.

Geothermal energy is the most productive, new renewable source available, once the cost of producing it drops near the price of home heating oil, he said.

Oil and propane are reliable and efficient power sources, about 90 percent efficient in generating heat, he said.

Geothermal is more than three times as efficient as oil and gasoline, Hallquist said.

In particular, geothermal energy is capable of heating or cooling a home, recharging a hybrid or electric car, and even allowing utilities to tap into the stored electricity in a hybrid car battery to feed into the grid.

"We could actually pay you for it," he said.

If the cooperative had enough members with geothermal systems and hybrid vehicles, it would have a local and highly efficient energy source that is renewable, highly efficient and reliable, unlike solar and wind, Hallquist said.

The state could integrate its climate change goals with its electric grid goals, he said.

VEC Focus

The board of directors asked Hallquist to look at how the co-op as an electricity utility and the electric grid can be used to reduce the carbon footprint.

Hallquist said he is already studying the opportunities and will report back to the board in the new year. He then hopes to take that on to the Legislature and change the discussion in the state.

The co-op has been a leader in other utility matters, leading the way on smart grid technology.

Article Comment Submission Form

Please feel free to submit your comments.

Article comments are not posted immediately to the Web site. Each submission must be approved by the Web site editor, who may edit content for appropriateness. There may be a delay of 24-48 hours for any submission while the web site editor reviews and approves it.

Note: All information on this form is required. Your telephone number is for our use only, and will not be attached to your comment.

Submit an Article Comment

First Name:
Required

Last Name:
Required

Telephone:
Required

Email:
Required

Comment:
Required

Passcode:
Required

Click here to see a new mix of characters.

This is an anti-SPAM device. It is not case sensitive.

Submit Reset

LIFE

The Caledonian-Record, 190 Federal St., P.O. Box 8, St. Johnsbury, VT 05819 - 802-748-8121

Annette Smith
Executive Director
VCE
Danby

Category: Wind

Comments: In my public comment yesterday I made reference to a workshop I attended where panelists from New England states talk about the process they have gone through. I found the audio, it is here: http://esnips.com/displayimage.php?pid=32946248. Below is the entire program. This audio is Session VG, "Searching for Best Practices in Regional Planning: Comparing Models and Strategies." This audio would be worthwhile for the panelists to listen to, augmenting what they heard yesterday from other New England states.

NEWEEP Conference & Workshop June 7, 2011
Video/Audio File Links

Session I	Video	Opening Plenary: Welcoming Remarks & Overview of New England Wind Project Development Activity	http://www.youtube.com/watch?v=-KTTEq8agjY
Session II	Video	Public Acceptance Experiences with Operating Wind Projects	http://www.youtube.com/watch?v=SGq0cCoetVs
Session III	Video	Topics in Public Acceptance	http://www.youtube.com/watch?v=KGT5cSojZBY
Session IV	Video	The Context for New England Wind Power: Energy, Climate, and Sound Science	http://www.youtube.com/watch?v=DVkyCB99M1M
Session VA	Audio	Wind Energy Economics	http://esnips.com/displayimage.php?album=434857&pid=32946249&uid=1022474#top_display_media
Session VB	Audio	Searching for Best Practices in Regional Planning: Comparing Models & Strategies	http://esnips.com/displayimage.php?pid=32946248
Session VC	Audio	Offshore Wind: Finding the Right Balance between Benefits & Impacts	http://esnips.com/displayimage.php?album=434857&pid=32946250&uid=1022474#top_display_media
Session VD	Video	Current Mitigation Techniques: How to Balance Their Costs & Benefits	http://www.youtube.com/watch?v=BOlLA-xrTgU
Panel VI -	Audio	Moving Toward More Wind Power: Will the Lights Stay on?	http://esnips.com/displayimage.php?album=434857&pid=32946252&uid=1022474#top_display_media
Session VI. Workshop A	n/a	Advancing the State of Knowledge - Building and Funding a Credible Research &Education Agenda	
Session VI. Workshop B	n/a	Using Stakeholder Networks to Engage the Undecided	
Session VI. Workshop C	n/a	Building Better Bylaws	
Session VI. Workshop D	n/a	Learning from Experience: Using Planning and Mitigation to Find Better Outcomes	
Session VII and Session VIII	Video	What Have We Learned? Closing Remarks	http://www.youtube.com/watch?v=vkEK10YE-Yc

Rob Pforzheimer

Category: Wind

Comments: Link to article, Your View: Real science behind concerns over wind turbines(http://www.southcoasttoday.com/apps/pbcs.dll/article?AID=/20121115/OPINION/211150332&cid=sitesearch)

Your View: Real science behind concerns over wind turbines FeatureHeadline

By **DR. RAYMOND S. HARTMAN**

Raymond S. Hartman has a doctorate from MIT in mathematical economics and has served on the faculties of MIT, Boston University and the University of California, Berkeley. He is president and director of Greylock McKinnon Associates, an economic consulting firm specializing in analysis in support of litigation. He critically reviewed "The Wind Turbine Health Impact Study" of Massachusetts and termed it "junk science."

November 15, 2012 12:00 AM

I read with interest your Nov. 10 article by Ariel Wittenberg, headlined "Study finds physical, mental health effects from wind turbines." The article discusses the recently published peer-reviewed work of Nissenbaum, Armani and Hanning. I was particularly interested by the responses from self-interested stakeholders who clearly are, or appear to be, pro-wind — specifically, Sumul Shah, the developer, and Brian Bowcock, the chairman of the Fairhaven Board of Selectmen.

POPULAR TODAY

New Bedford school van driver stabbed in apparent road rage incident

New Bedford Salaries 2011

John Costa

New Bedford firefighters practice for the real thing

New Bedford forms 10-person offshore wind energy advisory panel

Henry S. Zavala

Van driver stabbed in apparent New Bedford road rage incident

The article quotes these persons as follows:

"Sumul Shah said, 'This would be the first peer-reviewed one [study] that has a direct link between turbines and health effects.' "

"Brian Bowcock, chairman of the Fairhaven Board of Selectmen, also had not heard of the study but said that '4,500 feet is quite a long way away.... The common-sense factor would tell you that you shouldn't believe everything you hear.'"

Both men are flat-out wrong.

First, this is not the first peer-reviewed study that demonstrates that industrial wind turbines have a direct and serious adverse impact upon sleep and health, both physical and mental. Many other studies, published in peer-reviewed journals over the last decade, have come to the same conclusion.

However, many of these earlier studies have been misquoted or mischaracterized by the pro-wind lobby. Perhaps Mr. Shah is only familiar with those mischaracterizations. For example, the "Wind Turbine Health Impact Study: Report of Independent Expert Panel," January 2012, prepared for the Massachusetts Department of Environmental Protection and the Massachusetts Department of Public Health cites five peer-reviewed studies, upon which it relies. Those studies are the following:

- Pedersen and Waye, "Perception and Annoyance Due to Wind Turbine Noise: A Dose—Response Relationship," Journal of the Acoustical Society of America, December 2004
- Pedersen and Waye, "Wind turbine noise, annoyance and self-reported health and well-being in different living environments," Occupational and Environmental Medicine, March 2007
- Pedersen and Larsman, "The impact of visual factors on noise annoyance among people living in the vicinity of wind turbines," Journal of Environmental Psychology, 2008
- Pedersen, van den Berg, Bakker & Bouma, "Response to noise from modern wind farms in The Netherlands", Journal of the Acoustical Society of America, 2009
- Shepherd, D., McBride, D., Welch, D., Dirks, K. N., & Hill, E. M., "Evaluating the impact of wind turbine noise on health-related quality of life", Noise Health, 2011.

These studies all found that industrial wind turbine (IWT) noise contributes to sleep disorders and diseases associated with the serious adverse responses to the low frequency impulses (infrasound) generated by the IWTs.

Second, contrary to Mr. Bowcock's assertion, there are other countries and some U.S. states that have found that the noise from IWTs is sufficiently harmful to health that a setback of more than 4,500 feet to any residence is required. For just a few of many examples:

- In a settlement reached in a wind turbine dispute in Fayette County, Pennsylvania, the setback was set at 6,000-foot (1.1 mile).
- "Location, Location, Location: An investigation into wind farms and noise by the UK Noise Association (UKNA)" finds an appropriate setback to be 1 to 1.5 mile setback (7,900 ft).
- "Recommendations on the Siting of Wind Farms in the Vicinity of Eskdalemuir, Scotland (2005)" finds an appropriate setback to be 10 km (6.2 mile or 32,730 ft).
- Beech Ridge Wind Farm (West Virginia) has a 1 to 4 mile setback.

Many more exist, in excess of 4,500 feet.

If these guys are going to make public statements, they should get their facts straight.

HOME

Print this Article Email this Article

Ann Ingerson
Sr. Economist
The Wildnerness Society
Craftsbury

Category: All of the above

Comments: One issue that I hope the Commission will consider is accounting for cumulative impacts of energy development. Vermont's ambitious energy goals require transforming the way we generate and use energy to support our economy and our daily lives. As we make choices among alternatives, we need to think well in advance about what sort of landscape we want to leave to the next generation of Vermonters as well as the next generation of other species coping with climate stresses. Piecemeal permitting cannot address this issue well, but one small contribution might be a compensatory mitigation program through which environmental damage caused by a project results in equivalent protection elsewhere. Having a formal program, with preferred zones where project developers can purchase easements, would go a long way toward reassuring those who are concerned that meeting our renewable energy goals will mean an end to the rural landscape that means so much to the state.

Right now mitigation tends to be negotiated between project proponents and opponents, or by state agencies focused on a single resource. It would be helpful to have a system that incorporates the full suite of resource values and ensures consistency and predictability. The wetlands mitigation process might serve as a model in terms of defining the values to be conserved, agreeing upon accepted compensation ratios, and developing in lieu fee programs. Defining the public values of interest (unfragmented wildlife habitat, nonindustrial views, late succession forest, etc.) might be a bit more challenging than for wetlands, but it would be great if the Commission could at least start that conversation. Thank you for your work on this important issue.

Rob Pforzheimer

Category: Wind

Comments: Link to editorial, Governors Demand Wind PTC to Cover State Costs (http://www.windaction.org/faqs/36548)

WindAction Editorial

An exclusive feature of WindAction.org

Back to WindAction Editorial Index

Governors Demand Wind PTC to Cover State Costs

(Posted November 16, 2012)

The United States is in the midst of a fiscal crisis. If Congress and the White House are unable to reach agreement on spending by January 1, crushing tax increases and draconian budget cuts will go into effect sending the country's already weakened economy into another destructive recession.

Against this backdrop, the 23-member Governors' Wind Energy Coalition put aside their own states' $2+ trillion deficits[1] to deliver a message to Congress - extend the wind production tax credit (PTC).

The staged media event on Capitol Hill was a modern-day equivalent of Nero fiddling while Rome burned.

The Letter

In their letter, the governors acknowledge the wind industry is not yet competitive with other fuel sources but insist it will be "in the not-so-distant future."

They tout job claims, and potential losses, based on American Wind Energy Association

employment models, and underscore the impact of losing the PTC by listing recent layoffs in Colorado (182 Vestas workers), Iowa (407 Siemens workers) and Pennsylvania (165 Gamesa workers).

The governors are convinced the wind subsidy should be a top priority for the country ahead of our military and other bread-and-butter issues but are unaware, or don't care, that American taxpayers are shouldering a large part of the cost.

Do they realize that by 2015, American taxpayers will have provided a cumulative $40 billion to the industrial wind energy industry in production tax credits and cash grants alone, the bulk of which will be distributed after 2010? Or that the open-ended subsidy of 2.2¢/kWh in after-tax income represents a pre-tax value (3.4¢/kWh) that's equal to, or more than the wholesale price of power in many regions of the country?

Why the SOS?

Why would the Governors demand billions more for an industry that, after over 20 years, has failed to establish itself as a self-sustaining contributor to meeting our energy needs?

It's no accident that all of the Governors who signed the letter hail from states with mandatory renewable portfolio standards (RPS) or from states adjacent to those with RPS policies.

State legislators who voted in favor of renewable mandates, did so after being convinced that adding alternative resources to the energy mix, particularly those with no fuel cost, would reduce fossil use, attract jobs and ultimately stabilize and lower energy prices. (Wind energy was seen by most as the dominant resource for meeting compliance.)

But they were wrong.

Researchers at the Lawrence Berkeley National Labs (LBNL) found that ‘Policy Impact' studies relied on by the states tended to underestimate the effect of adding high-cost renewables on retail rates and all of them failed to anticipate the persistent low natural gas prices we enjoy today.

Seventy-percent of the RPS cost studies that were examined forecasted minimal retail electricity rate increases - no more than 1% - while a number predicted electricity consumers would experience a cost savings.

In fact, the artificial no-compete power markets created by RPS policies drove up electricity prices and forced consumers to pay for energy they didn't need. In 2011 residential rates in states with mandates were 27% higher than those without mandates while industrial electricity prices were 23% higher.

The Governors know that the federal PTC disproportionately benefits States with renewable mandates by distributing the high cost of their policies to taxpayers at large. They also understand that eliminating the PTC will impose the full burden of costly renewable mandates squarely on the States who enacted them. If California, New York, and Minnesota mandate large wind development, it's appropriate they bear the full cost of their energy choices.

Iowa is an exception. Its capacity-based RPS was satisfied years ago with the installation of just 105 megawatts of wind capacity, leaving the state's two investor-owned utilities, including Warren Buffett's MidAmerican Energy, at liberty to sell most of their wind power to neighboring states -- ***which they do at prices significantly above market.***

According to Mark Glaess, executive director of the Minnesota Rural Electric Association, which represents about 50 small utilities serving about 650,000 rural residents, its members lost more than $70 million in 2011 because of the high cost of wind power. "Right now we're paying for wind power we don't need, we can't use and can't sell," he said.

Expiration Is a Compromise

The production tax credit, which turns twenty years old this year, serves little purpose today other than to line the pockets of project owners and tax-advantaged investors and artificially mask the true price of wind power.

If the PTC were to expire, REC prices in states with RPS policies would likely go up for a while until the industry can implement necessary cost-cutting measures. States will respond by reexamining ways to rein-in RPS-related energy costs. We will also likely see the industry shift their business plans away from those based on tax avoidance to plans based on energy production - as they should be. American taxpayers and ratepayers would be best served by letting the PTC expire.

The Governors' self-serving pleas aside, there is no justification for wind projects eligible under any State RPS programs to receive the benefit of BOTH the State policies and the PTC wealth transfer from taxpayers. Congress has a responsibility to say NO.

---

[1] The 23-member Governors oversee states with a combined aggregate debt of more than $2 trillion for fiscal year 2011 including California and New York representing total debt of nearly $1 trillion.

Will Wiquist
Executive Director
Green Mountain Club
Waterbury

Category: Wind

Comments: I wanted to write to follow up on the email below from Commissioner Miller. I would greatly appreciate the opportunity for the Green Mountain Club to formally testify before the commission – likely on the Nov. 30 or Dec. 19 dates. As the first date is coming quickly, I was hoping to know one way or another soon. My ideal situation would be a chance to present our position to the commission and be joined by the club's vice president, an attorney who led the club's intervention in the Lowell case before the PSB.

The Green Mountain Club has been very seriously involved in the issues of wind energy siting. The Vt. General Assembly entrusted the club "with the responsibility for the leadership in the development of policies" related to the Long Trail. The commission is clearly related to this and this is why we played a leadership role in establishing the commission.

Liz asked that we coordinate any testimony with other like-minded organizations. While I cannot speak for other organizations, I am willing to reach out to some of our allies for input on any testimony.
I look forward to hearing back from you.

P.S. In case you had not seen it, I have attached the letter I send to the commission members before the hearings began.

4711 Waterbury-Stowe Road, Waterbury Center, Vermont 05677
Phone: 802-244-7037 Fax: 802-244-5867
www.GreenMountainClub.org

October 26, 2012

James Matteau

Dear Commissioner Matteau,

Congratulations on your appointment to the Governor's Energy Generation Siting Policy Commission. The Green Mountain Club is proud of the role it played with partner organizations in suggesting the creation of this commission.

In the past, Vermont has turned to commissions such as the Commission on Country Life, the "Little Hoover Commission", and the Gibb Commission to address challenging and divisive issues facing the state. Through the 1969 Gibb Commission, Green Mountain Club President Shirley Strong of Craftsbury was instrumental in protecting our mountains above 2,500 feet through the resulting State Land Use and Development Plan (Act 250). The club hopes to play a similarly constructive role in the Siting Commission both in general and specifically to the point Ms. Strong made regarding protecting our natural resources.

The Green Mountain Club is designated by the Vermont General Assembly as "the founder, sponsor, defender and protector of the Long Trail system for now and future generations to come" (J.R.S.22 of 1971 and J.R.S.18 of 1985). The same 1971 resolution also resolved that: "the continued existence of the Long Trail system and the preservation of its usefulness, beauty and natural character is threatened by the rapid encroachment of residential, commercial and business activity." Similar resolutions were passed in 1960, 2000, and 2010.

While the club's concerns regarding energy development center mostly on wind projects due to their high elevation siting, we understand the commission's charge is broader. We suggest that the commission work first on the policy and process questions that impact siting of all modes of energy production (e.g. Sec. 248). Second, as the commission turns to the question of establishing specific criteria for siting – a process which will undoubtedly look at each type of energy development separately –, we hope the commission will consider wind energy siting criteria first, as it is clearly the most divisive of the energy siting issues facing Vermont today.

As you look toward beginning the commission's work, we hope you will implement a transparent and inclusive process. Part of this process may include an advisory or technical panel as was used effectively by the Gibb Commission. If so, the club would welcome the opportunity to sit on this panel.
The governor's executive order asks the commission to "Analyze whether Vermont's criteria for electric generation project siting approval adequately protects Vermont's lands, environmental resources and cultural resources, both with respect to individual projects and with respect to cumulative impacts of multiple projects." We trust that the commission will consider both the uses of the land on which projects are proposed and the possible cultural impacts – including visual impacts to scenic resources.

We greatly appreciate the leadership displayed by Gov. Peter Shumlin in establishing this commission, picking such experienced and unbiased commissioners, and creating a charge through his executive order which includes nearly every aspect of the proposal from the Green Mountain Club, Vermont Natural Resources Council, Vermont Land Trust, The Nature Conservancy, Audubon Vermont, and the League of Conservation Voters. Gov. Shumlin, Commissioner Elizabeth Miller, and Secretary Deborah Markowitz have shown great forethought and wisdom in moving us to this point. As we move forward, the Green Mountain Club hopes that the commission will both utilize this support from the governor's administration and outline for itself a truly independent process.

The Green Mountain Club, entrusted by the Vermont General Assembly "with the responsibility for the leadership in the development of policies" relating to The Long Trail, cares deeply about any development issues that might impact the Long Trail System or the experience enjoyed by hikers in Vermont. To that end, the club played an active role in both the Lowell and Deerfield projects. In both cases, we were able to encourage regulators (the Public Service Board and U.S. Forest Service respectively) to require developers to install radar-activated lighting systems on towers – with FAA approval of the technology expected by summer 2013. In Lowell, we were also able to secure developer-funded decommissioning plans and mitigation. In both cases, we engaged in the process because of potential negative impacts of development to the Long Trail.

Learning from these experiences, the Green Mountain Club extensively revised our Wind Energy Facility Development Policy in the past year. This policy looks at development proposals through a tiered approach that I think could be beneficial to the commission's work.

The club said it would oppose development in certain key places – namely any of the trails, trail corridors, or lands that are part of Green Mountain Club's management responsibility (e.g. the Long Trail along the main ridge of the Green Mountains). Similar "off limits" locations (including the Long Trail system corridor) should be statutorily protected around the state as a result of the commission's work – just as the Gibb Commission resulted in the protection of lands above 2,500 feet.

Additionally, the club's policy outlines "Tier 1" considerations when analyzing the impact of a proposed development on hiking in Vermont. In the club's case, these include view impacts, hiker safety, and GMC/public investments in the impacted area. "Tier 2" considerations include other important criteria that may be considered.

We believe a similar structure might benefit the state in its development of siting energy projects. To that end, I have attached a copy of our policy.

Lastly, it is worth noting that the Green Mountain Club has conserved more than 25,000 acres of Vermont land to protect the Long Trail System for today's hikers and future generations. Most of this protected land was added to the Agency of Natural Resources-managed state forest system. The General Assembly resolved in 2000 that "in 1986, the Green Mountain Club and the state of Vermont embarked together on a land protection campaign to ensure a permanent corridor for the trail's path and its connecting side trails, an effort which is nearly complete but continues to this day." This campaign has brought the Long Trail to within a few miles of complete protection.

In light of this conservation work and successful partnership with the state of Vermont, the club was concerned by this administration's proposal in the Comprehensive Energy Plan to lift the previous administration's moratorium on large-scale wind development on lands managed by the Agency of Natural Resources. The 2004 moratorium explicitly allowed for "small-scale, renewable energy

applications in appropriate locations on ANR lands" and we believe it should be preserved at least until new policies to protect conserved lands are put in place by the legislature.

Thank you for your willingness to serve our state in this way. While this is a divisive issues to be sure, we must have hope that through an inclusive and thoughtful process we can find ways make these difficult policy decisions as neighbors.

Sincerely,

William S. Wiquist, III
Executive Director

CC:

Governor Peter Shumlin
Secretary Deborah Markowitz
Commissioner Elizabeth Miller

Rob Pforzheimer

Category: Wind

Comments: Link to blog, Big Wind: the most corrupt and corrupting industry in the world (http://blogs.telegraph.co.uk/news/jamesdelingpole/100190461/big-wind-the-most-corrupt-and-corrupting-industry-in-the-world/)

Big Wind: the most corrupt and corrupting industry in the world

By James Delingpole Environment Last updated: November 19th, 2012

773 Comments Comment on this article

One more time for Joss Garman: go, Japanese whalers, go!

There's an excellent article in the Copenhagen Post which I'm going to reprint here in full. It's by a retired high court judge called Peter Rørdam. I'm reprinting it because apart from the place names, every last detail applies to the UK wind industry too. And – from what I've seen personally – the Australian one. And the US and Canadian ones as well.

The reason the industry is so corrupt is quite simply that without the lies it tells as a matter of course and without the cosy stitch-ups it arranges with regulators and politicians at taxpayers' expense, it simply would not exist. Take the noise regulations which are currently the subject of an enquiry by the Institute of Acoustics. The reason these noise regulations so badly need re-examining is that the original parameters for noise limits were set by people working for the wind industry with a vested interest in making it as easy as possible for wind farms to be built in as many places as possible. They make no allowance whatsoever for the damage to human health now known to be caused by Low Frequency Noise which – hey guess, what? – isn't even measured by the tame acoustics experts who work on behalf of the wind developers because the system has been rigged so they don't have to.

It's entirely possible that this corrupt system will continue to be rigged with the connivance of politicians. A report in today's Telegraph suggests that the green activists who staff DECC may have fixed in advance the results of a new enquiry by the Institute of Acoustics by setting it worthless parameters.

> Richard Perkins, Vice President of the Institute of Acoustics and chairman of the working group looking at the guidance, insisted the new guidance would tighten up the rules so that only wind farms in the right places are given planning permission.
>
> He said current noise levels are a matter for the Government, and were outside the working group's terms of reference.

In other words, it looks like this enquiry has been asked to overlook the very area which it should be studying most closely.

If this sounds like the kind of shabby behaviour you'd more closely associate with communist states and third world kleptocracies than sophisticated Western economies, think again. It's rife across the Western world, as this article by a former Danish high court judge illustrates.

> It's a widely held conception that Denmark is one of the world's least corrupt countries. The message is always warmly received, but this isn't the same as saying that Denmark is free of corruption.
>
> I'm not qualified to speak about corruption in general, but there is one area in which I do have an in-depth knowledge: wind power – which is an industry that has managed to thoroughly corrupt the political system.
>
> The law approving construction of a test centre of large land-based wind turbines near the Jutland town of Østerild was forced through parliament despite warnings about the effects it would have on the natural environment in the area and its impact on residents. The bill was able to make its way through parliament thanks to a complete manipulation of the facts – both by keeping some information under wraps, and by directly misinforming people.
>
> But it wasn't parliament that was misled. Members of parliament that voted for the law were fully aware of the truth, yet they turned a blind eye so the law could be passed. It was, in fact, voters who were tricked into thinking that they had been told the whole truth.
>
> The only thing that matters for wind turbine makers is money. You can wonder why law makers would play along with their game, but as soon as they threatened to move jobs abroad they did as they were told.
>
> Laying out all the details of this sitation would require more space than is available here, but for those that read Danish, Peter Skeel Hjort's book 'Besat af wind' (Obsessed by the wind) provides a harrowing look into of the industry and the political system.
>
> Collaboration between the industry and lawmakers didn't stop with the approval of the test centre. Since then, there has been a flood of complaints from people who were unfortunate enough to find themselves living next to large land-based wind turbines elsewhere. The effects, which are well documented, can cause illness and render properties uninhabitable. Their complaints, however, are normally rejected by the authorities, who maintain that living close to wind turbines is not associated with any detrimental effects.
>
> On October 9, Berlingske newspaper published an article by three Aalborg University scientists,

who proved that the official noise calculations are wrong, and that the manipulated figures tone down the problems associated with living near a wind turbine. The authorities have done nothing to show that they have scientific evidence to base their claims on. Their only reaction has been to say that the Aalborg University study is wrong, because it does not jibe with the wind power industry's own findings. We heard this most recently from the environment minister, Ida Auken, who is either being led around by the nose of the people whose interests she's looking out for, or – as was the case with her predecessor – she is taking part in the misinformation.

It's worth noting that the compensation homeowners living near wind turbines are given to make up for lost property value is based the falsified noise calculations – which means that people are, in fact, being cheated out of the full amount they are actually owed.

Corruption is defined as moral decay, and that is precisely what we are witnessing here. The fear that Denmark could lose jobs and the near religious obsession with wind power has made politicians deaf and blind to objections to wind as a source of energy, and led them to take part in the industry's fraud. The environmental and human impacts of what they are doing appear to have no effect on them.

It only adds to the embarrassment is that instead of hiring people, the wind industry is eliminating jobs in Denmark. Meanwhile, little has happened at the Østerild test centre. Parliament rushed to approve the establishment of Østerild, because the industry told them it was vital that they could have seven large wind turbines standing in a row. Østerild was chosen because it had the physical characteristics the industry needed. Today, one turbine stands, and it remains to be seen how many more will be built.

There are a lot of people who have plenty to be ashamed of, but we shouldn't expect that to change much. Moral scruples aren't what we most associate with Danish politicians.

Tags: Big Wind, Copenhagen Post, corruption, Institute of Acoustics, Low Frequency Noise, Peter Rørdam

Recent Posts

- The Met Office – defending the indefensible, as per usual
  January 10th, 2013 18:56
  82 Comments
- Should Morrissey join Ukip?
  January 10th, 2013 12:38
  154 Comments
- Donnagate
  January 8th, 2013 17:51

Annette Smith
Executive Director
VCE
Danby

Category: All of the above

Comments: Attached please find VCE’s Comments and Observations on Vermont’s PSB, ANR, and Act 250 permitting processes as presented to the Energy Siting Commission, 10/31/12.
These comments are offered to provide our perspective on the current permitting processes based on our experience working with the public since 1999. Rob Pforzheimer

Category: Wind

Comments: Link to article, Call to shut down Fullabrook Wind Farm after tests show 'above limits' noise levels (http://www.thisisnorthdevon.co.uk/shut-Fullabrook-Wind-Farm-tests-limits-noise/story-17401807-detail/story.html) plus comment, ""These Vestas machines are too big and too noisy to be used on shore and this has been proved by Fullabrook."

VCE's Comments and Observations on Vermont's PSB, ANR, and Act 250 permitting processes

VCE History and Experience

VCE has been working with citizens and towns in the regulatory arena in Vermont since 1999. Our experience is from the perspective of public participation.

We have been involved in "permit reform" discussions in 2001-02, 2003-04, 2005-06, 2007-08, and 2011-12 and actively participated in the proceedings of the Agency of Natural Resources (ANR)Restructuring Committee in 2005-06.

PSB case experience:

- 1999-2000, two power plants and two pipelines proposed for southwestern Vermont
- 2004, VELCO NRP
- 2009 to present – multiple cases for wind, biomass, and solar generation projects
- 2011-12, smart meter dockets
- 2012, tracking first instance of PSB hearing appeal of ANR permits

ANR experience working with the following Departments and Divisions on permits and impacts from proposed or operating projects:

- Department of Environmental Conservation (DEC): Air Pollution, Solid Waste, Hazardous Waste, Water Supply, Water Quality
- Fish and Wildlife
- Forests and Parks
- Department of Health (as relevant to ANR permits)

Act 250 District Commission experience:

- Representing or advising citizens in Districts 1, 2, 4, 8, and 9.
- In 2003 we held focus groups around the state with citizens who had participated in Local Zoning and Act 250 processes and appeals to the Environmental Board.
- Appeals of Act 250 permits to Environmental Court (now called Vermont Judiciary Environmental Division)

Our comments are organized by permit – first PSB, then ANR, then Act 250 and the Environmental Division. For each section, comments address the following issues:

a) Process
b) Standing
c) Coordination
d) The Filing Process
e) Participation by other Boards/RPCs
f) The Public Record
g) Expense
h) Enforcement
i) Result

1. Public Service Board (PSB)

a) Process

It is often said that the PSB's process to review applications for Certificates of Public Good (CPGs) under Section 248 is very legalistic. What that means in practice is that it is not possible for the public or towns to participate effectively without lawyers and experts. Formal discovery processes and standards of evidence apply. Field site visits and public hearings are held but decisions are made only on the basis of the formal, on-the-record technical hearings at the PSB. *Pro se* parties are allowed, but are rarely effective. Some attorneys have indicated to us that the PSB process is grueling and several have said they do not want to do any more PSB work. Unlike Act 250 District Commission hearings, VCE cannot represent citizens' interests before the PSB.

The timeline of a typical PSB CPG permitting case is very quick for parties other than the developer. Generally the developer has been working on their project for more than a year, preparing materials and hiring experts far in advance. For most projects, the permitting process gives a minimum of 45 days' notice to town select boards and planning commissions, but no notice to abutters is required until after the CPG application is filed with the PSB. Some net metering and met tower projects have even shorter notice requirements. In one case, a developer satisfied notice requirements by mailing a letter to a select board introducing himself and making very general comments about his plans.

This timing makes it difficult to near impossible for parties other than the developer to put on a full case in response to the application. At best, parties other than the developer will hire experts on a few issues, but not participate on all the issues before the Board.

Once the application is filed with the Board, a determination is made for its completeness. In recent years it has been rare for an application to be deemed incomplete. This is an issue that has been raised repeatedly and needs to be addressed, in the interests of fairness to Intervenors who are expected to respond to an incomplete application. Citizens have described the PSB as "coddling" developers by allowing them to submit applications over and over again, creating a "major problem" for other parties.

> *Example:* In the Derby wind turbine application, the PSB accepted and moved ahead with the application even though it did not contain a decommissioning plan or a post-construction noise monitoring plan, among other deficiencies. Intervenors are deprived of critical time necessary to hire their own experts to respond to the developer's studies, if an incomplete application is accepted and moved forward in the process.

Soon after the application is accepted as complete by the PSB, the Board holds a pre-hearing conference where abutters, people with interests affected, towns' select boards, and local and regional planning commissions need to be present. For towns and regional planning commissions that meet monthly or less frequently, the timing may mean that the pre-hearing conference will be held before they have had a chance to discuss it. Most local boards do not have staff, meaning citizen volunteers must make the time to participate in hearings during the work day in Montpelier.

In some CPG cases, the developer fails to notify all the abutters initially. Citizens who are challenging the project are often the ones who have to do the detail-oriented investigations to determine if all required parties have in fact been notified – not regulators or the PSB. Inadequate notice to abutters has been an issue in several recent renewable energy cases.

> *Examples:* Sheffield, and Seneca Mountain Wind (SMW), which is on its third round of attempting to correctly notify abutters.

These challenges to adequate notice unnecessarily create an adversarial, challenging tone from the very start of projects. A project that has been developed with active community engagement before the filing process begins would avoid these unnecessary stresses.

At the **pre-hearing conference**, a schedule for filing for party status is discussed and then a schedule is set for parties to apply to intervene. The scope of each party's intervention is prescribed (and limited) by the PSB.

In several cases, we have observed that the first round of discovery has occurred before people or entities that have applied for party status have been approved by the PSB. This needs to be changed in the interests of fairness to all parties. The process should not start until the parties and their scope of intervention have been decided by the PSB.

Once party status is decided, citizens and towns become immersed in a process that involves a lot of paperwork and time hiring lawyers and experts, raising money, and forming organizations. It becomes a full time job for citizens for many months or years, dealing with unwanted projects that divide communities. One project neighbor described it this way,

> …the neighborhood, friendships and families have been fractured. Because of stress from hundreds of hours taken off from work, the financial burden and tough decisions that have to be made....the sacrifice as *pro se* intervenors have made cannot be measured. We did not ask for this life, it was forced upon us.

There may be "rolling discovery" (as was the case for the Sheffield project—very expensive because the developer's attorneys kept asking more questions) but usually there are three rounds of discovery and prefiled testimony, rebuttal testimony, and surrebuttal testimony from technical experts. By comparison, Act 250 may occasionally use prefiled testimony at the District Commission level but usually uses direct, live testimony with live cross-examination.

Citizens quickly become by-standers devoted to raising hundreds of thousands of dollars as the lawyers and experts take the lead. Neighbors and people whose interests are affected work with a lawyer to prepare their prefiled testimony.

At some point early in their adjudication of a CPG application, the PSB holds a **site visit**. This term is misleading, at least with wind cases.

> *Example:* In the Lowell wind case, the ANR asked the PSB to go up on the mountain and see one of the met tower sites and the nearby wetlands. The PSB instead took a

> bus ride around the mountain. The three members of the Board never set foot on top of the Lowell Mountains where the construction would actually occur prior to issuing the CPG.

It was not until the site visit for the stormwater appeals, more than a year after the CPG was issued, that the Board did an actual site visit to the top of the mountain where the turbines were already being constructed.

The Board's **public hearing** is also a source of complaints from the public. Testimony offered in these setting does not become part of the hearing record upon which the decision must be based, meaning that the hearing literally has no legal role in the Board's decision-making process. Board members sit impassively at the front of the room making no comment while citizens speak, with no interaction or reaction.

There are also questions about fairness and consistency in how the public hearings are run.

> *Example:* The PSB held its public hearing in Lowell after parties had been decided. A selectman from Lowell (the Town of Lowell was a party) was allowed to speak at the public hearing. But when Ben Rose, representing the Green Mountain Club (GMC), stepped up to speak, he was sternly told by the Chair that GMC was a party and they would have their chance in the hearings. Ben objected and was still refused an opportunity to speak in public. Several of the citizens who were neighbors and parties wanted to speak but could not because of the Board's determination that only non-parties could speak at the public hearing. They were all told that "you will have your turn at the technical hearings."

Citizens now refer to the public hearings as a meaningless joke. Since they are not considered in the PSB decisions, the public has repeatedly indicated they do not feel that their voices are being heard or considered by the PSB.

The **technical hearings** come after a ruling has been made on party status, the site visit (such as it is), a public hearing has been held, and the three rounds of discovery and written testimony have occurred. In several cases, the project size and scope has been changed by the developer between the initial filing and the technical hearings, requiring more work and expense for the other parties.

An example is the UPC/First Wind Sheffield case. Initially, the project involved smaller wind turbines, some in Sheffield and some in Sutton. However, the towns of Barton and Sutton voted overwhelmingly to oppose the wind project, and Sutton already had a changed Town Plan to formally oppose industrial wind development. After the project application was filed and expert witness testimony was completed based on the initial design, UPC/First Wind redesigned the project, eliminating the turbines in Sutton and putting larger turbines just over the town line in Sheffield.

The change had a number of impacts, none good for the citizens or the neighboring town. The changes required a whole new round of analysis for other parties. Perhaps most

ironic, noise and visual impacts to Sutton and Barton if anything increased because the project was on the defining ridgeline for those now non-host towns.

The Sheffield project was redesigned many times after the original application was submitted and deemed complete by the PSB, including moving the substation from one watershed to another and extensively redesigning the road access system and turbine locations. This required the other parties to essentially start over in their analysis, and added an enormous amount of expense and stress.

In the end, though, it did not matter. Citizens spent huge amounts of money retaining lawyers and experts in order to participate "effectively" and then the PSB summarily dismissed their work, as they accepted the testimony of the developer's "experts" at face value. It was as if the intervenors had never participated.

The Board's legalistic process places no value on a **citizen's voice.** Hearing someone speak out – in their own words, tone, and sentiment – about the impacts of a project is different than reading their written comments. Citizens who are involved in a PSB process are led to believe that they will get "their day in court" – a chance to literally speak, and expand on whatever has been filed. They travel to attend a hearing, get time off from work, and spend hours preparing. But in most cases, they never get to speak, because no one cross-examines them. Citizen parties to the wind dockets have complained that no citizens have ever been cross-examined by the Board, state agency staff, or other parties, and as a result they say their voices are not being heard.

> *Example:* This short video from the Lowell technical hearings shows the public's frustration with the PSB's process https://vimeo.com/26499335 when a citizen broke the rules and asked the Board members questions.

The **Public Service Department's participation** in the large renewable energy cases has been limited and disappointing to the public, especially in the technical hearings where it is rare that a PSD attorney asks probing questions of witnesses. The public has also noted that politics appears to play a role in the PSD's involvement.

> *Example:* In the Lowell wind case, PSD initially testified (during the Douglas administration) that the project would not be in the public good based on its economic analysis. When the new administration came in, PSD's same expert changed his testimony and found the project would be in the public good based on the economic analysis, even though the economic analysis had not changed.

ANR's role in the technical hearings has also been problematic. ANR staff scientists had numerous issues with the UPC/First Wind Sheffield project and found undue adverse impacts during the technical hearings. Then ANR signed a Memorandum of Understanding (MOU) with First Wind that was accepted by the PSB after only 20 minutes were allowed for Intervenors' cross examination, eliminating further discussion of the ANR issues.

> *Example:* In the permitting process for the Green Mountain Power (GMP) Lowell project, ANR's staff scientists filed testimony indicating an undue adverse impact.

> Near the end of the technical hearings, ANR came into the PSB with an "in concept" MOU which contained few details. The PSB was asked to accept it, and they did.

In the presentations to the Siting Commission last month, VCE was left with the impression that the PSB does not just take the MOU at face value but does its own analysis. That is not what the experience has been in the Sheffield or Lowell wind projects where ANR came in with an MOU that was essentially accepted by the PSB as a done deal.

The Lowell wind case saw several instances of a **failure of due process**, especially on issues of wildlife habitat fragmentation and connectivity.

Because of the rushed and incomplete review of the ANR MOU, there was never an opportunity for parties to cross-examine ANR witnesses on the details during the technical hearings. Part of the MOU involved conservation easements to mitigate habitat fragmentation on lands leased by GMP on the western side of the mountain. After the CPG was granted, GMP notified the PSB that the landowner had done clearing along a road within the habitat fragmentation mitigation parcels. Parties asked the PSB to re-open the hearings to allow testimony on the damage done to the habitat fragmentation value of the conservation easements. In a split 2-1 decision, the PSB denied the request.

In his dissent, Board Member Burke acknowledged the economic and time considerations, but wrote, "that does not legitimize the abrogation of the parties' constitutional rights." The Vermont Supreme Court grappled with the issue and sided with the PSB, but their decision left open the possibility of a *certiorari* petition to the U.S. Supreme Court on the due process issue.

The **determination of substantive issues after a CPG has been granted** has also been a major issue in wind cases.

One example from the Lowell wind case involved the PSB's determination (opposed by the Towns and Lowell Mountains Group) allowing GMP to finalize the habitat connectivity easements by the end of 2011 rather than prior to commencement of construction as the PSB originally required in the CPG. GMP argued for more time and, as with everything in the PSB's rulings on the Lowell Wind case, the PSB agreed with GMP and reversed itself and modified the CPG to allow the habitat connectivity easements to be finalized after the commencement of construction. GMP provided minimal evidence of its finalized easements by the deadline, and the Towns had to press to get actual maps showing the details.

When the details were finally known, the parties were surprised to find that there was a mile gap between the Lowell wind project and the parcels that GMP secured to mitigate the loss of habitat connectivity. The PSB clearly stated that the limited hearings on the habitat connectivity easements would cover only the mitigation parcels themselves, and would not allow testimony on the connectivity of the area. This meant that there was never any testimony before the PSB about the overall habitat connectivity from south to north. There is a mile-long gap between parcels south of the Lowell project that were secured to address habitat connectivity and the Lowell Mountain Wind project which has numerous roads on the western side that are deterrents to wildlife movement. The eastern side of the

mountain is not conserved. The result is that habitat connectivity has not been secured along the Lowell Mountain range.

For Georgia Mountain, the issue of setbacks from neighboring property lines was not addressed until after the CPG was granted by the PSB. The CPG was issued in November 2010. The setback hearings were held March 2011 and an Order was released in June 2011. The Georgia Mountain site is very constrained and if the PSB had required turbines to be more than 200 feet from neighboring property lines, the project could not have been built.

The developer requested a setback of 188 feet, and brought in experts to testify that the request was safe based on a risk assessment analysis. The PSD submitted testimony advocating for what is the setback norm (where ice throw is not an issue) throughout the United States, which is 1.1x the total height of the wind turbine with blade extended. Neighbors participated with lawyers and experts in the hearings on the matter, and advocated for 1.5x the total height, which is the national norm for an appropriate setback for safety when there is potential for ice throw. That distance would have been at least 600 feet, far greater than 200 feet the developers not only requested but had to have. The PSB ignored the neighbors and PSD, and gave developers exactly what they wanted, setbacks of 188 feet for 400+ foot tall turbines.

Approval of ridiculously small setbacks was also an issue in the Lowell wind case, where the PSB approved a setback 196 feet from the neighboring property line. In both Georgia Mountain and Lowell wind, the small setbacks have resulted in flyrock being thrown onto neighboring property and neighbors in both areas have been served with Temporary Restraining Orders (TRO) and lawsuits to keep them off their own land for 1000 feet from the border while blasting was taking place. In the Lowell wind case, this meant that the neighbors were enjoined from being on 150 acres of their own property, which interfered with plans to harvest firewood.

In the Georgia Mountain wind case, more than a month before being served with the TRO and lawsuit, neighbors wrote to the PSB imploring them to address the flyrock being thrown and the threat it presented to neighbors and their livestock. The PSB took more than one month to respond, and neighbors were left to try to defend their property interests by physically being present on their land so that flyrock could not be thrown. This incident has resulted in enormous stress to neighbors who are being called "protesters" by being on their own property trying to stop the flyrock in the absence of any regulatory oversight.

Throughout their blasting and construction activities, the Georgia Mountain wind developer repeatedly denied flyrock was being thrown. After a site visit by PSD and the Department of Public Safety, it was determined without a doubt that flyrock was being thrown across property lines that was dangerous to public safety. A settlement between the wind developer and neighbors is currently being negotiated (by an attorney paid for by the wind company) after the PSB indicated it would take the issue of violations of the CPG seriously. The PSB's delay in responding to the neighbors' complaints gave the wind developer time to complete the blasting that was the subject of the complaint. In other

words, action was not taken until the dangerous activity in question had concluded, leaving neighbors at risk and wondering why regulators are not holding permit-holders accountable or protecting Vermonters.

In neither case did the PSB require the developers to prove that they had secured control or access to normal safety buffers for blasting. The wind developers assumed they could use 1000 feet of the neighbors' properties as blasting zones, without ever raising the issue of their right to take neighboring property.

The lack of a **definition of commencement of construction** has been an issue in several wind cases, including Georgia Mountain and SMW.

Post-CPG but before all conditions were met, neighbors of Georgia Mountain noticed tree clearing, road building and blasting were occurring on lands owned by the wind developer. A PSB hearing officer conducted one site visit, and later the full PSB conducted a second site visit. One of the PSB members commented to one of the neighbors that it was "clever" that the developer happened to be harvesting firewood in the area where portions of the wind project would require clearing. But the Board found that the landowner had a right to cut firewood, blast a road, and conduct other activities that the landowner claimed had nothing to with the wind development.

> *Example:* In the case of SMW, a very large road has been constructed through conserved land, purportedly for wood harvesting. The road appears to perfectly connect up two areas of land desired for wind turbines by SMW. We understand ANR is looking at developing standards for logging roads that would address the problem with "logging roads" that have been occurring on the mountains targeted for wind development.

The **legislature** has contributed to creating the poor process that neighbors have experienced where wind projects are concerned. Wind developers have pushed the legislature to streamline the permitting process in multiple and rather subtle ways. One result has been that developers can receive CPGs from the PSB without having identified specific models of turbines they are using, even though models can vary greatly in size and impacts. Wind developers have also sought "one stop shopping", and the legislature responded by moving appeals of ANR permits to the PSB instead of the Environmental Division, ironically over objections from the Board and with little support from the court.

Despite their oft-stated desire for "one stop shopping", developers have used a range of legal venues when it suited them.

In both Lowell and Georgia Mountain wind cases, rather than utilize the PSB's process of condemnation that is available to take a neighbors' property for a blasting zone and compensate the neighbors for the use of their property, the wind developers instead jumped to Superior Court to get TROs without any hearing or notification to neighbors, and filed lawsuits against neighbors in Superior Court.

Article 2 of **Vermont's Constitution** calls for compensating landowners when their properties are used for the public good. Developers have routinely ignored this requirement.

After the very public debacle involving the Nelsons in Lowell, GMP did seek condemnation of one parcel to the south, and paid money to that neighbor for use of the property as a blast zone.

The PSB says it has no role to play in property issues, despite having a condemnation process. The PSB enables the violation of Vermonters' property rights by issuing CPGs with inadequate setbacks, not requiring or even encouraging developers to go through the condemnation process, and telling neighbors to go to Superior Court if they want to protect their property rights.

The PSB's willingness to allow developers to make post-CPG changes to key aspects of projects, as enabled by the legislature, can be seen in their post-CPG decisions for the Lowell project.

GMP's application for a CPG identified two different types of wind turbines for possible use in the development. The largest was the Vestas v90, which are 443 feet tall. All of the aesthetic, noise, and economic testimony was based on wind turbines no taller than 443 feet, including viewshed analyses. Post-CPG, GMP came back to the PSB with a plan to instead use the Vestas v112 turbines, which are 459 feet tall. The Towns asked the PSB to re-open the hearings to consider the changes. The PSB denied the request, as they did with all but one request by the Towns.

The change in turbines resulted in a $20 million dollar increase in cost, which GMP said would be offset by an increased capacity factor that would result in more electricity being produced. No evidence was provided by GMP or required by the PSB to support that claim.

The difference in the height of the turbines was longer blades. Longer blades are well documented to increase low frequency noise (LFN). Noise had already been an issue in the Lowell wind case with the turbines that were considered in the technical hearings. The PSB's initial decision identified that the noise would likely exceed their standard in some portions of neighboring properties, such that they required GMP to come up with a plan to compensate neighbors if the neighbors can prove that the noise is exceeding the allowable noise levels on their properties.

Nevertheless, the PSB refused to allow further hearings to take testimony on the impacts of the increase in turbine height and blade length on noise and aesthetics or the overall economics of the project.

For three years, the legislature has refused to take up a siting and setback bill that was drafted in 2009 to look at appropriate distances from wind turbines to protect public health and safety.

Recent events indicate the legislature's refusal to take testimony on setbacks and the PSB's lax attitude were misplaced and clearly detrimental to the public interest.

> *Example:* Noise has already been "horrendous" for neighbors of the Lowell wind project, something that was predicted in testimony by two noise experts and one doctor who testified to the PSB on behalf of the Towns and the Lowell Mountains Group. Even the doctor who testified for GMP said that personally he would want lower noise standards than the PSB set in other cases (PSB standard is 45 dBA exterior Leq, the expert for GMP said 35 to 40 dBA exterior Leq would be his preference if a wind turbine was located near where he lived).

No process has been set up by any state agency to address the noise complaints and resulting public health issues that are already being experienced by Vermonters. The Vermont Department of Health has not engaged in the issue in any meaningful way. The PSB has accepted at face value the noise monitoring reports provided by the developer of the Sheffield project and has ignored (failed to respond at all to) the noise complaints filed by neighbors.

b) Standing

The PSB has been relatively good in granting party status to the public in renewable energy cases but has carefully limited their scope of intervention. The PSB has denied the public the opportunity to present evidence on energy cost/benefit issues, deferring instead entirely to the PSD (which seems to have forgotten about selecting the least cost option).

c) Coordination

The PSB has no "front door" for the public, and treats most attempts at interaction, even requests for information, as a formal legal activity. The PSB has a clerk and an assistant clerk who receive submissions and send out Board orders.

d) The Filing Process/Communications

The PSB is currently deciding between requiring paper filings or allowing electronic ones on a case by case basis. Some cases use digital filings, but they all require paper filings, too. The PSB often corresponds with the applicant via electronic media but corresponds with the intervening parties only via hard copy. There is substantial expense for Intervenors as they must mail paper copies to extensive "service lists" in order to comply with the PSB process.

> *Example:* In the Lowell case, a neighbor who was also an Intervenor observed blasting occurred after approved hours, and hand delivered a letter to the PSB noting the lack of compliance with the CPG. A day or so later, the Intervenor was notified by the Clerk of the Board that a hard copy of the complaint had to be mailed to all 27 parties.

This kind of requirement may be relatively easy for a law firm with many staff (and an expense account charged to their client), but presents significant and unequal burdens for citizen Intervenors.

VCE often recommends that neighbors find non-Intervenors to file a complaint as a public comment to the PSB, so they do not have to go through the ridiculous time and expense of mailing hard copies to all the parties.

e) Participation by town select boards and planning commissions and Regional Planning Commissions (RPCs)

Town and regional boards and commissions are not automatic parties and must petition to intervene. RPCs are expected to participate according to their governing statute. Towns participate by hiring lawyers and experts, either paid for by private citizen fundraising or at taxpayer expense. RPC executive directors have participated in VELCO NRP and Vermont Yankee cases in limited ways, usually involving asking questions at the technical hearings.

f) The Public Record

Until a few months ago, the various wind dockets have been on 3 different servers.

- East Haven: http://publicservice.vermont.gov/dockets/6911/
- Sheffield: http://www.state.vt.us/psb/document/7156upc/upc-main.htm and http://psb.vermont.gov/docketsandprojects/electric/7156 and http://psb.vermont.gov/docketsandprojects/electric/7156/ordersandmemos and http://www.sheffieldwind.com/sheffield/permitting.cfm
- Deerfield: http://www.state.vt.us/psb/document/7250Deerfield/deerfield-main.htm and http://psb.vermont.gov/docketsandprojects/electric/7250 and http://www.iberdrolarenewables.us/deerfield/index.html
- Georgia Mountain: http://www.state.vt.us/psb/document/7508GeorgiaMtn/7508_main.htm and http://psb.vermont.gov/docketsandprojects/electric/7508 and http://www.georgiamountainwind.com/permitting.htm
- Lowell: http://psb.vermont.gov/docketandprojects/electric/7628 and http://www.kingdomcommunitywind.com/home/section-248-permit-filing-for-wind-towers/ and http://energizevermont.org/2010/01/lowell-vt-green-mountain-power-kingdom-community-wind-information/

Sometime recently, the state eliminated the state.vt.us/psb server, so those documents are no longer available and are lost to the public. Additionally, First Wind has removed the Sheffield permitting documents from its site. It is no longer possible to review all the wind docket filings, and even when all the sites were up, they were incomplete. The PSB posts the initial filings by the applicants and sometimes posts the Intervenor's initial filings, but rebuttal and surrebuttal testimony is not usually posted by the PSB.

The PSB site also contains errors sometimes.

> *Example:* A search for the CPG for GMP's Vergennes NPS 100 turbine turned up nothing. It was listed as a solar project, not a wind project. The CPG was there, but only if you knew to look for solar, not wind.

For some months now, the PSB website's search function has contained this message:

> **Please note that we are experiencing technical difficulties with the search function. Currently, the search function does not work. The State is working on fixing this problem. We apologize for the inconvenience.**

Public hearings and the technical hearings are recorded by court reporters. In theory, the material is then available to the public. However, court reporters are fiercely protective of their work product, and retain ownership. Additional copies must be purchased which becomes very expensive for the hundreds of pages of hearing record. If one of their transcripts is posted on a website, reporters object and demand that it be removed. Therefore, the only public record that is freely available is at the PSB office, where the public can go and read the hard copy of the record. This is unacceptable in this era of digital recording technologies.

In essence, right now the PSB public record is not a public record at all, and is only really available to the lawyers who pay for the transcripts, and at great cost.

g) Expense

Average cost of participation in large cases at the PSB is well over $100,000 for citizens and towns.

Examples:

- VELCO NRP: numerous towns hired lawyers, some hired the same firm but were then double billed. Total cost was at least $700,000 for participation by the towns.
- Sheffield Wind: Town of Sutton and Ridge Protectors participated on numerous issues, total expense more than $700,000, not including appeals of stormwater permits to Environmental Court which cost more than $100,000.
- Lowell Wind: Towns of Albany and Craftsbury participated in a limited way because of limited resources, spent more than $150,000. Lowell Mountains Group hired attorney and experts, limited participation, spent more than $100,000. Energize Vermont appealed stormwater permits to the PSB, cost more than $100,000.

Towns do not have budgets or resources set aside for these purposes, so in most cases when the towns agree to participate, fundraising and paying for lawyers and experts is done by citizens, not through the town budgeting process.

The Town of Newark has just been sued over their town plan amendment process by a landowner who has leased land to Eolian Wind for the SMW project, so that town is going to be running up some very large legal fees, with nothing in the budget for them.

A Selectboard member from another small town being pushed to "host" a wind project puts these numbers in perspective:

> [T]he front loader is leaking from a front seal ….Our grader is over 22 years old and badly in need of replacement. The estimated figures for lease-to-buy deal for these two is around $40,000/year. And we don't have that. Add to that an as-yet-unknown amount for legal fees and it begins to appear likely that [our town] will not

be able to maintain our roads adequately. We just cannot expect to raise sufficient money from property taxes.

h) Enforcement

The PSB has no enforcement capabilities and does not perform compliance inspections. Experience shows that for large generation projects, post-CPG condition compliance has been impossible to enforce. The PSB appears to simply accept everything the developer reports at face value.

i) Result

VCE has been working with citizens and towns dealing with wind projects since 2009. In more than three years we have seen hundreds of thousands of dollars spent on participation in the PSB process. We have followed the legal processes and read the PSB's CPGs and post-certification determinations.

Without exception, the public and towns have been ignored. "It was as though we were not even there," is a phrase used repeatedly by neighbors and town officials. Another citizen observed that they invested "thousands of hours" to be a party in the PSB hearings, " with the outcome predetermined."

The PSB has ignored credible testimony from national and state experts on noise and health, birds and bats, appropriate distances from property lines for safety, appropriate distances from homes to protect public health, and has instead approved everything the wind developers have requested.

We have come to the point where we can no longer ethically advise citizens and towns to raise the money and hire the lawyers and experts to participate in a charade of a process that has proven to completely ignore all testimony except that provided by applicants.

2. Agency of Natural Resources (ANR)

a) Process

As a regulatory agency, ANR's primary purpose is to issue permits to applicants. The "customer" is the regulated community, not the public or the environment. This perspective is evidenced by the relatively limited public process that surrounds ANR's permits.

Since VCE began working on environmental issues in 1999, we have dealt with seven different ANR Secretaries. VCE's relationship with ANR changes depending on the administration and agency leadership. Our most positive experiences have involved collaboration with Agency staff about rule-making for solid waste and groundwater issues during the Douglas administration. Our least positive experiences have surrounded the stormwater permits issued for wind projects under the Shumlin administration.

VCE's primary mode of interaction with ANR is via the filing of **public records requests.** Because applicants often interact with ANR staff for months and even years prior to the public learning about a proposal, accessing public records enables us to get up to speed

quickly on the history of the interactions and the most recent status of the issues. However, once a developer files an application with the PSB, ANR then withholds documents related to those cases as a product of litigation.

Over the last 13+ years, we have observed that ANR staff are making fewer written reports.

> *Example:* While the Sheffield Wind project was under construction in 2011, we received regular DEC site inspection reports, which contained photos and written observations. When we began receiving those reports for the Lowell wind project in 2012, we noted that the reports no longer contained any written observations. It was at times impossible to understand the meaning and importance of photographs contained in the reports without knowing where it was taken or what it was showing, none of which was stated.

The quality of the response to public records requests changes depending on who is serving as General Counsel. We once waited more than six months for response to a public records request. While ANR is now mostly being responsive in a timely manner, the material that is being withheld has increased, and we do not automatically receive a letter itemizing and identifying the materials that are being withheld.

In one instance in the Lowell wind case, we were told that we would have to pay more than $1000 just for the redaction report. In general, the information we are receiving in response to our public records requests has declined in both quantity and quality.

In response to the relatively late notice that project neighbors receive to large projects that go through Act 250 and require ANR permits, about 10 years ago the legislature passed a **scoping process** that is still in statute: http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=03&Chapter=051&Section=02828. It is voluntary on the part of the applicant, and refers only to Act 250, but could be a **useful model** for renewable energy projects. It provides the opportunity for notice to municipalities, abutters, town and regional boards so that there is increased notice and ability to discuss the substantive issues well in advance of formal regulatory proceedings. Based on recent discussions with other environmental organizations and current ANR and Act 250 senior staff, this process has never been utilized.

In the normal course of permitting renewable energy projects that require ANR permits, developers and their experts meet repeatedly with ANR staff. ANR staff offer guidance to the developers on what they need to do to receive permits. Sometimes there is rigorous back and forth, sometimes not. Eventually the permits get issued. It appears that ANR never denies a permit.

At the first public hearing ANR held on the Lowell wind stormwater permits, the public asked if ANR had ever denied a stormwater permit, and the answer was "no". ANR also admitted during the Sheffield stormwater appeal hearings that ANR has never denied a permit.

Not all ANR permits require **public notice, public hearings**, or offer the opportunity for **public comments** and **ANR response to comments**. For those that do, it is increasingly viewed as a pro forma, meaningless exercise. Draft permits are issued after much consultation with the applicant and no public knowledge or input. A public hearing may include a presentation by the developer's expert, not ANR staff. ANR does not make itself available to the public's experts during the internal development of the permits. ANR legal counsel and staff attend public hearings to listen to public comment but not necessarily to respond.

There is never an opportunity for a member of the public or their hired expert to engage in a discussion or examine the decision-making that went into the draft permit prior to the issuance of that draft permit. The draft permit is essentially offered up as a fait accompli, with minimal opportunity for the public to have meaningful input after all the work that went into it behind closed doors. The public's experts can offer substantive written comment, but not engage in dialogue with ANR's staff (even though the developer's experts have had many hours of interactions with the same staff). After the permits are issued, ANR issues a response to public comment.

> *Example:* In the St. Albans Wal-Mart case where VNRC's counsel (now ANR's General Counsel) had to subpoena the stormwater expert in Environmental Court in order to be able to question him about the decisions that went into the issuance of the permit. Note this action took place in the appeal process, as only then was it possible to subpoena and question ANR staff.

Another example is in the Lowell wind stormwater permits, where the public's experts put on a presentation at the second ANR public hearing, and then filed extensive comments with ANR. They noted that up to nine headwater streams were going to be filled by the project. In its response to public comment, ANR simply noted that they disagreed that headwater streams would be filled. In VCE's work in the previous administration, had we had that kind of substantive difference of facts with ANR's draft permits, we would have had the opportunity to sit down with ANR staff and discuss it. Instead, ANR chose to dismiss comments from the public's experts and followed the developer's expert's desires, giving them everything they wanted.

During the construction of the Lowell wind project, we noted that the field reports identified headwater streams that were "being taken for the project", confirming that the public's experts had been correct.

Yet another example from Lowell of ANR's poor process is what happened when the landowner who GMP leased the land from cut trees and widened a road in the habitat fragmentation mitigation parcels. After GMP disclosed to the PSB that the landowner had conducted work on lands set aside with easements for habitat fragmentation mitigation, ANR deferred to GMP's "expert" to provide a report to the PSB. GMP's "expert" report was written by Jeff Nelson, a stormwater consultant who has no credentials in wildlife habitat or the impacts of habitat fragmentation.

The public provided the PSB with evidence contradicting what was reported by GMP (and supported by ANR). The PSB gave ANR 24 hours to submit evidence from their experts about the damage and whether it harmed the value of the parcels to fulfill their purposes of mitigating the fragmentation of wildlife habitat. Instead of providing sworn testimony in the form of affidavits, ANR's counsel wrote a two-page letter to the PSB paraphrasing phone conversations he had with two ANR experts.

Over the objections of parties, the PSB never required any sworn testimony from the experts, and accepted the phoned-in hearsay provided by ANR's counsel. It was this incident that led PSB member Burke to issue a dissenting opinion citing the abrogation of the public's constitutional rights (referenced on page 6, above).

ANR has avoided having a meaningful public component of the permit review process for far too long. With fewer notes and reasoning being written down, there is no administrative record to enable the public who may want to challenge the permits to understand what went into the decision-making process for issuing a permit. The first and only opportunity the public has to question ANR staff is through the appeal process, which is expensive and legalistic whether it is via the renewable energy appeal path to the PSB, or via the Vermont Judiciary Environmental Division.

ANR's permitting process necessitates appeals because it is closed to discussions with the public or their experts until after the permits are issued.

b) Standing for appeals

Party status for appealing permits has become an issue.

> *Example:* It is not clear who has standing to appeal the permit issued by ANR to First Wind to allow killing bats at the Sheffield wind site. Those appeals now go to the PSB. But they were not appealed because nobody could figure out how to show that they have interests that are distinct from the interests of the general public.

c) Coordination

ANR has no "front door" for the public. ANR has permit coordinators for applicants who are clearly identified. VCE has experience calling ANR staff who sound genuinely surprised that we called them directly. In general we do not contact staff, as it is obvious they do not feel comfortable speaking to members of the public. Therefore our relationships with ANR are almost entirely with agency lawyers who process our public records requests (which would often be unnecessary if communications with staff were more direct).

ANR has regional offices out of which watershed, wastewater, enforcement and other staff work. VCE has interacted with them in their jobs, usually on sites rather than in the office, but they do not seem to have any relevance in the current regulatory scheme.

d) Filing process

Citizens may file public comment by email or mail. ANR's responses come in the mail with a paper copy.

e) Participation by town select boards and planning commissions and Regional Planning Commissions

There is no requirement for standing to offer comments on ANR permits. Towns may offer comments on permits related to renewable energy projects. ANR permits are not reviewed by RPCs. Towns may appeal ANR permits to the PSB. The Towns of Albany and Craftsbury appealed ANR's stormwater permits for the Lowell Wind project, and that decision is currently before the PSB.

f) The Public Record

ANR's public records are sometimes only available for review by going to wherever they are located, after filing public records requests. In other cases, after making a public records request, ANR may provide hard copies by mail or digital files by email or on a CD or by posting them on a password-protected website.

Interaction with the staff actually responsible for creating the documents is rarely part of the public process. Many documents are withheld by ANR as work product for litigation during the PSB process, and are only made available after all appeals have run their course. For an example of what ANR does make available, ANR's Environmental Notice site http://www.anr.state.vt.us/dec/enb/cfm/viewenb.cfm shows only that an application has been submitted (type in Readsboro to see the status of the Deerfield Wind stormwater permits) but no further information is included; most notably the application documents are not available.

ANR's record is the least transparent of all the processes being reviewed by the energy siting commission

g) Expense

The primary expense in dealing with ANR is the charge for public records. The most VCE has ever paid is about $1300 for documents relating to outdoor wood boilers. We have declined to pursue public records requests for wind projects and the redacted material when we have been given rough estimates of "over $1000". The expense of getting public records from ANR has been prohibitive in wind cases.

Appealing ANR permits relating to renewable energy projects to the PSB is highly litigious. They follow the same process as a CPG application review process, requiring lawyers and experts, several rounds of discovery and prefiled testimony. The process is similar with non-renewable energy ANR permits, but instead goes to Vermont Judiciary Environmental Division, which is another dauntingly expensive process for citizens.

h) Enforcement

ANR's enforcement division was until recently best characterized as a "black hole". The public was not even allowed to know if a case was sent to enforcement. The public learned about the enforcement result only when it was noticed to Environmental Court. The legislature recently has improved the situation somewhat, so now there is notice and the opportunity for comment prior to the finalization of an enforcement action. It is not known if the public's input is being considered or is resulting in changes to the enforcement action.

VCE has provided comment on one enforcement action and saw no change as a result of our comment.

Vermonters do not have the right to bring citizens suits, and the Attorney General's office rarely brings enforcement actions against environmental violators.

VCE has brought what we considered to be serious violations of ANR permits related to renewable energy projects to the attention of ANR's enforcement division on several occasions. As far as we know, no actions have ever been taken. ANR's enforcement chief has told us they do not have the time or staff to get back to people who bring complaints to their attention to provide status reports.

> *Example:* There has been no rigorous follow-up to ensure the provisions of the Sheffield MOU – the "project mitigation" provisions – have been carried out. The land at issue was already in Current Use and the timber management plan was not changed as a result of the 2700 acres being designated as "project mitigation." The whole proposal appears to be a fig leaf to make the project acceptable to ANR.

i) Result

In the renewable energy cases VCE has observed for the last three-plus years, ANR has made closed door deals with developers with no public process or opportunity for input. ANR works for the developers and their experts, not the public or the environment.

3. Act 250 District Commission and Vermont Judiciary Environmental Division

a) Process

VCE's 2003 focus groups identified major problems with notification to adjoiners in local zoning permits, which was fixed in revisions to Chapter 117. Most of the major cases that were appealed stemmed from poor public notice for local zoning permits. Our focus groups also identified the universal support for the Act 250 District Commission process. Expense was an issue with large, contested cases, and inadequate preparation time was also a common problem, but members of the public who participated in our focus groups who had experience with the District Commission process all said it is by far the best public process in Vermont.

Because of regionally located offices and District Coordinators, Act 250 provides a human being for the public to call or go see in person. While coordinators may spend most of their time answering applicants' questions and meeting with applicants, they are just as accessible to members of the public.

Developers routinely make presentations on projects they are considering to the relevant RPCs in advance of filing for an Act 250 permit. As a result, informal conversations in the community often serve to get the word out about what may be coming to the regulatory process at some time in the future. It is still not possible for people whose interests are affected to prepare until an application is filed. Act 250 applications are publicized in newspapers and there is a good record of adjoiner notice. Act 250 is good at identifying stakeholders.

Once filed, Act 250 permit applications are reviewed by RPCs for compliance with the regional plan, and local commissioners have an opportunity to identify specific issues and offer comments to assist the Commission in its decision.

The original vision for Act 250 involving participation by a variety of state, regional and local parties has not worked (see graphic and discussion, p. 21, below), so it is not unusual for there to be no other party to an Act 250 proceeding except the applicant. Unless neighbors have issues with a project's design, impacts, scope or location, District Commissioners may only hear the applicant's presentation and have no other parties present to raise substantive questions. Unlike the PSB process which has both the PSD and ANR as statutory parties, Act 250 hearings lack a public advocate to assure that the process protects the public interest.

In recent years ANR has begun participating again in Act 250 hearings where its permits are involved. Over the last 12 years there have been permit reform discussions about improving the efficiency of ANR and Act 250 permits, with the goal of eliminating "two bites at the apple" as developers have called it. State statute currently allows for ANR permits to be brought into Act 250 for hearings. No change in the law is necessary to combine the two permitting processes. Doing so would give the public the missing opportunity to question ANR staff about the reasoning behind their decisions, and would address the developer's complaints about duplication of process.

Most Act 250 applications are now handled as Minor. Act 250 cases have public notice in newspapers and notice to abutters and interested parties. Some commissions hold only daytime hearings, others hold hearings at night. District Commissions hold site visits prior to the hearings, or on the day of a pre-hearing conference. Some hold a pre-hearing conference to take and rule on applications for party status. Others do the site visit, take applications for party status, and conduct the hearings all on the same day. Some allow anyone who took the time to attend the opportunity to ask questions. Others limit participation to parties.

At the hearings for the permit application itself, citizens can represent themselves, be represented by other citizens or advocates, or hire lawyers to represent their interests. Businesses can have their engineering firm or some other consulting firm present their project without using lawyers. In our experience, the Act 250 District Commission process works best when there are no lawyers.

After a hearing, it is common for the District Commission to issue a recess order giving all parties time to submit requested information or offer rebuttals to information presented at the hearings. After a decision is issued, parties can file a Motion to Alter requesting the Commission to reconsider some elements of their decision, and/or they can appeal the final decision to Vermont Judiciary's Environmental Division (formerly known as Environmental Court).

VCE has observed wide inconsistencies in process and quality of the different District Commissions throughout the state. More details are available upon request. Also, because

commissioners are political appointees, the decisions can reflect the goals of the administration.

Whether or not to use lawyers and experts in the District Commission process is something that we advise citizens to consider on a case by case basis. If there are not large areas of dispute, the District Commission is the best place to get a permit that is fair to all parties. Public input often results in changes to projects. However, in contested cases, the District Commissions can become a mini-courtroom at great expense. Citizens who have participated in major cases at the District Commission level complain they do not have time to get their case together.

Appeals to the Environmental Division require putting on the case *de novo* – that is, starting over. Developers argue this requirement is not fair to them, as they have to put on the same case twice. Citizens, however, often need the District Commission process to learn about large projects that are being proposed and understand what kind of expertise they need to hire (and pay for) and what issues may require legal assistance. Even if citizens know something is coming, developers' initial applications for an Act 250 permit can be relatively short on details, and sometimes the public has described it is like pulling teeth to get them to disclose information.

VCE advises parties to use a less formal process at the District Commission, enabling all parties to get the facts out on the table, see what more information might be needed, and to determine if there are substantive issues worthy of a contested case at the appeal level. VCE does not support one idea floated last year in the permit reform discussion that would require major contested cases to go through a more formal process on the state level, unless there is either Intervenor Funding or a Public Advocate so the public's interests can be represented without bankrupting the communities.

The Environmental Division has a requirement that when an appeal is filed with them, the parties must engage in mediation. VCE has assisted some citizens with the mediation process and found that it has been productive in only a few cases. The mediation requirement further stresses citizens attempting to participate *pro se*, as they are expected to pay for a portion of the mediator's expenses, and usually find they need to be represented by legal counsel to adequately protect their interests in mediation.

b) Standing

Over time, public participation has been limited so now it is people whose property interests are directly affected who are most likely to get party status and be able to appeal the decision. Getting standing in Act 250 is now a "hunt for adjoiners." If there are wildlife habitats threatened, it is difficult if not impossible for entities that advocate for non-humans to find a way to get party status, to protect bears or butterflies, for example.

Requests for party status in Act 250 have been routinely contested. Act 250 is the one permitting process in Vermont where the issue of standing has been fiercely contested, usually to the detriment of the public interest.

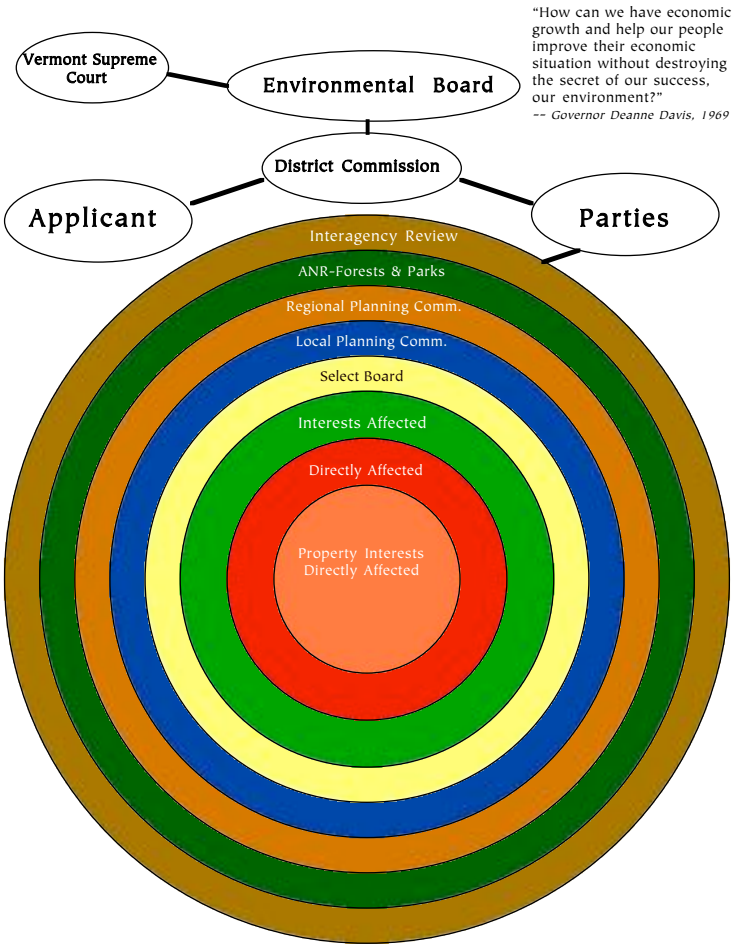
After objections over appeals by "materially assisting parties", the legislature changed the law to limit participation by environmental groups like VCE to "friends of the commission" which lacks appeal rights. The hurdle for participation was supposed to be liberal. However, the first time VCE sought party status as a friend of the commission, we were denied the opportunity to participate and provide the commission with factual information we had accumulated in other similar cases around the state.

c) Coordination
Act 250 has District Coordinators that are accessible to all parties and provide a front door for the public.

d) Filing process
Citizens can file digitally.

e) Participation by town select boards and planning commissions and Regional Planning Commissions
They are automatic parties to the process and do not need to petition to intervene. However, they generally do not have any funds to put into participation in a meaningful way.

Act 250 was initially intended to be a forum for participation by state, regional, local and direct interests. VCE created the graphic at the right about 10 years ago after reviewing the history of Act 250.



The Interagency Review process as been discontinued. ANR's participation is limited and usually does not include testimony by ANR staff scientists.

RPCs may weigh in with comments on specific applications, but choose not participate in hearings. Some RPCs do participate, others do not, or they might send a comment letter. RPCs are charged through statute at looking at cumulative impacts, but generally do not take that as far as testifying in Act 250. One example where RPCs are participating is in the current proposal for Killington's Master Plan, where three RPCs are participating on traffic. Local planning commissions and select

board participation has been limited due to limited resources by these volunteer boards. The burden of providing (and paying for) expert witness testimony usually falls to the neighbors whose interests are affected.

f) Public Records
Act 250's public records are available at their regional offices and are openly available to the public for inspection. Act 250 also has a relatively good online application database http://www.anr.state.vt.us/site/cfm/act250/index.cfm where the public can access project applications. District Commissioners now use digital recording devices so the audio record is available.

g) Expense
In major cases where applicants use lawyers and experts at the District Commission, the cost of participation can be high if citizens also choose to use lawyers and experts. In some cases it makes sense to go this route. In others it does not. Once a case is appealed to the Environmental Division, the issues of cost are similar to those with the PSB. Only people who can raise hundreds of thousands of dollars can afford to bring appeals.

> *Example:* The "Moretown Quarry" case shows the expense in an Act 250 case. The proposed development was contested first on the local level at a cost of about $40,000. The town board declined to issue a permit, but the developer continued and applied to Act 250 anyway, where it was again contested at an expense of about $70,000. Again the permit was denied. The developer appealed to the Environmental Division, where the case was hotly contested and legal expenses were likely more than $100,000 (VCE does not have the final number on that part of the case). The permit was again denied by the court.

h) Enforcement
Act 250 has at least one staff person dedicated to enforcement. It is not clear to VCE how effective Act 250's enforcement efforts are in practice. In theory, at least, Act 250 does have the ability to bring enforcement actions and respond to complaints from the public.

Act 250 has a definition of commencement of construction, unlike the PSB.

i) Result
Act 250 has the best public process for reviewing land use development proposals in the state, and is one that we recommend be used as a foundation for other permitting processes. It has a coordinator, automatic standing for town and regional boards and commissions, effective abutter notice provisions, access to public records, and enforcement.

Expense is a major issue in contested cases requiring lawyers and experts, especially at the appeal level.

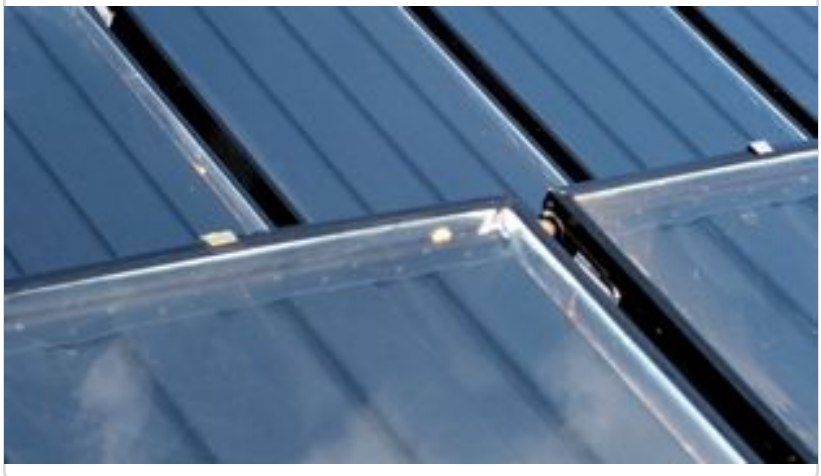
Rob Pforzheimer

Category: Wind

Comments: Link to blog, Michigan's insane 25x25 proposition: A postmortem (http://www.cfact.org/2012/11/14/michigans-insane-25x25-proposition-a-postmortem/) with comment, "The siting commission and the PSB should read and heed this piece about the defeat of mandated wind in Michigan. No "desire" for mandated and subsidized industrial wind projects, in their backyard or anywhere in the State."

Michigan’s insane 25×25 proposition: A postmortem

Why Michigan voters wisely rejected the crazy idea of 25% electricity from renewables by 2025



November 14, 2012, by Kevon Martis, 5 Comments

- Tweet 14

The Michigan Energy-Michigan Jobs (MEMJ) Proposal 3 – its 25 by 25 gambit – would have forced Michigan taxpayers and ratepayers to produce 25 percent of the Wolverine State's electricity via expensive, unreliable, parasitic wind and solar projects by 2025.

The misguided program has now been laid to rest by the wisdom of Michigan's voters. What can we learn by autopsying its corpse?

This initiative was hardly local. It was driven by out-of-state pressure groups like the Sierra Club that were backed by the League of Conservation Voters, natural gas company Chesapeake Energy, and a number of deep-pocketed elites. MEMJ itself was funded largely by the Green Tech Action Fund of San Francisco; the Natural Resources Defense Fund of New York, whose president is multi-millionaire Frances Beinecke; and San Francisco hedge fund billionaire Tom Steyer.

These carpetbagger activists placed a bull's-eye on Michigan ratepayers with Proposal 3. Sierra Club was blunt: "If successful, the [Michigan] 25×25 initiative will send an important signal to the nation that public desire to move toward green energy remains strong."

The grassroots activists who defeated this proposal had no billionaire largesse to draw upon. They were united under the Interstate Informed Citizen's Coalition, a bipartisan renewable energy consumers watchdog group dependent on small contributions to support its work and committed to advancing sensible science-based energy policies and free market land use policies.

Compelled by the principle that industrial renewable energy schemes like Proposal 3 bring far more benefit to their invisible

corporate cronies than to the environment, IICC members traveled the state on their own dime to speak out, protest, educate and inform. Their reward was sweet: they took their message of science-based energy policy to the people, who responded at the ballot box, soundly defeating Proposal 3 by 64-36 percent.

Using Sierra's own test, Michigan ratepayers have shouted there is no such "public desire."

In fact, there is widespread opposition to mandating forest-denuding biomass and massively expensive solar. But the hottest conflict focused on industrial wind. Michigan wind projects have lost at the ballot box virtually every time they have been put to the vote in a fair manner – and by similar margins.

At the township level, opposition to wind cronyism is just as strong. In Lenawee County, Riga Township rejected wind-friendly zoning by 64-36 percent. Two more Lenawee Townships followed suit. In Huron County, Lake Township removed a wind friendly ordinance by a similar 61-39 percent. And in Clinton County townships are intent on adopting police power regulations for wind energy installations, in defiance of too-permissive county level zoning.

This opposition is strongly bipartisan. Proposal 3 and its miles of wind turbines were opposed by both the free market Americans for Prosperity and Michael Moore movie producer Jeff Gibbs.

The ballot box evidence is clear. Michigan ratepayers from left to right are emphatic that there is no "desire" for mandated and subsidized industrial wind projects, in their backyard or anywhere in the State.

The push for Prop 3 also broke the big utilities' code of silence on wind inefficacy. MEMJ unwittingly exposed CMS Energy's duplicity on this issue – observing that CMS praised its new Ludington area wind plant for furnishing "reliable and affordable energy," even as its public relations surrogate Care for Michigan was calling wind "expensive and unreliable." Unfortunately for MEMJ, the Care for Michigan version was the truth.

Opponents of renewable energy have long pointed out that wind energy is parasitic – totally dependent on fossil fuels for backup power, with every megawatt of wind power supported by a megawatt of redundant coal or natural gas generating plants. So wind cannot possibly or meaningfully reduce emissions.

But the utilities stood silent. Their beloved existing 10 percent renewable mandate, PA295, restored their monopoly status and guaranteed them nice profits, in exchange for a small number of renewable projects. They were not interested in biting the legislative hand that was (and is) feeding them.

But Prop 3 brought all stick and no carrot for the utilities. They could no longer remain silent. Out came the truth. Wind cannot replace fossil fuel plants. Wind is not getting inexorably cheaper, but is far more expensive than current generation and, minus the huge hidden subsidies, more expensive than new coal. Wind cannot increase employment without costing employment in other industries that get stuck with soaring electricity bills. Wind energy cannot liberate us from foreign oil or from out-of-state coal imports.

What then did our autopsy discover? Michigan renewable energy mandates – including PA295 – are doomed. Because of gluttonous overreach, they will die by their own hand. Politicians need not fear public reprisal for opposing and repealing renewable energy mandates. It is now safe for lawmakers to acknowledge and act on the fact that renewables mandates like PA 295 are of no benefit to ratepayers, employers or employees, and are of dubious benefit to the environment.

Through the failure of Proposal 3, Michigan wind has been dissected and eviscerated by public opinion. The sooner our elected officials zip the death bag shut and send the corpse out for burial, the sooner Michigan can protect its rural areas from needless industrialization and our energy intensive industries from rising electricity costs that compromise their competitive edge.

Other states, and our federal government, should take note.

Kevon Martis is Senior Policy Analyst for the Interstate Informed Citizen's Coalition (www.iiccusa.org) in Blissfield, Michigan.

CFACT Insights

Energy *Solar*

About the Author: CFACT

CFACT defends the environment and human welfare through facts, news, and analysis.

Western Morning News

Follow

Britain's biggest onshore wind farm, in North Devon, could be operating well above permitted noise levels in every location where readings were taken, a new report claims.

Residents have called on North Devon District Council to shut down the facility at Fullabrook after a report commissioned by the authority said all 22 turbines could be exceeding set limits.

1. Nick Williams at his home near Fullabrook wind farm in North Devon. He says he has been prescribed anti-depressants

2. Fullabrook Wind Farm

The plant's operator has released data from a monitoring exercise which showed five of the 12 measured locations were noisier than Government maximums.

But in a study to verify the data, acoustic specialists say the firm has not factored in an extra audible "hum" which would push all the readings above the maximum.

Bob Barfoot, North Devon chairman of the Campaign to Protect Rural England (CPRE), said the results were not unexpected.

"It was quite obvious to everybody that they would exceed the limits," he added. "These Vestas machines are too big and too noisy to be used on shore and this has been proved by Fullabrook."

Neighbours have repeatedly argued that the permitted maximum of 40 decibels (db) or 5db above background noise is still much too high.

Nick Williams, who has been prescribed anti-depressants to help him cope with the effects of the plant, lives 450m away and can see seven turbines from his window.

The 53-year-old told the Western Morning News the sound was like a "tumble drier" and often at its worst on clear winter days.

"They have woken me up two nights in a row – it is not acceptable," he added.

"I think the council should turn them off – if you built a house and broke the rules they would come down on you like a ton of bricks."

The testing was carried out earlier this year by ESB International, in order to satisfy the council that it is not breaching planning regulations.

Two reports into noise assessments around Fullabrook have been released this week.

A compliance assessment report by ESB showed that broadband noise levels – the "swooshing" of the blades – recorded at four locations were above the limits set out within the planning consent, by up to 1.9db in certain wind conditions. The report says the operator intends to work with the manufacturer of the turbines to ensure they return to acceptable levels.

Meanwhile, North Devon council has also released an independent report, by Robert Davis Associates, to verify ESB's assessment study.

Both reports said that "tonal noise" was measured, at Binalong, Crackaway, Beara and Patsford. The verification report said under planning conditions this attracts a "graduated penalty of up to 5dB". "The analysis presented to date does not include any correction to measured noise levels to take account of audible tones," it added. "Since noise levels at all 12 survey locations are within 5dB of the noise limits at some wind speeds the addition of a penalty for tonal noise could result in noise at all locations being shown to exceed the limits."

North Devon council is "seeking further clarification" on the tonal noise issue and said ESB has commissioned further work to quantify the "degree by which tonal noise is a feature".

Rob Pforzheimer

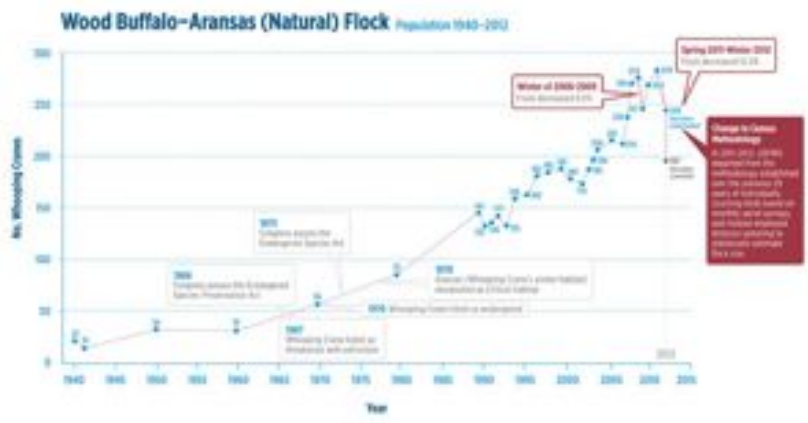
Category: Wind

Comments: Link to article, SOS for whooping cranes (http://www.examiner.com/article/sos-for-whooping-cranes-updated) with comment, "Siting Commission members, Please read the article below the chart. It's about the whooping crane being killed by wind turbines.
In Vermont, the Sheffield project, according to the developer, First Wind, has killed over 90 bats, and we don't know how many birds. First Wind has been granted a take permit that allows the killing of endangered bats, already decimated by White Nose Syndrome. An MOU between First Wind and ANR was supposed to find ways to mitigate the killing of birds and bats, not permit more. Has the commission considered the cumulative effect of more wind "farms" on bats and other wild life. Will all the future wind farms be granted take permits until all the bats, endangered and not yet endangered, are wiped out by an inefficient, expensive, divisive source of generation that we don't even need?"

SOS for whooping cranes (updated) (Photos)

WHOOPING CRANES FACE EXTINCTION | NOVEMBER 27, 2012 | BY: CATHY TAIBBI |

2 photos
View the full slideshow »



RELATED TOPICS

- Endangered Species (http://www.examiner.com/topic/endangered-species)

Just in - According to experts, whooping cranes will be extinct within five years, unless the burgeoning wind energy industry is stopped.

And with wind-industry lobby money firmly in our politician's pockets (http://www.thedailybeast.com/newsweek/2011/11/13/how-obama-s-alternative-energy-programs-became-green-graft.html) , it is pretty certain that the downward-spiraling whooping crane population will be blamed on everything from climate-change to droughts - Anything except the most visible and lethal culprit, the guillotine blades of so-called 'green' propeller-style wind turbines.

View slideshow: Demise of the Whooping Crane? (http://www.examiner.com/slideshow/demise-of-the-whooping-crane)

There are so many turbines now, and so many more planned (40,000 are planned for their habitat) as new wind 'farms' (read: industrial scale wind utility installations) proliferate, that the magnificent migrating whooping cranes, snatched back from the brink of extinction and widely celebrated in both prose and film, will have no migration routes left free of the disastrous and deadly killer blades.

Have we 'saved' them, only to subject a remnant population to languishing in designated protected 'parks'? Are we dooming yet another wild species to live out their lives as, basically, zoo specimens in kinda large zoo habitats, just so yet another environmentally damaging industry can get a free ride?

According to soaring bird expert and wind-farm activist Jim Wiegand, it's very likely. "The Whooping Cranes will be gone within 5 years. By then there will be so many turbines with so much rotor sweep it will be impossible for them to survive. The turnover in the population will be too great and the population will lose their breeders.

"The official blame for their demise will be some disease like botulism, bad weather or both . A lot of hoopla will be made about how they (USFWS) are going to revive the population from their contrived catastrophe. Money will then be allocated and dolled out to the corrupt for their bogus studies. But it will all be a lie. In the end all we will have left of the Whooping Cranes will be some small populations from breeding projects that do not migrate. Just like what has happened the condors. They will be fed and taken care of, but their world will have been taken from them.

"About the only thing positive I see in all this," Wiegand continued, "Is that the public will see first hand how corrupt this great nation is. By knowing the truth, changes can then be made. As for job creation, millions could be created by sending people out to rebuild forests, ecosystems, and lost soil. This will actually help offset carbon buildup instead of the ridiculous carbon credit scam. A scam that rewards the worst perpetrators."

For any readers not yet familiar with the facts about what a poor choice industrial wind projects are for both energy efficiency and the environment (http://www.examiner.com/article/dispelling-the-cats-buildings-vs-wind-farm-bird-death-myth) , the author offers this link on the real costs of wind energy (http://www.examiner.com/article/bird-slaughterhouse-repowering-altamont-pass-with-smoke-and-mirrors) , which explains just why industrial wind is not the

(http://cdn2-b.examiner.com/sites/default/files/styles/large_lightbox/hash/a4/a6/1354062753_6583_marcduchamp9.jpg)

Cranes are dying at wind farms all over the world. This is a European Crane.
Photo credit: COCN

green, wildlife friendly option all the ads make it out to be.

Sadly, many conservation organizations seem hypnotized by the same wind-lobby green-washing misinformation as the general media. Foolhardy legislation is about to be passed, in the form of still more **tax credits for the wind industry (http://www.eastcountymagazine.org/node/11786)** . All while casualty **counts are being under-reported or (literally) buried (http://www.examiner.com/article/wind-farms-accused-of-concealing-deaths-of-protected-species)** , and now it seems, key personnel will be absent during a time when crane mortality should be most closely monitored.

"I was told that the head biologist at Aransas is leaving in early December (and) the Project Leader (aka Refuge Manager) is retiring the end of November," Wiegand reported via email. "I was also told that it may take several months before a new Project Leader is appointed. So who counts the cranes this year?

"To me any delay in the whooping crane count is obvious. They want no bad news to get out before the vote in Congress. So now we not only are dealing with the new bogus count methodology, we will probably be be dealing with incompetent personnel that the USFWS can conveniently produce as sacrificial lambs. Keep in mind that the true numbers will eventually come out, especially when the locals, tourists and bird watchers stop seeing them on their wintering grounds."

One way readers can help fight this corruption is to **demand that accurate counts be done (http://whoopingcrane.com/citizens-want-accurate-and-timely-whooping-crane-information/)** . As Mr. Wiegand commented below the Reader's Editorial **"TELL CONGRESS-- DON'T RENEW TAX CREDITS FOR INDUSTRIAL WIND PROJECTS" (http://www.eastcountymagazine.org/node/11786)** by Terry Weiner, Desert Protective Council, in East County Magazine:

Do not let the wind industry & USFWS manipulate the coming vote

In the next few weeks Congress will vote on the wind industry's production tax credit. The wind industry has had this kickback from the taxpayer for decades. This year's gift from the taxpayer could amount to 12 billion dollars or even more. This behavior makes perfect sense when you are hiding impacts so an industry can prosper. After all something has to be done. As a result of this move, the USFWS now counts/estimates numbers with shell game methodology. Their numbers can no longer be trusted

That is why what I am about to say is very important. Congress should demand an accurate and verifiable 2012 winter count for the whooping cranes along with complete age class figures. The public has a right to know the fate of the whooping cranes and to also how many captive bred birds are being dumped into the population. This count should be done before there is a vote on the production tax credit (PTC) so members will have to answer to the public if they vote yes.

If Congress does not do this, then it is apparent they too are part of this cover-up. I encourage everyone to follow this closely.

He adds, "One would think that after knowing the true impacts, no one would ever want to reward this industry for what has truly become an environmental disaster. But this isn't the way it works. If it did, this industry's killer wind turbines would have been thrown in the bone yard in 1984 when headless eagles started showing at wind farms."

The only way to stop this mockery of a so-called 'Earth-friendly energy industry' is to speak out, call your politicians out and hold their toes to the fire. Demand accountability and full disclosure.

Letting greed and corruption destroy whats's left of our wildlife and wild areas is not an option.

As Mr.Weiner concludes in his editorial, "Please spread the word. It is such a shame to be **destroying huge expanses of habitat, the plants and animals (http://www.examiner.com/article/losing-endangered-species-to-green-energy-the-wind-industry-and-the-incidental-take-permit)** that live there and our Native American cultural heritage for these inefficient wind turbines."

For more information on the truth about wind farms, **click here. (http://savetheeaglesinternational.org/)**

[?]

Cathy Taibbi, Wildlife Conservation Examiner

Cathy Taibbi is a former professional zookeeper and conservation watchdog, sharing her passion through writing, art and roll-up-your-sleeves, hands-on work. At home she's created a backyard wildlife habitat and raises her beloved pet chickens. Email Cathy.

Rob Pforzheimer

Category: Wind

Comments: Link to article, Backlash against Big Wind Continues (http://www.nationalreview.com/articles/334102/backlash-against-big-wind-continues-robert-bryce#) with comment, "The Left and the mainstream media ignore a new lawsuit against a wind-energy plant."Rob Pforzheimer

Category: Wind

Comments: Link to article, LAST LOWELL TURBINE COMMISSIONED (Pforzheimer_Backlash against Big Wind Continues) with comment, " "Schnure said that during that time wet snow built up on the turbines blades. The temperature was around 32 degrees with low cloud cover. This scenario is thought to have caused the noise."

NATIONAL REVIEW ONLINE www.nationalreview.com PRINT

Backlash against Big Wind Continues

By Robert Bryce

November 27, 2012 4:00 A.M.

Last month, 60 residents of New York's Herkimer County filed a lawsuit in Albany that provides yet another example of the growing backlash against the wind-energy sector. It also exposes the double standard that exists in both the mainstream media and among environmental groups when it comes to "green" energy.

The main defendant in the lawsuit is the Spanish electric utility Iberdrola, which is the second-largest wind-energy operator in the U.S. The Herkimer County residents — all of whom live within a mile or so of the $200 million Hardscrabble Wind Power Project — are suing Iberdrola and a group of other companies because of the noise and disruption caused by the wind project.

The lawsuit comes at a touchy time for the wind industry, which is desperately trying to convince Congress to extend the industry's production tax credit that expires at the end of this year. The subsidy gives wind-energy companies 2.2 cents for every kilowatt-hour of electricity that they produce.

Wind-energy proponents claim that an elimination of this tax credit could result in the loss of 37,000 jobs, but they have not been able to silence the dozens upon dozens of groups that have sprung up to fight expansion of the wind sector. And few places in the U.S. have seen a bigger backlash than New York State. About two dozen New York towns have passed rules banning or restricting wind-energy development, and many rural residents have expressed ongoing concerns about turbine noise.

The noise issue is front and center in the Hardscrabble lawsuit. Neighbors of the project have been complaining about noise from the turbines since last year. Two noise studies done on the Hardscrabble facility found that the turbines sometimes exceed their permitted limit of 50 decibels. In response to the complaints, Iberdrola Renewables — which owns the Hardscrabble project — installed noise-reduction equipment on a handful of the turbines.

In the lawsuit, the residents claim that the noise produced by the turbines on the 74-megawatt facility causes headaches and disturbs their sleep. Some of the residents say they have abandoned their homes because of the noise. Others are claiming that the project has hurt their property values. The key paragraph in the suit says that the defendants "failed to adequately assess the effect that the wind turbines would have on neighboring properties including, but not limited to, noise creation, significant loss of use and enjoyment of property . . . diminished property values, destruction of scenic countryside, various forms of trespass and nuisance to neighboring properties, and health concerns, among other effects."

For years, the wind industry and its many supporters on the "green" left have been trying to dismiss the turbine-noise issue — and the nearby residents who are complaining about the problem. In late 2009, the American Wind Energy Association and the Canadian Wind Energy Association published a paper that attempted to quiet critics of the noise problem; they stated in the paper that "there is no evidence that the audible or sub-audible sounds emitted by wind turbines have any direct adverse physiological effects." The paper also suggested that the symptoms critics were attributing to wind-turbine noise were psychosomatic and declared flatly that the vibrations from the turbines were "too weak to be detected by, or to affect, humans."

The Herkimer County lawsuit — *Abele et al. v. Iberdrola et al.* — will bring the noise issue into the legal arena where it can

be properly adjudicated. But it's not yet clear what the plaintiffs might get if they win, because the lawsuit doesn't name a specific dollar amount in damages. Jeff DeFrancisco, one of the lawyers representing the plaintiffs, said that New York State doesn't allow plaintiffs to put a dollar value on the damages. Further, DeFrancisco said the plantiffs cannot seek injunctive relief because the turbines are already in place. "All we can do is seek compensation," he says.

DeFrancisco said the litigation was necessary because the residents living near the turbines had no other options. The plaintiffs, he says, "can't live peacefully" in their homes. "These are people who never had a problem before." Some of them, he says, "would like to move but can't because they can't sell their homes."

In addition to illustrating the backlash against the wind industry, the Herkimer County lawsuit provides yet another example of the double standard that exists in media coverage of "green" energy. Rural newspapers in New York and a few anti-wind websites have covered the lawsuit, but it has not been mentioned in mainstream media outlets such as the *New York Times*.

It's easy to imagine what the coverage in the *Times* might look like if a lawsuit similar to the one in Herkimer County was filed against a company that was drilling for oil or natural gas. Last year, the *Times* ran a number of stories under a banner called "drilling down" — some of them were published on the front page — spotlighting hydraulic fracturing and the possibility of water contamination due to drilling.

The issues involved in oil and gas drilling and wind-turbine development are similar. They all entail new industrial activity in rural areas. All bring friction — truck traffic, noise, and other disruptions — to regions that are not accustomed to energy development. But the *Times* has never published a story on the backlash against the wind industry, even though New York is home to much of the backlash.

Although it's easy to get riled about the newspaper of record, it's mainstream environmental groups that display the most pernicious double standard. Sierra Club, Greenpeace, and other groups were founded on the notion of environmental protection. The Sierra Club's mission statement declares that it wants to "educate and enlist humanity to protect and restore the quality of the natural and human environment."

If that's true, why isn't the Sierra Club campaigning for the rights of the residents in Herkimer County? Don't rural landowners have the right to a high-quality natural and human environment that is free from industrial intrusions, like, say, 470-foot-high wind turbines that are built within a few thousand feet of their homes?

The hard reality is that for groups such as the Sierra Club and their fellow travelers, the issue of climate change — and their near-religious belief that wind turbines are an effective method of cutting carbon dioxide emissions — trumps nearly every other concern. If rural residents in Herkimer County and elsewhere are getting steamrolled by wind-energy developers, well, then, that's just too bad.

It will take months for the Herkimer County lawsuit to wend its way through the courts. But the lawsuit shows, once again, that the anti-wind backlash is growing. And that blowback will only get worse — with or without the help of the self-proclaimed "environmentalists."

— Robert Bryce is a senior fellow at the Manhattan Institute.

Permalink

Willem Post

Category: Wind

Comments: All, Below is a URL with production data reported by the wind turbine facility owners in Maine.

BY LAW, the quarterly data is reported by wind turbine facility owners to the Federal Regulatory Energy Commission, FERC.

The results are dismal, much less than the optimistic capacity factors used to get financing from banks and investors, and approval from government regulators, the public and legislators.
These wind turbine facilities on ridge lines are not economically viable, not even with the present huge subsidies.

http://www.windtaskforce.org/profiles/blog/show?id=4401701%3ABlogPost%3A43514
HOW IS THIS RELEVANT TO VERMONT?

GMP will likely NOT rue the day it spent $160 million to put 63 MW of these IWTs on the Lowell ridge line, plus about $10 million, required by ISO-NE, for equipment to integrate the variable wind energy to the grid. GMP was going to place the burden on the other suppliers to the grid, but the ISO-NE said it follows the "USER PAYS" rule, well familiar to GMP. Not a problem for GMP; it just rolls the extra cost in to rate schedules.

GMP will charge ALL of its additional costs to the captive rate payers in its service area, 70% of Vermont households and businesses, already stressed-out, because of the Great Recession, and a near-zero-growth economy, and financing subsidized RE follies.

Whereas, GMP was grossly misled and engaged in self-deception, it had the resources to determine the facts BEFORE proceeding, unlike lay-people.

Independent energy systems analysts, with decades of experience, had advised against it, but were shoved aside, ignored, even belittled.

GMP COULD have started with one 3 MW turbine to see how it would perform, but that was not impressive enough, as Shumlin wanted to proceed as quickly as possible, build as many IWTs as possible, destroy as many ridge lines as possible, to get as much state and federal subsidies as possible for Vermont's wind oligarchy, which consists mostly of multi-millionaires in the top 1%.
New England annual average grid prices are about 5 c/kWh, nearly unchanged for the past 3 years, and likely to stay that way, because of a LONG-TERM, abundant supply of natural gas.
Hydro-Quebec energy is available at about 6 c/kWh. It is STEADY, CO2-free, available 24/7/365, rain or shine, windy or not windy.

Vermont Yankee's energy is available at about 6 c/kWh. It is STEADY, CO2-free, available 24/7/365, rain or shine, windy or not windy.

Lowell Mountain energy, heavily-subsidized with state and federal subsidies, is available at about 10 c/kWh, per GMP. Its cost would be 15 c/kWh, unsubsidized, per US-DOE. GMP will roll its extra cost into already-stressed households and businesses.

New England, with fair-to-good wind conditions only on 2,000-ft or higher ridge lines, about 30 percent of the hours of the year near-zero wind energy is produced, because wind speeds are insufficient (7.5 mph) to turn the rotors, or too great for safety, as during stronger weather fronts or tropical storms, such as Sandy and Irene, passing over the ridge lines.

About 60% of the wind energy is produced during about 30% of the hours of the year, mostly at night, and mostly during winter. When wind turbines are not producing sufficient or no energy, they DRAW energy from the grid.

Wind energy is variable and intermittent and requires gas turbines to ramp down with wind energy surges and ramp up with wind energy ebbs to maintain a stable grid. This requires extra fuel/kWh and emits extra CO2/kWh.

At greater annual wind energy percentages on the grid, these extras mostly offset what wind energy was meant to reduce, i.e., wind energy is NOT a viable CO2 reduction technology, AND it acts as a disturber of the grid which makes the grid less efficient and less stable, AND it is very expensive.

See below URLs which have had about 10,000 views till now.

http://theenergycollective.com/willem-post/61309/lowell-mountain-wind-turbine-facility-vermont
http://theenergycollective.com/willem-post/71771/energy-efficiency-first-renewables-later
http://theenergycollective.com/willem-post/84293/wind-turbine-noise-and-air-pressure-pulses
http://theenergycollective.com/willem-post/89476/wind-energy-co2-emissions-are-overstated

Year to Date 2012 Maine Wind Power Output is Poor

- Posted by Brad Blake on January 6, 2013 at 8:30pm
- View Blog

The data for the Third Quarter (July, August, September) for production of Maine wind projects has been obtained from the Federal Energy Regulatory Agency (FERC) and the results are, as expected, very poor. The Summer months low production completely offsets the Winter months. Unfortunately, due to air conditioning demand, the

need for generation for ISO-New England is greatest when wind power fails the most. If the 4th Quarter mirrors the 2nd Quarter, it appears that in 2012, the average capacity factor of Maine's wind projects falls below 25%.

Year To Date Maine Wind Project Output

Maine Wind Project Generation and Revenues

[All data is extracted from FERC Spreadsheets]

1st Q 2012

Wind Project	Mars Hill	Stetson 1	Stetson 2	Kibby Mtn.	Rollins	Record Hill	Totals
Nameplate Capacity (MW)	42	57	26	132	60	50.5	368
Generation (MwHrs)	40,658	36,779	14,406	92,955	39,581	37,906	262,285
Energy Revenue	$1,880,104	$1,124,663	$618,616	$2,666,321	$2,192,094	$1,134,632	$9,596,430
Capacity Revenue	$0	$0	$0	$442,584	-$193,429	$137,455	
Total Revenue	$1,880,104	$1,124,663	$618,616	$3,108,905	$1,998,666	$1,272,087	
Energy$$/MwHr Average	$46.75	$30.58	$42.94	$28.68	$55.38	$29.93	$36.59
Capacity Factor	44.32%	29.54%	25.37%	32.24%	30.20%	34.37%	32.68%
Notes	(1)	(2)	(3)	(4)	(5)	(6)	

2nd Q 2012

Wind Project	Mars Hill	Stetson 1	Stetson 2	Kibby Mtn.	Rollins	Record Hill	
Nameplate Capacity (MW)	42	57	26	132	60	50.5	368
Generation (MwHrs)	27,290	19,673	10,132	58,386	29,279	24,693	169,452
Energy Revenue	$1,248,519	$533,344	$409,716	$1,537,725	$1,639,650	$662,956	$6,031,910
Capacity Revenue	$0	$0	$0	$442,584	-$181,811	$152,265	
Total Revenue	$1,248,519	$533,344	$409,716	$1,980,309	$1,457,839	$815,221	
Energy$$/MwHr Average	$46.75	$27.39	$40.44	$26.34	$56.00	$26.63	$35.60
Capacity Factor	29.75%	15.68%	17.84%	20.25%	22.34%	22.57%	21.11%
Notes	(1)	(2)	(3)	(4)	(5)	(6)	

3rd Q 2012

Wind Project	Mars Hill	Stetson 1	Stetson 2	Kibby Mtn.	Rollins	Record Hill	
Nameplate Capacity (MW)	42	57	26	132	60	50.5	368
Generation (MwHrs)	25,528	24,927	8,259	39,937	24,393	17,796	140,842
Energy Revenue	$1,167,906	$875,874	$381,507	$1,440,065	$1,415,103	$667,946	$5,948,400
Capacity Revenue	$0	$0	$0	$150,855	-$158,557	$144,264	
Total Revenue	$1,167,906	$875,874	$381,507	$1,590,920	$1,256,546	$812,210	
Energy$$/MwHr Average	$46.75	$35.14	$46.19	$36.06	$58.01	$37.53	$42.23
Capacity Factor	27.53%	19.01%	14.39%	13.70%	18.41%	15.96%	17.36%
Notes	(1)	(2)	(3)	(4)	(5)	(6)	

	Cumulative Totals
	368
	572,579
	$21,576,740
	$37.68
	23.69%

Notes

(1) Mars Hill has a short term PPA with New Brunswick Power
(2) Stetson 1 is a "merchant" plant which sells in the wholesale auction market
(3) Stetson 2 sells 50% of its power to Harvard under a 20-year PPA and the other 50% in the auction market
(4) Kibby has a short term PPA with its parent TransCanada
(5) Rollins sells its power to Bangor Hydro and CMP (20%/80%) under a 20-year PPA
(6) Record Hill is a "merchant" plant which sells in the wholesale auction market

This is part of the Record Hill wind project from Roxbury Pond. This project, developed by Independence Wind and subject of much attention this year as wind site developer Angus King ran for US Senate, is a prime example of the failure of Maine wind projects. Think Maine's western mountains are always windy and thus productive wind turbine sites? Think again!

Capacity factors year to date for the Record Hill Project (see table above) are: 1st Quarter (Jan., Feb., March): 34.37%; 2nd Quarter (April, May, June): 22.57%; 3rd Quarter (July, Aug., Sept): 15.96%.

What is worse is on June 8, 2012 Independence Wind was awarded $33.7 million ARRA Section 1603 grant (free gift of taxpayer $$$)! This is an up-front payment that bails out the troubled project temporarily. This is in lieu of earning 2.2 cents per kwh from Production Tax Credit for 10 years, a smart move considering the poor performance. Does it get any worse? Yes! Using King's influence and alleging a dubious "innovation", Independence Wind obtianed a Federal government $102 million loan guarantee. With continuing poor performance, this project might not re-pay its loans and default, leaving the taxpayers to bail it out with the loan guarantee.

This is not an isolated case, as there are poor performances and many problems with and questions concerning the circumstances of Maine wind projects. It is time to end this farce and stop any further development of wind power in this state. These figures posted here tell the real facts that wind power does not work in Maine. We do not need this fickle trickle of unpredictable, unreliable, non-dispatchable, and costly electricity. We need to protect our beautiful state, its "Quality of Place", and its natural resources from industrial wind blight!

Views: 462

Share Twitter Facebook

- < Previous Post

Comment

You need to be a member of Citizens' Task Force on Wind Power - Maine to add comments!

Join Citizens' Task Force on Wind Power - Maine

Comment by Willem Post on November 24, 2012 at 10:14am

Brad,

Thank you posting this great information.

I will use it in my articles, etc. See below URLs.

http://theenergycollective.com/willem-post/46142/impact-pv-solar-fe...

http://theenergycollective.com/willem-post/46252/thermal-solar-cali...

http://theenergycollective.com/willem-post/46652/reducing-energy-us...

http://theenergycollective.com/willem-post/46824/impact-csp-and-pv-...

http://theenergycollective.com/willem-post/46977/impacts-variable-i...

http://theenergycollective.com/willem-post/47519/base-power-alterna...

http://theenergycollective.com/willem-post/50167/impact-pv-solar-pe...

http://theenergycollective.com/willem-post/50925/electric-vehicle-h...

http://theenergycollective.com/willem-post/51642/dutch-renewables-a...

http://theenergycollective.com/willem-post/52228/impact-closing-ver...

http://theenergycollective.com/willem-post/53258/examples-wind-powe...

http://theenergycollective.com/willem-post/53939/radiation-exposure

http://theenergycollective.com/willem-post/57905/wind-power-and-co2...

http://theenergycollective.com/willem-post/59747/ge-flexefficiency-...

http://theenergycollective.com/willem-post/61309/lowell-mountain-wi...

http://theenergycollective.com/willem-post/61774/wind-energy-expensive

http://theenergycollective.com/willem-post/64492/wind-energy-reduce...

http://theenergycollective.com/willem-post/67528/german-nuclear-dec...

http://theenergycollective.com/willem-post/69710/will-germany-make-...

http://theenergycollective.com/willem-post/71771/energy-efficiency-...

http://theenergycollective.com/willem-post/74311/german-eeg-program

http://theenergycollective.com/willem-post/74847/pv-solar-energy-st...

http://theenergycollective.com/willem-post/77343/vermont-leaders-ba...

http://theenergycollective.com/willem-post/83704/reduce-co2-and-slo...

http://theenergycollective.com/willem-post/84293/wind-turbine-noise...

http://theenergycollective.com/willem-post/89476/wind-energy-co2-em...

http://theenergycollective.com/willem-post/98061/irelands-wind-ener...

http://theenergycollective.com/willem-post/107316/global-warming-co...

RSS

Welcome to
Citizens' Task Force on Wind Power - Maine

Sign Up
or Sign In

CMP Transmission Rate Skyrockets 19.6% Due to Wind Power

Click here to read how the Maine ratepayer has been sold down the river by the Angus King cabal.

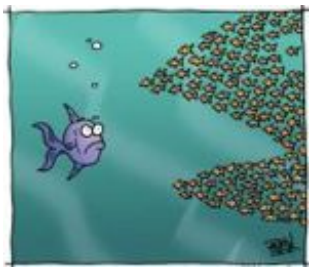
Maine Center For Public Interest Reporting – Three Part Series: A CRITICAL LOOK AT MAINE'S WIND ACT (excerpts) From Part 1 – On Maine's Wind Law "Once the committee passed the wind

energy bill on to the full House and Senate, lawmakers there didn't even debate it. They passed it unanimously and with no discussion. House Majority Leader Hannah Pingree, a Democrat from North Haven, says legislators probably didn't know how many turbines would be constructed in Maine if the law's goals were met." . – Maine Center for Public Interest Reporting, August 2010 http://pinetreewatchdog.org/2010/08/09/wind-power-bandwagon-hits-bumps-in-the-road-3/ **From Part 2 – On Wind and Oil** Yet using wind energy doesn't lower dependence on imported foreign oil. That's because the majority of imported oil in Maine is used for heating and transportation. And switching our dependence from foreign oil to Maine-produced electricity isn't likely to happen very soon, says Bartlett. "Right now, people can't switch to electric cars and heating – if they did, we'd be in trouble." So was one of the fundamental premises of the task force false, or at least misleading?" http://pinetreewatchdog.org/2010/08/11/wind-swept-task-force-set-the-rules/ **From Part 3 – On Wind-Required New Transmission Lines** Finally, the building of enormous, high-voltage transmission lines that the regional electricity system operator says are required to move substantial amounts of wind power to markets south of Maine was never even discussed by the task force – an omission that Mills said will come to haunt the state."If you try to put 2,500 or 3,000 megawatts in northern or eastern Maine – oh, my god, try to build the transmission!" said Mills. "It's not just the towers, it's the lines – that's when I begin to think that the goal is a little farfetched." http://pinetreewatchdog.org/2010/08/12/flaws-in-bill-like-skating-with-dull-skates/

Not yet a member?

Sign up today and lend your voice and presence to the steadily rising tide that will soon sweep the scourge of useless and wretched turbines from our beloved Maine countryside. For many of us, our little pieces of paradise have been hard won. Did the carpetbaggers think they could simply steal them from us?

We have the facts on our side. We have the truth on our side. All we need now is **YOU**.



"First they ignore you, then they laugh at you, then they fight you, then you win."

-- Mahatma Gandhi

Task Force membership is free. Please sign up today!

Richard First
POMG Bike Tours of Vermont

Category: Some of the above

Comments: I have several concerns.

1. My direct experience is that the PSB does not follow it's own rules. We have a neighbor who applied for and received a CPG for a net metered private wind turbine. We were left out of the notification process because we do not adjoin their property. Their visibility statement in the application is/was misleading at best, fraudulent at worst. The PSB refused to investigate after I brought a motion to the PSB with photo evidence, including a request, in writing, from a Public Service Dept attorney, Sarah Hoffman, who wrote a letter to the PSB suggesting a site visit. How can the PSB know if the statement is misleading or fraudulent if they don't even do a site visit? Their own rules state that if an applicant provides such a statement, the CPG may be revoked. The PSB refused the motion with no site visit or hearing.

2. The PSB has no check or balance to make sure applicants for private net metered projects actually provide notification to adjoining neighbors. Applicants simply provide a list to the PSB of who they notified. At a minimum, applicants should be required to notify adjoining neighbors through registered mail with a signature from the recipient, and provide receipts to the PSB. The burden needs to be on the applicant to not only notify adjoining neighbors, but to make them more aware of the impacts of these projects. 3. Notification of only adjoining neighbors is not enough. We live less than 1/5 of a mile from our neighbors wind turbine. They put it up directly in our pristine and narrow view of Lake Champlain. We now view their turbine from the primary use areas of our home. Worse, on any day with more than a slight wind, we hear the turbine.
This is not an example of "The Public Good." Private Good perhaps. Had we been notified, we could have been part of the process from the beginning and the turbine could have been sited differently which would have made a difference. I testified to the Senate Committee on Energy & Natural Resources and would be happy to provide my testimony to your committee. This would provide in depth detail of the experience. I would be delighted to be a part of a process that would make all of this more neighborly. We need to come up with a system/process which enables renewables to gain ground, but at their real cost. Why should my family pay/bear the cost of my neighbor having a private wind turbine that generates a miniscule amount of energy?
How is this in the Public Good of Vermont?

4. The PSB needs a system where by citizens can request to be notified when net metered applications are submitted. If this is in the "Public Good" then the Public has a right to know when applications are being made so they can request to be a party to the proceedings in case they will be directly or indirectly effected by the project. I called the Clerk of the PSB several times to request a notification if these same neighbors applied for an amendment to their CPG.
I was told there was not a system to do so. After calling week after week, the Clerk finally told me she would let me know if an amendment request came in from my neighbors. Sure enough, our neighbor applied for an amendment to their CPG, I was not notified, and their amendment to raise their tower height 14 feet was granted, making the situation even worse for us.

Thanks for your attention to this important issue facing Vermont. Again, I would be happy to testify to your commission.

Respectfully,
Richard First

Lisa Wright Garcia
West Rutland

Category: Wind

Comments: I attended the first meeting of the commission yesterday. While I went in with the bias that this was just an appeasement motion on the part of Governor Shumlin, I was pleased to hear some very meaningful questions from the commissioners. I urge you to give the Governor more than he bargained for in created this commission, and to generate some meaningful discourse on the process. The system is broken, it is not working to represent the interests of all Vermonters fairly, and I would further argue that because the public is left out of the discourse on "public good" that the public good granted to these projects is not honestly and fairly determined.

Thank you for allowing public comment yesterday. I did not comment myself, but would echo the comments expressed by many of those who did speak, particularly Ken Fried. I have attached a letter to the editor, which I think summarizes my comments at this time.

Predictable, Fast and Inclusive?

Governor Shumlin stated recently that his goal for the Energy Generation Siting Commission he formed was to ensure that the process for permitting energy generation projects would be as predictable, fast and inclusive.

That phrase is telling of Shumlin's real motivations. The current process is predictable. It is designed to grant large out of state corporations a green light for their projects. And it is fast – fast enough for those corporations to build when the tax subsidies are at their peak. Critical thought has already been suspended regarding industrial wind in the rush to build them – we do not need to make this any faster.

He threw "inclusive" in there to try to appease those of us who argue that the real stakeholders are disenfranchised from this process. The process is not inclusive, and it is not inclusive because it is predictable and fast. The corporations willing to do grave harm with their energy projects are given lots of time and guidance from the state on how to make their project fly. Because state agencies grant them "pre-approval" on some aspects of their plan, it is also predictable. In contrast, "host" towns are given 45 days before a permit is filed and then have to petition for "intervenor" status to give input, which will be promptly ignored. Adjacent landowners and residents are not required to be notified at all, and are given no formal input in the process.

Lisa Wright Garcia

West Rutland, VT

Lee Krohn
Planning Director
Town of Manchester
Manchester

Category: Other

Comments: First, I speak for myself and not representing the Town here.

I think it of fundamental importance that the underlying concept of Section
248 state review be remembered, clarified, and discussed. So much is made of 'local control' or lack thereof, and how or whether towns have a say in 248 decisionmaking. This process exists for the types of larger/regional/state facilities that need to go somewhere... but if every town had veto power, we'

likely never be able to site in any location. Hospitals, power lines, power plants of any sort... typically, no one wants these anywhere near them. But we need them somewhere, and they serve a much broader need than just within a town. So we needed a process that by definition, had the ability and mandate to transcend town boundaries. This entire premise has been lost in translation with all of the furor over wind, and no one has yet reminded the world of why this process exists as it is. It really needs that context brought back to the forefront to set the stage for rational debate and perspective.

This is not to suggest that I think that any project in any location deserves approval. But it might clarify why certain projects are approved; not because the PSB is in anyone's pocket, but they are following the mandate described in law, and created for the very reasons we see today. Thank you.

Monique Aniel
Citizens Task Force on Windpower - Maine

Category: Wind

Comments: As promised at the Blue Ribbon Committee's meeting on other state's experiences with Wind Turbine permitting on November 16th , we are providing the link and the recommendations from the Maine Office of Energy Independence and Security's 2012 Wind Energy Assessment. We believe the recommendations in this report are based on a fair and comprehensive review of the issues which have become "lightning rods" in Maine. The wind industry and concerned citizens both had input into the report. Maine has had a few more years of wind development than Vermont and some of the issues which have recently become controversial in Vermont are well understood in Maine (noise, landscape impacts, benefits to local communities, long term contracts, mandated goals for renewables in light of current economic realities). We hope you find the following information useful.

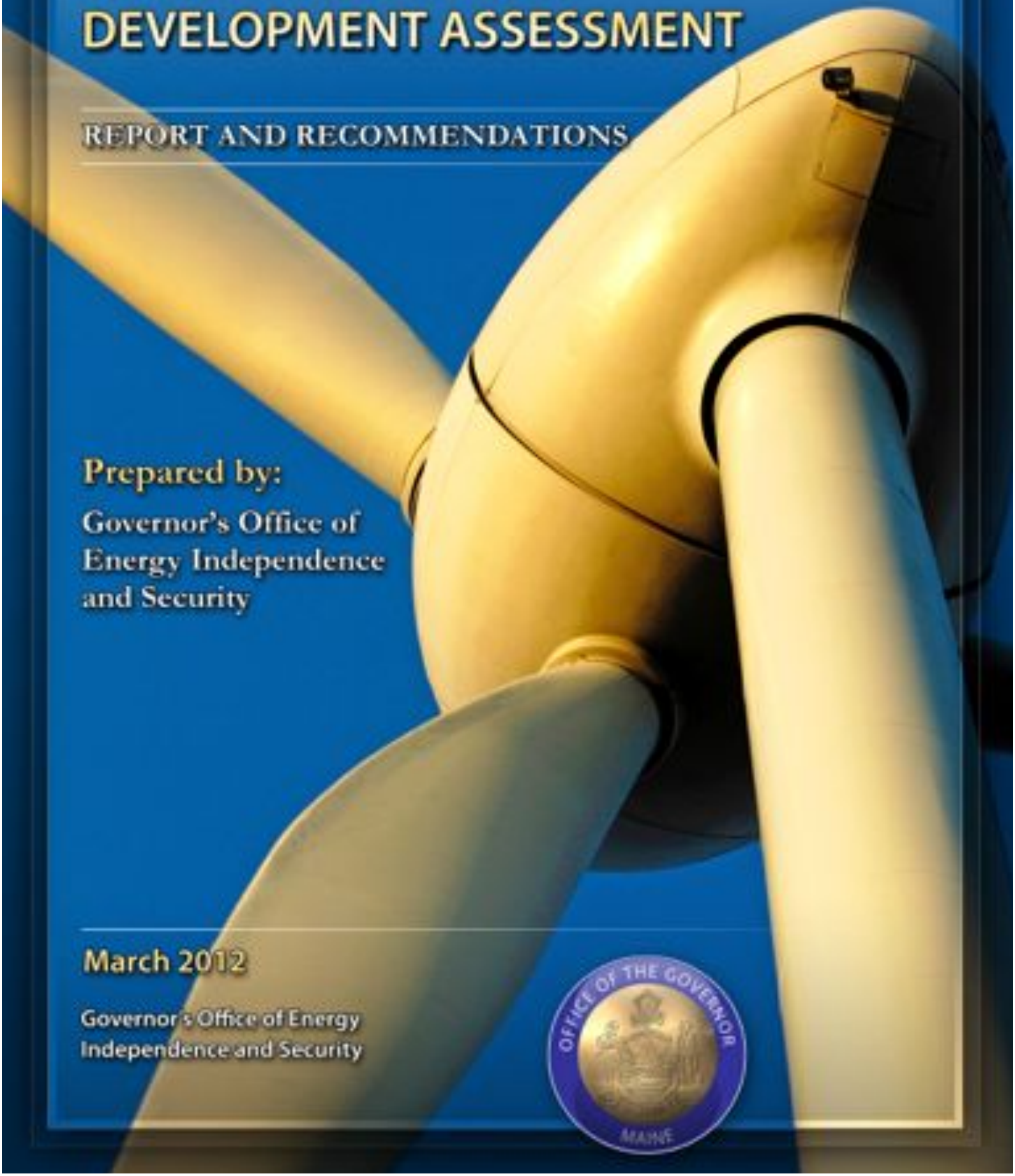
Please call us or email us with any question and let us know that you received this message

Regards,
Monique Aniel, MD and Steve Thurston,

Citizens Task Force on Wind Power - Maine
Link to final report: http://maine.gov/energy/pdf/Binder1.pdf
Recommendations from the report: [SEE FULL EMAIL AND/OR REPORT]

MAINE WIND ENERGY DEVELOPMENT ASSESSMENT

REPORT AND RECOMMENDATIONS



Prepared by:

Governor's Office of Energy Independence and Security

March 2012

Governor's Office of Energy Independence and Security

MAINE WIND ENERGY DEVELOPMENT ASSESSMENT

Report & Recommendations – 2012

Prepared by

Governor's Office of Energy Independence and Security

March 2012

Acknowledgements

The Office of Energy Independence and Security would like to thank all the contributing state agencies and their staff members who provided us with assistance and information, especially ***Mark Margerum*** at the Maine Department of Environmental Protection and ***Marcia Spencer-Famous*** and ***Samantha Horn-Olsen*** at the Land Use Regulation Commission.

Jeff Marks, Deputy Director of the Governor's Office of Energy Independence and Security (OEIS) served as the primary author and manager of the Maine Wind Energy Development Assessment.

Special thanks to ***Hugh Coxe*** at the Land Use Regulation Commission for coordination of the Cumulative Visual Impact (CVI) study group and preparation of the CVI report.

Coastal Enterprises, Inc. (CEI), Perkins Point Energy Consulting and Synapse Energy Economics, Inc. prepared the economic and energy information and data needed to permit the OEIS to formulate substantive recommendations based on the *Maine Wind Assessment 2012, A Report* (January 31, 2012). We appreciate the expertise and professional work performed by ***Stephen Cole*** *(CEI)*, ***Stephen Ward*** *(Perkins Point)* and ***Robert Fagan*** *(Synapse.)*.

Michael Barden with the Governor's Office of Energy Independence and Security assisted with the editing.

Jon Doucette, Woodard & Curran designed the cover.

We appreciate the candid advice, guidance and information provided by the organizations and individuals consulted by OEIS and those interviewed for the 2012 wind assessment and cited in Attachment 1 of the accompanying *Maine Wind Assessment 2012, A Report*.

Kenneth C. Fletcher
Director
Governor's Office of Energy Independence and Security

Table of contents

Executive Summary

The Governor's Office of Energy Independence and Security (OEIS) is responsible for assessing the State of Maine wind energy goals and recommending changes to law to achieve a cost-effective, sustainable energy, environmental and economic policy strategy. In addition, the OEIS is required to examine permitting standards and processes, visual impact criteria, decommissioning plans and other issues and formulate recommendations to improve Maine's wind energy policies.

Based on the 2015 wind development goal, the State of Maine has met ~17.28 percent of its wind energy goals with 345.5 megawatts (MW) of installed land-based wind capacity. To attain Maine's 2015 goal of 2,000 MW of onshore wind, a total of 1,654.5 MW of wind would need to be installed by 2015. There are currently no off-shore wind projects in operation in Maine.

Maine continues to be a leader in wind power development in New England and the nation and significant tangible benefits are being delivered to the economy, environment and Maine people. Excellent wind resources, interest in renewable energy generation and potential economic and environmental benefits are driving development and discussion of projects through the State. Progress is being made on potential development of deep-water off-shore wind energy through research, development and deployment efforts. Developers are considering new technologies as they become available in the marketplace. However, continuing economic uncertainty, growing state and local opposition to projects and the potential expiration of the federal renewable energy production tax credit are affecting costs, financing options and permitting times.

While Maine has progressed forward in meeting its wind energy development goals and the theoretical potential for increasing installed wind capacity in Maine exists, there are several critical policy and financial issues that will influence the rate of that development, some of which are beyond the control of state government. The Governor and Maine Legislature must work together to examine policy changes that will reduce the price of electricity to Maine consumers in a manner that is environmentally responsible, optimizes economic growth, provides energy security and preserves Maine's quality of place and life.

To that end, the OEIS has consulted with experts and the public, examined the issues and provided recommendations that may be helpful in guiding policymakers to improve the process related to the permitting of wind energy development. These recommendations propose changes to wind goals and criteria for wind permitting; wind permitting process; noise and technology issues; visual and cumulative visual impact; decommissioning; offshore wind; and long-term contracting for renewable resources.

Recommendation Outline

The OEIS recommends exploring opportunities for the development of wind energy production in the state in a manner that is consistent with state and federal environmental standards and community expectations and that achieves reliable, cost-effective, sustainable energy production. These recommendations are discussed in additional detail in the "Conclusions and Recommendations" section, and analysis and rationale for the proposals are based on the accompanying reports.

Wind Goals and Criteria for Wind Permitting

1. Eliminate the statutory goal of 2,000 MW of installed wind capacity by 2015 since it is highly unlikely that level of installed capacity will be achievable.
2. Retain the statutory goals of 3,000 MW of installed wind capacity by 2020 and 8,000 MW of installed capacity by 2030 until a comprehensive re-assessment can be completed.
3. The Governor, the Legislature, the Governor's Energy Office, the Department of Environmental Protection and/or others should convene a panel to identify where in Maine expedited permitting would be allowed in a way that provides maximum energy, economic and environmental benefits and minimum harm to local residents and the environment.
4. The Legislature should clarify the significance of a quantitative "statutory goal" with respect to the action required if the goal is not achieved and/or exceeded.

Wind Permitting Process

5. Require independent analysis to evaluate the "financial capability" of a wind developer and expected output and capacity rating of a project's turbines.
6. Revise "one-size-fits-all" permitting process to allow regulators to distinguish among varying levels of project impact – with diminished or expanded oversight as the circumstances warrant.
7. Treat all "robo-communications" as a single comment in permitting process.
8. Support the LURC December 20, 2011 proposal to add a second public meeting to the permit application process to improve efficiency and provide additional opportunity for comment and information exchange.
9. Adopt a consistent regulatory scheme for wind projects to eliminate major discontinuities between LURC and DEP implementation of their wind permitting responsibilities.
10. Amend the wind law to identify "those regions and view sheds that are most critical to the state's recreational and tourism economy and would be unacceptably degraded by any significant level of wind power development" and "remove any area within fifteen miles of them from the Expedited Permitting Area (EPA)" unless the wind project is not visible from them.
11. Revise the existing permitting process to allow for areas to be removed from the EPA.
12. Make no changes to the 270-day statutory period for processing a permit application.

Noise and Best Available Technology

13. Provide post-construction noise monitoring of an approved wind project.
14. Require use of "best available control technology" to limit impacts from wind development.

Visual and Cumulative Visual Impact

15. Update the surveys of resources designated as having state or national significance.
16. Institute a standard methodology or a more formal guidance document for visual impact assessment.
17. Require "intercept surveys" to help gauge scenic impact – pre- and post-construction visual impact surveys.
18. Amend the wind law to require scenic impact evaluations to eight miles, with a fifteen mile standard option and provisions made for review to greater distances.
19. Support a clear statutory authority for permitting agencies to consider cumulative visual impacts.

Offshore Wind

20. Continue partnerships with MPUC, BOEM, state, federal, private, university, non-profit and other stakeholders in offshore wind development and corresponding energy, economic and environmental analysis.

Decommissioning

21. Incorporate into statute the LURC "Applications Guidance and Checklist" for wind projects pertaining to decommissioning planning.
22. Incorporate into statute the periodic updating of decommissioning plans with a regulatory check-in of decommissioning cost assumptions on a pre-determined schedule (*e.g.*, every three to six years).
23. Require that standard permit conditions for wind projects include requirements that decommissioning payments be made in the form of a performance bond, surety bond, letter of credit, parental guaranty or other acceptable form of financial assurance.
24. The practice of including a future estimate of the salvage values as part of the decommissioning funds needs to be carefully considered and it is recommended that there be a standard formula developed that recognizes the surplus value but at more conservative level such as no more than 50% of the total decommissioning requirements.

Long-Term Contracting

25. Adjust language in 35-A MRSA §3210-C (capacity resource adequacy) providing for long-term contracts for capacity and energy in a manner that prioritizes and promotes lower costs of electricity to ratepayers over the life of such contracts.

Maine Wind Energy Development Assessment: Report & Recommendations

I. Introduction

As required by *The Wind Energy Development Act*, enacted as Public Law 2007, Chapter 661, the Governor's Office of Energy Independence and Security (OEIS) is responsible for reporting to the Joint Standing Committee on Energy, Utilities and Technology on the "**State of Maine's wind energy goals and realization of tangible benefits"** on an annual basis. In addition, by December 2013, the OEIS is responsible, in consultation with other state agencies as appropriate, for conducting a full review of the status of meeting the goals for 2015 and the likelihood of achieving the goals for 2020.

> ***Sec. A-8. Tracking progress toward achievement of state wind energy goals.*** *The Executive Department, Governor's Office of Energy Independence and Security, referred to in this section as "the office," shall, on an annual basis, monitor and make an assessment of progress toward meeting the wind energy development goals established in the Maine Revised Statutes, Title 35-A, section 3404, subsection 2 and, by December 2013, in consultation with other state agencies as appropriate, conduct a full review of the status of meeting the goals for 2015 and the likelihood of achieving the goals for 2020. The office shall provide its assessment and recommendations under this section to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters by January 15th of each year.*
>
> ***1. Assessment.*** *The assessment under this section must include:*
>
> *A. Examination of experiences from the permitting process;*
> *B. Identified successes, including tangible benefits realized from wind energy development, in implementing the recommendations contained in the February 2008 final report of the Governor's Task Force on Wind Power Development in Maine pursuant to Executive Order issued May 8, 2007;*
> *C. Projections of wind energy developers' plans, as well as technology trends and their state policy implications;*
> *D. The status of Maine and each of the other New England states in making progress toward reducing greenhouse gas emissions; and*
> *E. Recommendations, including, but not limited to, any changes regarding:*
>
> > *(1) The wind energy development goals established in Title 35-A, section 3404, subsection 2;*
> > *(2) Permitting processes for wind energy development;*
> > *(3) Identification of places within the State's unorganized and deorganized areas for inclusion in the expedited permitting area established pursuant to Title 35-A, chapter 34-A; and*

(4) Creation of an independent siting authority to consider wind energy development applications.

The OEIS was established in the Executive Department to carry out responsibilities of the State relating to energy resources, planning and development. The office seeks to achieve all cost-effective energy efficiency in the State of Maine; provide resources to invest in renewable and clean energy projects; support investment in improving transportation and fuel efficiencies; reduce electricity prices and overall energy costs to Maine consumers; and make available the financial, regulatory and policy support to upgrade electricity and natural gas services, transmission systems and infrastructures. The OEIS identifies opportunities and partners with state, regional, federal, and private-sector partners to integrate energy, environmental and economic policies into a cohesive and sustainable energy strategy.

The OEIS has been monitoring the progress and has made an assessment of the State's progress toward meeting the wind energy development goals established in the Maine Revised Statutes, Title 35-A, section 3404, subsection 2 and the realization of the tangible benefits of wind energy developments as well as other considerations and pertinent questions included in the law.

According to the statute, the goals for wind energy development in the State are that there be:

Photo: courtesy of CEI

A. At least 2,000 MW of installed capacity by 2015; and
B. At least 3,000 MW of installed capacity by 2020, including 300 MW or more from generation facilities located in coastal waters, or in proximate federal waters; and
C. At least 8,000 MW of installed capacity by 2030, including 5,000 MW from generation facilities located in coastal waters or in proximate federal waters.

Maine Installed Wind Goals

Total Wind MW	On-shore	Off-shore	By When
2,000	**2,000**	**-**	**2015**
3,000	**2,700**	**300**	**2020**
8,000	**3,000**	**5,000**	**2030**

To accomplish the above task, the OEIS has conferred with both the Department of Environmental Protection (DEP) and the Land Use Regulation Commission (LURC), the State's

two permitting and regulatory entities responsible for permitting wind energy projects. The OEIS has also met with and had discussions with wind energy developers and members of the public to gauge process and progress of wind energy development in the State.

The information and recommendations in this report are based primarily on the following resources:

- Coastal Enterprises, Inc., Perkins Point Energy Consulting and Synapse Energy Economics, Inc. – *Maine Wind Assessment 2012, A Report* **(Appendix A)**
- Maine Land Use Regulation Commission – *Report of OEIS Assessment of Cumulative Visual Impacts from Wind Energy Development* **(Appendix C)**
- London Economics International (LEI), *MPUC RPS Report 2011 – Review of RPS Requirements and Compliance in Maine* **(Appendix B)**
- New England States Committee on Electricity (NESCOE), *Renewable Resource Supply Curve Report*, 2011 **(Appendix B)**
- Maine Department of Environmental Protection
- Maine Land Use Regulation Commission

II. Assessment of Progress Toward Meeting Wind Energy Development Goals

A total of eight large-scale wind energy development projects are operating in the State of Maine with a total capacity of 345.5 megawatts (MW). These facilities are exclusive of a number of non-utility "community" scale wind projects that are also operational. In addition, there are two large-scale wind energy development projects under construction or in operational testing mode (at the time of publication) with a potential total of 84.8 MW of capacity, three projects that have been permitted but not yet under construction with a potential of 216 MW and at least four wind energy projects under review with the total potential capacity of 250.1 MW. Other Maine-based wind projects are in discussion or appear in ISO-NE's queue (Independent System Operator – New England) but are not far along enough to be counted by either the DEP or LURC as a serious project at this time. There are no off-shore wind projects in operation or under development in Maine at this time.

Currently Operating Maine Wind Plants

Project	MW Installed	# Turbines	Ave. Size (MW)
Kibby	132.0	44	3
Rollins	60.0	40	1.5
Stetson I	57.0	38	1.5
Mars Hill	42.0	28	1.5
Stetson II	25.5	17	1.5
Spruce Mtn	20.0	10	2
Beaver Ridge	4.5	3	1.5
Vinalhaven	4.5	3	1.5
Total	**345.5**	**183**	**1.9**

Note: Excludes small, "community-scale" wind.

Source: Synapse Energy Economics, tabulation of data from multiple sources, including NRCM, US DOE/EE/RE Wind Power America New England Wind Project database, Maine developer web sites as compiled by CEI, January 31, 2012.

Planned, Proposed or Under Construction Wind Plants in Maine

Project	MW Installed
Bingham	49.7
Bowers Mtn/ Passadumkeag	69.1
Blue Hill	34.2
Dundee	32.0
Fletcher Mtn	60.0
Highland	117.0
Kibby Expansion	33.0
Longfellow/ Black Mtn	40.0
Record Hill	50.6
Revised Oakfield	150.0
Saddleback Ridge Wind Project	33.0
Spruce Mtn Increase	18.0
Timber Wind – Canton	22.0
Timber Wind – Dixfield	33.0
Wind Proj. Phase 4 (MPS Queue #8)	250.0
Wind Proj. Phase 5 (MPS Queue #9)	150.0
Total	**1,141.6**

Source: Synapse Energy Economics, tabulation of data from multiple sources, including NRCM, US DOE/EE/RE Wind Power America New England Wind Project database, Maine developer web sites, ISO-NE interconnection queue, MPS interconnection queue, as compiled by CEI, January 31, 2012. **NOTE:** OEIS compilation of projects include only LURC/DEP projects under construction, testing or review.

III. Summary of Progress Toward Meeting Wind Energy Development Goals

Based on the 2015 wind development goal, and taking into account only the DEP and LURC projects that are operational, under construction, approved/permitted but not yet under construction or operational, and under review:

- The State of Maine has met 17.28 % of wind energy goals with 345.5 MW of installed capacity.
- The percentage would rise to 21.52 % if all 84.8 MW of capacity under construction or testing are operational.
- The percentage would rise to 32.32 % if all 216 MW approved/permitted but not yet under construction are constructed and operational.
- The percentage would rise to 44.82 % if all 250.1 MW under review are constructed and operational.

In the accompanying report, *Maine Wind Assessment 2012, A Report*, published by Coastal Enterprises, Inc. (CEI) on January 31, 2012, the combination of existing and proposed, planned or under-construction wind farms in Maine – 345.5 MW existing plus 1,141.6 planned (*Note:* CEI report includes additional projects not currently under consideration by LURC/DEP) – totals 1,487.1 MW. The percentage of wind energy goals reached if all are constructed by 2015 would be ~ 74.4%, falling short of the goal by 512.9 MW. To attain Maine's 2015 goal of 2,000 MW of onshore wind, a total of 1,654.5 MW of wind would need to be installed between now and 2015 – 2,000 MW (goal) minus 345.5 MW (operating).

IV. Summary of Wind Energy Development Projects in Maine

Projects in Operation in LURC jurisdiction

- Kibby I (Kibby Wind Power Project)
  - TransCanada Maine Wind Development, Inc.
  - Kibby Township and Skinner Township, Franklin County
  - 132 MW
  - 44 turbines
  - LURC permit and planned development subdistrict prior to the *Wind Energy Act*; DEP reviewed small portion of the generator lead line passing through an organized town

- Stetson I (Stetson Wind Project)
  - Evergreen Wind V, LLC (First Wind)
  - T8 R3 NBPP and T8 R4 NBPP, Washington County

- 57 MW
- 38 turbines
- LURC permit and planned development subdistrict, prior to the *Wind Energy Act*; DEP license for the generator lead line

- Stetson II (Owl Mountain and Jimmey Mountain Wind Project)
  - Stetson Wind II, LLC (First Wind)
  - T8 R4 NBPP, Washington County
  - 25.5 MW
  - 17 turbines
  - LURC permit under the *Wind Energy Act*

Total in Operation: 214.5 MW

Projects in Operation in DEP jurisdiction

- Beaver Ridge Wind
  - Patriot Renewables
  - Freedom
  - 4.5 MW
  - 3 turbines
  - Local permit only

- Fox Islands Wind
  - Fox Islands Wind, LLC
  - Vinalhaven, Knox County
  - 4.5 MW
  - 3 General Electric 1.5 MW turbines
  - DEP small scale wind certification issued June 5, 2009
  - Project in operation

- Mars Hill Wind
  - Evergreen Windpower, LLC (First Wind)
  - Town of Mars Hill, Aroostook County
  - 42 MW
  - 28 General Electric 1.5 MW turbines
  - Project in operation

- Rollins Mountain Wind
  - First Wind
  - Lincoln, Penobscot County
  - 60 MW
  - 40 General Electric 1.5 MW turbines
  - DEP permit issued April 21, 2009
  - Project in operation

- Spruce Mountain Wind
  - Patriot Renewables
  - Woodstock, Oxford County
  - 20 MW
  - 10 Gamesa 2.0 MW turbines
  - Project in operation

  Total in Operation: 131 MW

Projects in LURC Jurisdiction Under Construction

- Bull Hill Wind Project
  - Blue Sky East, LLC (First Wind)
  - T16 MD, Hancock Co.
  - 34.2 MW
  - 19 turbines
  - LURC permit

  Total Under Construction: 34.2 MW

Projects Permitted in LURC jurisdiction but not yet under construction

- Kibby II (Kibby Expansion Project)
  - TransCanada Maine Wind Development, Inc.
  - Chain of Ponds Township and Kibby Township, Franklin County
  - 33 MW
  - 11 turbines
  - Under appeal
  - LURC permit under the *Wind Energy Act*

  Total Permitted, not yet under construction: 33 MW

Projects Approved by DEP but not yet operational

- Oakfield Wind
  - Evergreen Wind Power II, LLC (First Wind)
  - Oakfield, Aroostook County
  - 150 MW total, expansion of previously approved 51 MW project
  - 34 General Electric 1.5 MW turbines
  - DEP permit issued January 17, 2012
  - Appealed to BEP February 16, 2012

- Record Hill Wind
  - Record Hill Wind, LLC, subsidiary of Independence Wind
  - Town of Roxbury, Oxford County
  - 50.6 MW
  - 22 Siemens 2.3 MW turbines
  - DEP permit issued August 20, 2009,
  - Project in operational testing mode as of drafting of this report

- Saddleback Ridge Wind
  - Saddleback Ridge Wind, LLC (Patriot Renewables)
  - Carthage, Oxford County
  - 33 MW
  - 12 General Electric 2.75 MW turbines
  - DEP permit issued October 6, 2011
  - Appeal Denied by BEP February 16, 2012

Total Approved by DEP but not yet operational: 233.6 MW

Projects Reviewed and Withdrawn in LURC jurisdiction (i.e., application has been or is in the process of being withdrawn with the intention to re-submit)

- Bowers Wind Project
  - Champlain Wind, LLC (First Wind)
  - Carroll Plantation (Penobscot County) and Kossuth Township (Washington County)
  - 69.1 MW
  - 27 turbines
  - LURC permit reviewed, but applicant is in the process of withdrawing, stating an intention to re-submit at a later date.

- Highland Wind Power Project
  - Highland Wind, LLC (Independence Wind)
  - Highland Plantation and Pleasant Ridge Plantation, Somerset County
  - 117 MW
  - 39 turbines
  - LURC permit review, but application was withdrawn in May 2011 with intent to re-submit at a later date.

Total Reviewed but withdrawn with intent to re-submit: 186.1 MW (If re-submitted, the sizes of these projects are likely to change.)

Projects Under Review by DEP

- Canton Mountain Wind
  - Canton Mountain Wind, LLC (Patriot Renewables)
  - Canton, Oxford County
  - 22 MW
  - 7 General Electric 2.75 MW turbines
  - Application accepted for processing, January 13, 2012

- Passadumkeag Wind Park
  - Passadumkeag Wind Park LLC (Noble Environmental Power LLC)
  - Grand Falls Township, Greenbush, Penobscot County
  - 42 MW
  - 14 Vestas 3.0 MW turbines
  - Application accepted for processing February 27, 2012

Total projects under review by DEP: 64 MW

V. Resolve, Chapter 93, LD 1366 (Resolve, To Clarify the Expectation for the 2012 Assessment of Progress on Meeting Wind Energy Development Goals)

Per RESOLVE, Chapter 93, LD 1366, the OEIS issued a request for proposals (RFP) for a consultant to assist the OEIS in its annual assessment of progress on meeting the wind energy development goals. Coastal Enterprises, Inc. (CEI), Perkins Point Energy Consulting and Synapse Energy Economics, Inc. were chosen to prepare the economic and energy information and data needed to permit the OEIS to formulate substantive recommendations based on the information and data. The CEI report is a companion piece to this wind energy development assessment and should be read in conjunction with this assessment.

The areas of additional examination to meet the requirements of the Resolve include the following:

Statewide Permitting Standards: All statewide permitting standards that apply to wind development, including but not limited to noise standards, visual standards, setback requirement and decommissioning plans.

Visual Impact Criteria: The criteria used during the permitting process to consider the visual impact of an expedited grid-scale wind energy development, the permits issued and any potential changes that could be made to the criteria, including, but not limited to potential changes to the criteria that require the primary siting authorities to consider

insignificant the visual impacts greater than 8 miles from a scenic resource of state or national significance as defined in the Maine Revised Statutes, Title 35-A, section 3451, subsection 9.

Decommissioning Plans: The quality of submitted decommissioning plans and potential recommendations for mechanisms to provide financial assurance for funding decommissioning.

Permitting Process: The time required for completing the permitting process, including the time required for conducting environmental surveys and preparing and submitting the applications and the associated costs.

Greenhouse Gas Emission Reductions: The accuracy of the estimates generated by state agencies and wind energy developers for greenhouse gas reductions that are a result of wind energy development in Maine. Potential recommendations for a standardized protocol for estimated greenhouse gas emission reductions as a result of wind energy development in Maine, if necessary.

Number of Wind Turbines Necessary to Meet Wind Energy Goals: The number of wind turbines necessary to meet the goals, market conditions, development trends, emission goals, siting policies, cumulative impacts and other factors that may make it necessary to amend wind energy development goals.

Expedited Permitting Areas: Whether places should be removed from expedited permitting areas, including, but not limited to mountain area protection subdistricts, as described by the Department of Conservation, Maine Land Use Regulation Commission Rule Chapter 10.

Additional Areas of Examination

- Methods by which permitting authorities could consider the cumulative impact on natural resources at the state or regional level, including but not limited to mountain areas and to scenic resources of state or national significance as defined in the Maine Revised Statutes, Title 35-A, section 3451, subsection 9.
- Economic effects of wind energy development on the tourism industry.
- Costs associated with transmission upgrades for the purpose of transmitting wind energy.
- Implications of the intermittency of wind power for regional markets and the grid, including capacity charges, the forward capacity market and electricity price volatility.

The OEIS has prepared recommendations based on these considerations, as outlined in the CEI report.

VI. Wind Development – Economic Assessment

Maine currently has 345.5 MW of operating on-shore wind generation with an additional 84.8 MW under construction or in operational testing. There are 216 MW of permitted projects that are not yet operational. An additional 250.1 MW are under review or have been withdrawn with the intention to re-submit. Assuming all projects are permitted and built, including those that have been withdrawn, Maine's installed capacity would be ~896.4 MW. Based on the current rate of existing and proposed projects, it is unlikely that 1103.6 MW of new projects will be brought forth in the next 36 months.

One of the contributing factors to the rate of wind generation development is the inherent economics of on-shore wind power. As London Economics International (LEI) identified in the January 30, 2012 *MPUC RPS Report 2011 – Review of RPS Requirements and Compliance in Maine,* the projected all-in-levelized costs for on-shore wind generation in Maine is $109/MWh (LEI, Figure 70, page 113) based on an average capital cost of $2.56 million per MW.

Wind generation relies on four primary funding sources:

1. Energy prices;
2. Renewable energy certificate (REC) prices;
3. Federal production tax credits; and
4. Capacity payments.

1. *Energy Prices.* Since 2007, there has been a decline in the average Maine Hub Day Ahead (DA) Locational Marginal Price (LMP) which has reduced revenue to wind generation. In 2007, the average DA LMP for Maine was $64.42/MWh increasing to $75.97/MWh in 2008. In 2009, the average DA LMP decreased to $39.60/MWh. The average DA LMP for 2010 was $46.70/MWh and was $45.61/MWh in 2011. As compared to the 2007-2008 time period, current DA LMPs are 35% lower.

2. *Renewable Energy Certificate (REC) sales.* It is reported that REC prices are generally higher in other New England states than Maine but there is considerable variation in the price. Class 1 REC prices have decreased from ~ $35/MWh in 2009 to a low of $5/MWh in July 2011. (LEI, Figure 12, page 32). In comparison, Massachusetts Class 1 REC prices have varied from $40/MWh in October 2009 to a low of ~$15/MWh in February 2011, rebounding to a $40+/MWh in December 2011 (LEI, Figure 13, page 33). Since REC prices represent a significant portion of wind generation revenue, the current price volatility in the market introduces financial uncertainty and influences investment decisions. REC prices would need to be at least $33/MWh for on-shore wind to achieve a break-even point on an all-in-levelized cost basis. At a $33/MWh requirement, REC revenue represents 33% of total revenue (LEI, page 13).

3. *Federal Tax Subsidy.* The federal Production Tax Credit (PTC) of $21/MWh is set to expire in December 2012. The PTC is a major incentive for wind development representing over 20% of total revenue for the first ten-year period of a project. Without

the federal PTC, either energy prices and/or REC prices would need to increase significantly to achieve the all-in-levelized break-even point. LEI estimated that REC prices would need to increase to $60.9/MWh to reach the breakeven point if the federal PTC is not available.

4. *Capacity Payments.* Due to the intermittent nature of wind generation, capacity payments are reduced to a normal range of ~$6.2/MWh which is significantly less than other generation sources.

LEI provided a typical on-shore wind generation revenue break-even balance sheet as:

Energy price	$48.9/MWh
REC price	$33.0/MWh
PTC	$21.0/MWh
Capacity	$ 6.2/MWh
Total	**$109.1/MWh**

As is being experienced in Maine and other locations, wind power investment appears to be waning due to the financial realities and uncertainties associated with decreased energy prices, REC price volatility and federal inaction on extensions of the PTC subsidy.

These market factors are understood and as a result, there may well be a greater emphasis on long term contracts to provide the revenue predictability. Maine has entered into one long term wind contract since 2008 (Rollins Wind Project). This contract is based on a discount off the hourly real time wholesale market prices with a $55/MWh floor price escalating to a $65/MWh floor price. The MPUC reported on February 13, 2012 that the first six months of the Rollins contract added $953,000 in above market costs to electric rates (~ $1.9 million per year).

Work recently completed by New England States Committee on Electricity (NESCOE) as reported in January 2012, indicates that long term contracts developed through a competitive procurement process for wind generation would be the likely mechanism to support the development of increased wind generation to meet New England Renewable demand (*Renewable Resource Supply Curve Report*). NESCOE supply curve analysis indicates that wind generation prices could be $125/MWh to $200/MWh in the 2016 time frame to achieve the required investment and capacity. NESCOE projects that Maine on-shore wind will be the majority source of on-shore wind by 2016 (up to 72 % of the total or 2054 MW) if transmission constraints do not exist.

While the theoretical potential for increasing the installed wind capacity in Maine exists, there are two obstacles that will need to be overcome to realize the investment.

1. An unpredictable revenue system that results in a significantly higher revenue level than the current market price and REC price structure affords. If the federal PTC is not extended in the immediate future, the decline in wind investment will be significant. The

NESCOE analysis indicates that long term contracts by the New England states that need to satisfy their respective renewable requirements are the most likely method to achieve the revenue predictability and level to encourage investment.

2. Transmission restraints will need to be eliminated so that Maine wind generation can reach the New England market. The Western Maine Renewable Integration Study (WMRIS) determined that integrating an additional 743 MW of wind in addition to the 362 MW of existing generation in the region would require a transmission investment of $553 million. While there is a total of 400 MW of potential wind development in the Maine Public Service (MPS) service area in northern Maine, there will need to be a transmission investment needed to "connect" to the ISO-NE system.

VII. Experiences from the Permitting Process

The OEIS, in conversations with both regulators and developers has found that overall the *Wind Power Development Act* is working as intended. However, with the increased numbers of operational and proposed wind energy developments, public controversy and opposition to wind energy continues, and appeals have lengthened the permitting process considerably.

LD 1680, "An Act to Assist in Reviewing Wind Energy Applications" enacted as Public Law 2010, Chapter 492, was intended to create consistency in the application and permitting process of wind energy developments before LURC and DEP. The law requires LURC to render a determination on an application in the expedited permitting area for projects 100 kW or greater within 185 days after the LURC determines that the application is complete, except the LURC can render a decision in 270 days if a public hearing is held. These timeframes are consistent with the DEP process.

LD 1504, "An Act to Provide Predictable Benefits to Maine Communities That Host Wind Energy Developments", enacted as Public Law 2010, Chapter 642, changed appeals of final actions of the LURC and DEP for expedited wind energy developments to the Supreme Judicial Court sitting as the Law Court. The Law Court now has exclusive jurisdiction over requests for judicial review of final actions of the LURC regarding expedited wind energy developments.

The LURC may, by rule, add specified places in the State's unorganized areas to the expedited permitting area if 1) the area involved a logical geographic extension of the currently designated expedited permitting area; 2) the area is important to meeting the state goals for wind energy development; and 3) the area would not compromise the principal values and the goals identified in the comprehensive land use plan adopted by the LURC. In April 2011, LURC revised guidance to interpret the statutory criteria for expanding the expedited area.

The LURC Reform Commission was formed through a resolution passed by the 125th Maine Legislature to make recommendations on how to carry out land use planning, zoning and permitting in the 10.4 million acres of unorganized towns and plantations of Maine. The LURC Reform Commission recommended the transfer of all permitting for wind power projects and other large projects that trigger the Site Location of Development Act in the unorganized

territory, except under existing or future Concept Plans, to the Maine Department of Environmental Protection. Under LD 1798 – *An Act to Reform Land Use Planning in the Unorganized Territory*, the DEP would exclusively administer and enforce wind energy development within the expedited permitting areas. The bill is being considered in the 125th Legislature.

Status of LURC and DEP wind project permitting is in the "Summary of Wind Energy Development Projects in Maine" above.

VIII. Visual Impacts

Based on analysis completed by CEI (*Maine Wind Assessment 20102, A Report*, Jan. 2012), the wind projects developed in Maine to date have resulted in 11.5 MW per mile of ridgeline. This varies proportional to the turbine size. With 3 MW turbines in use, the average was 18.8 MW per mile of ridgeline. With 1.5 MW turbines in use, the average was 9.4 MW per mile of ridgeline. To achieve the additional 1654.5 MW to realize the 2000 MW by 2015 goal, an additional 144 miles of ridgeline will need to be accessed (range of 88 miles with 3 MW turbines to 176 miles with 1.5 MW turbines). Based on the experience to date, 260 miles of Maine ridgeline would be needed to achieve the 3,000 MW of on-shore wind generation by 2030. The Appalachian Mountain Club has estimated that there may be insufficient ridgeline available to site all the wind projects that would be needed to achieve the goals (*Ridgeline Windpower Development in Maine: An Analysis of Potential Natural Resources Conflicts, AMC Technical Report 2011 -1*).

In addition to the required ridgeline, there is an associated need for land to support the wind generation development. The January 2012 LEI report on Maine's RPS identified that a typical wind project requires 25 to 50 acres per installed MW. If this is an accurate measure of land requirements, 75,000 acres to 150,000 acres could be required to support the 3,000 MW by 2030 goal.

This possibility, in conjunction with studies on cumulative visual impacts, indicates that there may well be the need to revisit on-shore wind generation goals and the appropriateness of the existing expedited permitting areas.

Per RESOLVE, Chapter 93, LD 1366, the OEIS asked the Land Use Regulation Commission (LURC) to develop a process for the assessment of cumulative visual impact from wind power development based on the experiences of the state's reviewing authorities in permitting grid-scale wind projects. This assessment process convened a study group and assembled resources for their consideration, defined and described the cumulative visual impact issues to be addressed by the assessment, developed and evaluated options for addressing cumulative visual impacts from wind energy development, and reported on the process and findings. Three experts in the fields of landscape architecture and visual resource assessment participated in the study group along with staff from OEIS, LURC and DEP.

The study group identified and described a fairly large and diverse set of potential solutions and strategies and then worked on evaluating the options in a systematic manner based on the feasibility and importance of the option. The LURC assessment identified twenty-two options for consideration. The options are grouped by the type of approach offered by the potential solution or strategy.

- **Threshold analysis** approaches generally look at providing a method and/ or criteria for indicating when the accumulation of visual impacts from wind power development has crossed some unacceptable threshold.
- **Cluster** approaches generally look to pre-determine (or proactively plan) where a certain amount of development could be accommodated and, conversely, where it could not.
- The **Other** approaches category includes options that do not fit either the threshold or cluster category but which may have some ability to reduce the impact on visual resources from cumulative wind power development (and in many instances from individual projects).

This study and report is part of the OEIS wind energy development assessment conducted pursuant to LD 1366 and is not separate or independent from this report. The full report is at http://www.maine.gov/oeis/alternativeenergy.html. See Appendix C for summary.

IX. Identified Successes, Including Tangible Benefits

While Maine has progressed forward in meeting its wind energy development goals with a total installed wind energy capacity of 345.5 MW, meeting the goals will be challenging if not impossible. Maine continues to be a leader in wind power development in New England and the nation and significant meaningful tangible benefits are being delivered to the economy, environment, and Maine people.

Progress is ongoing for the potential development of deep-water off-shore wind energy through the research, development and deployment efforts of the University of Maine, as well as the continued partnership between the State of Maine and the U.S. Bureau of Ocean Energy Management (BOEM). This technology will continue in an R & D phase for several more years.

Tangible Benefits and Community Benefits

Prior to July 12, 2010 grid-scale, commercial wind energy projects proposed in the State of Maine had to provide “significant tangible benefits”. In making findings, the primary siting authority (DEP/LURC) had to presume that an expedited wind energy development provided energy and emissions-related benefits and had to make additional findings regarding other tangible benefits provided by the development.

"Tangible benefits" was defined as environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development, including but not limited to: construction-related employment; local purchase of materials; employment in

operations and maintenance; reduced property taxes; reduced electrical rates; natural resource conservation; performance of construction, operations and maintenance activities by trained, qualified and licensed workers in accordance with Title 32, chapter 17 and other applicable laws; or other comparable benefits, with particular attention to assurance of such benefits to the host community to the extent practicable and affected neighboring communities.

LD 1504, "An Act to Provide Predictable Benefits to Maine Communities That Host Wind Energy Developments", enacted as Public Law 2010, Chapter 642 changed the definition of "tangible benefits". Tangible benefits now also include property tax payments resulting from the development and other payments to a host community, including, but not limited to payments under a community benefit agreement. Tangible benefits also apply to host communities instead of just one community.

"Community benefit agreement" is defined as an agreement between the developer of an expedited wind energy development and a host community that involves payments by the developer to the host community to be utilized for public purposes including, but not limited to property tax reductions, economic development projects, land and natural resource conservation, tourism promotion or reduction of energy costs. The agreement must specify in writing the value of the payments to the community and any payment schedule and other terms and conditions made over time by the developer to the host community.

"Community benefits package" is defined as the aggregate collection of tangible benefits resulting from: payments, not including property tax payments, to the host community or communities including, but not limited to, payments under community benefit agreements, payments that reduce energy costs in the host communities and any donations for land or natural resource conservation. An applicant for a wind energy development is required to establish a community benefits package valued at no less than $4,000 per year per wind turbine, averaged over a 20-year period, unless a host community's legislative body votes to waive or reduce the community benefits package requirement. Projects under 20 MW in size, owned by a nonprofit entity or quasi-public entity, or are located on certain Indian territories are exempt from this requirement.

Wind energy permit applications must also include the following information regarding tangible benefits:

- Estimated jobs to be created statewide and in host communities as a result of construction, maintenance and operations;
- Estimated annual generation of wind energy;
- Projected property tax payments;
- Description of the community benefits package, including but not limited to community benefit agreement payments; and
- Any other tangible benefits to be provided by the project.

The law also expanded the reporting of tangible benefits by the OEIS by adding a summary of tangible benefits provided by expedited wind energy developments including but not limited to, documentation of community benefits packages, community benefit agreement payments

provided, as well as a review of the community benefits package and the actual amount of negotiated community benefits packages relative to the statutorily required minimum amount.

The OEIS consulted with DEP and LURC and the agencies provided the following information on several operating and proposed projects.

Tangible benefits, wind projects in LURC jurisdiction

1. Stetson I and II (Stetson Wind Project and Owl Mountain and Jimmey Mountain Wind Project, respectively)

The Stetson I project permit application was submitted to LURC prior to the effective date of the *Wind Energy Act* in April of 2008, and as such it did not include a tangible benefits proposal. However, the LURC permit required that First Wind report the energy and environmental benefits annually for Stetson I for the first two years of operation.

Stetson II was subject to the tangible benefits requirement of the *Wind Energy Act* in PL 2007 Ch. 661, but not to the amended tangible benefits requirement in PL 2009 Ch. 642.

Energy produced and pollution offset. Stetson I and Stetson II are connected by a 34.5 kV collector line, forming one continuous project that connects to the New England grid by one generator lead line. As such, the amount of energy produced and pollution offset by Stetson I and Stetson II are reported here as one project.

- Stetson I, consisting of 38 turbines with a total generating capacity of 57 MW, went into commercial operation on January 22, 2009. Stetson II, consisting of 17 turbines with a total generating capacity of 25.5 MW, went into commercial operation on March 15, 2010.
- *2009.* For Stetson I, First Wind reported to LURC that this project produced 138,969 MW hours in 2009.
- *2010.* In 2010, Stetson I and Stetson II combined produced 200,657 MW hours (Stetson I – 155,723 MW hours; and Stetson II - 44,934 MW hours). The pollution offset by the combined project in 2010 was reported by First Wind as 83,214 tons of carbon dioxide (CO_2), 86 tons of nitrogen oxides (NO_x), 237 tons of sulfur dioxide (SO_2), and 2.05 pounds of mercury.
- *2011.* For Stetson II only, First Wind reported that the amount of energy produced in 2011 was 60,353 MW hours. The pollution offset by Stetson II in 2011 was reported by First Wind as 24,985 tons of CO_2, 25.4 tons of NO_x, 85.8 tons of SO_2, and 0.06 pounds of mercury.
- The total amount of energy produced in 2009 is for Stetson I only. The total amount reported for 2010 is for Stetson I for 12 months and Stetson II for approximately 9.5 months of 2010. The total amount of power produced by Stetson I in 2010 was affected by a shut-down for repair of a transformer, and a second shut-down during construction of Stetson II. The total amount of energy reported for 2011 is for Stetson II only because the two-year reporting requirements for Stetson I were met when the 2010 report was submitted.

Stetson II - Other tangible benefits. The other tangible benefits reported for the Stetson II project included:

- 114 Maine-based companies were engaged as sub-contractors, suppliers, or consultants.
- A high proportion of the 200 individuals employed during construction were Maine or local residents.
- Currently, 6 individuals are employed for the operation and maintenance of Stetson I and II (with an additional 25 employees located in the Portland office to develop, construct, and operate all of First Wind's projects in Maine). The Stetson project continues to contract with Maine and local businesses.
- Over $10 million were spent directly with Maine-based companies and individuals during construction of Stetson II. This amount does not include land-owner payments, tax payments, or other "induced" payments.
- The tax liability for Stetson II in 2010 was $270,972.
- $468,465 in grants has been made available from the Stetson I and II tax incremental financing (TIF) funds for conservation and nature tourism, leveraging $2.86 million in matching grants for projects in Washington County. These funds have resulted in 72 full-time equivalent jobs created and/or retained, and 14.5 temporary or seasonal jobs created. Stetson II's share of this is roughly 40%.

2. Kibby I (Kibby Wind Power Project)

The Kibby I wind project was developed by TransCanada Maine Wind Development, Inc. The project permit was approved by the LURC Commission on July 9, 2008, and the project became fully operational on October 24, 2010.

The permit application for the Kibby I wind power project was submitted to LURC prior to effective date of the *Wind Energy Act* in April 2008, and as such it did not include provisions for tangible benefits. However, the LURC permit required that TransCanada report annually the energy and environmental benefits for the first two years of operation, including the amount of power produced and pollution offset.

In January, 2012, TransCanada reported to LURC that 278,435 MW hours of energy were produced by the Kibby I project in 2011. The amount of energy produced equates to an offset of 26.21 tons of NO_x, 35.47 tons of SO_2, and 136,297 tons of CO_2.

3. Kibby II (Kibby Expansion Project)

The Kibby II wind project is being developed by TransCanada Maine Wind Development, Inc. The permit was approved by the LURC Commission on January 5, 2011, and was appealed on January 28, 2011. The appeal is still pending, and as such no construction has started on this project. This project was subject to the tangible benefits requirements of PL 2007, Ch 661, but not to the provisions of the amended tangible benefits requirements in PL 2009 Ch. 642.

Highlights of Kibby II's tangible benefits include the following:

Total estimated project cost: $116.3 million

- *Estimated jobs to be created during engineering, design, permitting and construction*: Up to 315 jobs during peak construction.
- *Indirect benefits to local and Maine businesses due to purchases of supplies or services.* Noted, but not quantified.
- *Maintenance and operations jobs*: 1 additional permanent job, added to the nine individuals already employed to operate and maintain the Kibby I project.
- *Estimated annual generation of wind energy*: Up to 92,000 MW hours per year, and the associated offset of emissions generated by a comparable amount of generation using fossils fuels.
- *Projected property tax payments*: More than $400,000 per year, or $10 million over the 25-year life of the project.
- *Income taxes*: Estimated $13 million over the 25-year life of the project
- *Community benefits package*:
  - Payments to the Town of Eustis/Stratton of $33,000 per year (or $1,000 per MW per year) in additional to the $132,000 per year already paid to the town for the Kibby I project, resulting in a total of $177,000 per year paid for the Kibby I and Kibby II projects combined.
  - $110,000 to the Maine Department of Labor for green jobs education and training in Franklin County.
  - $110,000 to the High Peaks Alliance for land conservation and trail corridor acquisition.

4. Highland Wind Project

The Highland Wind Project is being developed by Highland Wind, LLC, an affiliate of Independence Wind. The permit application was being reviewed by LURC, but was withdrawn by the applicant in May 2011, with the intention of re-submitting a revised project in the near future. However, no re-submission date has been set at this time. The Community Benefits Package for this project was subject to the amended tangible benefits reporting requirements, in accordance with PL 2009 Ch. 642. If the application is re-submitted as a revised project, the proposed Community Benefits Package may be revised as well.

Highlights of the Highland Wind Project's tangible benefits proposal in the application that was withdrawn included the following:

Total estimated project costs: $247 million

- *Estimated jobs created during engineering, design, permitting and construction*: 330 jobs during the primary construction year, 36 jobs during non-peak years. Engineering, design, permitting and construction are expected to take a total of 6 years.
- *Maintenance and operations jobs*: 8 permanent jobs
- *Estimated annual generation of wind energy*: Approximately 306,000 to 350,000 MW hours per year, and the associated avoidance of emissions generated by a comparable amount of power generation using fossils fuels.
- *Projected property tax payments to Highland Plantation*: $118,000 to $119,000 per year.

- *Community benefits package*: Annual payments of $104,000 to Highland Plantation for energy conservation over the 20-year life of the project, for a total of $2,080,000, paid into a Highland Plantation Fund, including:
  - A one-time pre-permitting advance to Highland Plantation of up to $15,000 to help defray the costs of reviewing the permit application.
  - Annual payments directly to year-round and seasonal residences in Highland Plantation to help defray the cost of electrical power during the 20-year life of the project.
  - One-time payment of up to $6,000 directly to each year-round residence in Highland Plantation for the purpose of home energy efficiency projects.
  - Annual payments directly to each year-round residence in Highland Plantation who have installed an electro-thermal heat storage unit to help defray electricity costs.

  After payments are made to each individual landowner, as described above, the remainder of the $104,000 will go to Highland Plantation.
- *Benefits to the University of Maine.* Highland Wind proposed to provide the University of Maine with electro-thermal heat storage units to be used in the future expansion of the University's Offshore Wind Laboratory.

5. Bowers Wind Project

The Bowers Wind Project is proposed by Champlain Wind, LLC, a subsidiary of First Wind. The Bowers Wind Project has been reviewed by LURC, but the applicant has decided to withdraw the application and re-submit a revised proposal in the future. This project is subject to the amended tangible benefits reporting requirements, in accordance with PL 2009 Ch. 642. The tangible benefits initially proposed in the application are summarized here.

Total estimated project costs: $136 million

- *Direct and indirect jobs.* The number of direct and indirect jobs expected to be created, and the amount of money expected to be spent in Maine to construct and operate the Bowers Wind Project would be similar to those resulting from the Stetson I project.
  - Construction-related employment of the project will create approximately 150 jobs
  - Three (3) full-time operation and maintenance jobs and 5 technician jobs during the first three years of operation will be created.
  - Project-related wages would total $12.5 million.
  - An estimated $50 million would be spent in Maine during construction.
- *Property taxes.* The estimated annual property taxes to be paid are approximately $628,000, adjusted by any credit enhancement agreement, for a total of $125 million over the 20-year life of the project.
- *Energy to be produced.* Approximately 200,000 MW hours per year would be produced by the 69.1 MW project.
- *Community Benefits*
  - *Agreement with Carroll Plantation:* Payments of $92,000 annually over the 20-year life of the project, totaling $1,840,000.
  - *Payments to Washington County:* $10,000 annually over the 20-year life of the project, totaling $200,000.

- *Energy Fund:* Establish an Energy Fund to be held and administered by the Sunrise County Economic Council of Washington County to offset the cost of electricity for Kossuth residents and for energy related projects. There would be an initial payment of $20,000, thereafter $15,000 annually over the 20-year life of the project, totaling $305,000.
- *Conservation Fund:* Establish the Bowers Mountain Fund to be administered by the Forest Society of Maine to support and enhance natural resource conservation, public access, and recreational opportunities in Carroll Plt., Kossuth Twp., Lakeville Twp., and vicinity. The initial payment will be $120,000, with $20,000 paid annually over the subsequent 19 years, totaling $500,000.

6. Bull Hill Wind Project

The Bull Hill Wind Project is being developed by Blue Sky East, LLC, a subsidiary of First Wind. The permit was approved in October 2011, and construction started in February 2012. This project is subject to the amended tangible benefits reporting requirements, in accordance with PL 2009 Ch. 642.

Highlights of the Bull Hill Wind Project's tangible benefits include the following:

Total project costs: $78.5 million

- *Estimated jobs created during construction:* 225 individual jobs.
- *Maintenance and operations*: 3 to 8 permanent jobs.
- *Total wages generated*: $6.2 million over 20-year life of the project.
- *Indirect economic benefits:* Supplies and services purchased by contractors during construction.
- *Estimated annual generation of wind energy*: Approximately 94,000 MW hours per year.
- *Projected property tax payments:* $342,343 annually totaling $6.9 million over 20-year life of the project.
- *Annual lease payments:* To landowner Lakeville Shores, which hires locally for its forest operations business.
- *Community benefits package*:
    - $200,001 to Hancock County annually ($5,848 per MW per year) totaling $4 million over the 20-year life of the project.
    - $20,000 to the Town of Eastbrook annually, totaling $400,000 over the 20-year life of the project.
    - $20,000 annually to the Downeast Salmon Federation (DSF) for water quality improvement and public access projects.
    - $25,000 one-time contribution to DSF for conservation projects.

Tangible benefits, wind projects in DEP jurisdiction

1. Oakfield Wind

The applicants submitted a description of the tangible benefits to be provided by the project in Section 28 of the application. In that description the applicants described tangible benefits that the project will provide to the State of Maine and to the host community of Oakfield, including economic benefits and environmental benefits.

The applicants state that the proposed project will add significant new property tax value to the Town of Oakfield. In 2009, the Town of Oakfield designated a TIF (Tax Increment Financing) district and adopted a Development Program for the TIF district. The Town intends to amend the designation of a municipal TIF district to be known as "Amended Town of Oakfield Wind Project Municipal Development and Tax Increment Financing District," and adopt the first amendment to the Development Program for the District as presented to the Town.

The applicants state that their proposal will benefit the host communities and surrounding areas through construction-related employment opportunities. These will include tree clearing and excavation jobs, and jobs in businesses that support construction such as lodging, restaurant, fuel and concrete supply. The applicants anticipate hiring five to ten permanent employees to operate and maintain the facility.

The 59- mile generator lead line will also result in increased property values and property taxes paid to the property taxing jurisdictions.

Communities Benefits Agreement. The applicants propose to establish a community benefits package that will consist of an annual payment to the Town of Oakfield of $5,000/MW, which equals $15,000 per turbine. This payment will total $600,000 annually paid to the Town of Oakfield for the 20 year term of the agreement.

2. Saddleback Ridge

The applicant submitted a description of the tangible benefits to be provided by the Saddleback Ridge Wind Project as Section 28 of the application. In that description the applicant describes tangible benefits that the project will provide to the State of Maine and to the host community of Carthage, including economic benefits and environmental benefits. The applicant states that the project is expected to be assessed at approximately $66 million, providing tax revenue to the host community.

The applicant states that the host community will also benefit through employment opportunities, the local purchase of materials and supplies, taxes paid on the project, and a proposed annual Community Benefit Fund payment. The applicant describes the employment benefits in part as follows:

> *"On average, the Project would employ 60 to 70 construction workers for five to six months and up to 100 workers during peak construction times. Materials located close to*

the site will be used as much as possible, giving local stone quarries and construction material suppliers procurement opportunities. In addition, local businesses such as motels, restaurants, gas stations, and retail stores will see increases in activity during construction. After construction is complete, the Project will employ a maintenance staff of two to three full-time workers. There will also be a need for ongoing road maintenance, plowing, and landscaping services."

The applicant also states that the project will increase energy diversity, thereby helping to reduce electric price volatility in Maine. The applicant states that the project will help Maine meet its commitments under the Regional Greenhouse Gas Initiative, which establishes limits for emissions associated with the generation of electricity, and that it will have the capacity to provide enough emission-free energy to power more than 16,000 Maine households annually, with no air or water pollution and with no greenhouse gas emissions.

Community Benefits Fund. The applicant has agreed with the Town of Carthage to establish a Community Benefits Fund. This fund would be used at the Town's discretion to provide direct economic benefits to its citizens. The applicant's proposed contribution to the community benefit fund will be at least $4,000 per turbine per year for the life of the project and will be administered by the Town of Carthage. The applicant states that the size of this fund may increase subject to availability of project resources. The Town of Carthage submitted a letter to the DEP dated February 21, 2011, accepting the proposed community benefit fund.

Recreation Donation. The applicant initially proposed to donate $60,000 to the Maine Bureau of Parks and Lands for a new playground at the beach and campground near Webb Lake in Mount Blue State Park. In comments dated December 9, 2010, the BPL notes that this proposal is above and beyond the minimum requirements of the law. BPL further stated that since negotiating the agreement, other potential funds have been identified for the playground so the donation should be restructured as a more general contribution to BPL, or more specifically for land acquisition in the vicinity of Mount Blue State Park.

3. Canton Mountain

The applicant submitted a description of the tangible benefits to be provided by the Canton Mountain Wind Project as Section 28 of the application. In that description the applicant describes tangible benefits that the project will provide to the State of Maine and to the host community of Canton, Maine including economic benefits and environmental benefits. According to the application, the project is expected to be assessed at approximately $44 million. This significant investment in the local community will make CMW the largest taxpayer in Canton and will increase the assessment of the town by roughly 60 percent. Canton can elect to use the funds from the new tax revenue to lower taxes and/or fund public projects.

According to the applicant, the project will have a significant impact on employment in the State of Maine. During development of the Project, CMW hired many consultants, contractors, and field crews that are based in Maine. Specifically, CMW used Maine-based companies for wetland and vernal pool delineations, wildlife surveys, soil work, visual impact assessment, archaeological surveys, real estate surveying, electrical engineering, and legal counsel. During

construction, there will be job opportunities for activities such as tree clearing, excavation, road construction, concrete work, and electrical work. On average, the project would employ 40 to 50 construction workers for five to six months and up to 75 workers during peak construction times. Materials located close to the site will be used as much as possible and local businesses such as motels, restaurants, gas stations, and retail stores will see increases in activity during construction. After construction is complete, the project will employ a maintenance staff of two to three full-time workers. There will also be a need for ongoing road maintenance, plowing, electrical, and landscaping services.

Community Benefit Fund. According to the applicant, CMW will establish a Community Benefit Fund (CBF) that would provide the Town of Canton with an annual funding source that could be used by the community without restrictions. CMW would fund at least $4,000 per turbine per year for the first 15 years of the Project and at least $6,000 per turbine per year from year 16 to the end of the Project; the size of this fund may increase subject to availability of project resources. The CBF would be administered by the Town of Canton.

CMW is exploring various options for entering into a long-term, fixed-price power purchase agreement with a New England load-serving utility. According to the applicant, a 22-MW project on Canton Mountain would provide enough emission-free renewable energy for more than 10,900 Maine households each year.

4. Passadumkeag Project

The applicant submitted a description of the tangible benefits to be provided by the Canton Mountain Wind Project as Section 28 of the application. In that description the applicant describes tangible benefits that the project will provide to the State of Maine, Penobscot County and local communities, including economic and environmental benefits.

According to the applicants, the project:

> *Provides a direct economic benefit to the local landowner participating in the project through a land lease. This income stream will significantly supplement revenue from commercial forestry. This additional income stream will help maintain the property in traditional forestry and recreational uses, while creating a new source of clean energy.*
>
> *Development and construction of the proposed Passadumkeag Wind Project is estimated to require the direct labor of approximately 225 individuals. Following the construction phase, the Applicant estimates three to eight permanent employees will be required to operate and maintain the facility. The project would respond directly to area needs and to the people who live and work in the vicinity of Greenbush and southeastern Penobscot County. A significant portion of the estimated $79 million dollar project cost is expected to be spent on development, engineering, and construction-related activities, much of which is anticipated to stay within Maine. The surrounding areas can benefit through construction-related employment opportunities and the ancillary economic benefits of that construction activity. There will be the opportunity for direct jobs for activities like*

tree clearing and excavation, and ancillary jobs in businesses that support construction such as lodging, restaurant, fuel and concrete supply.

The Applicant expects that it will pay significant annual property taxes on the project. The Applicant is currently discussing the development with the Penobscot County Commissioners, and is proposing a tax increment financing (TIF) program for the project. The Applicant estimates that the Passadumkeag Wind Project will initially add approximately $68 million of new property tax value to the unorganized territory of Penobscot County, resulting in estimated average annual tax payment of approximately $496,000 dollars (averaged over a 20-year period), adjusted by any credit enhancement agreement.

The applicant states that the addition of new power generation facilities in Maine will tend to lead to lower and less volatile electricity prices.

Community Benefits Package. According to the applicant, they are negotiating a Community Benefit Agreement (CBA) with Penobscot County that will satisfy or exceed the $4,000 per turbine per year. An immediate community benefit to the residents living along Greenfield Road will be the rebuild of approximately eight miles of the existing Bangor Hydro Electric Company distribution system from the new substation location in Greenbush, through Greenfield, and into Summit Township. This rebuild will provide greater system reliability, and decrease the likelihood of power outages for those living along this section of Greenfield Road.

X. Technology Trends

The development of new wind power technology continues apace, driven by demand as installations continue to grow exponentially worldwide. The more important features of recent wind technology developments, and those most relevant to Maine, include new or improved technology for reduction of noise nuisance and bird and bat strikes, improved technology and technique for grid reliability, power production integration and backup, and related improvements in wind power forecasting. On the research side, there has been a recent and very large increase in the Department of Energy's estimate of total US wind power available based on new measurement with very tall anemometer towers, which would likely apply to Maine based wind development as well. Finally, great strides have been made in overall power production, both by improved equipment, particularly larger equipment, as well as by the improved anemometry from the DOE and individual companies' own efforts and better forecasting.

Research and Technology Trends

The Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL) continue to be active in making technological and planning knowledge accessible to New England and to Maine users. Of particular note is the New England Wind Power Education Project, under the auspices of the Wind Powering America initiative (http://www.windpoweringamerica.gov/newengland/neweep/). Considerable improvements have been made to the average cost and overall availability of technology to do bird and bat

studies using avian radar. Companies with bases or representation in Maine have made this technology increasingly and more easily available to wind power developers. The US Fish and Wildlife Service has issued guidelines for wind power development and wildlife planning, available at http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html.

A major finding by a NREL study released in 2011 resulted in the DOE and NREL issuing a new 80-meter above ground level wind map for the entire United States. The new map and base data show an increase in the available wind power projection, from 11 trillion KWh to 37 trillion KWh (http://www.windpoweringamerica.gov/filter_detail.asp?itemid=2542). These data were the result of new tall tower anemometrical studies (up to 120 meters) around the country, but particularly the Midwest and Texas, as well as continued development of wind map models by the company AWS Truewind. According to the Department of Energy, the new data apply to Maine, and indicate a much larger amount of available wind power in Maine at these higher turbine hub heights (of 80 meters and 100 meters). The larger turbine equipment is now widely available, and has already been used on many if not most sites in Maine, leading the state's various public-interest wind power analysts to consider whether or not Maine wind power facilities are already more productive than currently expected. Maine has two anemometrists who serve the general public, one at the University of Maine School of Engineering Technology, the other at Unity College, who have together measured the wind, or are doing so, at sixteen sites around the state. The new DOE data is consistent with their findings, but there has not been the ability to perform the tall tower studies that would be needed to fully confirm the availability of this larger wind resource.

The information in this section has been provided in part by Dr. Michael W. "Mick" Womersley, Lead Faculty of the Sustainability Energy Program at Unity College. According to Dr. Womersley, new research has addressed the question of grid reliability and back-up, sometimes known as integration. Further work has confirmed these findings and expanded the knowledge base for wind power integration. Dr. Womersley states that this research demonstrates that previous apprehensions of grid power integration difficulties and possible disruption because of intermittent wind power production were overstated. Relatively large amounts of power, especially from larger wind farms with forecasting technology employed, can be, and are being, absorbed by the grid in some grid balancing areas. The overall increase in combined cycle natural gas power generation, at the expense of coal generation, facilitates this transition because of the more immediate dispatch of modern natural gas plants. Improved technique in wind power forecasting applied to grid integration has been first demonstrated and then mainstreamed at commercial wind power sites in the Midwest and Texas, and as Maine's wind power capacity grows, these techniques can be expected to be extended to Maine.

Dr. Womersley maintains that forecasting is of particular value to Maine if feasible, off-peak and excess wind power is in the future shunted to building heat in our windy winter season, facilitated by Smart Grid technology that is at present being installed by Central Maine Power and Bangor Hydro. With the high price of heating oil expected to continue unabated, state planners and decision makers would wish to be aware of these possibilities as wind power expands. A very small-scale experiment is underway at the Fox Islands Wind installation, using electric storage heaters and cell-phone based switching. The current effective comparable cost of

2 home heating oil at the average Maine price of $3.86/gallon (as of March 12, 2012) is 9.5 ¢/KWh, assuming 100% efficiency and no transmission losses. There may be room for mutually beneficial arbitrage between wind power generators, smart grid operators, and residential and other consumers of home heat.

Wind Technology in Maine

The evolution of wind power equipment choice in Maine supports the likelihood that Maine wind power companies are already well aware of the larger wind power resource at higher turbine hub heights. Until recently, most operational wind energy development projects in Maine use General Electric (GE) 1.5 MW turbines with the exception of the Kibby project which operates 3 MW Vestas turbines and the Spruce Mountain Wind Project which operates 10 Gamesa G90 2 MW turbines. However, GE has increased the size of the available towers for the 1.5 MW turbine, from 60 and 67 meters to 80 and 100 meters, and has produced larger blade configurations for certain types of sites, and many of these taller and broader units have been deployed in Maine already. Capacity factors for the taller units would be higher by several percentage points, although, it would be difficult for state government and the public to know whether or not these machines were more efficient than expected. Developers are also looking to new turbine designs from General Electric and other companies that are now coming to market.

Stetson Wind I and II consist of GE 1.5 MW turbines, the most installed brand of turbine in the industry. The towers are 80 meters (262 feet) tall and blade diameters are 77 meters (253 feet). According to GE the 1.5 MW turbine "is active yaw and pitch regulated with power/torque control capability and an asynchronous generator. It uses a bedplate drive train design where all nacelle components are joined on a common structure, providing exceptional durability. The generator and gearbox are supported by elastomeric elements to minimize noise emissions." There are over 16,500 units of these turbines in operation worldwide and it continues to be one of the world's most widely used wind turbines in its class. Beaver Ridge Wind, Mars Hill Wind, Rollins Mountain Wind and Fox Islands also operate the GE 1.5 MW turbines, although with different tower height and blade configurations.

The Kibby wind project utilizes Vestas V90 3 MW turbines. According to Cleantech, "the V90 wind turbine consists of a rotor in a total diameter of 90 meters. The rotor has a swept area of 6,362 square meters with a total of three blades. It operates at a speed of 16.1 rotations per minute. The turbine can be installed on towers with varying hub heights such as 80 meters and 105 meters. The V90 wind turbine generates 3 megawatts of power at a nominal wind speed of 15 meters per second. The cut-in and cut-out wind speeds of the turbine are 4 meters per second and 25 meters per second, respectively".

The Spruce Mountain project uses 10 Gamesa 2 MW turbines. According to RenewableEnergyfocus.com this model is designed for sites with low wind resources, is produced with lighter blades using fiberglass and has an aerodynamic design NRS control system to minimize noise emissions.

Some wind developers are investigating the use of GE 2.5 MW, Siemens 2.3 MW and 3 MW turbines. According to GE, their 2.5 MW turbines "can be deployed on over 85% of the sites

being developed today. The turbine generates a leading amount of annual energy production and its 100m rotor also makes it an excellent solution for low wind sites. The patented rotor blade technology provides the turbine with very competitive acoustic performance. With the optional noise-reduced operation modes, the turbine can be deployed at sites with the most stringent noise restraints, while simultaneously maintaining a high energy yield. The turbine can also be equipped with various towers resulting in hub heights of 100m, 85m and 75m, meeting potential tip height constraints and maximizing energy yield."

The Siemens 2.3 MW turbine unit is among the largest land-based turbines deployed in the United States. According to WindPower Engineering it was "turbine of the month" in March, 2010 and was tested at the National Renewable Energy Lab's Technology Center to examine "structural and performance characteristics, aerodynamic and performance improvements, along with model, acoustics, and power-quality studies. The turbine is fitted with a 101-m diameter rotor (331 ft) and mounted atop an 80-m tower (262 ft)". According to Siemens, their 3 MW turbine "offers innovation through a completely new Direct Drive concept introducing a permanent magnet generator. With half the parts of a conventional geared wind turbine, and much less than half the number of moving parts, the new wind turbine will require less maintenance and increase profitability for customers. The new Direct Drive wind turbine features a rotor diameter of 101 meters and is now available for sale for onshore and offshore projects around the world. The main advantage of permanent magnet generators is their simple and robust design that requires no excitation power, slip rings or excitation control systems. This leads to high efficiency even at low loads. A major advantage of the new machine is its compact design. With a length of 6.8 meters and a diameter of only 4.2 meters, the nacelle can be transported using standard vehicles commonly available in most major markets."

The Saddleback Ridge project is proposing to use a GE 2.75 MW turbine. According to Windpower Engineering, GE's 2.75-100 turbine "is an upgrade of the existing 2.5-100 wind turbine without mechanical component changes and only minor changes to the electrical system. GE's 2.75-103, a combination of the 2.75 uprate and the 103-m rotor which uses GE's 50.2 m proprietary blade design offers the latest enhancements in aerodynamics, reduced acoustics, and robust performance".

Off-shore wind energy turbine development technologies are just emerging and it remains to be seen which technologies will prove to be commercially viable. For example, the University of Maine is developing a Floating Turbine Design of coupled aeroeleastic/hydrodynamic models developed by NREL with optimized platform designs that integrate more durable, lighter, hybrid composite materials. Their tasks include developing a complete design of one or more scale floating turbine platforms, capable of supporting a wind turbine in the 10 kW to 250 kW range for deployment at the University of Maine Deepwater Offshore Wind Test Site.

Further improvements to power production from wind turbine technology can be expected, as yet larger turbine configurations come into production. A 7.5 MW machine has been commissioned for an offshore site in the North Sea and both Enercon and Clipper wind power are involved in the design and production of 7.5 MWh wind machines. Other efficiencies might be gained from better site planning technology, particularly the use of 3D airflow modeling. The development of high voltage DC transmission line technology has facilitated reduced transmission losses, adding

value to power production at the demand source. Large scale DC transmission line initiatives have been proposed for the east coast, particularly by Google, an important consumer and driver of renewable energy technology development. Other developers are considering new models as they become available in the marketplace and are proposed for a number of projects in Maine.

XI. Maine and New England States' Progress Toward Reducing Greenhouse Gas Emissions

In January 2012, the Maine Department of Environmental Protection (DEP) released its Fourth Biennial Report on Progress toward Greenhouse Gas Reduction Goals. The DEP's analysis of energy consumption, industrial processes, agriculture and waste management found that Maine met the goal of reducing greenhouse gas (GHG) emissions to 1990 levels by 2010. The Department's analysis indicates:

- 89% of GHG emissions in Maine are the result of energy consumption, largely produced by combustion of petroleum products.
- From 1990 to 2009, total energy consumption in Maine declined 7% while total GHG emissions only declined 2.5%.
- The Transportation sector produces almost half of all CO_2 emissions in Maine.
- CO_2 emissions from petroleum combustion in the Industrial sector dropped 50% and in the Electric Power sector 85% since 1990.

According to the DEP, "additional GHG emission reductions can be achieved by encouraging energy efficiency strategies and replacement of petroleum products with renewable energy sources. New federal standards for vehicle fuel efficiency, electric generating facilities, and boilers are expected to reduce GHG emissions in the coming years. The Department recommends that future GHG emission reduction programs in Maine should focus on reducing petroleum consumption in the residential, commercial and transportation sectors."

According to the accompanying CEI Report, *Maine Wind Assessment 2012, A Report*, natural gas is the "marginal rule" for dispatch in the New England power system at most times so that wind energy coming on line is generally associated with decreases in natural gas generation (and small amounts of other fossil fuels, such as coal). As a result, wind generation in Maine that displaces natural gas-fired generation produces GHG reductions in proportion to natural gas-fired generation's GHG emissions.

The table below summarizes GHG (CO_2) emission rate reductions for different Maine wind penetration rates, assuming the 2009 marginal emission rate for CO_2 in New England, and making assumptions about the capacity factor of Maine wind resources:

New England GHG Reduction Due to Maine Wind

Time-frame	On-shore MW	Est'd Capacity Factor Onshore	Onshore Energy GWh/yr	Off-shore MW	Est'd Capacity Factor Offshore	Offshore Energy GWh/yr	Total Energy GWh/yr	Est'd GHG Reduction Factor (lbs/MWh)	Est'd GHG Reduction (Tons)
2011	346	32.6%	988	0			988	930	459,465
2015 Target	2,000	33.0%	5,782	0			5,782	930	2,688,444
2020 Target	2,700	33.0%	7,805	300	40%	1,051	8,856	930	4,118,207
2030 Target	3,000	33.0%	8,672	5,000	40%	17,520	26,192	930	12,179,466

Source: *Synapse Energy Economics, tabulation based on current Maine wind plants, ISO-NE data on marginal emissions, capacity factor estimates for wind, and Maine wind targets.*

New England's 2009 total greenhouse gas emissions was ~ 49,380,000 tons. According to CEI, "if Maine were to achieve the wind energy goal for 2015 of 2,000 MW and if those turbines actually operated with a capacity factor of 33%, we estimate that these wind turbines would cause an annual Greenhouse Gas reduction of 2,688,444 tons that otherwise would have been emitted in New England, primarily by natural gas-fired generators" depending on assumptions used in displaced energy models. The more than 2.6 million ton reduction corresponds to 5.4% of all New England's CO_2 reductions (2009) and the ~ 4.1 million ton and ~ 12.1 million ton reductions for 2020 and 2030 respectively account for 8.3% and 24.7% of New England's total CO_2 in 2009.

Notwithstanding additional wind power development, Maine's GHG reductions are likely to continue to decline in the coming years as residents and businesses respond to higher petroleum prices through fuel switching and /or energy efficiency improvements. Similarly, consumers will likely purchase more fuel efficient vehicles and/or drive less miles to offset higher fuel costs. Efficiency Maine Trust has estimated that its incentive and grant programs saved Maine residents and businesses approximately 1.67 billion kWh of electricity in 2011, reducing GHG emissions by 693,613 tons over the lifetime of the projects. Moreover, Federal stimulus grant programs awarded by Efficiency Maine Trust to residential and industrial customers in Maine, resulted in GHG emission reductions totaling approximately 247,000 tons/year (*2011 Annual Report of the Efficiency Maine Trust*, December 1, 2011). In addition, Maine State Housing Authority estimates that more than 5,000 low-income Maine homes were weatherized with federal stimulus grant funds over the past 3 years, savings those homeowners approximately $1.9 million, and reducing GHG emissions by 9,500 tons/year.

Lastly, with the potential expansion of new natural gas pipelines in key regions of the state, more energy supply options would be available for Maine consumers. OEIS has estimated that converting several of Maine's large industrial plants from oil to natural gas would reduce GHG emissions by approximately 400,000 tons per year.

XII. Offshore Wind Energy Development

Maine's statutory goals for wind power development include the following:

- At least 2,000 Megawatts (MW) of installed capacity by 2015;
- At least 3,000 MW of installed capacity by 2020, with potential to produce 300 MW or more of offshore wind power;
- At least 8,000 MW by 2030 including 5,000 MW located in coastal waters.

There has been much interest in developing both land- and ocean-based wind and tidal energy development projects in Maine due to the excellent wind resources, potential development of transmission, many operational wind energy projects and interest in renewable energy generation and reduction of greenhouse gas emissions. There are numerous wind energy projects currently in development and others in the discussion phase.

Two significant pieces of legislation laid the foundation for Maine's renewable ocean energy industry.

Public Law 2009, chapter 270 contains several provisions to facilitate research and development and testing of renewable ocean energy technologies. The law streamlines state permitting of offshore wind energy demonstration projects by creating a general permit administered by the Department of Environmental Protection for qualified offshore wind energy demonstration projects located in specific identified offshore areas. As directed by law, the Department of Conservation, in cooperation with the State Planning Office, designated three offshore wind energy test areas based on consideration of potential effects on natural resources and existing uses, community support and other factors, and following public outreach and consideration of public comments. One of these areas (off Monhegan Island) is the Maine Offshore Wind Energy Research Center, established to facilitate offshore wind energy-related research and development conducted by or in cooperation with the University of Maine.

Public Law 2009, chapter 615 sets ambitious state goals for installation of offshore wind energy capacity - 5,000 megawatts of offshore wind by 2030 – and streamlines and further clarifies state permitting and leasing laws. The law also directed the Maine Public Utilities Commission (MPUC) to issue a request for proposals for price-capped, long-term contracts for up to 25 MW of deep-water offshore wind power and 5 MW of tidal power. The MPUC issued this RFP on September 1, 2010 seeking proposals for "long-term contracts to supply installed capacity and associated renewable energy and renewable energy credits from one or more deep-water offshore wind energy pilot projects or tidal energy demonstration projects." Bidders selected will enter into long-term contractual arrangements with one or more of Maine's investor-owned transmission and distribution utilities: Central Maine Power (CMP), Bangor Hydro Electric Company (BHE) and Maine Public Service Company (MPS). Initial proposals have been submitted and updated in 2011. All information can be found at http://www.maine.gov/mpuc/electricity/rfps/standard_offer/deepwater2010/.

Maine's primary interest has been on deep-water ocean wind energy projects with turbines that will be placed in deep water off the Outer Continental Shelf (OCS). This geographic focus was driven by a number of factors, including the availability of a vast and renewable energy source; a need to move home heating and transportation costs away from volatile price fluctuations; a desire to move wind turbines offshore; the creation of unique industrial, technical, and specialized jobs; and the possibility of energy exportation. Maine's coastal waters feature heavily-used fishing grounds and widely acknowledged scenic qualities. Well-sited development in federal waters ten miles or more off the coast may have less of a potential for adverse effects on fishing activity as well as scenic and other natural resources. In addition, increased energy security, stabilized energy prices and reduced electricity costs for Maine ratepayers and businesses are significant goals for off-shore wind development.

The OEIS, State Planning Office, Department of Environmental Protection, Maine Department of Marine Resources and other state agencies are currently working with Federal agencies and other Atlantic states to further the development of offshore wind energy development off the coast of Maine. Maine is a participant in the Atlantic Offshore Wind Energy Consortium (AOWEC), formalized by a Memorandum of Understanding with the Department of Interior and ten member states, to facilitate the expeditious development of the wind resources of the OCS in a safe, responsible, and environmentally sound manner and to improve the working relationships and facilitate coordination among the participants on regional issues of mutual interest relating to wind development on the Atlantic OCS.

Maine is also participating in a U.S. Bureau of Ocean Energy Management (BOEM) Task Force to coordinate on proposed leasing of federal OCS areas off Maine for wind energy development. This BOEM-State task force, which met twice in 2011, is a consultative, inter-governmental group of public officials comprised of Federal, state, local, and tribal representatives. The purpose of the task force is to assist government decision-making regarding renewable energy leasing and development on the OCS off the coast of Maine.

BOEM has received an unsolicited request for a commercial lease from Statoil North America Inc. (Statoil NA). Statoil proposed a pilot project in response to a RFP issued by the MPUC. The Hywind Maine pilot project contemplates the deployment of a multi-turbine floating wind park in the Gulf of Maine at a location that is approximately 460 – 520 feet in depth and approximately 12 nautical miles from any land area of the State. The proposed legal description of the area for the renewable energy lease is within the Bath Area, OCS Official Protraction Diagram NK19-02. The gross size of the area is 22.2 square miles, which is expected to be reduced in size when detailed assessments of environmental impact, sea bed conditions and wind resources have been undertaken. The final park size is assumed to be approximately 2.32 – 3.86 square miles.

BOEM has finished a completeness review of the unsolicited lease application and has deemed Statoil NA to be legally qualified. The technical and financial qualifications review is currently underway. The area identified in the application is subject to task force deliberation and is subject to change. A second Maine task force meeting was held on December 8, 2011. The purpose of this meeting was to discuss the unsolicited lease application received from Statoil North America. A link to the task force site, and all files, will be at

http://www.maine.gov/oeis/Ocean%20Energy.html. OEIS Director Ken Fletcher is the point of contact for the state agencies.

The DeepCwind Consortium's mission is to establish the State of Maine as a national leader in deepwater offshore wind technology through a research initiative funded by the U.S. Department of Energy, the National Science Foundation, and others. The University of Maine-led consortium includes universities, nonprofits, and utilities; a wide range of industry leaders in offshore design, offshore construction, and marine structures manufacturing; firms with expertise in wind project siting, environmental analysis, environmental law, composites materials to assist in corrosion-resistant material design and selection, and energy investment; and industry organizations to assist with education and tech transfer activities.

XIII. Projections of Wind Energy Developers' Plans and Their State Policy Implications

There has been much interest in developing wind energy development projects in Maine due to the excellent wind resources, potential development of transmission, many operational wind energy projects and interest in renewable energy generation and reduction of greenhouse gas emissions. There are numerous wind energy projects currently in development and others in the discussion phase. However, continuing economic conditions, escalating citizen opposition to new wind projects, the resulting lengthy and contentious permitting process and the potential expiration of the federal renewable energy production tax credit have some developers examining their financing options and potentially re-thinking plans for new projects and/or looking to states where existing transmission lines or lower project costs may exist.

According to *Recent Developments in the Levelized Cost of Energy from U.S. Wind Power Projects* (Lawrence Berkeley National Laboratory and National Renewable Energy Laboratory, Feb. 2012), the economic attractiveness of wind projects has somewhat decreased due to increased capital costs, a move toward lower wind speed sites and lower electricity prices. However, the report suggests that lower capital costs and continued increases in wind turbine productivity may drive down the levelized cost of energy for U.S. wind projects in the future. The Global Wind Energy Council (GWEC), in an annual market statistics report published on February 7, 2012 stated that the wind industry installed just over 41,000 MW of new wind power generation capacity in 2011, an increase of 21 percent over 2010. Despite the state of the global economy, wind power continues to grow with China as the global market leader. The United States wind industry had a difficult 2010, but installed more than 6,800 MW in 2011. More than 1/3 of all new U.S. electricity generation capacity in the last few years has been wind powered. Projects continue to come online in Maine, while others are in various levels of construction, review and development.

Recognizing that some Maine citizens are opposed to grid-scale development and have legitimate issues, the Maine State Legislature passed and the Governor signed legislation in 2011 – Resolve, Chapter 93, LD 1366 (*Resolve, To Clarify the Expectation for the 2012 Assessment of Progress on Meeting Wind Energy Development Goals*) – to further refine the OEIS assessment

and require updates of wind generation goals with an examination of various factors. LD 1366 was a compilation of ideas from bills introduced in the 1st Session of the 125th Legislature, amended to specify that certain information concerning wind power development in Maine be included in the OEIS's next annual report on wind energy progress. The proposed bills generally opposed wind power development and covered the following topics:

Noise and visual standards

- L.D. 711 *An Act To Regulate Noise from Wind Turbines in Residential Developments*
- L.D. 865 *An Act To Require the Department of Environmental Protection To Enforce Standards for Smaller-scale Wind Energy Development in Organized Areas*
- L.D. 1234 *An Act To Restore the Uniform Visual Permitting Standard for Wind Power Projects*
- L.D. 1443 *An Act To Improve the Permitting Process for Wind Energy Developments and To Protect Maine's Quality of Place*
- L.D. 1479 *An Act To Minimize Conflicts between Property Owners and Grid-scale Wind Energy Developments*

Wind energy benefits

- L.D. 1366 *An Act To Update the Maine Wind Energy Act To Include Low-emission Energy*
- L.D. 1236 *An Act To Amend the Legislative Findings in the Maine Wind Energy Act*
- L.D. 1411 *An Act To Facilitate Transparency and Accountability while Reducing Electricity Costs*

Health impacts

- L.D. 502 *An Act To Place a Moratorium on Expedited Permitting of Grid-scale Wind Energy Development*
- L.D. 1035 *Resolve, To Establish Baseline Information on Health Impacts from Grid-scale Wind Energy Development*

Property Values, Tangible Benefits, Community Benefit Packages

- L. D. 1042 *An Act To Preserve and Protect Citizens' Property Rights and Values*
- L.D. 1362 *An Act To Ensure Accurate Valuation of a Community Benefits Package for Communities That Host Wind Energy Developments*

Other wind issues

- L.D. 1170 *An Act To Establish a Code of Ethics for Individuals Involved in Grid-scale Wind Energy Development*
- L.D. 1291 *Resolve, To Promote Community Wind Energy Development*

Federal Energy Subsidies

The *American Recovery and Reinvestment Act of 2009* (ARRA) allowed taxpayers eligible for the federal renewable electricity production tax credit (PTC) to take the federal business energy investment tax credit (ITC) or to receive a grant from the U.S. Treasury Department instead of taking the PTC for new installations. The grant was only available to systems where construction began prior to December 31, 2011. The federal renewable electricity production tax credit (PTC) is a per-kilowatt-hour tax credit for electricity generated by qualified energy resources. Originally enacted in 1992, the PTC has been renewed and expanded numerous times. The tax credit amount for wind is 2.2¢/kWh. Despite bipartisan support in Congress, an extension of the federal wind energy PTC is not assured and is being vigorously pursued by wind developers and supporters. Expiration of the PTC, or continued intermittent extensions of the PTC, could limit private and public investment in wind projects and raise the cost to developers and ratepayers.

On a broader scale, federal subsidies for energy resources and development have varied significantly over the past several years. Historically, federal subsidies (*e.g.*, tax expenditures, R&D, loans/loan guarantees, federal electricity programs, regulations) have benefited oil and gas development, while more recently renewable energy technologies, and in particular wind resources, have been the predominant beneficiary of federal incentives.

According to the U.S. Energy Information Administration (EIA), direct federal financial interventions and subsidies in energy markets doubled between 2007 and 2010, primarily as a result of ARRA and the *Energy Improvement and Extension Act*. Spending increased from $7.7 billion in 2007 to $11.9 billion in 2010. As noted above, ARRA allowed developers in new qualifying projects (primarily wind) to choose an upfront grant in lieu of the existing 10-year production tax credit. While the grant and tax credit programs have similar value to developers and cost to the federal treasury over the life of the project, the grant awards front-load the federal cost and increase the 2010 expenditure versus what would have been reported if subsidies were taken as a production tax credit.

Total Federal Subsidies (Direct, Tax, R/D, Loans/Loan Guarantees)
(millions, 2010 dollars)

FUEL	2007	2010
Coal	3,981	1,358
Nat Gas/Liquid Petroleum	2,010	2,820
Nuclear	1,714	2,499
Biomass	61	1,117
Geothermal	14	273
Hydro	170	216
Solar	179	1,134
Wind	476	4,986
Biofuels*	3,999	6,644

** primarily for ethanol in transportation fuels*

Total Federal 2010 Subsidies per Unit of Production ($/MWh)

FUEL	
Coal	0.73
Nat Gas/Liquid Petroleum	0.63
Nuclear	3.10
Biomass	2.00
Geothermal	12.50
Hydro	0.84
Solar	968
Wind	52.48

Source: Analysis and Projection: Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2010, EIA, August 2011 http://www.eia.gov/analysis/requests/subsidy/

XIV. Conclusions and Recommendations

The Maine Comprehensive Energy Action Plan outlines the necessary action steps the State of Maine should consider implementing in order to achieve energy security over the next 50 years. The Plan's goals, objectives and implementation measures are built on six overarching and interconnected strategies:

1. Strengthening energy efficiency, conservation and weatherization;
2. *Fostering renewable energy;*
3. Improving transportation and fuel efficiencies;
4. *Upgrading electricity and natural gas services and transmission infrastructure;*
5. State of Maine Leading by Example; and
6. Energy Emergency preparedness and response.

The following three objectives have defined the purposes of fostering wind as a renewable resource in the Maine Energy Plan:

- To make Maine a leader in wind power development;
- To protect Maine's quality of place and natural resources; and
- To maximize the tangible benefits Maine people receive from wind power development.

Maine is a leader in wind power development. While the State's short-term wind goals may need to be revised, the OEIS does not believe the long-term goals should be abandoned without further analysis in the face of their potential to help us deliver economic, energy and environmental benefits on behalf of Maine's residents and businesses. Achieving these goals, or enacting legislation revising the goals to reflect new information and data, will require thoughtful

planning and balanced decision-making in order to tap into the State's significant wind resources, protect Maine's quality of place and deliver clean, affordable power.

We recognize that achieving these goals is not entirely within our control and will depend on factors such as technology developments, future energy costs, federal policies and other factors. However, some components are within our control, including but not limited to:

- Expediting wind permits under carefully considered and controlled circumstances.
- Providing significant tangible benefits to host and neighboring communities and residents, including construction-related employment; local purchase of materials; employment in operations and maintenance; reduced property taxes; reduced electrical rates; natural resource conservation.
- Requirements that an applicant for a wind energy development is required to establish a community benefits package.
- Opportunity for public participation.

Through extensive research and discussions with experts, the OEIS has found that the topics of noise standards, visual impacts, setback requirements, and regulation of wind turbine noise in particular, to be highly technical, complex and complicated subjects. During consideration of these issues in the 1st Session, 125th Legislature Committee hearings and work sessions, the OEIS did not assert it had all the answers at the beginning of the process, nor do we believe we are experts on the subject at this time. However, the OEIS completed a thorough examination of the issues and came to some conclusions and provided recommendations that may be helpful in guiding policymakers in Maine to improve the process relating to the permitting of wind energy development.

Maine is not in a unique situation compared to other U.S. states and countries around the world that have wind energy projects in operation or under development. It is clear that the DEP and LURC have learned from past experiences and have begun to adopt 'best practices" that have been developed over the last several years. This experience has proven valuable and should help guide the permitting process in the future.

Pursuant to Resolve 2011, Chapter 93, CEI prepared *Maine Wind Assessment 2012, A Report*, which was submitted to the OEIS on January 31, 2012. That report serves as the basis for many of the OEIS recommendations below. The purpose of these recommendations are to assist the Maine Legislature in examining ways to reduce the price of electricity to Maine people in a way that is environmentally responsible, optimizes economic growth and preserves Maine's quality of place and life.

To that end, the OEIS recommends exploring opportunities for the development of wind energy production in the State in a manner that is consistent with state and federal environmental standards and community expectations and that achieves reliable, cost-effective, sustainable energy production. The OEIS partnered with various public and private organizations to assess the status of wind energy development in Maine with a focus on helping the OEIS formulate recommendations to the Maine State Legislature, Joint Standing Committee on Energy, Utilities and Technology.

Wind Goals and Criteria for Wind Permitting

1. *Eliminate the statutory goal of 2,000 MW of installed wind capacity by 2015.*

   The change would permit a more realistic pace for wind development, rather than the near-doubling which the current 2015 goal requires – to 294 MW per year to 2020 rather than 552 MW per year to 2015.

   Maine has more than five years of experience with on-shore wind development. Over 430 MW of installed or under construction capacity and another 216 MW permitted sites are based in Maine. The experience that has been gained should provide an appropriate experiential base to assess the aspects of wind generation which was not available when the 2008 *Wind Energy Act* was passed. In that regard, it is recommended that:

   The 2015 on-shore wind capacity goals need to be re-considered in light of the actual build-out rates and the current economic factors as well as the implications of the transformation of Maine's mountain environments. If in fact a natural "slump" in future wind projects occurs as a result of the uncertainty of the federal PTC, low energy prices, variable REC prices, and the need for long term contracts to provide the financial support that on-shore wind development will need, an objective review and re-alignment of expectations would be appropriate.

2. *Retain the statutory goals of 3,000 MW of installed wind capacity by 2020 and 8,000 MW of installed capacity by 2030.*

   This recommendation would ensure that energy policy would still be guided by a major commitment to the development of wind resources. This change would retain the same amount of wind resources in the same timeframe, but allow more time to permit a thoughtful consideration of the role that both on-shore and off-shore wind may play in achieving wind power goals.

3. *The Governor, the Legislature, the Governor's Energy Office, the Department of Environmental Protection and/or others should convene a panel to identify where in Maine expedited permitting would be allowed in a way that provides maximum energy, economic and environmental benefits and minimum harm to local residents and the environment.*

   The 2008 Governor's Wind Energy Task Force has been accused of meeting in a non-transparent manner to develop the original goals and criteria for expedited permitting and the listing of scenic features. A transparent, public process with a diverse set of stakeholders to review the goals and criteria will confer legitimacy to the process and initiate a review that may be needed five years later.

   A public review process conducted by a broad cross section of individuals should be instituted to re-visit the topics covered by the 2008 Wind Energy Task Force that identified the expedited permitting areas and the process. This review would be

worthwhile based on the five years of experience. This could be a Legislative action or could be initiated by the Executive branch.

4. *The Legislature should clarify the significance of a quantitative "statutory goal" with respect to the action required if the goal is not achieved and/or exceeded.*

Wind Permitting Process

5. *Require independent analysis to evaluate the "financial capability" of a wind developer and expected output and capacity rating of a project's turbines.*

   LURC and DEP often lack in-house expertise to assess the financial robustness of a project and expected output and capacity.

6. *Revise "one-size-fits-all" permitting process to allow regulators to distinguish among varying levels of project impact – with diminished or expanded oversight as the circumstances warrant.*

7. *Treat all "robo-communications" as a single comment in permitting process.*

   Current administrative law requires that each communications be retained in the record of the proceeding and receive an individual written response. Treating "robo-communications" that are identical, or nearly identical, generated as a result of advocacy strategies as a single comment will reduce considerable investment of staff time.

8. *Support the LURC December 20, 2011 proposal to add a second public meeting to the permit application process to improve efficiency and provide additional opportunity for comment and information exchange.*

9. *Adopt a consistent regulatory scheme for wind projects to eliminate major discontinuities between LURC and DEP implementation of their wind permitting responsibilities.*

10. *Amend the wind law to identify "those regions and view sheds that are most critical to the state's recreational and tourism economy and would be unacceptably degraded by any significant level of wind power development" and "remove any area within fifteen miles of them from the Expedited Permitting Area (EPA)" unless the wind project is not visible from them.*

11. *Revise the existing permitting process to allow for areas to be removed from the EPA.*

    The existing wind law provides for capability of adding areas to the expedited process but does not include a provision for areas to be removed from the designated expedited permitted areas. It is recommended that the provisions of the wind law be modified to allow areas to be removed from the EPA. Included in this work would be an assessment of the criteria used by the 2008 Wind Energy Task Force that resulted in the designation of the EPAs.

12. *Make no changes to the 270-day statutory period for processing a permit application.*

    The expedited permitting process may well have decreased the permitting timeline but experience has shown that the preparation and data gathering requirements can take up to four years prior to actual submission of an application. Once the application is received, the DEP process has 185 days to reach a decision if there is not an evidentiary hearing. The LURC process decision process can be up to 270 days. Once a permit is issued, it is not uncommon that there will be an appeal which extends the permitting timeline. For example, the Oakfield project was issued a DEP permit on January 17, 2012 and was appealed to the Board of Environmental Protection (BEP) on February 16, 2012. The Saddleback Ridge Wind Project was issued a DEP permit on October 6, 2011 and was appealed to the BEP which denied the appeal on February 16, 2012. Additional permitting complexities and processing timelines arise when an application is being reviewed and the applicant withdraws the application for re-submission at a later date. Two projects are currently at this stage. (Bowers Wind Project and Highland Wind Power Project). The permitting process is time consuming but the OEIS is not making specific recommendations at this time to change the procedure.

Noise and Best Available Technology

13. *Provide post-construction noise monitoring of an approved wind project.*

    Since noise has been a primary issue with wind development, both the DEP and LURC permitting processes should include a post-construction noise monitoring provision funded by the specific project.

14. *Require use of "best available control technology" to limit impacts from wind development.*
    a. Example: Radar-controlled night lighting systems to decrease visual impacts in night landscape.
    b. Example: Modify turbines for higher cut-in speeds to reduce bird and bat mortality.

Visual and Cumulative Visual Impact

15. *Update the surveys of resources designated as having state or national significance.*

    a. Example: Review whether sporting camps should be specifically listed as a "scenic resource of state or national significance" for LURC/DEP consideration in wind project application process.
    b. Example: Review whether scenic highways should be listed as a "scenic resource of state or national significance" for LURC/DEP consideration.
    c. Example: Review whether remote ponds should be listed as a "scenic resource of state or national significance" for LURC/DEP consideration.

16. *Institute a standard methodology or a more formal guidance document for visual impact assessment.*

    Consideration of a standard methodology should evaluate what constitutes a "legal right of access" to a historic site and what constitutes "use of a scenic resource."

17. *Require "intercept surveys" to help gauge scenic impact – pre- and post-construction visual impact surveys.*

    While there is limited information that suggests wind development could have negative impacts on scenic and tourism values at a local level, permitting should include provisions to include post-construction visual impact surveys as part of the applicant's responsibility. Post-construction visual impact surveys could provide critical information for the future expansion of wind development in Maine to provide a better understanding of the local visual and related tourism impact. The information that has been gained from LURC's outreach to seek public comment on cumulative visual impact combined with findings from tourists' perceptions in the Gaspe region of Quebec suggests that there is a preference for clustered wind development rather than fewer turbines spread over a larger area (*i.e.*, turbine sprawl).

18. *Amend the wind law to require scenic impact evaluations to eight miles, with a fifteen mile standard option and provisions made for review to greater distances.*

    The scenic evaluation zones incorporated into the wind siting law requires visual impact analysis to a distance of three miles, with analysis to a distance of eight miles being optional.

19. *Support a clear statutory authority for permitting agencies to consider cumulative visual impacts.*

    The LURC has considered CVI issues on multiple occasions and has sought public comment on CVI issues. The OEIS requested that LURC recommend a process for the assessment of CVI and convene a study group to consider options for CVI assessment. The study group examined several different scenarios, including a concentration of turbines that dominate a particular landscape and the dispersal of turbines throughout a landscape over a considerable distance. The options considered were grouped by the type of approach to the potential solution or strategy:

    d. Threshold analysis – Provide a method and/or criteria for indicating when the accumulation of development has crossed some unacceptable threshold.
    e. Cluster analysis – Pre-determine or plan where a certain amount of development could be accommodated or where it could not be accommodated.
    f. Other analysis – Implement plans that may reduce the impact on visual resources from cumulative and individual wind power development.

    The OEIS recommends further analysis of these options by policymakers and potential study to better understand policies to address CVI. The result should be a clear statutory

authority for permitting agencies to consider CVI and the criteria to follow in wind development project permitting. The LURC review should be the basis for this additional analysis. The CVI study group options are at http://www.maine.gov/oeis/alternativeenergy.html.

Offshore Wind

20. *Continue partnerships with MPUC, BOEM, state, federal, private, university, non-profit and other stakeholders in offshore wind development and corresponding energy, economic and environmental analysis.*

Decommissioning

21. *Incorporate into statute the LURC "Applications Guidance and Checklist" for wind projects pertaining to decommissioning planning:*

    a. Demonstrate that the applicant's present and future finances are adequate to fully fund necessary decommissioning costs, with consideration of:
        i. The size of the fund;
        ii. The date by which the decommissioning reserve will be fully funded;
        iii. The mechanism for ensuring that funds are not diverted for unrelated purposes; and
        iv. Criteria that trigger the start-up of decommissioning or allow its deferral.
    b. Identify all physical structures on the site to be removed and restored, consistent with a final detailed plan; and
    c. Explain under what conditions decommissioning would commence and notification of the regulating agency.

22. *Incorporate into statute the periodic updating of decommissioning plans with a regulatory check-in of decommissioning cost assumptions on a pre-determined schedule (e.g., every three to six years).*

23. *Require that standard permit conditions for wind projects include requirements that decommissioning payments be made in the form of a performance bond, surety bond, letter of credit, parental guaranty or other acceptable form of financial assurance.*

    While there has been relatively limited experience in the actual decommissioning of wind projects, both LURC and DEP have experienced an evolution in decommissioning requirements in the general direction of full funding within the first years of a project's life cycle. In the early years of a project, the federal production tax credit, low finance costs, and TIF's are significant subsidies which should permit the full funding of the decommissioning reserves during the first 10 years of operation. The current DEP and LURC practices of requiring that the first year's amount must be paid into the decommissioning reserve account beginning prior to the first year of commercial operation should be required as a standard condition. The DEP's recent direction of requiring that the DEP become an obligee of any performance bond with the right to call

the bond in the event of non-performance should also be considered as a standard practice for both DEP and LURC. While there could be extenuating circumstances that may need to be considered, it is reasonable to establish a rebuttable presumption that 12 consecutive months of "no-power production" indicates that the project is no longer operationally viable and decommissioning should be activated.

24. *The practice of including a future estimate of the salvage values as part of the decommissioning funds needs to be carefully considered.*

    It has been reported that as much as 97% of the total projected decommissioning costs have been comprised of estimates of surplus value in the future. This practice seems to be highly speculative and it is recommended that there be a standard formula developed that recognizes the surplus value but at more conservative level such as no more than 50% of the total decommissioning requirements.

Long-Term Contracting

25. *Adjust language in 35-A MRSA §3210-C (capacity resource adequacy) providing for long-term contracts for capacity and energy in a manner that prioritizes and promotes lower costs of electricity to ratepayers over the life of such contracts.*

    LD 1863 (125th Legislature, 2nd Session – *An Act to Lower the Price of Electricity for Maine Consumers*) clarifies that while the State is committed to systemically increasing the share of the generation that is derived from renewable sources, this must be accomplished in a way that places a high priority on reducing electric prices and price volatility. It is possible to achieve the other priorities such as greenhouse gas emissions reduction and mitigation of regional and federal capacity resource mandates, but there needs to be a clear balance until Maine's electricity prices are more competitive.

    Long-term contracts are one of the only means available to the State to promote investment in new generation while having some control over costs. Evaluation of long-term contracts necessarily entails a certain amount of analysis and forecasting of future energy prices, an approach that carries an inherent risk despite the potential benefit. The OEIS certainly supports pursuing all cost-effective energy efficiency opportunities and encouraging renewable, indigenous energy sources. But, in order to invest in cost effective renewable generation and increase the generation of renewable power into the State of Maine's electricity portfolio, we must closely examine directives that attempt to achieve these public policies, such as long-term contracts. To that end, the long term contracting provisions should be modified to clarify that the primary consideration of a long term contract decision would be the determination that the contract would be expected to lower the price of electricity to ratepayers over the life of the contract in addition to consideration of the State's greenhouse gas goals. The proposed changes to long term contract decision criteria would also place a priority on capacity resources located in the State.

Appendix A – *Maine Wind Assessment 2012, A Report*

(Accompanying Report Available at http://www.maine.gov/oeis/alternativeenergy.html)

Prepared for the Governor's Office of Energy Independence and Security

MAINE WIND ASSESSMENT 2012, A REPORT

Pursuant to Resolve 2011, Chapter 93

"To Clarify the Expectation for the 2012 Assessment of Progress On Meeting Wind Energy Development Goals"

Photo Credit: Brad Blake

Stephen Cole, Coastal Enterprises, Inc. (CEI), Wiscasset, Maine
Stephen Ward, Perkins Point Energy Consulting, Newcastle, Maine
Robert Fagan, Synapse Energy Economics, Inc., Cambridge, Massachusetts

Published by CEI, 36 Water Street, Wiscasset, ME 04578
January 31, 2012

Maine Wind Assessment 2012: A Report

Prepared for the Governor's Office of Energy Independence and Security
Pursuant to Resolve 2011, Chapter 93:
"To Clarify the Expectation for the 2012 Assessment of Progress On Meeting Wind Energy Development Goals"

Executive Summary

This report was prepared for the Governor's Office of Energy Independence and Security, pursuant to Resolve 2011, Chapter 93 ("To clarify the Expectation for the 2012 Assessment of Progress on Meeting Wind Energy Development Goals"). After interviewing some forty spokespersons on all sides of debates over wind power development; the Report's authors offer a series of observations about utility-scale wind permitting and development in Maine. A summary of these observations follows.

1. Meeting Maine's Statutory Goals for Wind Development: In order to meet the 2015 goal, at least 552 new turbines will have to be permitted and become operational by 2012, and – depending on the size of the turbines – potentially as many as 1,103 turbines will be needed. Compared with the pace of siting that was actually achieved over the past three years – about 75 megawatts (MW) per year – meeting the 2015 goal will require a much faster pace, 184 MW per year on average. The pace of permitting over the next three years will nearly have to double. Maine will likely fall short of the 2015 goal by 513 MW even if all onshore projects proposed and in development actually come on line – an unlikely prospect. Maine is making progress, though, in meeting the off-shore wind goals for 2020 and 2030.

2. Efforts to Expedite the Review Process: Even with a streamlining of the process that took effect in 2008, the permitting process at the Land Use Regulation Commission (LURC) still requires 270 days (185 days at Department of Environmental Protection (DEP) with no evidentiary

hearing) and is preceded by up to four years of data gathering in compliance with permitting requirements. The permitting process remains arduous and costly.

3. Developer Criticisms of Maine's Permitting Process for Wind: Delays in the permitting process are "commonplace". Because Maine has a "one-size-fits-all" permitting process, there is no possibility of avoiding major costs in the case of permits for smaller projects in less sensitive settings. After initial high hopes in 2008 for wind development, developers now say they are "bearish" about the regulatory climate. Generally, developers prefer DEP's non-hearing process to LURC's adjudicatory process. In both settings, outside State agencies that provide consultative comment during permitting are seen often as over-reaching in making extreme demands. There still is not enough certainty and predictability in Maine's permitting process.

4. Criticisms of Wind Opponents: Both DEP and LURC lack in-house capacity to evaluate the financial capability of individual project developers. Both agencies accept developer claims about the projected output of wind turbines without sufficient scrutiny. Opponents have a consistent preference for LURC's formal process over DEP's informal, consultative process. Unlike LURC, DEP operates without any specific "process guidance" for how wind project applications are to be handled; the process is at the discretion of the DEP Commissioner.

5. Specific Aspects of Siting: The 2007 decisions creating the areas eligible for Expedited Permitting have left three species exposed to significant potential harm, in the eyes of some opponents – Bicknell's thrush, the Northern bog lemming and the Fir-Heartleaved birch forest. There also is interest in diminishing nighttime visual impacts from wind turbines by installing radar-activated lighting systems.

6. Visual Impacts: Sporting camps and scenic highways were left off the list for scenic features of state or national significance and deserve reconsideration, some believe. Lists of other scenic resources – Great Ponds and rivers – could be updated and expanded to include remote ponds. There is concern about the cumulative visual impact of wind development among some observers and regulators and some research underway.

Some observers suggest post-construction user surveys as an important means to assess visual impact. There is some interest in considering visual impacts that are beyond the current mandated and optional zones around a wind project.

7. Other Siting Concerns:
Municipalities that are confronted with very large wind proposals would benefit from assistance in evaluating TIF requests and community benefit proposals. Such assistance could be derived from sharing some portion of the developer's application fee at LURC or DEP. Regarding projects eventually being decommissioned with developer funds reserved for that purpose, both DEP and LURC permit major portions of the projected requirement to be "paid for" with proceeds from the expected sale or salvage of the turbines and related equipment. Both LURC and DEP recently have required full funding of the decommissioning reserve at an earlier point – year 12 for DEP and year 7 for LURC.

8. Technical Aspects of Wind Generation: The fact that wind turbines only generate output when the wind blows (intermittency) is not likely to impose costs on the ISO-New England grid and its ratepayers until wind's share eventually comes to more than 20% of total electric output in the region. A recent CMP study indicates that a major strengthening of the transmission system to accommodate more wind projects in Western Maine could raise rates by as little as 0.3% (with ISO-New England subsidies) or as much as 8% (without ISO-New England subsidies). Any reduction in Greenhouse Gases resulting from increased wind output in New England can best be estimated based on reductions in natural-gas output and its associated Greenhouse Gases.

9. Reconsidering the Statutory Goals:
There are considerable viewshed impacts in Western Maine if the 2030 goal is to be achieved. Maine could designate the habitat of the Bicknell thrush as ineligible for wind sites. Maine could eliminate the 2015 goal as excessive in light of harm to sensitive mountainous settings, while retaining the 2020 and 2030 onshore and off-shore goals. Maine could convene a new panel – in an open process that is available to the press and public – for reconsidering the designations that created the Expedited Permitting Area for wind development in 2007.

Appendix B – Other Primary Resources

London Economics International (LEI), *MPUC RPS Report 2011 – Review of RPS Requirements and Compliance in Maine* – Full Report at http://www.maine.gov/mpuc/legislative/reports.shtml and http://www.maine.gov/oeis/alternativeenergy.html.

During its 2011 session, the Legislature enacted *An Act To Reduce Energy Prices for Maine Consumers*, P.L. 2011, ch. 413 (Act). Section 6 of the Act directed the Maine Public Utilities Commission (MPUC) to study the portfolio requirement established in 35-A M.R.S.A. § 3210 (3-A).

The Act specified that the study must include an analysis of:

> 1. The source and cost of renewable energy credits used to satisfy the portfolio requirements;
> 2. The impact of renewable energy credits generated in this State on the regional renewable energy credit market;
> 3. The impact of the portfolio requirements on the viability of electricity generating facilities in this State that are eligible to meet the portfolio requirements;
> 4. The impact of the portfolio requirements on electricity costs;
> 5. If the portfolio requirements result in an increase in electricity costs, to the extent possible, the impact of that increase on economic development in this State;
> 6. The cost of the use of the alternative compliance payment mechanism under Title 35-A, section 3210, subsection 9 for electricity consumers in this State and, to the extent information is available, the reasons competitive electricity providers use the alternative compliance payment mechanism;
> 7. The best practices for setting the alternative compliance payment rate; and
> 8. To the extent possible, the benefits resulting from the portfolio requirements, including, but not limited to, tangible benefits and community benefits pursuant to Title 35-A, section 3454, economic benefits due to the creation of jobs or investments in this State including multiplier effects, research and development investment in this State, the impact on electricity rates and benefits due to diversifying this State's energy generation portfolio.

New England States Committee on Electricity (NESCOE), *Renewable Resource Supply Curve Report*, 2011 – Full Report at http://www.nescoe.com/ and http://www.maine.gov/oeis/alternativeenergy.html.

Executive Summary:

In the summer of 2011, the New England Governors expressed interest in continuing to explore the potential for coordinated competitive renewable power procurement. To provide policy-makers additional information about New England's renewable resources, the New England States Committee on Electricity ("NESCOE") completed directionally indicative analysis of the availability of, and potential cost for, new wind resources that could be developed in New England or New York to meet New England's renewable energy goals.

The analysis demonstrates that the regional potential for additional wind energy greatly exceeds the forecasted regional need through 2020. Over 50% of the total wind energy developable by 2016 would come from on-shore projects in Maine, while very large off-shore wind resources could be available by 2020. The costs for off-shore wind energy are higher than the costs of wind energy from many of the on-shore projects, and thus, the actual development of off-shore wind will likely be constrained by cost considerations. When considering generation only, on-shore wind generation located in Maine would provide the majority of wind energy with the lowest costs. In 2016, 72% of the lowest-cost energy required to meet regional renewable energy goals would come from onshore generation in Maine. When transmission is considered, a larger percentage of regional needs might be supplied from off-shore wind & imports. For instance, in 2016, imports & off-shore wind would provide 44% of total regional needs. Such resources would provide 45% of regional needs in 2020.

However, the numerous wind resources - both on-shore and off-shore - that could be developed have a wide range of potential costs in both absolute and relative terms. In particular, the specific mix of wind resources that could meet regional renewable energy goals at the lowest *total* cost to consumers depends on the relative costs of new wind resources. In turn, those relative costs are driven by several key parameters, including:

- The region's preferred standard for integrating new wind resources into the regional power supply mix, since that standard would determine, for each specific wind resource, the amount and cost of additional transmission required to achieve the integration standard;
- The allocation of the costs for such additional transmission; and,
- The relative changes in technology and costs for different wind resources (*e.g.*, the cost reductions from forecasted decreases in the capital cost of off-shore wind generation may, or may not, be matched by cost reductions achieved from higher capacity factors that may be accomplished with taller towers for onshore generation).

A key implication for a regional coordinated renewables procurement process is that such a process requires a defined standard for integrating the output of new renewable energy resources. A "REC Only" standard – in which the energy output of new renewable generators only needs to displace non-renewable generation and thus increase the supply of Renewable Energy Credits ("RECs") within the region – would tend to reduce the amount of new transmission required to achieve that integration standard. However, such a standard may not maximize the market benefits (*e.g.*, displacement of the highest cost regional generation) that could be provided by new wind resources, given enough additional transmission. A more stringent "REC Plus" integration standard could capture more of those market benefits, but at the cost of requiring additional transmission investment.

An important near-term consideration is the appropriate "energy integration" standard that would be applicable in any joint or separate but coordinated competitive power procurement process. While the current process used by the Independent System Operator-NE ("ISO-NE") to interconnect new generators may be able to support an efficient coordinated procurement process if a "REC Only" standard is used, an efficient coordinated procurement process using a "REC Plus" standard may only be possible with modifications to ISO-NE's interconnection process.

Appendix C – *Report of OEIS Assessment of Cumulative Visual Impacts from Wind Energy Development*

(Accompanying Report Available at http://www.maine.gov/oeis/alternativeenergy.html)

Report of OEIS Assessment of Cumulative Visual Impacts from Wind Energy Development

(CVI Assessment)

March, 2012

Executive Summary

The 125th Maine Legislature's Resolve 93 (LD 1366) directs the Office of Energy Independence and Security (OEIS) to conduct an assessment of the Wind Energy Act including the method by which permitting authorities should consider the cumulative impact on scenic resources of state or national significance. OEIS worked with the Land Use Regulation Commission (LURC) to develop a process for the assessment of cumulative visual impact from wind power development based on the experiences of the state's reviewing authorities in permitting grid-scale wind projects.

This assessment process convened a study group and assembled resources for their consideration, defined and described the cumulative visual impact issues to be addressed by the assessment, developed and evaluated options for addressing cumulative visual impacts from wind energy development, and reported on the process and findings. Three experts in the fields of landscape architecture and visual resource assessment participated in the study group along with staff from OEIS, LURC and Maine Department of Environmental Protection (MDEP).

The study group identified and described a fairly large and diverse set of potential solutions and strategies and then worked on evaluating the options in a systematic manner based on the feasibility and importance of the option. The report sets out the twenty-two options the group felt merit consideration.

The options are grouped by the type of approach offered by the potential solution or strategy.

- **Threshold analysis** approaches generally look at providing a method and/ or criteria for indicating when the accumulation of visual impacts from wind power development has crossed some unacceptable threshold.
- **Cluster** approaches generally look to pre-determine (or proactively plan) where a certain amount of development could be accommodated and, conversely, where it could not.
- The **Other** approaches category includes options that do not fit either the threshold or cluster category but which may have some ability to reduce the impact on visual resources from cumulative wind power development (and in many instances from individual projects).

This study and report is understood by the study group to be part of the OEIS report conducted pursuant to LD 1366 and is not separate or independent from that report. **The study group has not made specific recommendations and this report leaves any policy choices or preferences to others.**

L. Kinvin Wroth
Professor of Law
VT Law School
S. Royalton

Category: Other

Comments: I attach the October 2008 report, which I assume is what you have, together with a March 2009 follow-up memo that became the basis for legislation initially sponsored by Ginny Lyons as S.231 in January 2010 and a draft of that bill referred to in the memo as Appendix II.
I'd be glad to answer questions about these items and the process, though memory has somewhat faded with the passage of time. [Response to our request for an electronic copy of the report, Energy and Land Use: Merging the Regulatory Streams."

Energy and Land Use: Merging the Regulatory Streams

Michael H. Dworkin, Director
Institute for Energy and the Environment (IEE)

L. Kinvin Wroth, Director
Land Use Institute (LUI)

Peg Elmer, AICP, Associate Director
Land Use Institute (LUI)

Student Research Associates
Elizabeth Catlin,'08, *IEE/LUI Research Associate*
Natalie Firestine, '08, *IEE Research Associate*
Frank Skiba, '08, *LUI Research Associate*
Caitlin Callaghan, '09, *IEE Research Associate*
Melanie Fenzel, '09, *LUI Research Associate*

Prepared under a grant from
The Windham Foundation
Grafton, Vermont

Table of Contents

Introduction

This document is a compilation of work representing the first phase of "Energy and Land Use: Merging the Regulatory Streams," a joint project of Vermont Law School's Land Use Institute (LUI) and Institute for Energy and the Environment (IEE). The project's goals are to implement better energy efficiency and conservation practices in land use planning and development, to optimize the siting of necessary new electric facilities, to educate land use and utility authorities, and to increase educated public participation in land use and electric utility planning and permitting processes. We identified these goals in the fall of 2006 as we considered the near-future consequences of increased development in Vermont and the expiration of Vermont utilities' contracts with the companies that supply over two-thirds of the state's electric power.

During this first phase of "Merging the Regulatory Streams," the Institutes held two working group meetings during the Fall of 2007, which brought together many of Vermont's experts in energy and land use to work on problem identification and problem solving. Included in the present document are lists of working group members, as well as memoranda we prepared prior to each meeting, highlighting the Vermont statutes and practices most relevant to planning and permitting, and suggesting statutory and regulatory changes. We received written feedback from several participants, and the working group meetings provided a forum for rarely held discussions between land use and energy experts of problems and possible solutions under the current systems. After each meeting, we circulated memoranda summarizing the working group discussions. All of the memoranda and participant written feedback are included in this document.

The Institute for Energy and the Environment and the Land Use Institute acknowledge, with gratitude, the work of Paula Mangold and Alicia Cordero for their efforts at every stage of this project. We also thank our joint research team for this first phase of work, Vermont Law School students Caitlin Callaghan, Elizabeth Catlin, Natalie Firestine, and Frank Skiba, and we acknowledge Melanie Fenzel as a new member of the team as we enter our next phase. Jane D'Antonio, of the Environmental Law Center at VLS, provided integral support from the project's initiation in November 2006. Finally, we thank the Windham Foundation of Grafton, Vermont for providing a grant to the Institutes to make this work possible.

Working Group Invitees

Below is a list of individuals who were invited to participate in working groups.[1]

Name	Organization	Participation	
		10/23/2007	11/28/2007
Adler, Aaron	Agency of Natural Resources	✓	
Allen, Riley	Vermont Department of Public Service	✓	✓
Bentley, Bruce	Central Vermont Public Service	✓	✓
Biewald, Bruce	Synapse Energy Economics	✓	
Brown, Greg	Chittenden County Regional Commission	✓	
Cadwell, Leslie Lyons	Vermont Electric Power Company (VELCO)		
Callaghan, Caitlin	Vermont Law School	✓	✓
Catlin, Elizabeth	Vermont Law School	✓	✓
Coleman, Warren T.	Vermont Agency of Natural Resources		
Cowart, Richard	The Regulatory Assistance Project (RAP)		
Diamond, Joshua R.	Diamond & Robinson, P.C.	✓	
Dostis, Robert	Chair, House Committee on Natural Resources and Energy		
Dumont, James A.	Law Office of James A. Dumont	✓	
Dunnington, Fred	Middlebury Zoning Administrator & Town Planner.		✓
Dutton, Christopher	Green Mountain Power Corporation	✓	
Dworkin, Michael	Vermont Law School	✓	✓
Elmer, Peg	Vermont Law School	✓	✓
Emerson, Elijah D.	Primmer Piper Eggleston & Cramer, P.C.	✓	✓
Farley, Dana	Town of Essex, Community Development		✓
Firestine, Natalie	Vermont Law School	✓	✓
Grimes, Barbara	Burlington Electric Department	✓	

[1] Each person listed received a copy of the materials compiled in this document.

Name	Organization	Participation	
		10/23/2007	11/28/2007
Hall, Michael	Vermont Electric Power Company (VELCO)		✓
Hasen, John D.	Natural Resources Board		
Hofmann, Sarah D.	Vermont Department of Public Service	✓	
Horn, Karen B.	Vermont League of Cities & Towns		✓
Ide, Robert	Vermont Department of Public Service	✓	✓
Ingulsrud, Faith	Department of Housing and Community Affairs		
Janson, Kurt R.	Vermont Public Service Board		
Johnstone, Scott	Chittenden County Metropolitan Planning Organization (CCMPO)		
Kassel, John B.	Shems, Dunkiel, Kassel & Saunders		
Kenlan, Jay	Kenlan, Schwiebert, & Facey, P.C.	✓	
Levine, Sandra E.	Conservation Law Foundation	✓	
Lyons, Virginia	Chair, Senate Committee on Natural Resources and Energy	✓	
Marshall, John H.	Downs Rachlin Martin PLLC		
Matteau, Jim	Windham Regional Commission		
Parker, Scudder	Candidate for Vermont Governor and Former Director, Energy Efficiency Division,Vermont Department of Public Service	✓	
Powel, Bill	Washington Electric Cooperative	✓	
Reynes, Stephen A.	Primmer Piper Eggleston & Cramer, P.C.		
Rocheleau, Dale	Central Vermont Public Service	✓	✓
Sachs, Debra L.	Alliance for Climate Action	✓	
Schweibert, Van	Kenlan, Schwiebert, & Facey, P.C.		✓
Sease, Steve	Agency of Natural Resources	✓	
Sedano, Richard	The Regulatory Assistance Project (RAP)		
Skiba, Frank	Vermont Law School	✓	✓

Name	Organization	Participation	
		10/23/2007	11/28/2007
Smith, Richard	Vermont Department of Public Service		✓
Walker, Bob	Sustainable Energy Resource Group		
Wroth, Kinvin	Vermont Law School	✓	✓
Zahner, Michael	Natural Resources Board		

Total:	26	17

Working Group I Memo

Energy and Land Use: Merging the Regulatory Streams[2]

October 23, 2007
8:30 am – 4:00 pm

I. Introduction

Vermont Law School's Land Use Institute and Institute for Energy and the Environment, through a grant from the Windham Foundation, are hosting a working group meeting on October 23, 2007 to address the problems that arise from the current separation of the utility planning and siting regulatory processes from the land use planning and development regulatory processes. The purpose of the working group session is to develop ideas for solving some of the state's near and long-term energy and land use challenges by developing better land use law and utility planning law, and to devise ways to ensure that energy facility siting decisions protect important land use considerations. Our goal is to develop statutory changes that we will propose to the Vermont Legislature.

In this memorandum, we lay out the design and key principles of Vermont's energy and land use statutes. The statutes are 30 V.S.A. § 248 (Section 248), which governs the Certificate of Public Good (CPG) process for energy development; 30 V.S.A. § 218c (Section 218c), which governs utilities' Integrated Resource Planning (IRP); 24 V.S.A. §§ 4301-4498 (Chapter 117), which governs local and regional planning; and 10 V.S.A. 6086 (Act 250), which governs the statewide permit process for commercial, industrial, and large residential development as well as subdivisions. For each statute, we identify language in the current law and regulatory practice which make implementing a cohesive policy problematic, and propose changes to the language and structure of these areas. The proposed changes are ideas to stimulate discussion for how to overcome statutory, regulatory, and implementation problems in ways that would further our policy goals of minimizing new electricity demand across the state, encouraging clustered growth around areas that already have the infrastructure able to serve new demand, and encouraging new, in-state electricity generation to be built in areas that will minimize adverse land use impacts.

Readers should interpret our proposed changes as idea-provoking, not as final (or even fully-thought-out) solutions. The main purpose of this memorandum is to establish a common ground for the working group members, and to spark ideas for creative and useful new legislation that we can present to the Vermont Legislature.

[2] This memorandum was prepared by Vermont Law students Natalie Firestine and Caitlin Callaghan of the Institute for Energy and the Environment research team, Frank Skiba of the Land Use Institute research team, and Elizabeth Catlin of both teams.

II. Energy Considerations in Utility Planning

a. Introduction

One central problem this project addresses is the fact that the energy needs of Vermont will continue while Vermont utilities' contracts with Vermont Yankee and Hydro-Quebec (the sources that supply two-thirds of the state's electricity) will expire in the near future. The resulting demand for new electricity generation could result in several adverse outcomes, two of which are particularly striking. First, the demand could force the utilities to propose, and the Public Service Board (PSB or Board) to approve, projects that then seem badly needed for energy purposes, but which have financial or land-use impacts that could have been avoided by a more portfolio-based consideration of alternatives.[3] Second, the prospect of building any new facilities within Vermont could meet with such resistance that any new projects could become stuck in expensive and lengthy administrative proceedings, thus forcing unnecessary reliance upon out-of-state energy sources that might have higher financial or environmental costs.

The goal of our current project is to avoid both situations by amending the statutes that govern energy facility siting so that utilities can begin planning more effectively.

Currently, the Public Service Board has two main statutory tools for reviewing proposed electricity and transmission projects: Section 248, which mandates that the Board consider several criteria before it issues a certificate of public good (CPG) for a proposed facility, and Section 218c, which requires utilities to engage in "least cost integrated planning." Historically, the PSB has relied heavily on Section 248 for consideration of specific projects, making limited use of Section 218c to evaluate and compare specific proposals. Unfortunately, Sections 248 and 218c are not entirely complementary in terms of planning energy projects. Section 218c is not as detailed as Section 248, and it does not require consideration of all of the factors that are found in Section 248. Thus, in practice, a new generation proposal may be consistent with a utility's Section 218c plan, but it might not be able to receive a CPG from the Board.

A related issue is that Section 248 is focused on review of need, which is often driven by the real world judgment of what type of resources currently exist, the magnitude of electricity demand that is in place, and the impact of both of those factors on reliability. If an applicant demonstrates that current demand exceeds resource capacity, it is very difficult for the Board to deny a proposed project.[4] Under the current system, the PSB reviews projects separately and

[3] In fact, this situation has already occurred. In *In re Vermont Elec. Power Co., Inc.*, 2006 VT 69, 374, 895 A.2d 226, 229, the Vermont Supreme Court affirmed a Public Service Board Order issuing a Certificate of Public Good for VELCO's "Northwest Reliability Project," re-stating the Board's conclusion that there was " 'no cost-effective alternative to the proposed Project that is reasonably assured of timely implementation.'" *Id*. (quoting the Board's 240-page Order). The Court also noted the Board's "concern . . . that deficiencies in VELCO's planning process and lack of long-term focused attention on efficiency efforts had narrowed the Board's options in considering alternatives to the project proposal." *Id*. (n. 3).

[4] The PSB recognized how its decision-making power was limited by the planning hole that created the demand for the Northwest Reliability Project, stating that "waiting to evaluate non-transmission options until it is too late to implement them represents neither sound public policy nor good utility planning practice." *In re Petition of Vermont Elec. Power Co., Inc.*, State Of Vermont Public Service Board, Docket No. 6860, Order of 1/28/05 at 58.

sequentially, and it may reject one project after another as electric demand rises. At a certain point, the Board is compelled to approve the next proposed project, even if an earlier alternative would have been a better choice for the public good. One possible alternative to this scenario would be to change the statutory frameworks to (1) establish criteria for evaluating trade-offs between projects, (2) develop a process for screening proposed sources against the criteria, and (3) provide greater assurance that costs will be recovered once sources have been screened and approved. With this alternative process in mind, we propose an "open season-portfolio review" process that would bring multiple projects before the Board at a specified time, allowing the Board to see competing proposals together to find the best alternative under the circumstances, ensuring Vermont will have the energy resources it needs.

b. Relevant Statutory Sections and Suggestions for Changes

30 V.S.A. § 248

Overall, Section 248 is aimed at project-by-project review of both the financial and physical elements of new utility infrastructure. The purpose of Section 248 is to require the Public Service Board to consider criteria before issuing a CPG for proposed electricity generation and transmission projects. Section 248 is a prior review statute. It prohibits a "company" from beginning site preparation for an electric generation or transmission facility, unless the public service board first finds that such facility "will promote the general good of the state and issues a certificate to that effect." The statute then sets out several criteria that the PSB must find are satisfied by the applicant before it may issue a CPG:

- **Section (b)(1)** requires that the new facility not "unduly interfere" with the development of the region. The PSB says that whether a project "unduly interferes" with development is determined by performing a balancing test, with more weight on the public need for the facility. Section (b)(2) instructs that a higher degree of need expressly puts less of a balance in favor of the environment Because of this reality, it is critical that utilities' integrated resource plans be reviewed first through 218c, which require them to consider environmental and efficiency behaviors, before the Board is faced with the problem of balancing need versus the environment.

- In addition, section (b)(1) requires that "due consideration" be given to the recommendations of the municipal and regional planning commissions, and to land conservation measures in any municipal plan adopted under Chapter 117. However, "due consideration" does not require consistency with those land use criteria.[5] Thus, even if issuance of a CPG would be troubling under each of the land use criteria, if the need for power is great, the Board could be forced to approve the proposed project. This scenario reiterates the importance of integration of both Section 248 and Section 218c with the Act 250 and municipal plan review process. The result would be that Act 250 district

[5] The Vermont Supreme Court has construed the "due consideration" phrase found in Section 248(b)(1) to "at least impliedly postulate[ ] that municipal enactments, in the specific area, are advisory rather than controlling." *City of S. Burlingtion v. Vt. Elec. Power Co.*, 133 Vt. 438, 447, 344 A.2d 19, 25 (1975). The Board has consistently followed this approach.

commissions and municipal and regional planners would act with the awareness that their behavior will affect the decisions of the PSB.

- **Section (b)(2)** states that the facility can be approved only if it is "required to meet the need" for present and future demand for services that cannot be met in a "more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures." Also, this section focuses the PSB's attention on the element of immediate need, as opposed to planning that could have avoided the need. Obviously, this reflects the social need for electricity that will occur under those circumstances and, thus, the focus of this subsection cannot readily be changed. However, its adverse effects can be eased by making sure that land-use decisions are taken only with a knowledge that they will feed into this subsequent test for new infrastructure. This type of language is not found in Act 250; its inclusion there would help create consistency between the statutes.

- **Section (b)(5)** sets out the substantive criteria of Act 250 that the Board must consider before issuing a certificate of public good. Here, the general good of the state always dominates, but only after the Board takes into consideration the requirements of Act 250. However, Act 250 and Chapter 117 do not provide the same explicit mandates to consider general good of the state. Thus, there is a possibility that a project will not receive the same response if the projects are looked at separately (as is the current process) instead of being looked at with the statutes considered together.

- **Section (b)(6)** requires, with respect to purchases, investments, or construction by a company, that the facility is consistent with "the principles" for resource selection expressed in that company's approved least cost integrated plan. The language referenced here from Section 218c is very soft in the sense that a utility's IRP will seldom lead to a decision that any specific proposal should or should not be adopted. Also, this section "does not prohibit the public service board from granting a certificate of public good under 10 V.S.A. § 248 for a utility which does not have an approved least cost integrated plan." [6] Finally, while the IRP statute appears to allow comparative analysis of groups of projects, that has not been common in practice. An interesting question is whether or not this should be required. More specifically, should there be amendments requiring use of Section 248(b)(6) and Section 218c to require review of specific clusters of projects in comparison to and among each other under 218c? If so, would that lead to greater deference to that process in the 248 proceedings later?

- **Sections (a)(4)(A)-(D)** state that "the PSB shall hold a nontechnical public hearing on each petition for such finding and certificate in at least one county in which any portion of the

[6] P.A. No. 259, § 8 (1992 Vt., Adj. Sess.). However, the PSB noted in its order for the NW Reliability Project: "We do not wish to suggest that Vermont's utilities should blithely ignore their least-cost planning obligations. Instead, we are observing that, in those instances where the utility has not fulfilled those obligations, it would only make an undesirable situation worse to indiscriminately veto all resource options that come within the purview of Section 248, thereby depriving the utility of access to options to serve their customers in ways that might be far superior to the options that would remain." STATE OF VERMONT PUBLIC SERVICE BOARD Docket No. 6860. Footnote 112, page 61 of 244.

construction of the facility is proposed to be located." An important question is whether this discourages earlier public participation, where it could be more meaningful, or, does it lead to resistance to new facilities at a later time, when little change can be made?

- **Section (a)(4)(E)** requires the Agency of Natural Resources to be a party whenever a new electricity or transmission facility is proposed and the PSB grants the certificate of public good by presenting evidence and providing recommendations. However, because the Agency of Natural Resources (ANR) has very limited staff and resources, it rarely shows up at PSB proceedings. The question then becomes, does the fact that the ANR is commenting rather than deciding mean that this role receives little internal emphasis? In addition, the ANR is behind on permits, and, lacks a centralized office of policy coordination that could act earlier and more effectively. One important consideration is whether strengthening ANR's role in the current process requires additional resources.

Possible Changes:

One possible revised process would have the Public Service Board call for proposals from utilities once a year ("open season"), and then compare all of the proposals side-by-side ("portfolio review"). Any proposals approved during the portfolio review would carry a presumption of being acceptable under overall need and alternatives criteria, and could go more swiftly to site-specific permitting. If the planning process is given this kind of impact on the permitting stages, the public would have a greater incentive to become involved in the planning process. Public participation would also take place in the context of comparing various options, rather than being channeled into opposing each project seriatim. Would such a 'comparative' process be an opportunity for the public to learn about the environmental, economic, safety, and health impacts of different kinds of facilities? Would it give developers the opportunity—and obligation—to build public support and get public input in the planning stages, and thereby smooth the road for public support during the site-specific permitting stage of well-designed and appropriate facilities? For that matter, would it lead to better decisions by state policy makers?

***Query**: could an "energy portfolio" for Vermont be created that, as a part of the "open season-portfolio review" approach, develops "trade-off criteria" to better steer decision making? Some issues and criteria that have been suggested include:*

- *how to perform cost-benefit analysis between projects,*
- *local approval criteria,*
- *upgrading facility considerations, fast track options for projects that are part of the "approved energy portfolio,"*
- *presentation of alternative projects if a proposed facility is challenged,*
- *a broadened role of the Agency of Natural Resources to participate in development of trade-off criteria,*
- *trade-off criteria developed through the state energy plan,*
- *trade-off criteria being formula driven,*
- *legal issues,*
- *regulating based on the measure of the overall performance of the "energy portfolio," instead of case-by-case review,*

- *having a single entity or consortium at the state level as the responsible party for negotiating all power purchases and planning the development of new energy sources,*
- *prices and terms being set by original state negotiation, but allowing utilities to enter into agreements with suppliers on their own, etc.*

30 V.S.A. § 218c

Overall, Section 218c addresses the planning responsibilities of regulated gas, electric, and transmission utilities. This statute requires such entities to engage in "least cost integrated planning" to ensure that public's needs are met by the "lowest present value life cycle cost." This process requires these entities to consider environmental and economic costs and comprehensive energy efficiency programs in their Least Cost Integrated Plan (LCIP), with an ultimate plan describing the mix of sources they might use in their future delivery of energy.

Subsections (a) and (b) of Section 218c state that every electric and gas utility is required to develop a plan describing how it will serve the public's energy needs at the least possible cost. These plans must be submitted to the Department of Public Service (DPS) and the Public Service Board (PSB or the Board). The Board then decides whether to approve a utility's plan based on the statutory criteria in section 218c(a)(1). There are no statutory references to the timeframe that the plan must cover, nor to how often a utility must update its plan. The statute's most relevant subsections are described below:

- **Subsection (a)(1)** defines the contours of the Least Cost Integrated Plan (LCIP) as one developed by a regulated electric or gas utility, the purpose of which is to establish how the utility will meet "the public's needs for energy services:
  - after safety concerns are addressed,
  - at the lowest present value life cycle cost,
  - including environmental and economic costs,
  - through a strategy combining investments and expenditures on
    - energy supply,
    - transmission and distribution capacity,
    - transmission and distribution efficiency,
    - and comprehensive energy efficiency programs."

- **Subsection (a)(2)** defines Comprehensive Energy Efficiency Programs (CEEPs) as a coordinated set of investments or program expenditures designed to acquire the full amount of cost effective savings from those investments/programs. The expenditures are *made by* a regulated electric or gas utility in order to meet the public's need for energy services through efficiency, conservation or load management in *all* customer classes and areas of opportunity.

- **Section (b)** requires every regulated electric or gas company to prepare and implement an LCIP. LCIPs must be submitted to DPS and the PSB, and the PSB must provide the utility with notice and opportunity to be heard. The Board may then approve the LCIP based on the criteria in (a)(1).

Section (d) of the statute provides a detailed scheme for development of transmission least cost plans.

- **Subsection (d)(1)** states that every company or utility that owns or operates any part of a transmission system in Vermont is required to collaboratively prepare a transmission plan that looks forward at least ten years. These plans must be submitted to DPS, PSB, the House Committee on Commerce, the Senate Committee on Finance, and both the House and Senate Committees on Natural Resources and Energy. Important to our project, this subsection states that the purpose and objective of transmission plans *shall be* to identify the potential need for transmission system improvements as early as possible, in order to allow sufficient time to *plan and implement more cost-effective nontransmission alternatives to meet reliability needs*, wherever feasible. The statute then lists mandatory components of transmission plans:

  (A) identify existing and potential transmission system reliability deficiencies by location within Vermont;
  (B) estimate the date, and identify the local or regional load levels and other likely system conditions at which these reliability deficiencies, in the absence of further action, would likely occur;
  (C) describe the likely manner of resolving the identified deficiencies through transmission system improvements;
  (D) estimate the likely costs of these improvements;
  (E) identify potential obstacles to the realization of these improvements; and
  (F) identify the demand or supply parameters that generation, demand response, energy efficiency or other nontransmission strategies would need to address to resolve the reliability deficiencies identified.

- **Subsection (d)(2)** states that prior to plan adoption, the planning utilities must hold at least two public meetings, specifically aimed at finding non-transmission alternatives to the plan. After plan adoption, affected utilities must incorporate the transmission plan into their least cost integrated plans. The transmission plans must be updated at least every three years or within nine months of a request to do so by the Public Service Board (PSB) or DPS.

- **Subsection (d)(5)** mandates the PSB to encourage and facilitate the resolution of reliability deficiencies through nontransmission alternatives, where those alternatives would better serve the public good, based on the information contained in a transmission system plan.

- Significantly, for our project, **subsection (d)(7)** requires the DPS to hold at least one public meeting prior to taking a position before the PSB related to any new transmission construction that has "significant land use ramifications."

A recent development in transmission planning is the creation of the Vermont System Planning Committee (VSPC). The VSPC was created by a settlement agreement approved in PSB Docket

#7081 and will function as a utility coordinator working with the DPS on transmission projects, but not under state authority. Members comprising VSPC include Efficiency Vermont, electric utilities, VELCO, public interest groups, and DPS. It has been suggested that this committee is a progressive first step "to facilitate the full, fair and timely consideration of cost-effective non-transmission alternatives to new transmission products."[7]

Possible Changes:

Section 218c requires utilities to create an integrated resource plan; however, the statute doesn't say how often it should be done. Although the Board has said in administrative orders that the process should be done every three years, that requirement has not always been followed. Furthermore, Section 218c lacks a timeframe over which a utility must plan. Without that baseline, there is the potential for plans to take too short of a view of resource planning, and potentially to miss some of the most "cost-effective alternatives." One question to consider is whether specific short term and long term requirements might be included in statutory language to address this void, as well as requiring IRP updates every three years.

Another possible change to the generation-planning process is to take VSPC's creation as an illustration that the State recognizes that the successful integration of both land use and facility siting statutes is vital to Vermont's future? Should part of the solution here be to give the PSB authority to impose a similar scheme for generation planning to that established in VSPC? Also, should the efforts of this Vermont Law School project be coordinated with the efforts of VSPC?[8]

Our final suggestion for change is to ensure that the land use processes are aligned with the utility planning processes. One way to pursue this is to require the utilities and the municipal and regional planning commissions to use the same set of population and economic growth projections for a given service area. These figures need to be coordinated so that utilities are able to plan properly to serve the area, and so that the approved development of electric generation and transmission matches the expected development needs of Vermont's towns, and vice-versa. Further, the Department of Public Service should review all electric utility guarantees of ability to serve proposed Act 250 development. The Department shall determine whether the utility's ability to serve the proposed development, in addition to the existing demand that the utility already serves, complies with the utility's Integrated Resource Plan as developed and approved under 30 V.S.A. § 218c.

---

[7] *See* Vermont System Planning Committee Home Page, http://www.state.vt.us/psb/VSPC/main.html

[8] Note the concern of the PSB in its final order on the Northwest Reliability Project: "We are also concerned that even a timely consideration of demand-side options will be of little effect if there is no entity charged with their implementation. Under current Vermont laws and policies, there appears to be an 'efficiency gap' in which distribution utilities are relieved of their obligations to pursue all cost-effective efficiency investments on the condition that they cooperate in good faith with the Energy Efficiency Utility.104 However, the Energy Efficiency Utility, because of the statutory cap on its funding as set in 30 V.S.A. § 209(d)(4), is not provided with the funding necessary to make all cost-effective energy efficiency investments." Docket No. 6860 Pages 58-59 of 244 104. Docket No. 5980, Order of 9/30/99, Attachment A ("Memorandum of Understanding") at ¶ 15.

III. Energy Considerations in Chapter 117

a. Introduction

Chapter 117 is Vermont's enabling law for local and regional land use planning and regulation. Energy conservation is an important component of Chapter 117. Planning actions taken at the state, regional, and municipal levels pursuant to Chapter 117 must be consistent with the Chapter's broad goals, which include encouraging the efficient use of energy and the development of renewable energy resources. The Chapter also requires regional and municipal planning commissions to assess present and future energy needs in creating and implementing plans and bylaws.

Chapter 117 encourages energy-efficient development, but the chapter's requirements are stated in general terms. The statute does not require minimum performance standards, but rather requires planning commissions to consider ways of implementing energy conservation programs that are best suited to local needs. It would not be difficult to add sections to Chapter 117 requiring minimum performance standards, stricter zoning requirements, or other implementation guidelines.

The primary problem with enacting stricter requirements is that doing so might undermine another central goal of Chapter 117, which is to ensure that planning decisions are made at the most local level possible commensurate with their impact. Chapter 117's structure for reviewing planning decisions between state, regional and municipal levels evidences the legislature's intent to leave the bulk of planning decisions (aside from those requiring other state or federal permits) to municipal decision-makers. Efforts to implement more demanding energy consideration in municipal planning processes by amending Chapter 117 run counter to the legislature's intended scheme of leaving planning decisions to the most local level possible. For example, if municipalities were required to adopt a specific building standard in their municipal bylaws, takes some of the planning authority away from the "most local level possible."
The following sections provide an overview of Chapter 117 and suggest possible changes that would require more rigorous energy consideration, bearing in mind the tension between adding more requirements and the state's goal of leaving planning decisions to local decision-makers. The statutory overview and suggested changes are discussed in three parts: 1) an overview of how Chapter 117 specifically addresses energy conservation; 2) a summary of the review structure between state, regional and municipal levels; and 3) how Chapter 117 interacts with Act 250, Section 248 and Section 218c.

b. Statutory Overview and Possible Amendments

24 V.S.A. § 4302

The primary goals of Chapter 117 require municipalities, regional planning commissions and state agencies to:

- Consider the use of resources and the consequences of growth and development for the region and the state, as well as the community in which the development takes place.
- In planning efforts (at all levels), to encourage the efficient use of energy and the development of renewable energy resources.
- Provide for the wise and efficient use of Vermont's natural resources
- Plan for, finance and provide and efficient system of public facilities and services to meet future needs.
- Ensure that the rate of community growth does not exceed the community's ability to provide facilities and services.

Section 4302(f) defines consistency with these goals to mean that planning efforts pursuant to Chapter 117 are making "substantial progress" toward attaining Chapter 117 goals, unless a municipality elects for stated reasons not to pursue a particular goal. The section also establishes a standard for determining that one plan is "compatible" with another.

Possible Changes:

One possible amendment might add a further goal or amend one of the existing goals to encourage planning commissions to incorporate standards in development review such that evaluation of impact on electrical demand and available supply is included.

24 V.S.A. § 4325

Regional planning commissions *may* prepare and recommend building, housing, plumbing, fire, and related codes and enforcement procedures to municipal legislative bodies under whose authority the commissions serve.

Possible Changes:

This section could be amended to require regional commissions to develop model standards that municipalities within that region must in turn adopt or follow.

24 V.S.A. § 4345

Regional Planning Commissions *may* undertake studies and make recommendations to municipalities within their jurisdiction pertaining to the conservation and development of renewable energy resources.

Possible Changes:

This section could be changed to require regional planning commissions to undertake studies with the aim of adopting metric performance standards for planning and development decisions.

24 V.S.A. § 4348a

Regional plans *shall* include an "energy element." This element *may* include an inventory of energy resources and an analysis of energy needs, scarcities, costs and problems within the region. The element should also include a statement of policy regarding land use patterns and densities that will likely result in energy conservation and that will allow municipalities to make planning decisions based on the region's energy resources.

Regional plans must also include a "utility and facility element." This element should include a map as well as a statement of present and prospective public utilities, including power-generating plants and transmission lines.

Possible Changes:

Under the current language of 24 V.S.A. § 4348a(h), regional plans must be consistent with municipal plans within the region in Act 250 and Section 248 proceedings, unless the matter is regional in its impact. This is problematic with respect to the energy and utility elements required by Section 4348a because utilities and transmission systems usually serve more than one town. One way to achieve more consistency within a region would be to reverse this dichotomy so that municipal plans must more clearly be consistent with regional plans. Placing more emphasis on municipalities' compatibility with regional plans could provide for more consistent energy conservation efforts within a region.

24 V.S.A. § 4382

Municipal planning is not required under 24 V.S.A. § 4381, but if it is undertaken, Section 4382 provides that a municipal plan *may* be consistent with § 4302 goals. However, as noted under Section 4302, *supra*, p. 10, to be deemed consistent, it *shall* include an "energy plan." The energy plans must include an analysis of energy resources, needs, scarcities, costs and problems within the municipality. They should also include a policy statement on the conservation of energy and programs that the municipality will implement to promote energy conservation and efficiency.

To be consistent with Section 4302, municipal plans must also include a "utility and facility plan." This should include a map showing the location of present and prospective community facilities, public utilities, and transmission lines. This part should also include recommendations for meeting future needs for community facilities and services. The plan should indicate the priority of need and costs and methods of financing programs to meet future needs. Municipalities may not adopt a capital budget plan unless they have satisfactorily adopted a utility and facility element. *See* 24 V.S.A. § 4443(a).

See p. 20, *infra*, for further discussion of consistency under 24 V.S.A. § 4350.

Possible Changes:

Again, like § 4302 goals, the requirements under this section are stated broadly. Several municipal plans, including Burlington and Rutland, show that the energy and utility and facility components, while included in the plan, are vague and state general policies for what the municipalities hope to accomplish in terms of conservation efforts. Municipal plan requirements could be more specific by requiring municipalities to adopt minimum metric standards or set other measurable conservation goals.

The following sections provide municipalities with the regulatory power necessary to implement and enforce energy efficient development and renewable energy use standards. Thus, they merge land use and energy use in the ways that are the focus area of this project.

24 V.S.A. § 4402

Municipalities may employ a wide range of regulatory tools to implement and enforce their energy plans. Such tools include zoning and site plan review bylaws, building codes, and other performance standards. *See* 24 V.S.A. § 4414.

24 V.S.A. § 4403

Municipalities may also employ several non-regulatory tools to implement and enforce conservation and efficiency programs. Available tools include tax incentives, appointing advisory commissions, and other incentives to encourage energy-efficient development.

24 V.S.A. § 4413

This section prohibits municipalities from regulating public utility power generating plants and transmissions facilities regulated under 30 V.S.A. § 248.

24 V.S.A. § 4414

This section specifies permissible types of regulations that municipalities may adopt. All bylaws must be in conformance with the municipal plan and compatible with § 4302 goals. Permissible regulations include zoning districts, performance standards, and bylaws allowing for conditional uses.

24 V.S.A. § 4418

Municipalities may regulate how land is subdivided for sale, development or lease. Subdivision bylaws may include specific development standards that promote energy conservation or permit the use of renewable energy resources.

Possible Changes:

The previous sections show that Chapter 117 gives municipalities the authority to adopt and implement regulatory and non-regulatory programs that encourage or require energy efficient developments. Some municipalities do, in fact, use regulatory tools such as building codes and efficiency standards in their planning processes. Chapter 117 also allows municipalities to use non-regulatory incentives that encourage energy efficient development. Thus, the problem does not seem to be that Chapter 117 neglects energy considerations. Rather, the concerns addressed by this project appear to lie in how municipalities implement energy conservation programs. Therefore, while Chapter 117 could be amended to place more focus on energy conservation efforts, such amendments may have little effect, given that the current statutory language already gives municipalities broad authority to implement conservation programs. Getting municipalities to implement more rigorous and uniform energy conservation programs may lie more in the need for stronger education and training on ways of implementing the provisions that exist.

24 V.S.A. § 4433

Municipalities may create advisory commissions to help the municipality prepare and implement the municipality's plan and bylaws. An advisory commission devoted to energy conservation programs is one option.

Possible Changes:

This section could be amended to add a specific section that encourages municipalities to appoint an energy advisory commission. The statute currently specifically addresses historic preservation commissions, design review commissions, and housing commissions. Adding a section specifically addressing energy conservation programs may help encourage municipalities to appoint a commission of experts to review and advise the municipality's development plans as they pertain to energy conservation.

24 V.S.A. § 4443

Municipalities may adopt a capital budget program only if they have satisfactorily created and adopted a utility and facilities plan as described in §4382(a)(4). This section places special focus on utility considerations by giving this component of municipal plans priority over others.

Possible Changes:

This section provides an incentive to municipalities in that they may not adopt a capital budget program unless they have adequately considered the present and prospective needs for community facilities and public utilities. Requiring municipalities to adopt an adequate energy element before allowing them to adopt a capital budget program is one way to further encourage municipalities to place more focus on energy conservation in their planning processes.

c. Proposed Changes to Ch. 117's Review Structure

A major feature of Chapter 117 is the review structure it creates between municipal, regional and state levels. The structure itself reflects one of the statute's primary goals: ensuring that planning decisions are made at the most local level possible commensurate with the development's impacts. To change this structure in order to implement a statewide "floor" for energy conservation measures would require either: 1) reframing how Vermont defines "commensurate impacts" to recognize that energy concerns cause "impacts" at regional or state levels, or 2) deciding that the need for consistent energy conservation programs outweighs the benefits of leaving planning decisions to local control. Imposing additional oversight on municipal planning decisions from regional or state levels necessarily will reduce the authority municipalities have over local planning decisions. This, in turn, runs counter to Chapter 117's goal of ensuring that planning decisions are made at the most local level possible.

24 V.S.A. § 4305

Although dormant for more than a decade, the top level of Chapter 117's review structure is the Council of Regional Commissions. The Commission's responsibilities include the review of proposed regional plans to assure that they are consistent with Section 4302 goals and are compatible with approved municipal plans (if a municipality requests review). The Commission also reviews state agency plans to determine whether agency plans are consistent with §4302 goals and approved municipal plans.

According to this section, the Council of Regional Commissions must review regional plans to assure that they are consistent with approved municipal plans. The review structure reflects the §4302 goal that planning decisions be made at the municipal level.

24 V.S.A. § 4306

This section establishes the "Municipal and Regional Planning Fund." The section prescribes how money from the fund is distributed to regional planning commissions and to municipalities to assist them with planning efforts.

Possible Changes:

Amending this section is one way to give Chapter 117 some teeth. Currently, in order to receive funds, municipalities must participate in a "competitive program." Municipalities must have approved municipal plans in order to compete and must have voted at an annual or special meeting to provide local funds for municipal planning purposes. Further, municipalities must be "confirmed" by the regional planning commission pursuant to steps outlined in § 4350. The confirmation process lacks measurable standards by which to base confirmation. Adding more specific prerequisites to receiving funds, such as reducing the municipality's energy consumption by a certain percentage or maintaining certain transportation or density standards, could

provide an incentive for municipalities to implement energy conservation programs more aggressively.

Chapter 117 lacks a similar confirmation process for regional planning commissions. Disbursement of funds from the Municipal and Regional Planning Fund to regional planning commissions is based on a formula adopted by rule created by the Department of Housing and Community Affairs. The rule considers whether the regional planning commission has adopted a regional plan. Beyond that, Chapter 117 leaves the choice of how to disburse funds to the regional planning commissions largely up to the Department of Housing and Community Affairs and to the regional planning commissions themselves. Amending Chapter 117 to include a confirmation process at the state level for regional planning commissions is one possible way to assure more uniformity across different regions. It is also a way to give Chapter 117 more teeth at the regional level, by limiting the amount of funds a regional planning commission may receive unless it meets more stringent Chapter 117 criteria.

24 V.S.A. § 4345a

Regional planning commissions *shall* provide technical and legal assistance to municipalities within their jurisdiction in the preparation and maintenance of plans, capacity studies, bylaws, and in related implementation activities.

Regional planning commissions must also prepare a regional plan that is consistent with the § 4302 goals and compatible with approved municipal and adjoining regional plans. The regional plans must include capacity studies and implementation guidelines to assist municipalities in developing municipal planning processes that will attain § 4302 goals. See 24 V.S.A. § 4347.

Regional Planning Commissions must also review municipal planning efforts at least every five years to ensure that they are making "substantial progress" toward attaining § 4302 goals. If municipalities are adversely affecting regional planning efforts, the regional commission shall "urge" the municipalities to mitigate those adverse effects.

Possible Changes:

Regional Planning Commissions exert considerable control over municipal planning efforts by confirming municipalities and approving municipal plans. However, after confirmation or approval of a municipal plan, the regional planning commissions' authority over municipalities is more advisory than supervisory. Regional planning commissions assist municipal planning efforts rather than oversee them. Acknowledging that this is unlikely politically, amending this power balance to give more oversight authority at the regional level would afford more consistent energy conservation programs throughout the region and the state.

24 V.S.A. § 4350

Regional planning commissions "confirm" that municipalities are engaged in a planning process and review and approve the resulting municipal plans. Confirmation is necessary for the

municipality to receive money from the Municipal and Regional Planning Fund, and provides other benefits. Regional Planning Commissions *shall* approve proposed municipal plans if the plan is consistent with § 4302 goals, is compatible with its regional plan and other municipal plans within the region, and contains the necessary elements required by Chapter 117 to be included in municipal plans. See 24 V.S.A. § 4382.

Possible Changes:

The requirements for municipal confirmation and municipal plan approval are general. Amending this section to add a more rigorous approval and confirmation processes might ensure better energy conservation programs.

24 V.S.A. §4382

This section provides that municipal plans may be consistent with § 4302 goals and compatible with approved plans of other municipalities in the region.

Suggested Changes:

This section reflects the permissive nature of the planning process under Chapter 117. As noted above in discussion of this section, pp. 11-12, consistency and compatibility are necessary for regional planning commission confirmation and approval of municipal plans and planning efforts, unless the town makes the case for omitting a particular goal. See discussion of Section 4302 on p. 10. A clearer statement of the requirement of consistency would be desirable.

24 V.S.A. §§ 4401-27

These sections authorize municipalities to use a wide range of regulatory and non-regulatory tools to implement and enforce municipal plans. Section 4413 limits what municipal bylaws may regulate. For example, municipalities may not regulate schools, power-generating plants, and transmission lines. However, municipalities are specifically authorized to enact zoning bylaws that impose performance standards and other bylaws to protect and provide access to renewable energy sources. *See supra* at 18.

Possible Changes:

Individual municipalities have wide discretion in how they implement and enforce municipal plans. This is consistent with the § 4302 goal that planning decisions be made at the most local level possible. Amending these sections to remove some of the discretion municipalities have over creating bylaws related to energy efficiency and conservation may provide a more consistent regulatory baseline throughout the state.

24 V.S.A. § 4451

Penalty fines for violating municipal bylaws are payable to the municipality whose bylaws have been violated.

Possible Changes:

Amending this section so that municipalities may receive fines only if their bylaws achieve a certain level of energy conservation or employ recommended performance standards could provide an incentive for municipalities to implement more stringent energy conservation programs into their bylaws.

24 V.S.A. § 4476

Affected individuals may request formal review of regional planning commissions' actions relating to their adoption of a regional plan, confirmation of municipal planning efforts, or approval of a municipal plan. This section provides criteria for reviewing these actions.

Possible Changes:

During review, the regional planning commissions' decisions are not stayed unless the regional planning commission orders a stay. Amending this section so that requests for formal review stay regional planning commission decisions could ensure that the decisions were properly made before allowing any adverse impacts to occur.

d. Interactions with Act 250, Section 248, and Section 218c

24 V.S.A. § 4420

This section allows municipalities which meet certain criteria to review projects that require Act 250 approval. Specifically, a municipality must:

- Have an approved municipal plan,
- Adopt zoning and subdivision bylaws consistent with Chapter 117,
- Adopt the Municipal Administrative Procedure Act,
- Create a development review board to conduct Act 250 review, and
- Adopt the criteria from this section into a municipal bylaw.

If the municipality meets these criteria, the development review board may review development or subdivision plans to ensure that the proposed development or subdivision:

- Will not cause an unreasonable burden on the municipality's ability to provide educational services

- Will not unreasonably burden the municipality's ability to provide services
- Is in conformance with the municipal plan.

Under Act 250, a district commission shall accept determinations made by a municipal development review board with respect to the above-listed criteria to the extent that the impacts affect the municipality. 10 V.S.A. § 6086(d).

24 V.S.A. § 4413

Municipal bylaws may not regulate public utility power-generating plants or transmission facilities that are regulated under 30 V.S.A. § 248.

Possible Changes:

What does it mean to "regulate" utility power-generating plants and transmission lines? Can this section be clarified to say that municipal planning decisions that will affect utility siting or that will create the need for additional transmission lines must undergo regional or state review?

IV. Energy Considerations in Act 250

Act 250 is Vermont's statewide land use development review statute. Act 250 jurisdiction extends to residential, commercial and industrial development over a certain size, statewide. About forty percent of Vermont's development falls within Act 250 jurisdiction. Vermont comprises nine Act 250 districts, and a three-member District Commission presides over the Act 250 review process in each district. The commissioners, who are appointed by the governor, are responsible for determining whether applicants have satisfied ten statutory criteria, and a number of subcriteria, before approving land use permits. The ten criteria cover diverse areas of land use concern in the state, including impact on water and air quality, aesthetics, traffic, and utilities.

Several Act 250 criteria have direct and indirect connections with energy planning in new development. Those connections place a burden on applicants to ensure that their development will meet certain energy conservation standards, and that the electric utility serving the area is on notice and prepared to serve the new demand that the development will create. While these standards are a positive step toward minimizing the impact of development on the state's electricity infrastructure, and toward allowing the utilities to plan for increased demand, there are many ways that the energy-related criteria of Act 250 could be modified so that energy issues are addressed more fully in permitting procedures.

One of the primary ways to provide District Commissions with the detailed and accurate information they need to address energy issues in Act 250 proceedings would be to require more input from the service utilities and the Department of Public Service (DPS or Department). This input would address in more detail a utility's ability to serve a new development, and the extent to which the utility has already planned for the increased demand created by the development. One way to enact this kind of a change would be to amend Act 250 to require applicants to demonstrate how their proposed development complies with utilities' Integrated Resource Plans

(IRP). *See supra* § II.b. Another possibility is to require DPS to independently review certain cost calculations that Act 250 already requires applicants to perform, as well as the compliance of the new electric demand with the utility's IRP. In addition to merging more of the utility regulatory procedures with Act 250 permitting, energy conservation may be achieved better if more stringent conservation and efficiency requirements were implemented as part of Act 250 procedures. In sum, there are several complementary approaches that could allow Act 250 to more fully address the range of energy issues that are raised by new development in the state.

A counterpoint to implementing more utility and energy-related information and decision-making in the Act 250 process is to limit the power of District Commissions to approve of land development that does not comply with the Public Service Board's (PSB or Board) decisions regarding utility development. One major problem with the current separation between the two regulatory systems is that Act 250 permits are issued for developments that create sufficient new electricity demand to necessitate transmission upgrades or new generation facility construction. By the time the Section 248 process for those upgrades is underway before the PSB, the demand has risen to the level that the PSB must approve new utility projects in order to avoid damaging public safety and health. It may be necessary to amend Act 250 so that the power of district commissions to approve development does not preempt the power of the Board to determine whether new transmission or generation construction serves the public good.

a. Relevant Statutory Sections and Possible Amendments

10 V.S.A. § 6086(a)(9)(F) Energy Conservation

This criterion incorporates two related requirements: first, that "the planning and design of the subdivision or development reflect the principles of energy conservation;" and second, that the planning and design "incorporate the best available technology for efficient use or recovery of energy." 10 V.S.A. § 6086(a)(9)(F). The Department of Public Service may review Act 250 applications for compliance with this criterion and provides comments on proposals to the Commissions. Schedule B, the section of the Act 250 application where applicants provide initial information regarding how they will satisfy each of the criteria, gives applicants some guidance for satisfying the energy conservation criterion. Schedule B states that, by statute, conformance with Vermont's Residential Building Energy Standards (RBES) "creates a presumption of compliance with Criterion 9(F) (21 V.S.A. § 266(d))" for all residential buildings that are three stories or less. All other buildings must comply with Vermont's Commercial Building Energy Standards (CBES) (21 V.S.A. § 268). But compliance with CBES is only "strong evidence" of compliance and does not create a presumption of compliance with 9(F) for any commercial buildings or residential buildings over three stories tall. *See Act 250 Training Manual*, Criterion 9(F) (Energy Conservation), p. 2.

Natural Resources Board (formerly Environmental Board) Orders provide the background rules guiding District Commissions' evaluation of Criterion 9(F). The Board has stated that " '[a] project that reflects the principles of energy conservation will include all such energy efficiency siting and design features, building practices, and equipment that can be justified on a life-cycle cost basis.'" *Act 250 Training Manual,* Criterion 9(F) (Energy Conservation), p. 1 (citing *Re:*

Twin State Development Association, #5W1021-EB, Findings of Fact, Conclusions of Law and Order at 8 (Jun. 12, 1990)). Both the District Commissions and the Department have adopted definitions for "best available technology" under criterion 9(F). District Commissions rely on the Board's interpretation of the phrase, which is that "best available technology" means "any proven building practice or design, and any equipment and materials that can be obtained through normal construction and supply channels." *Id.* DPS defines best available technology as "that option which results in either the least energy use or has the lowest life cycle cost." *1993 Act 250 Commercial-Industrial Construction Handout*, http://publicservice.vermont.gov/energy-efficiency/ee_act250.html.

In sum, Criterion 9(F) requires all new construction to conform to Vermont's RBES or CBES. On a case by case basis, Commissions may require additional energy conservation measures based on DPS comments or for other reasons. See *Re: Springlet Limited*, #4C1192, and assoicated Agency of Natural Resources Comment (Sept. 10, 2007) (relaying DPS comments on a proposed condominium development). But the limits on the measures that a Commission can require appear to be that such measures are "proven," obtainable "through normal construction and supply channels," and have "the lowest life cycle cost."

Possible Changes:

Best available technology means the most stringent technology available, either through normal or specialized construction and supply channels, for minimizing energy demand from utilities and reducing the project's overall demand for energy. Such technology shall include on-site energy sources, combined heat and electric generation facilities, whole building or subdivision design elements, as well as insulation factors and other traditional technologies.

Lowest life cycle cost calculations shall be independently verified by the Department of Public Service and shall include the utility and publicly-borne costs of upgrading existing transmission or generation facilities and services that would be necessary to serve the development or subdivision if a given technological measure were not implemented.

This section may also be a place to add a mandatory consultation between the developer and the state's energy efficiency utility, or to explicitly mandate compliance with town plan or regional plan efficiency or conservation standards (if any exist).

10 V.S.A. § 6086(a)(9)(G) Private Utility Services

Criterion 9(G) is primarily aimed at developments that include shared, privately-built and/or maintained roads, sewage treatment, water treatment, or stormwater systems. The criterion requires that any such private utility services must conform to the capital program of the involved municipalities. If the private utility services do not conform to, or there is no, municipal capital program, then the developer must provide "adequate surety . . . to the municipality" to protect the municipality in case it must later take over the maintenance or supply of the privately-developed facilities or services.

Although none of the statutory language, the Schedule B questions, or the District Commissioners' Training Manual appear to contemplate private electricity generation under this criterion, it is important to note that any generation used purely on-site is outside the Public Service Board's Section 248 jurisdiction.[9] Because it is outside the PSB's jurisdiction, District Commissions should evaluate any planned on-site electric generation in a development or subdivision as a private utility service under 9(G). But Criterion 9(G) should be modified to recognize that in most cases it is electric utilities, not municipalities, that would take over provision of electricity if a private generation system failed. For private electric utilities, Criterion 9(G) should require compliance with the area electric utility's Integrated Resource Plan. That comparison would accurately assess whether the party who would be responsible to satisfy the demand left by a failed private electricity generation system is prepared to bear the cost of it. It is unclear whether our policy goals would be furthered by implementing the same "adequate surety" provision for private electric utilities as exists for other utilities.

Possible Changes:

Amend Criterion 9(G) so that the current language remains as 9(G)(1) and 9(G)(2) reads as follows:

For a proposed development or subdivision which relies on privately-owned electricity generation that is used solely on-site, the applicant must demonstrate that the electric services or facilities conform to the Integrated Resource Plan (30 V.S.A. § 218c) of the electric utility that otherwise serves the area in which the development is located. If the privately-owned electric utility does not so conform, then the applicant must demonstrate that the private generation conforms with the municipal and regional energy plans, and that the population and economic growth expected to result from the proposed development or subdivision conforms with the municipal and the regional plan (or the regional plan alone if the municipality does not have a plan).

10 V.S.A. § 6086(a)(9)(H) Costs of Scattered Development

This criterion requires applicants who propose development in areas that are not "physically contiguous to an existing settlement" to demonstrate that "the additional costs of public services and facilities caused directly or indirectly by the proposed development or subdivision do not outweigh the tax revenue and other public benefits of the development or subdivision." Because non-contiguous development tends to cause towns to build more roads, water lines, sewer lines, and other public services and facilities, 9(H) requires that such development proposals withstand a higher level of scrutiny than those that will be located within existing towns and village centers. *Act 250 Training Manual*, Criterion 9(H) (Costs of scattered development), p. 1 (citing *Re: St. Albans Group and Wal*Mart Stores, Inc.*, #6F0471-EB, Findings of Fact, Conclusions of Law and Order (Altered) at 40-41 (Jun. 27, 1995), *aff'd, In re: Wal*Mart*, 167 VT 75 (1997)).

[9] "[E]xcept for electric generation facilities that are operated solely for on-site electricity consumption by the owner of those facilities: (A) no company . . . may begin site preparation for or construction of an electric generation facility or electric transmission facility within the state . . . unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect." 30 V.S.A. § 248(a)(2).

Both the statute and Schedule B provide some guidance regarding how an applicant should conduct the cost-benefit analysis of scattered development. In addition to tax revenue, other public benefits are "increased employment opportunities or the provision of needed and balanced housing accessible to existing or planned employment centers." 10 V.S.A. § 6086(a)(9)(H). For public costs, Schedule B states that "[i]nformation gathered under criteria 5 [highways, waterways, railways, airports and airways], 6 [ability of a municipality to provide educational services], 7 [ability of local governments to provide services], and 9A [Impact of growth] may also be relevant." Some permits indicate that by paying for the extensions of the public infrastructure needed to serve its development, an applicant has then covered many of the otherwise publicly-borne costs. *Id.*, at 3 (citing *Re: Okemo Mountain, Inc. (Master Plan),* #s 250351-30(2nd Revision)-EB, 250351-31EB and 250351-25R-EB, Findings of Fact, Conclusions of Law, and Order at 69 (Feb. 22, 2002)).

Similar to Criterion 9(G), none of Criterion 9(H)'s statutory language specifically references the costs of bringing electricity to the development as a cost that should be accounted for in this calculation. The lack of reference to energy-related costs caused by scattered development may reflect the fact that publicly-borne costs of electricity generation and transmission are within the exclusive jurisdiction of the PSB. Nonetheless, because such costs are both substantial and capable of being determined, 9(H) calculations should include them.

Possible Changes:

For any proposed scattered development or subdivision that will create --- kwh of new electric demand, the applicant is required to determine the cost of building either a distributed generation facility to serve its new electricity demand near its proposed location, or a new transmission line from the nearest generating facility to its development. That cost shall be determined even if such development would not immediately create the need for a utility to build the facility and it shall be included in the applicant's cost calculation under this section.

The applicant does not create a presumption that it has covered the additional electricity-related public costs created by the proposed development or subdivision by paying for the cost of a distribution line to its development or subdivision.

10 V.S.A. § 6086(a)(9)(J) Public Utility Services

Criterion 9(J) contains three slightly different requirements. First, applicants must show that either "necessary supportive governmental and public utility facilities and services are available" or those facilities and services "will be available when the development is completed under a duly adopted capital program." Second, the development must not place "an excessive or uneconomic demand" on the public facilities and services. Third, the town or utility providing the facilities and services must have planned to provide them based on "a projection of reasonable population increase and economic growth." The purpose of 9(J), in conjunction with criterion 9(F), is to give " 'a broad view of the problem of energy conservation and the impact which new developments have on the demand for public utility services.'" *Act 250 Training Manual*, Criterion 9(J) (Public utility services), p. 2 (quoting *Re: Killington 43 Associates*,

#IR0522-4-EB, Findings of Fact, Conclusions of Law and Order at 7-8 (Aug. 20, 1986). The Environmental Board has also stated that this criterion allows the Commissions to look at the cumulative impact of development on public utility services and to help protect rate-payers from "higher additional costs . . . as public utilities are forced to speed up their timetables in the construction of new generating and transmission facilities. *Id.*

To satisfy this criterion, applicants must provide "ability to serve" letters from the utility companies who will serve the development. Occasionally, electric companies have issued Ability to Serve letters with the caveat that the company will be able to serve the development provided that a certain transmission upgrade is approved by the PSB. Developments subject to such Ability to Serves have been permitted, sometimes with the Commission retaining jurisdiction over the project pending the PSB decision. In addition to the Ability to Serves, Schedule B asks applicants proposing commercial, institutional, or industrial development to "indicate how electrical use will be minimized during peak periods of energy demand in the service area for the utility."

Possible Changes:

No applicant will satisfy this criterion if a utility's ability to serve the development or subdivision depends on construction of a project that has not yet been approved by the governmental body responsible for its approval. This criterion shall not be satisfied by any condition stating that the District Commission will retain jurisdiction over the project pending the approval of the utility's needed upgrade. No project shall be permitted unless and until the necessary utility upgrade has been approved by the responsible governmental body and any appeals of such approval have been finally resolved.

The Department of Public Service shall review all electric utility guarantees of ability to serve the proposed development. The Department shall determine whether the utility's ability to serve the proposed development, in addition to the existing demand that the utility already serves, complies with the utility's Integrated Resource Plan as developed and approved under 30 V.S.A. § 218c.

10 V.S.A. § 6086(a)(10) [Conformance with town and regional plans]

Criterion 10 requires proposed development to conform with "any duly adopted local or regional plan or capital program under Chapter 117 of Title 24." This criterion may be relevant in energy planning because municipal and regional plans are required to contain energy components. Depending on the specific town or regional energy plan, Criterion 10 could have energy-related impacts on the Act 250 approval process for a given development.

b. Intersections with Section 218c, Section 248, Chapter 117

Act 250 explicitly requires that any proposed development must conform to local and regional plans. 10 V.S.A. § 6086(a)(10). Because one element of such plans is energy planning, 24 V.S.A. § 4382, and because Act 250 specifies that District Commissions must accept local and

regional review boards' determinations regarding the municipal impact of a proposed development, *id*. § 6086(d), conformity with local and regional plans could have a significant relationship to energy issues under Act 250. Act 250 also provides that municipal and regional planning commissions shall be entitled to party status in permit proceedings. 10 V.S.A. § 6085(c)(1)(C). But even though Act 250 proceedings are bound to reference town and regional plans, and no development will be permitted if it does not conform to those plans, the town and regional energy plan interconnection with Act 250 will only be significant if town and regional plans contain language that would bind a developer to certain energy standards. *See supra* § II.b.

The energy-related criteria of Act 250 do not directly reference Section 248 or Section 218c, which govern utility planning, electric generation or transmission facility construction, and electricity service. Although the utility planning statute was adopted after Act 250 was created, it would aid both land use and utility planning to include references to Section 218c in Act 250 today. In some places, such as Criteria 9(G), (H), and (J), the absence of reference to the utility planning statutes undermines the effectiveness of Act 250's goals. Where Act 250 attempts to save municipalities from being strapped with the risk of taking over failed private utilities, as in Criterion 9(G), it should also assess the risks to the electric utilities who may have to serve any demand created by the failure of a private, on-site electric generation facility. Similarly, in calculating the costs of scattered development (9(H)), a utility's IRP or a mandatory consultation between the applicant and DPS would be useful in determining the costs that rate-payers would incur if the scattered development caused the service utility to upgrade a transmission system or build a new generating facility.

Criterion 9(J), the public utility services criterion, is the Act 250 section where the absence of reference to the utility statutes is most glaring. There are no constraints on utilities' discretion to issue Ability to Serve letters. The 9(J) criterion and the practice of the district commissions do not demand that the applicant demonstrate that the service utility's ability to serve complies with its statutorily mandated IRP. Because the IRP is subject to PSB approval, it is especially important in terms of documenting the Board's determination of reasonable growth for the utility in that area, as well as the costs of that growth and the funding sources available for that growth. Act 250 practice is simply to take a standard Ability to Serve letter as evidence that criterion 9(J) is satisfied. Because those letters do not reference the utility's IRP, and because it is unlikely that the PSB has any control over whether or when a utility may issue Ability to Serves, the 9(J) process is liable to being misused so that both utility and land development may proceed at rates that neither sector had planned.

As a corollary to the lack of any mandatory compliance with a utility's IRP, the District Commissions' ability to permit development based merely on Ability to Serve letters can, in some cases, preempt the Public Service Board's decision-making authority. An especially stark example of this preemption is when a utility issues an Ability to Serve letter, but states that its ability to serve depends on Board approval of a certain project. If District Commissions allow the land development to go forward before the Board decides to approve the utility project, then the commissioners have essentially decided that the Board will have to approve of the project or put the public at risk of electricity outages. This intersection of District Commission and Public Service Board decision-making power needs to be turned into a merging of powers instead of a conflict of powers.

V. Conclusion

This project was conceived when the Land Use Institute and the Institute for Energy and the Environment began to consider the implications of the possible loss of Vermont Yankee and Hydro-Quebec as electricity generation sources for the state of Vermont. As we explored that problem, we realized the extent to which land use and energy development have seriously impacted each other as the State has grown economically and in population. Now we are trying to find ways to tie the planning processes of those two areas together to avoid some of the problems that have arisen from their current status as wholly separate processes. We reiterate that this memorandum is a presentation of *some* of the issues with the state's energy and land use planning processes and *some* of the possible approaches to dealing with those issues. We invite you to come to the Working Group session with new ideas and possible solutions.

Working Group I Appendix: List of Statutes

The Appendix to Working Group I Memo included the text of the following Vermont statutory provisions (omitted here).

APPENDIX A: Section 248
TITLE 30 Public Service
§ 248. New gas and electric purchases, investments, and facilities; certificate of public good.

APPENDIX B: Section 218
TITLE 30 Public Service
§ 218c. Least cost integrated planning.

APPENDIX C: Chapter 117
TITLE 24 Municipal and County Government
§ 4302. Purpose; goals
§ 4305. Council of regional commissions; reviews of state agency and regional plans; reviews of confirmation and approval opinions by regional planning commissions
§ 4306. Municipal and regional planning fund
§ 4325. Powers and duties of planning commissions
§ 4345. Optional powers and duties of regional planning commissions
§ 4345a. Duties of regional planning commissions
§ 4348a. Elements of a regional plan
§ 4350. Review and consultation regarding municipal planning effort
§ 4382. The plan for a municipality
§ 4401. Purpose and authority
§ 4402. Bylaws and regulatory implementation tools authorized
§ 4403. Nonregulatory implementation tools
§ 4410. Regulatory implementation of the municipal plan
§ 4411. Zoning bylaws
§ 4412. Regulation of flood hazard areas
§ 4413. Limitations on municipal bylaws
§ 4414. Zoning; permissible types of regulations
§ 4415. Interim bylaws
§ 4416. Site plan review
§ 4417. Planned unit development
§ 4418. Subdivision bylaws
§ 4419. Unified development bylaws
§ 4420. Local Act 250 review of municipal impacts
§ 4421. Official map
§ 4422. Adequate public facilities; phasing
§ 4423. Transfer of development rights
§ 4424. Shorelands; flood or hazard area; special or freestanding bylaws
§ 4427. Persons eligible to apply for permits
§ 4433. Advisory commissions and committees
§ 4443. Adoption, amendment, or repeal of capital budge and program

§ 4451. Enforcement; penalties
§ 4476. Formal review of regional planning commission decisions

APPENDIX D: Selected Text of Act 250
TITLE 10 Conservation and Development
§ 6086. Issuance of permit; conditions and criteria

Working Group I Summary

MEMORANDUM[10]

TO: Merging the Regulatory Streams Working Group
FROM: Vermont Law School Land Use Institute & Institute for Energy and the Environment
RE: Summary of Comments from October 23, 2007 Working Group Session
DATE: 1/19/2008

I. Introduction

This memo summarizes the comments from the October 23, 2007 Working Group Meeting, "Energy and Land Use: Merging the Regulatory Streams."[11] The headings identify several basic themes that Working Group members discussed. Specific suggestions varied significantly, reflecting the variety of interests affected by these issues. The following attempts to synthesize some of the major ideas and suggestions discussed during the meeting.

We have set November 28, 2007 as the date for our second Working Group meeting, and we invite you back to Vermont Law School to participate in a discussion focused on the changes we may propose in the coming year.

II. General Consensus

A general theme raised throughout the meeting is that more coordination between utility and land use planners is desirable at earlier stages in the planning processes. Coordination at earlier stages would avoid the "last in" problem that everyone agreed is a problem from economic, public policy, and practicality standpoints. If land use determines society's demands for energy, and the current utility process is set up to respond to those demands, then changing the utility process alone will only solve part of our problems. Planning statutes should be amended so that utility decisions do not depend on land use decisions or vice versa, in favor of a more coordinated approach where regulators and planners would consider both sides of the equation. Attendees proposed several, wide-ranging suggestions for bringing utility and land use planners together. Suggestions ranged from amending specific regulatory sections to broadening the

[10] This summary was prepared by Vermont Law students Natalie Firestine and Caitlin Callaghan of the Institute for Energy and the Environment research team, Frank Skiba of the Land Use Institute research team, and Elizabeth Catlin of both teams.

[11] The summary is based on notes from the Introductory Large Group Meeting, all three Morning Small Group Meetings, the Open Season Large Group Meeting, two of the three Afternoon Small Group Meetings, and the Big Picture Comments from the final Large Group Meeting.

focus of planning council considerations to include land use, utility siting, and transportation issues concurrently.

There also appeared to be a general consensus that some oversight at the state level would best accomplish more coordination between the different fields. Again, the suggestions for what type of state oversight and the extent of state oversight differed greatly. However, most agreed that an "open season" styled electric facility permitting process would accomplish more coordination from the different fields and provide a level of state oversight. When the "season" should "open" and how long it would remain open require further consideration. Everyone realized that any changes to regulatory structure must confront the balancing problem of "clarity in language, but rigidity in compliance vs. flexibility in compliance, but vagueness in language."

III. Current Realities

a. For Utilities and Electricity

The Section 248 planning process requires revision. Vermont's electric utilities are no longer vertically integrated. For most utilities, generation is not part of their internal work—they are, and consider themselves, "wire companies." Section 248 was written when the utilities were more like the traditional vertically integrated monopolies. The statute and process contain some background assumptions that the applicants will be vertically integrated utilities, and in that sense, Section 248 is outdated.

For example, Vermont currently has situations where unregulated power providers and transmission lines run through the state, but do not serve the state. Section 248 does not consider these current realities.

In terms of coordination between land use and utility planning processes, the backdrop for utility planning is the Department of Public Service's (DPS) twenty-year electric plan. The Department's plan, however, has no implementation component, which may explain why there is no public engagement in utility planning, and why land use planners do not get involved in utility planning outside of specific Section 248 hearings.

The New England Power Pool (NEPP) essentially functions as a third level of government, and regardless of what the state wants to do in terms of "open season" or other utility planning or permitting innovations, if the NEPP and ISO-NE do not agree, then the state cannot move on its own. Nonetheless, as a player in the region, and a member of the NEPP, Vermont's actions can inform what occurs regionally.

In the electricity world, it is getting harder to discern when problems are the responsibility of the individual distribution utilities (i.e. Green Mountain Power, CVPS), VELCO, ISO-NE, or national reliability. Problems no longer come in a linear fashion, which is how Section 248 is set up to deal with issues. The open season concept would allow regulators and the public to look at all of the players and the problems at once, which would avoid some of the problems that come

from the fragmented approach to demand and reliability problems in the state under the current processes.

b. For Land Use

Chapter 117 currently provides for state coordination of local planning decisions through the Council of Regional Commissions. However, the Council does not exist, meaning that there is no state-level policy coordination on land use in Vermont. The Council is one potential source of providing more state oversight over local planning decisions and a place to establish more coordination between utility and land use planning processes. Senator Lyons iterated that the Legislature cares about more than just local control when it comes to land use decision-making, and § 4305 shows that the legislature did intend coordination at the state level, especially where local decisions may affect policies that are important on a state or region-wide basis. The Council of Regional Commissions, under § 4305, provides a vehicle for implementing more state oversight over local land use planning that would not require amending current statutes.

In terms of encouraging greater public participation, the public generally does not know, or at least care about, what is in its town plan until the time when a development is poised to go in next door. Land use planning is very much driven by private interests whose general attitude is often "more is better."

Municipalities have disfavored adopting building codes. Energy planning and new codes are too much for town planners to implement. Most land use planning is driven by volunteer lay people who need extensive training, but even with training, there is constant turnover. Local commissioners also have limited expertise in energy language and technology. Further, land use permitting entails much more than electric energy efficiency considerations (i.e. transportation, affordable housing, aesthetics). Requiring local planners to focus too much on energy may result in more energy-efficient planning, but may detract from other, equally important land use considerations that are best left to municipalities. Therefore, it is often the private developers who have the most expertise and who can push for certain technologies within communities. Because there are not enough people currently with expertise in energy issues, the Chapter 117 requirements for energy plans at local and regional levels are not met effectively.

Act 250's Best Available Technology standard is vague, and there is no standard approach. In recent practice, BAT means the technology that is commonly used, not the best that is available. Additionally, the statewide building codes, though in existence, are not enforced.

c. Plans/Changes in Motion

The Vermont System Planning Committee (VSPC), which is comprised of VELCO, Vermont's distribution utilities, Efficiency Vermont, the PSD, three public members appointed by the Public Service Board, the Sustainably Priced Energy Enterprise Development Facilitator, and the administrator of Vermont's new initiative to promote renewable energy, is a new group established to work on transmission and reliability planning in the state. VSPC came as a result of the Section 218c amendments and Docket #7081. The statutory amendments required more

transparency in the planning process, a ten year planning horizon for transmission, and a three year cycle for the planning process. The Docket opened a broad policy investigation into the details of the elements of the planning process and the consideration of non-transmission alternatives in meeting reliability needs. The VSPC has its own website[12] to aid in transparency and public participation. The VSPC also takes a twenty-year view in the planning process, which gives a greater opportunity for lead time and resources for investigating non-transmission alternatives.

VSPC and Docket #7081 indicate that the DPS may already be on a path to an open season permitting system. The VSPC sends out requests for proposals (RFP) to respond to a specifically identified reliability need. Existing challenges for the VSPC include coordinating between the various utilities that use the same bulk transmission system and meeting public participation requirements. One practical concern is the difficulty in ensuring that the public gets involved at points in the decision-making process where its input would be most meaningful. Many view VSPC's new process as a positive change, and this project should be mindful not to undermine that progress.[13]

On the land use planning side, the new Growth Center program at the Department of Housing and Community Affairs is encouraging more compact and efficient land use patterns in the communities most affected by sprawl. The designation criteria include addressing infrastructure needs over a 20-year period, which could be construed to cover electrical demand, but that connection is likely to be missed without clarification. Further, Vermont Law School's Land Use Institute has drafted a bill which would implement recommendations from its January 2006 report, *Vermont by Design*.[14] The proposed legislation would establish an Office of Planning Coordination in the Agency of Administration to coordinate local, regional and state agency planning more effectively.

IV. Proposed Ways To Address Problems Presented By Current Realities

In order for there to be more consistency, there must be state standards. Current policies that favor leaving planning decisions to local control must give way to allow for statewide criteria to better meet the public good on issues that have statewide impacts, such as energy siting and source decisions. When statewide criteria are set, there should be a guaranteed pay-back to the developers who can satisfy those criteria—possibly by guaranteeing that a utility will be able to recover the cost of its investment in the project.

The regulatory approach is not the only, and may not be the best, way to change current practices and deal with current problems. Regulation may not be the best solution because it is less efficient to tell people not to do something, than to provide a resource to encourage people to do something. Motivating behavior can often best be dealt with by how costs are allocated. If you want to encourage development, then put the cost of new development (including electricity

[12] http://www.vermontspc.com

[13] For more detailed information on VSPC and other changes currently underway at DPS and with utilities around the state, refer to Appendix A, an email from Riley Allen, which includes a figure prepared by CVPS describing some of those changes.

[14] http://www.vjel.org/books/pdf/PUBS10002.pdf

reliability) on the whole community. If you want to inhibit development, then put the cost of upgrades on the "last in." For example, because ISO-NE views transmission as the best answer to reliability questions, it socializes transmission costs around the region.

Although legislation can put good standards in place, many of Vermont's current problems have more to do with action, implementation, and enforcement than with the standards themselves. Little guidance has been provided on how to apply the existing statutory language. Municipal and regional planners need access to more education and training in energy issues for building and development. However, additional education is cost-prohibitive for many planning bodies. Even where education programs are not cost-prohibitive, it is difficult to distribute education materials throughout the state. Further, local planners are often overwhelmed with the intense range of equally important issues in which they should be "educated." One recommendation for improving implementation would be to combine a couple of statewide codes for new development, namely a building code plus an appliance code, so that compliance with both codes would be deemed compliance with Act 250 and municipal energy efficiency/conservation standards.

An electricity budget or carbon budget for each household and business would be a technology-driving regulatory change. Once a budget is set, the state's energy efficiency utility and the area service utility would assist in managing those budgets. With alternative pricing regulation, like the kind that Green Mountain Power is currently using, the utilities no longer have the same financial incentives to sell more and more electricity and can instead expand their services to include helping customers meet their energy budgets.

One way to effectively meet all of the state's electric needs with the most creative, efficient, environmentally friendly solutions would be for all of the state's utilities to share with each other the projected demand and plan to meet demand for the service area. And this kind of openness may be the only way to ensure that the open season portfolio review process is meaningful. Open season cannot be effective unless all utilities have their plans laid out for other utilities and regulators. Only when that happens will the regulators be able to see how impacts on one part of the state will affect other parts of the state and the service utilities in those areas.

Geographic targeting of energy efficiency could reduce the need for some projects because it can work to provide efficiency funding to areas that are on the brink of needing new transmission or generation. However, if you target geographically, then you need to ensure that the whole state is getting the benefits because it is politically dangerous to target the money when everyone is putting money in to the system. The current reality that the increase in Efficiency Vermont's budget is going to targeted areas, and it is an open question as to whether targeting should be increased or decreased.

Another suggestion for eliminating some burdens of the utility siting process is to provide an information bank on environmental factors for proposed sites. The state could sponsor scientific studies on bird flight paths, endangered species habitat, and other environmental factors relevant to utility siting decisions. If such information were in one place and available to all potential developers, this could eliminate some delay in permitting decisions and remove some of the barriers to constructing wind and hydro-electric generating facilities.

V. Open Season, Portfolio Review Permitting Process

One focal point of discussion revolved around when the season should open. Some suggested that there should be a perpetually open season with specific guidelines or criteria that will steer the types of proposals according to the values of the state. Others favored using a one-time open season in anticipation of the expiration of Vermont Yankee and Hydro-Quebec contracts. Depending on how that one-time season worked, planners could continue to use the process in the future or alter it based on problems encountered during the initial process. Michael Dworkin's proposed version of open season permitting would have a season that opens and closes on specified dates. The Board may then choose from the submitted proposals the one that best meets needs and concerns.

Given the size of the Vermont electricity market, it is unlikely that we would need an open season to occur on any regular time interval. It would not be useful to routinely issue RFPs when there is no need, and then end up choosing no proposal. The other side to that issue is ensuring that anyone who would be interested in contributing proposals knows about the open season opportunity. In order to avoid either of those consequences, a continuously open season may be the best approach. But given the size of the state, and thus the market, it may be hard to attract proposals to serve demand or need with the open season approach

Defining the need in an open season request for proposals (RFP) will be crucial to determining how "open" the season really is. Certain ways of defining the need may steer the solution to being transmission and distribution, instead of alternatives like demand-side management. Additionally, if a need is defined in terms of a certain number of kWh, for example, then small valuable projects may lose in open season review if they cannot meet the full need. The process must ensure that proposals that are able to satisfy the entire defined need have no advantage over good individual projects that can only satisfy part of the need. However need is defined and the process operates, it must ensure that it does not favor any particular kind of solution, especially big transmission and distribution projects.

Section 248 and Section 218c do not present any legal obstacles to pursuing an open season-portfolio review process, but some questioned whether an open season portfolio review format would give better or worse opportunities to raise land use problems than the current Section 248 process. Given that many natural resource issues are site-specific, it may be difficult to adequately address these issues in an Open Season-Portfolio Review context. If they cannot be adequately addressed, then the Open Season process will not be meaningful enough to provide benefits to the energy developers because they will still be required to go through a lengthy site-specific permitting process. Others expressed concern that, given the size of Vermont's electricity market, it may be hard to attract proposals to serve demand or need with the open season approach. If there are not enough submissions to make an open season portfolio review meaningful, then reworking the current process may be counterproductive.

The Open Season system needs to be meaningful, but shorter than a full-blown Section 248 process. Although there will be site-specific issues that cannot be worked out in an Open Season format, it will be efficient to get larger conceptual issues finalized early to support investment in development. But there needs to be some guarantee to the utility that the planning process will

provide some pay-back when the time comes for implementation. If there is no tangible efficiency benefit to the utility in planning or Open Season approval, then there is no reason to participate in those processes. This may be especially true for small utilities or non-utility generators who cannot afford the transaction costs of multiple regulatory processes.
There are additional ways to address peak load that will not be considered in a portfolio review process. Whether or not we adopt an open season system, changes should not re-work the utility process to exclude any of the alternative methods of serving demand.

VI. Efficiency of Current Permitting Systems

The group generally agreed that current Section 248 and Section 248j processes are inefficient and do not make sense for the small, local, subtransmission projects. Small projects that do not have statewide impacts may not be appropriate for Section 248j proceedings, let alone an open season screening.

Some attendees expressed concern that Vermont's regulatory system is too uncertain from the investor's perspective. One way to settle some uncertainty is to establish better coordination between different arenas in the permitting process – DPS, the Board, the ANR, and local and regional planning authorities. The utilities are required to respond to demand, but problems with the incorporated Act 250 criteria can mean that the utility will get different answers from DPS and from ANR.

Another suggestion for reducing uncertainty, and thereby increasing development interest, is to better specify the goals that the state wants to achieve. For example, suppose that the state's ultimate goal is affordable housing. The fact that the state has a specific goal alone potentially attracts more developers because potential investors know what to expect. Again, it is more effective to tell people what the state wants and provide the resources to get there than it is to tell people what not to do.

VII. Energy and land use interactions

Some wondered whether the land use process should be used to define electricity need in an area so that land use planning defines the need for RFPs in Open Season more effectively. Currently, land use law is not a good predictor of future electricity demand. This is true because not every development application will be permitted, not every permit will be built out to the full permissible extent, and not every build-out will be used in perpetuity. Therefore, from the electricity planning point of view, land use permitting data is not a reliable determinant of demand. Utilities need more reliable estimates of demand than current land use practice provides. The VSPC is supposed to coordinate load forecasts between utilities, but there is no provision for sharing those forecasts with land use planners. Likewise, there is no process in place for land use planners to share population and economic growth forecasts with utilities or DPS.

The DPS is currently the agent in charge of reviewing, and to some extent enforcing, the Best Available Technology standard in Act 250. Because life-cycle cost is the underpinning to that

standard, the key is review and enforcement. Since the current practice has stagnated, with "Best Available" turning into "commonly used" (*see supra*, Reality b. Land Use), there needs to be a way to get energy experts/innovators into the land development process to ensure that the standard really is Best Available Technology.

The practice of utilities' issuance of Ability to Serve Letters in the Act 250 process allows utilities to support land use development, then meet that demand by building new energy infrastructure. If there were greater integration between Ability to Serve Letters and utility planning, then it might be possible to identify ways to meet demand without having the utilities build new electricity infrastructure. There should be a standard for Ability to Serve Letter issuance which would recognize the impact of the infrastructure.

The challenge and opportunity of this project (and development in general) is to make land use part of the solution, not just a way to define the need. For example, current land use policies such as the growth center orientation should influence the way utilities plan demand and load forecasts. Town plans should forecast their own energy needs more specifically, and instead of looking to see if the utility can serve them, they should take an active role in helping utilities meet demand forecasts through alternative methods, such as demand-side management or local generation. Better education for land use decision-makers on how to more reliably predict, review, and implement energy considerations during Chapter 117 and Act 250 review could provide for a more efficient permitting process. A heavier focus on utility considerations from the outset could obviate the need for some Section 248 processes.

VIII. Conclusion and Next Steps

On behalf of Vermont Law School's Land Use Institute and the Institute for Energy and the Environment, thank you to all who participated in this meeting. The thoughtful comments and ideas expressed in this memo will play an integral role in proposing legislation and other solutions to provide more coordination between utility and land use planning. We hope to see you all again on Wednesday, November 28 from 10:00 am to 2:00 pm to further discuss these issues. At that meeting, we will build off of the October 23 meeting by asking for new ideas based on this memo and your further reflections on these issues. Please look for another memorandum from us prior to the November 28th meeting to help frame our working group session around potential statutory and regulatory solutions. In the meantime, we encourage you to submit further comments and concerns to Paula Mangold via email at pmangold@vermontlaw.edu.

Working Group I Summary Appendix: Written Comments of Participants

APPENDIX A.

Text of Riley Allen e-mail in follow-up to October 23, 2007 "Energy and Land Use: Merging the Regulatory Streams" Working Group Meeting re. Utility and Statewide Planning Initiatives (with attached figure)

Attached is a figure that summarizes the various utility and statewide initiatives that are taking place related to the long term planning environment. After our meeting the other day, I became concerned that the Department has not done an adequate job of getting the word out on the many substantial planning efforts that are currently underway. I plan to work with our web page designers to address this in some way.

The attached PDF highlights the relationship between the various key ongoing planning initiatives. (CVPS prepared this for its own IRP, but it has relevance to all Vermont utilities.) I expect the legislature to act on the VY petition in the 2009 legislative session rather than during the 2008 session as reflected on the figure.

As noted at the meeting in South Royalton, we also have established the Vermont System Planning Committee. You noted this in your materials as well, but given the substantial effort that went into its development, more could be said about this process. Transmission planning and VSPC material is available at the VSPC web site, the VELCO web site, and the PSB web site. I recommend that you share these materials with the student group that is working on this project. The PSB order establishing the new planning process is on the PSB web site at http://www.state.vt.us/psb/VSPC/main.htm. The background materials related to the establishment of the new transmission planning paradigm are from the Board's lengthy investigation in Docket 7081 at http://www.state.vt.us/psb/document/majorongoing/7081.htm. The VSPC web site is at http://www.vermontspc.com/materials.html. I notified also Jim Dumont of the next meeting, so that he was invited. (He seemed concerned that this was a process that was closed to the public - it is NOT and we have established a subcommittee of the VSPC to explore ways to better include the public in the future). As Aaron and I mentioned at the meeting, this is intended to be a very public planning process and stands in sharp contrast to the ASC processes of the past.

I think the efforts of your group here can have a positive impact on the resource planning environment in Vermont. The details matter, however, and I am also concerned that these initiatives could be disruptive if they are advanced independent of good progress made on other fronts. I think it is important that the proposals blend well with some of the positive efforts and initiatives that are beginning to take hold. As an example, the concept of an "open season" could be given some consideration as part of the VSPC process. This was touched on at our meeting by at least two subgroups. In any event, you probably should be aware of the many substantial DPS/Utility and Legislative planning initiatives that are taking place. Included among the other efforts
are the following:

1. Public Engagement Process (pursuant to H.208 of 2006, status report due November 15, 2007)

2. Utility Generation Feasibility Study (due this Fall)

3. Comprehensive Energy Plan and Update to 20 Year Electric Plan (pursuant to 30 VSA 202(b) and 202b -- due Winter 2008)

4. CVPS/VELCO Southern Loop Public Engagement Process (http://www.cvps.com/AboutUs/news/viewStory.aspx?story_id=61)

5. Vermont Yankee Studies (pursuant to Act 260, due March 2008)

6. 3rd Round of Utility Integrated Resource Plans (pursuant to 218c) (CVPS, GMP and Vermont Marble have filed, VPPSA utilities have partial filings)

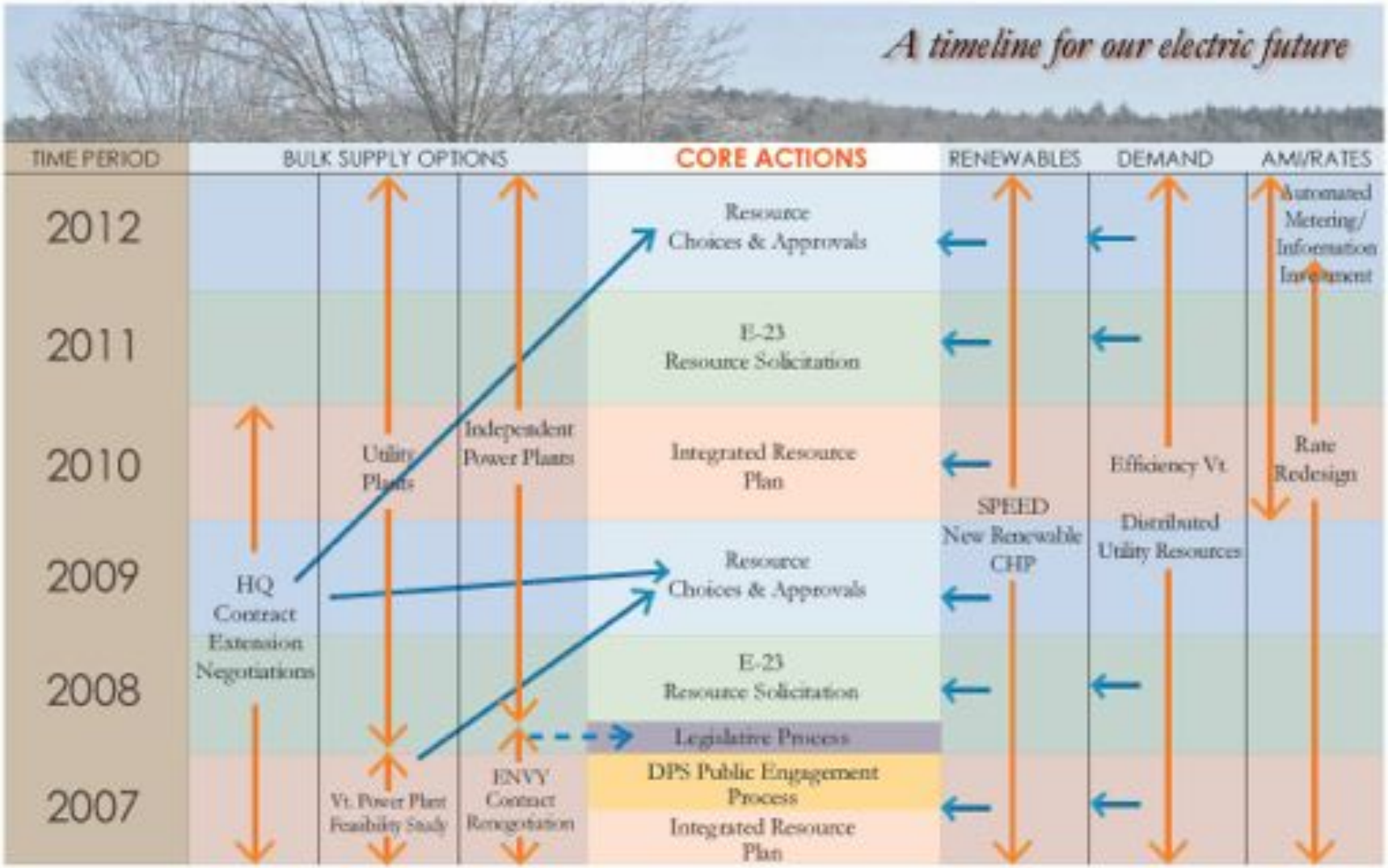
7. SPEED program (actions of the SPEED facilitator are expected in the future)

8. E23 (comprised of the 20 electric distribution utilities and VELCO and are working on coordinated utility initiatives such as planned RFPs as reflected on the PDF)

9. PSB Workshops into the EEU Structure (currently in process and meeting roughly every two weeks, report to Board due in late December)

Obviously the GCCC process may be relevant here as well, the scope of which includes issues related to the replacement of VY and HQ contracts, the promotion of energy efficiency and renewables.

There are, of course, many other regulatory proceedings and planning-related initiatives in progress or recently completed that are designed to reduce barriers and encourage distributed generation. These activities include the SPEED Rule (Rule 4.300 that became effective September 10, 2006) and the revisions to the net metering rules (Effective November 2007 with workshops taking place now to consider further revisions), Section 248 Rule (Rule 5.400 Effective October 15, 2006), the alternative regulations plans of GMP and the CVPS proposal that are designed to break the link between utility financial performance and load growth, consistent with the language of Act 61 passed in 2005. The Board has also been aggressive in pursuing both energy efficiency through the strategic targeting of DSM in geotargetted areas and by increasing the budget of the efficiency utility from $16.5 million in 2004 to $30.75 million in 2008 (see Board Order of August 2006) and in promoting an effective role for VT DSM in the newly established forward capacity markets (through various regional activities promoting these markets and EVT participation in the bids for 2010). There are also other activities related to the EEU planning and budgeting cycle that could be discussed, but this is enough detail to give you a sense for the major planning activities currently in progress.


A timeline for our electric future
TIME PERIOD
BULK SUPPLY OPTIONS
CORE ACTIONS
RENEWABLES
DEMAND
AMI/RATES
2012
2011
2010
2009
2008
2007
Resource Choices & Approvals
E-23 Resource Solicitation
Integrated Resource Plan
Resource Choices & Approvals
E-23 Resource Solicitation
Legislative Process
DPS Public Engagement Process
Integrated Resource Plan
HQ Contract Extension Negotiations
Utility Plants
Independent Power Plants
Vt. Power Plant Feasibility Study
ENVY Contract Renegotiation
SPEED New Renewable CHP
Efficiency Vt.
Distributed Utility Resources
Automated Metering/ Information Investment
Rate Redesign

Text of Aaron Adler e-mail in follow-up to October 23, 2007 "Energy and Land Use: Merging the Regulatory Streams" Working Group Meeting re. Utility and Statewide Planning Initiatives

Both Steve Sease and I enjoyed attending the working group session on 10/23/07. I am sending some comments, largely in response to items having to do with ANR contained in the memorandum that was distributed before the conference.

Several items on page five are mentioned in connection with ANR. On the statement that ANR "lacks a centralized office of policy coordination," ANR is open to considering ideas and ways to improve how it coordinates policy development. It has in fact put in place or is putting in place measures to do so which are not reflected in the memorandum. First, in recent years ANR created two separate positions to address policy coordination, including a Director of Policy Research and Planning and a Regulatory Policy Analyst. The analyst position includes specific focus on ANR's development and presentation of positions in Act 250 and Section 248 proceedings. Second, ANR is presently undergoing a reorganization that has a goal of increasing coordination among the various components of the agency. Part of this reorganization includes an "environmental master" concept under which personnel from one part of the Agency form information conduits to other parts of ANR. For example, ANR's draft task force report on reorganizing various agency components into a Center for Climate Change and Waste Reduction (CCCWR) envisions environmental masters providing input to CCCWR from the Department of Forest, Parks and Recreation and the Center for Watershed Management in order to integrate sustainable forestry practices and watershed management into CCCWR activities as appropriate.

Regarding ANR's participation in PSB proceedings, ANR believes it has participated in those § 248 proceedings that present significant natural resource impacts. While additional resources might increase the level of ANR participation, it would still remain the case that ANR would review cases to determine whether there are potential natural resource impacts and how significant they are likely to be.

ANR does not agree with the statement that it "is behind on permits." ANR is generally meeting its time goals for processing permits. For example, during calendar year 2007 through 10/19/07, ANR issued 94.6 percent of its permit decisions within its target time frames. In addition, major projects (including § 248 projects) may involve multiple design changes *after* ANR permits are issued, requiring project developers to return to ANR for permit amendments or determinations on whether amendments are needed.

The portfolio review concept as discussed in the memorandum and at the conference may be best suited for determinations of need and economic benefit and signaling a general direction to be pursued to resolve a problem. It may be possible to look broadly at natural resource issues in deciding on that general direction, but there is a substantial likelihood that any such review would be problematic and provisional, since those issues typically depend on site-specific conditions. Similarly, it may be possible for ANR to participate in the development of "trade-off criteria" as suggested on page six, but one has to caution that such criteria would involve "apples-to-oranges" comparisons. It may be difficult to form consensus on how much value to

place on a given natural resource or impact or how to compare, or assign comparable values to, different categories of natural resources or impacts.

Thanks for the opportunity to participate and comment.

Aaron Adler

Senior Environmental Litigation Attorney
Vermont Agency of Natural Resources

Working Group II Memo

Memorandum Regarding Proposed Changes to Land Use and Electric Utility Planning and Permitting Processes[15]

November 28, 2007
10:00 am – 2:00 pm

I. Introduction

Vermont Law School's Land Use Institute and Institute for Energy and the Environment, with the assistance of a grant from the Windham Foundation, are hosting a second working group meeting on November 28, 2007 to discuss statutory and administrative solutions to the problems that arise from the current separation of the utility planning and siting processes from the land use planning and development regulatory processes. This session will serve as a follow-up to our October 23, 2007 working group meeting where we focused on identifying problems with the current systems and began to develop ideas for handling those problems. At this second meeting we plan to discuss the merits and drawbacks of specific proposals for change at the statutory, regulatory, and administrative education and training levels that we have gleaned from the October 23rd session. The possible changes contained in this memorandum do not necessarily represent the views or positions of the Institute for Energy and the Environment or the Land Use Institute; rather, they represent some of the views we heard at Working Group I and some ideas for change that the Institutes have been working with over the past year.

In this memorandum, we raise possible statutory, regulatory, and implementation changes to the land use and utility planning processes (Chapter 117 and Section 218c) as well as to the land use and utility permitting processes (Chapter 117, Act 250, and Section 248). The potential changes are aimed at furthering our policy goals of minimizing new electricity demand across the state, encouraging clustered growth around areas that already have the infrastructure able to serve new demand, and encouraging new, in-state electricity generation to be built in areas that will minimize adverse land use impacts. To reiterate our request in our first Working Group memorandum: please interpret these possible changes as idea-provoking, not as final (or even fully-thought-out) solutions. However, given that these proposals are the product of ideas we heard from our first Working Group meeting, we are more interested in specific feedback on these ideas than on breaking entirely new ground at this second meeting.

[15] This memorandum was prepared by Vermont Law students Natalie Firestine and Caitlin Callaghan of the Institute for Energy and the Environment research team, Frank Skiba of the Land Use Institute research team, and Elizabeth Catlin of both teams.

II. The Matrix of Proposed Changes

PLANNING CHANGES

	§ 218c: Utility Resource Planning	Chapter 117: Municipal & Regional Review
Statutory Changes	**Ensuring Statewide Oversight and Consistency** • Existing law sufficiently covers these concerns	**Ensuring Statewide Oversight and Consistency** • Reinstate the Council of Regional Commissions established by 24 V.S.A. § 4305, OR • Repeal 24 V.S.A. § 4305 & implement Office of Planning Coordination bill, OR • Update regional confirmation and plan approval process to include energy planning, with funding implications.
	Changes to Plan Components and Review • Strengthen the § 218c utility planning process to pay closer attention to long-term utility planning	**Changes to Plan Components and Review** • Amend 24 V.S.A. § 4306 to precondition fund disbursement for municipal and regional planning efforts on stricter standards • Amend 24 V.S.A. § 4350 to create a more rigorous Municipal and Regional Confirmation Process
	Regulatory Body Membership and Parties to Administrative Proceedings • Amend 30 V.S.A. § 218c(b) to require utilities to submit proposed plans to all Municipal and Regional Planning Commissions within the service area of the regulated electric or gas company and require the Board to give due consideration to the comments and testimony of the commissions	**Regulatory Body Membership and Parties to Administrative Proceedings** • Amend 24 V.S.A. §4305(a), §4342, §4345a(5)(H) membership criteria, and/or implement Office of Planning Coordination bill to include utility planners in the land use planning process
Education & Training	• Recent PSB outreach proceedings pursuant to 2006 law starts to address public education on energy and utility issues • PSB should consider training of utility personnel in land use matters as legitimate for cost recovery in rate cases.	• Provide a more focused educational initiative for land use planners using training materials provided by the Vermont Land Use Education & Training Collaborative, and distributed through the Regional Planning Commissions

PERMITTING CHANGES

	§ 248: Energy Facility Siting	Act 250: Land Use Development/Siting	Chapter 117: Municipal & Regional Review	Open Season: § 248 & § 218c
Statutory Changes	• Ensure that projects that have been assessed with care in § 218c plans will benefit in the § 248 Certificate of Public Good process • Create a process by which utilities and electricity developers and their investors have more certainty regarding acceptable sites for different types of generation projects • Full return on investment to any utility that invests in certain types of generation • State agencies would pre-screen potential sites for natural resource issues: water, air, wildlife, historic • Identify projects that could be moved to CPG processes that are more expedited than § 248j processes in order to reduce transaction costs for distributed generation	• Amend Act 250 Criteria 9(F), 9(G), 9(H), and 9(J) to require Efficiency Vermont/DPS to be a party to all Act 250 proceedings and shall comment on the development or subdivision's compliance • Amend Criterion 9(F) requirements for Best Available Technology and Life Cycle Cost calculations • Add 9(G)(2) to acknowledge and encourage the possibility that developments can rely on on-site electricity generation, which, if it were used purely on-site and not attached to the grid, would fall outside of the PSB's § 248 jurisdiction • Amend 9(H) so that the applicant does not create a presumption that it has covered the additional electricity-related public costs created by the proposed development or subdivision by paying for the cost of a distribution line to its development or subdivision • Add 9(G)(2) to provide criteria regarding the cost of generation or transmission upgrades caused directly or indirectly by proposed scattered development • Amend 9(J) to state that no applicant will satisfy this criterion if a utility's ability to serve the development or subdivision depends on construction of a project that has not yet been approved by the governmental body responsible for its approval; the DPS shall review all electric utility guarantees of ability to serve the proposed development • Amend Criterion 10 to reflect our proposed amendments to Ch. 117, encouraging towns to create Greenhouse Gas Budgets	• Conditional Uses – Amend § 4414(3) to add a provision stating that conditional uses shall not have an undue adverse effect on state, regional, or municipal energy conservation and efficiency programs • Site Plan Review – Amend § 4416 to require municipal planning bodies to consider energy efficiency and conservation in addition to the other listed considerations as part of their site plan review process • Subdivision Bylaws – Amend § 4418(2) to change the permissive "may" to "must" in order to require that municipalities adopt specific development standards to promote energy conservation and to permit the utilization of renewable energy resources	• Broaden the § 248 process by giving competing proposals an opportunity to be considered by the PSB in response to any major § 248 filing • Strengthen the § 218c resource planning process by requiring that the least cost integrated plans specify the kinds of projects or contracts that the utility will undertake to serve need, or to specify the decisional processes that the utility will use to choose projects or contracts that they may need

PERMITTING CHANGES

	§ 248: Energy Facility Siting	Act 250: Land Use Development/Siting	Chapter 117: Municipal & Regional Review	Open Season: § 248 & § 218c
Regulatory Changes: Rulings & Rulemakings		• Change District Commission training guide to account for "strong evidence" changes and Best Available Technology definition change • Implement Life Cycle Cost Evaluation changes, including obtaining cost of energy updates • Ensure Commissioners are educated on § 248 jurisdiction limitation, types of on-site generation available, avoided costs and benefits, and risks of certain projects • Require District Commissions to invite comments and testimony from the service area electric utility and DPS regarding current capacity, existing infrastructure, timing, and projections of population and economic growth, the utility's § 218c plan, need upgrades, and the costs of the upgrades • Require District Commissioners to understand the "need" component of § 248 for land use projects that increase electricity demand • Require Act 250 applications to include information on proposed development's ability to comply with the towns GHG Budget (if any)	• Amend § 4414(3) to include findings regarding undue adverse effect on energy conservation programs under conditional use review • Amend § 4416 to include consideration of provisions for energy conservation and efficiency in site plan reviews • Amend § 4418 to move the adoption of standards that promote energy conservation in subdivision regulations from the permissive to a required element	• Broaden § 248 into "open season" through rulings and rulemaking • Implement concepts for converting § 218c process into "open season"

PERMITTING CHANGES

	§ 248: Energy Facility Siting	Act 250: Land Use Development/Siting	Chapter 117: Municipal & Regional Review	Open Season: § 248 & § 218c
Education & Training		• Include workshops or presentations by Efficiency Vermont and DPS in annual District Commissioner Training • Require District Commissioners to learn how to read and understand § 218c least cost integrated plans so they can determine whether the utilities' ability to serve guarantees are consistent with their § 218c approved plans • District Commissioners may need extra training to understand and be able to work with any technical language of GHG budgets or measurements	• Develop a focused educational initiative through the Land Use Education & Training Collaborative and distributed through the regional planning commissions on applying energy conservation and efficiency in local development review • Educate and train land use planners to evaluate the impacts of potential development on utilities the same way utility planners evaluate new investments	• The Legislature should allocate funds from appropriate resources to educate decision-makers in land-use and planning to better understand and define the need that the request for proposals addresses

III. The Planning Processes

a. Statutory Changes

1. Ensuring Statewide Oversight and Consistency

As reflected in the memorandum summarizing the first Working Group Meeting, there is a general consensus that some oversight at the state level is the best way to achieve more coordination between land use and utility planning processes. The Public Service Board provides that oversight and consistency for utility planning, but there is no similar state-level oversight of municipal and regional planning. We present three potential solutions for the land use side.

A. Reinstate the Council of Regional Commissions established by 24 V.S.A. § 4305.

Perhaps the easiest way to establish state oversight is to re-implement what is already there. Section 4305 of Chapter 117 establishes the Council of Regional Commissions, but the Council has not existed for over a decade due to lack of funding.

The Council, as described in statute, has the authority to:

- provide mediators to resolve disagreements concerning planning issues between municipalities, regional planning commissions, and/or state agencies;
- review proposed regional plans and plan amendments to determine if the plans
    - satisfy the statutorily required elements,
    - are compatible with adjoining regions' plans,
    - are consistent with the goals established in 24 V.S.A. § 4302 (Act 200),
    - and are compatible with approved municipal plans;
- review state agency plans and amendments to determine whether they are:
    - compatible with other state agencies' plans,
    - consistent with Act 200,
    - compatible with regional plans and municipal plans;
- make rules, to establish a formal review process to conduct the above tasks, which would provide for consistent, statewide application of standards that the Council adopts and allow for public participation in the process.

In order to reinstate the Council, someone must lobby for funding. The legislature may be more amenable to reinstating the Council if Chapter 117 is amended to allow the Council to do more in terms of coordinating land use and utility planning efforts.

Specific Suggestion for Change to Statute

- **Add 24 V.S.A. § 4305(h)** – The Council has the authority or duty to review utilities' Section 218c least cost integrated plans and Section 248 applications to ensure that they are consistent with municipal, regional, and state agency plans and Act 200 goals.

B. Office of Planning Coordination Bill.

An alternative is to repeal 24 V.S.A. § 4305 and adopt a bill that the Vermont Law School Land Use Institute and others will submit to the 2008 session of the Vermont Legislature with the purpose of implementing certain changes recommended in *Vermont by Design* (2006), the report of the Vermont Council on Planning. The bill would establish an Office of Planning Coordination in the Agency of Administration.

The Office's responsibilities would include:

- coordinating state agency planning to assure consistency with Act 200 goals;
- taking over the review functions of the Council of Regional Commissions per amendments to 24 V.S.A. § 4305;
- compiling and reporting annually on the overall state of compliance of municipal, regional, and state agency plans with the planning goals of Act 200;
- providing technical planning assistance as needed and serving as a data clearinghouse for planning information;
- staffing an expanded "planning" (formerly development) cabinet;
- and, possibly convening the planning directors of all state agencies as a working group.

The bill further provides that before the secretary of administration delivers an agency or department budget to the governor, the secretary must review the Office's analysis of the agency or department plan and will deliver the budget only if the plan complies with the Act 200 goals and other plans or there is a satisfactory explanation of noncompliance.

The current draft is attached as Appendix A. A revised draft is being prepared with the assistance of the Office of Legislative Counsel. The equivalent of the suggested 24 V.S.A. § 4305(h) (above) should be incorporated. The bill will require lobbying support for both passage and funding.

C. Regional Confirmation and Plan Approval Process with Funding Implications.

Chapter 117 requires that municipalities be confirmed by regional planning commissions before municipalities may be eligible to receive planning funds (see 24 V.S.A. §§ 4350 and 4306(b)). But there is no analogous process for regional planning commissions and regional planning commissions are essentially guaranteed funds as long as they have adopted a regional plan. Given that there is no state oversight body that reviews regional plans (see I.a.1.A and B above), the state has no assurance that regional plans are rigorous, satisfy all statutory criteria, and are consistent with adjacent regions and included municipalities' plans. A regional confirmation and

plan approval process carried out by a state-level regulator would ensure consistency across the state in satisfying the state's planning goals.

Specific Suggestions for Change to Statute

- **Add 24 V.S.A. § 4349 (new statutory section)**: Create a regional planning commission confirmation process and regional plan approval process similar to 24 V.S.A. § 4350 (the municipal confirmation and plan approval statute), which would be carried out by a state oversight body (i.e., the Council of Regional Commissions or the Office of Planning Administration), and which would be a prerequisite to the receipt of any regional planning funds by a regional planning commission. This statute should include similar energy planning criteria as those suggested below (I.a.2.B) for the municipal confirmation process under 24 V.S.A. § 4350.

2. Changes to Plan Components and Review

Working Group I expressed that the State can effectively promote positive change by clearly expressing priorities for development (rather than by telling the regulated community only what it is not allowed to do). With this principle in mind, to promote more energy-conscious land use planning, the state can either add more energy-specific language to the Chapter 117 sections that address municipal and regional plan requirements, or add such language to the sections that deal with distribution of state planning funds. In terms of electric generation planning, the state can promote more rigorous planning efforts by utilities (and more thorough planning review and participation by the Public Service Board, Department of Public Service, and the public) by specifying planning timeframes, and by guaranteeing that sufficiently detailed plans will create presumptions of satisfying certain Section 248 criteria in the utility's applications for generation development or power purchases.

A. 24 V.S.A. § 4306. Fund Disbursement for Municipal and Regional Planning Efforts,

Currently, the prerequisites for municipalities to receive funds from the Municipal Regional Planning Fund are stated in general terms. Laying out more specific prerequisites to receiving funds—such as reducing energy consumption by a specific percentage or completing more technically reliable municipal plans on which the DPS and other utility planners can rely—would promote statewide consistency and "incentivize" more rigorous energy planning. Regional planning commissions are not subject to the same competitive process for planning funds, but such a change, combined with the possible revisions to the confirmation and plan approval process (I.a.1.C, above), would be a powerful tool to increase energy efficiency and renewable energy planning at the regional level.

Specific Suggestions for Change to Statute

- **Add/Overall**: Recommend increasing the fund to account for new funding categories.

- **Amend 24 V.S.A. § 4306(b)**: Create a category of funding for regional planning commissions which will be distributed through a performance-based competitive program administered by the department for the assistance of the regional planning commissions. To qualify for funds, a regional planning commission shall be confirmed by a state-level "council" and shall have an approved plan under § 4349 of this title.

- **Add 24 V.S.A. § 4306(b)(4)**: Require as a pre-condition to receiving municipal funds that municipalities must enact bylaws or a building code aimed at addressing energy efficiency, or adopt a greenhouse gas budget.

- **Add 24 V.S.A. § 4306(b)(5)**: Require as a pre-condition to receiving municipal or regional funds that the energy component of a municipal or regional plan meet a certain level of technical specificity and reliability. One way of doing this would be for the state oversight authority (whether the Council of Regional Commissions or the Office of Planning Coordination, see I.a.1.A and B above) to establish a method for forecasting energy demand. Another possible way would be to reward municipalities or regional planning commissions post hoc for their accuracy in energy demand forecasting or remaining below any greenhouse gas or electricity budget.

- **Add 24 V.S.A. § 4306(b)(6)**: Regardless of whether a municipality or regional planning commission is confirmed or is developing a municipal or regional plan, municipalities or regional planning commissions may apply to a funding category exclusively to research and implement greenhouse gas budgets for households or businesses. Such an amendment would be consistent with the current exception that allows municipalities to receive funds for mapping roads, trails, and unidentified corridors. This suggestion is admittedly largely experimental and we realize that the municipal and regional planning fund is already too small to support all planning priorities.

B. 24 V.S.A. § 4350 Municipal Confirmation Process

Municipalities must be confirmed pursuant to 24 V.S.A. §4350 in order to receive funds from the Municipal Regional Planning Fund (see I.a.2.A above). The confirmation process thus presents another opportunity to achieve greater emphasis on electricity issues across all regions statewide. Currently, in order to be confirmed, a municipality must only demonstrate to the regional commission that it is engaged in a continuing planning process that will result in a municipal plan consistent with Act 200 goals, and demonstrate that it is maintaining efforts to provide local funds for municipal and regional planning purposes. The possible changes in this section should be mimicked in a new statutory section covering regional planning commission confirmation (see I.a.1.C, above).

Specific Suggestions for Change to Statute

- **Amend 24 V.S.A. § 4350**: add more requirements to the confirmation process. The amendments would likely look very similar to those suggested for the Section 4306 amendments, above.

- **Amend 24 V.S.A. § 4345a(6)**: require Regional Planning Commissions update Implementation Guidelines to incorporate planning for energy conservation, energy efficiency, and provision for future energy needs.

- **Amend Act 200 at 24 V.S.A. § 4302(c)(7)**: make the energy efficiency and renewable energy goal more specific and quantitative so that a municipality would not be confirmed unless it can demonstrate that its planning process will result in a plan that achieves the specific efficiency and renewable energy specifications in Section 4302(c)(7).

C. Strengthening the Section 218c Utility Planning Process[16]

The following statutory changes to Section 218c may encourage the utilities, the public, the Department of Public Service, and the Public Service Board to pay the kind of serious attention to long-term utility planning that we think is necessary to bring the state into the post-Vermont Yankee and potentially post-Hydro-Quebec (or at least post-inexpensive-Hydro-Quebec) years:

Specific Suggestions for Change to Statute

- **Amend 30 V.S.A. § 218c(a)(1)**: Require that the utility's calculations of the public's need for energy services be consistent with/conform to municipal and regional plan projections of economic and population growth as well as the utility and energy elements of those plans.

- **Amend 30 V.S.A. § 218c(b)(1)**: basically identical to current § 218(b) with imposed timeframes for planning:

    - Each regulated electric or gas company shall prepare and implement a least cost integrated plan for the provision of energy services to its Vermont customers every three years. Proposed plans shall include planning horizons of five, ten, fifteen, and twenty years. Proposed plans shall be submitted to the Department of Public Service and the Public Service Board. The Board, after notice and opportunity for hearing, may/shall approve a company's least cost integrated plan

[16] The new Vermont System Planning Commission is already undertaking the task of dealing with least cost planning and non-transmission alternatives for the transmission system under Section 218c(d). The Department of Public Service has expressed a strong desire that our work here not interfere with the VSPC process, especially since the Commission is so new. But we might examine that model more closely to see if it is the kind of approach that could work for generation and other methods of meeting demand.

The virtues of a VSPC-type system for generation and demand-response would be that it would provide a forum where each utility's plan for meeting demand would be open to every other utility and DPS and the public. At Working Group I, Burlington Electric Department expressed that such openness is desirable and even necessary in order for the state to assess the demand forecasts and response capabilities of different utilities, as well as the effects of the utilities' plans on their counterparts around the state. The VSPC process must involve much of that kind of information gathering and sharing itself in order to produce the five, ten, fifteen, and twenty year transmission plans. Therefore, the generation and non-transmission demand response planning of the utilities could remain the work of each individual utility using the information shared in the VSPC process.

if it determines that the company's plan complies with the requirements of subdivision (a)(1) of this section.

- In the event that the Board does not approve a company's plan, the Board shall provide written notice to the company stating its reasons for non-approval of the plan.

- If the Board neither approves nor denies approval of a plan within nine months of the plan's submission to the Board, the plan shall be deemed approved.

- **Add 30 V.S.A. § 218c(b)(2)**: Regulated electric and gas companies are required to update their approved plans at least every five years, or within nine months of a request to do so made by either the Public Service Board or the Department of Public Service.

- **Add 30 V.S.A. § 218c(b)(3)**: Any least cost integrated plan that includes specific purchases of, investments in, or construction of generation, and that is approved by the Public Service Board, shall create a presumption of compliance with 30 V.S.A. §§ 248(b)(2), (4), (6), (7), and (10) in that electric or gas company's application for a Certificate of Public Good for the purchase, investment, or construction specified in the approved least cost integrated plan.

3. Regulatory Body Membership and Parties to Administrative Proceedings

One product of the historical separation of the land use and energy regulatory processes is that most actors in the land use community have little training or expertise in electrical energy issues and most actors in the electric energy world have little training or expertise in land use matters. A remedy to this problem would be to include members of each community in the planning processes of the other.

Specific Suggestions for Change to Statute

- **Amend 24 V.S.A. § 4305(a)**: Amend Council of Regional Commissions membership to include a member from DPS, Efficiency Vermont,[17] or both.

- **Office of Planning Coordination Bill**: include in its membership provisions that one member of the staff responsible for reviewing municipal, regional, and state agency plans shall be appointed from DPS or Efficiency Vermont, or will otherwise be an expert in electricity planning.

[17] We are unsure if the Legislature can require that Efficiency Vermont be a party to any land use or utility proceeding without necessitating a renegotiation of the company's contract. We note that in order for Efficiency Vermont to participate in any of the proceedings we discuss in this memorandum, its participation must fall within the terms of its contract with the Public Service Board. If the participation we are advocating does not reasonably satisfy the terms of its contract, VEIC will not be paid for its work unless VEIC and the Board re-negotiate the contract under the direction of the Legislature.

- **Amend 24 V.S.A. § 4342**: Each regional commission shall include at least one member of DPS, Efficiency Vermont, or some qualified expert in electricity planning.

- **Add 24 V.S.A. § 4345a(5)(H)**: In addition to regional commissions' current duties, require that regional commissions consult with DPS, Efficiency Vermont, the area service utility and/or VELCO when creating and making decisions regarding the energy and utility elements of municipal and regional plans.

- **Amend 30 V.S.A. § 218c(b)**: Proposed plans shall be submitted to the Department of Public Service, the Public Service Board, all municipal and regional planning commissions within the service area of the regulated electric or gas company, and/or the Council of Regional Commissions/Office of Planning Coordination. The Board shall give due consideration to the comments and testimony of the municipal and regional planning commissions.

b. Education and Training

Most local land use decision-makers do not know how to apply energy conservation and efficiency criteria to projects under review in their jurisdictions. 24 V.S.A. § 4345a currently requires regional planning commissions to provide technical and legal assistance to municipalities within the respective regions. The regional commissions do a good job of providing education, but these efforts are not enough. A more focused educational initiative using training materials provided by the Vermont Land Use Education & Training Collaborative and distributed through the regional planning commissions could address this education gap.

Education materials should focus on expected energy costs rather than past energy costs. Additionally, the materials should train local planners how to compare potential investments based on life-cycle costs (i.e., considering both initial cost and annual costs for fuel, operations, and maintenance) rather than on the basis of initial investment cost alone. Planners should learn to make planning decisions by comparing the net present value of investments in energy efficiency with the net present value of avoiding such investments. In essence, land use planners should learn to evaluate the impacts of potential development on utilities the same way utility planners evaluate new investments. Such an education effort would require budgetary assistance.

New law from the 2006 legislative session provides that the Department of Public Service is conducting more public outreach to educate the public on energy and utility issues. The Public Service Board should consider training in land use matters as legitimate for cost recovery in rate cases. And similar to the training that land use planners should have in energy issues, the PSB and DPS should be provided with focused educational materials on the land use implications of facility siting.

IV. The Permitting Processes

a. Municipal Permitting Processes under Chapter 117

- **Conditional Uses** – Municipalities may enact bylaws regulating conditional uses under § 4414(3). This subsection should be amended to add a provision stating that conditional uses shall not have an undue adverse effect on state, regional, or municipal energy conservation and efficiency programs.

- **Site Plan Review** – The site plan review section (§ 4416) should be amended to require municipal planning bodies to consider "provision for energy efficiency and conservation" in addition to the other listed considerations as part of their site plan review process.

- **Subdivision Bylaws** – The subdivision bylaw section (§ 4418) is currently too permissive. Section 4418(2) should be amended to change the permissive "may" to "must." This change is especially important to § 4418(2)(C) which should require that municipalities adopt specific development standards to promote energy conservation and to permit the utilization of renewable energy resources.

b. The Act 250 Process

The following Act 250 subcriteria directly or indirectly address electric energy issues. After introducing the full text of each criterion, we raise potential statutory and administrative changes to address the problems inherent in current statute and practices. Appendix B of this document is a possible revised version of the Act 250 Application Form, Schedule B, addressing the same problems in a different format.

One overarching change we suggest is that Efficiency Vermont/the Department of Public Service shall be a party to all Act 250 proceedings and shall comment on the development or subdivision's compliance with Criteria 9(F), 9(G), 9(H), and 9(J).

> **(9)(F) Energy conservation. A permit will be granted when it has been demonstrated by the applicant that, in addition to all other applicable criteria, the planning and design of the subdivision or development reflect the principles of energy conservation and incorporate the best available technology for efficient use or recovery of energy.**
>
> ***Specific Suggestions for Change to Statute***

- **Add 9(F)(2)**: Best available technology means:
    - the most stringent technology available, either through normal or specialized construction and supply channels,

- for minimizing energy demand from utilities and for reducing the project's overall demand for energy.

- Such technology shall/may include on-site energy sources, combined heat and electric generation facilities, whole building or subdivision design elements, as well as insulation factors and other traditional technologies.

- **Add 9(F)(3)**: Life cycle cost calculations shall be independently verified by the Department of Public Service/Efficiency Vermont.

    - When comparing life cycle cost of potential technology compared to life cycle cost caused by the applying development if it does not use such technology, include costs of upgrading transmission or generation facilities that would be needed if the energy-saving technology were not used.

    - Use energy prices as forecast for the expected life of the applying project, rather than past energy prices, in calculating life cycle cost

Changes to Administrative Practice/Training

Change District Commission training guide so that conformance with Vermont's Commercial Building Energy Standards alone no longer counts as "strong evidence" that a project complies with criterion 9(F) and conformance with the Residential Building Energy Standards does not create a presumption of compliance with the criterion.

The training guide should also omit the definition of Best Available Technology (BAT) as "proven building practice or design" and materials that are available through "normal construction and supply channels." By omitting that definition, the Department of Public Service and the district commissions will share the lowest life cycle cost definition of BAT.

Implement the practice that life cycle cost calculations shall be independently verified by the Department of Public Service/Efficiency Vermont, and that those calculations include the utility-borne and publicly-borne costs of upgrading the transmission or generation facilities and services that would be necessary to serve the development or subdivision if a given best available technology measure were not implemented. The Department did undertake the life cycle cost calculation job during some time periods in the past, and presumably nothing is blocking it from being in that position again, but time and budget constraints may prevent DPS from contributing to today's Act 250 proceedings in the same way it has during other times.

Commissions will obtain cost of energy updates for every Act 250 proceeding, either from the Department of Public Service or Efficiency Vermont or the area electric utility. Those updates will include information regarding the cost of energy for the past 5-10 years and forecasts of energy costs in order to calculate life cycle costs. Include workshops or presentations by Efficiency Vermont and the Department of Public Service in annual District Commissioner training.

(9)(G) Private utility services. A permit will be granted for a development or subdivision which relies on privately-owned utility services or facilities, including central sewage or water facilities and roads, whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, the privately-owned utility services or facilities are in conformity with a capital program or plan of the municipality involved, or adequate surety is provided to the municipality and conditioned to protect the municipality in the event that the municipality is required to assume the responsibility for the services or facilities.

Specific Suggestions for Change to Statute

- **Add 9(G)(2)** *(to acknowledge and encourage the possibility that developments can rely on on-site electricity generation, which, if it were used purely on-site and not attached to the grid, would fall outside of the Public Service Board's Section 248 jurisdiction)*: For a proposed development or subdivision which relies on privately-owned electricity generation that is used solely on-site, the applicant must demonstrate that the electric services or facilities conform to the least cost integrated plan (30 V.S.A. § 218c) of the electric utility that serves the area in which the development is located. If the privately-owned generation does not so conform, then the applicant must demonstrate that the private generation conforms to the energy and utility elements of any affected municipal and regional plans.

Changes to Administrative Practice/Training

Ensure that Commissioners understand that electricity generation that is used solely on-site will not pass through Public Service Board processes because of the limits in Section 248 jurisdiction. Educate District Commissioners on the types of on-site electricity generation available, from renewables to fossil fuel-based generators, and including co-generation, so that they are prepared to inquire into whether developers have considered the possibilities. Provide updates to the Commissioners on avoided costs and benefits of such generation, as well as the risks of unsound construction and materials.

(9)(H) Costs of scattered development. The district commission will grant a permit for a development or subdivision which is not physically contiguous to an existing settlement whenever it is demonstrated that, in addition to all other applicable criteria, the additional costs of public services and facilities caused directly or indirectly by the proposed development or subdivision do not outweigh the tax revenue and other public benefits of the development or subdivision such as increased employment opportunities or the provision of needed and balanced housing accessible to existing or planned employment centers.

Specific Suggestions for Change to Statute

- **Amend 9(H)**: The applicant does not create a presumption that it has covered the additional electricity-related public costs created by the proposed development or subdivision by paying for the cost of a distribution line to its development or subdivision.

- **Add 9(H)(2)**: For any proposed scattered development or subdivision that will require electricity delivered through distribution and transmission facilities, the applicant is required to determine the cost of upgrading both transmission and generation as necessary to serve that area. That cost shall be independently verified by the Department of Public Service/the area's electric utility, and it shall be determined even if such development would not immediately create the need for a utility to build the facility. The verified cost of the generation or transmission upgrade shall be included in the applicant's cost calculation under this section.[18]

Changes to Administrative Practice/Training

District Commissions will invite comments and testimony from the service area electric utility and the Department of Public Service regarding the current capacity of the existing infrastructure to serve the proposed scattered development, the timing, based on projections of population and economic growth and the utility's Section 218c plan, of when the infrastructure would need upgrades, and the costs of the upgrades.

> **(9)(J) Public utility services. A permit will be granted for a development or subdivision whenever it is demonstrated that, in addition to all other applicable criteria, necessary supportive governmental and public utility facilities and services are available or will be available when the development is completed under a duly adopted capital program or plan, an excessive or uneconomic demand will not be placed on such facilities and services, and the provision of such facilities and services has been planned on the basis of a projection of reasonable population increase and economic growth.**

Specific Suggestions for Change to Statute

No applicant will satisfy this criterion if a utility's ability to serve the development or subdivision depends on construction of a project that has not yet been approved by the governmental body responsible for its approval. This criterion shall not be satisfied by any condition stating that the District Commission will retain jurisdiction over the project pending the approval of the utility's needed upgrade. No development or subdivision shall be permitted under this chapter unless and until the necessary utility upgrade has been approved by the responsible governmental body and any appeals of such approval have been finally resolved.

[18] This change reflects something of the "last in" cost sharing approach, which may be criticized for discouraging development or punishing later developers unfairly to the comparative advantage of earlier developers; however, because this applies only to scattered development, which the State is already battling on different fronts, this kind of cost allocation promotes a statewide policy of clustering growth, and does not discourage all types of development or growth. Additionally, the cost calculation does not imply that the developer will actually bear the costs, it only ensures that the District Commissioners are aware of the full extent of electricity related *publicly*-borne costs of scattered development.

Note that the Public Service Board's existing line-extension rules already lead to the direct assignment of most, but not all distribution costs associated with new development. To the extent that distribution costs are not fully recognized in line extension cost assignments, they should be considered with transmission and generation assignments, as "publicly-borne" costs.

The Department of Public Service shall review all electric utility guarantees of ability to serve the proposed development. The Department shall determine whether the utility's ability to serve the proposed development, in addition to the existing demand that the utility already serves or has promised to serve for other pending developments, complies with the utility's Least Cost Integrated Plan as developed and approved by the Public Service Board under 30 V.S.A. § 218c.

Changes to Administrative Practice/Training

At the broadest level, District Commissioners need to understand that by approving land use projects that increase electricity demand, they are contributing to the weight that "need" has in the calculations that the Public Service Board makes when exercising Section 248 jurisdiction to determine whether utility proposals serve the public good. It will also be important for District Commissioners to recognize that even if they retain jurisdiction over a project pending Public Service Board action, the utilities and the Board will likely still calculate the need for electricity infrastructure upgrades based on the approved development. Thus, retaining jurisdiction does not diminish the impact of their approval of the project on the Public Service Board's Section 248 jurisdiction.

District Commissioners will need to learn how to read and understand Section 218c least cost integrated plans so that they can judge whether applicants have accurately represented whether the utilities' ability to serve guarantees are consistent with their Section 218c approved plans.

(10) Is in conformance with any duly adopted local or regional plan or capital program under Chapter 117 of Title 24. In making this finding, if the district commission finds applicable provisions of the town plan to be ambiguous, the district commission, for interpretive purposes, shall consider bylaws, but only to the extent that they implement and are consistent with those provisions, and need not consider any other evidence.

Specific Suggestions for Change to Statute

- **Amend 10** (*To reflect our proposed amendments to Chapter 117, encouraging towns to create Greenhouse Gas Budgets*): Is in conformance with any duly adopted local or regional plan or capital program under Chapter 117 of Title 24, and any duly adopted Greenhouse Gas Budget or Greenhouse Gas municipal or regional regulations that are adopted by local governmental bodies, regardless of whether such budgets or regulations have been approved by regional planning commissions and whether the municipality has been confirmed under 24 V.S.A. § 4350.

Changes to Administrative Practice/Training

If any municipalities include Greenhouse Gas Budgets as part of their town plans, or develop Greenhouse Gas Budgets notwithstanding lack of a town plan, as we hope will result from amendments to Chapter 117, then any Act 250 applications in those municipalities will have to include information relating to the proposed development's impact on, or ability to comply with,

the town's GHG Budget. District Commissioners may need extra training to understand and be able to work with any technical language of GHG budgets or measurements.

c. The Section 248 Process

1. Ensure that projects that have been assessed with care in Section 218c plans will benefit in the Section 248 Certificate of Public Good process.

The following changes to Section 248 would both strengthen the Section 218c planning process and also ease subsequent the permitting process for utilities or non-utility generators when proposed projects have been prescreened in Section 218c plans:

Specific Suggestions for Change to Statute

- **Add 30 V.S.A. § 248(b)**: Any application for a Certificate of Public Good for any purchase, investment, or construction that has been pre-approved in the Section 218c process shall presumptively satisfy the following criteria:
    - § 248(b)(2) [is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to those developed pursuant to the provisions of sections 209(d), 218c, and 218(b)]
    - § 248(b)(4) [will result in an economic benefit to the state and its residents]
    - § 248(b)(6) [is consistent with the principles for resource selection expressed in that company's approved least cost integrated plan]
    - § 248(b)(7) [is in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action]
    - § 248(b)(10) [can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers]
        - The presumption may be overturned by the Public Service Board, but only upon clear and convincing evidence to the contrary presented in a subsequent specific Section 248 proceeding.

2. Create a process by which utilities and electricity developers and their investors have more certainty regarding acceptable sites for different types of generation projects.

Working Group I suggested two ideas that we are interested in exploring further for changing the electricity facility siting system to promote in-state development of electricity resources.

A. Full return on investment to any utility that invests in certain types of generation

Under this system, the state would set out specific goals or benchmarks for the type of generation it wants, i.e., renewables, specific amount of GHG emissions/kWH, promotes agricultural or forestry industries, reuses waste products. Then, if a utility builds or buys that kind of generation, the utility would receive full recognition of that investment when the Public Service Board approves its rates.

- In terms of cost-sharing, the rate-payers of whichever utilities invest in these kinds of generation will share the costs of finding appropriate sites for the "right" kind of generation, and the investors feel secure in their investment even if locating and vetting the site ends up being a substantial part of the initial cost of the project

- For land use concerns, this process may not guarantee a much higher level of land use scrutiny, and it would not seem to invite land use concerns to enter the utility permitting process any earlier than under the current Section 248 system; however, by ensuring investors a return on their investments, they may be more willing and able to carry out the kinds of natural resource studies that ANR or citizens demand.

B. State agencies would pre-screen potential sites for natural resource issues: water, air, wildlife, historic

This idea grew out of a discussion of wind development. The developers already know which ridge-tops provide viable wind resources for electricity generation, but there is so much uncertainty in the natural resource sensitivity of those areas, as well as historic site and aesthetic issues (and, of course, local opposition), that there is not too much action to invest in wind in Vermont. If the state, through the Natural Resources Board or the Office of Planning Coordination or other appropriate agency, in the interests of providing its citizens and businesses with some certainty in their electricity future and encouraging in-state generation, were to undertake some of the costs and responsibility of determining which sites were appropriate for wind, hydro, waste-to-energy, wood chip generation, or other generation facilities, then investors might be more willing to begin working on such projects in Vermont.

- As a cost-sharing approach, this option provides the most encouragement for development by the widest range (in terms of economic resources) of utilities and non-

utility generators. By putting the cost of these studies on the entire taxpayer base, the state would signal that it is welcoming new electricity development.[19]

- In terms of land use concerns, this approach would allow land use concerns to be aired and debated without any state agency having the pressure of knowing that a utility or non-utility generator has already invested resources in a particular site. By addressing land use questions independently from specific investment proposals, there is a chance that land use concerns could be addressed more objectively/comprehensively.

3. Identify projects that could be moved to CPG processes that are more expedited than 248j processes to reduce transaction costs for distributed generation.[20]

Kinds of Projects:

- distributed generation, particularly on-site electricity generation for businesses, housing developments, etc. that would also be hooked into the grid and use net metering
- upgrading distribution lines using same poles
- other?

Expedited Process:

- A community generation review process in which projects that follow local community guidelines with local acceptance, might apply through Section 248j rather than Section 248(b).
- If the VSPC process recommends zones where generation would be desirable, generation in those areas would receive beneficial siting processes in combination with targeted energy efficiency.
- We are interested in hearing from regulators, the utilities, and public interest groups regarding a process that would be sufficiently protective of public interest in the Section 248 criteria, but which would promote distributed generation and net-metering by allowing developers to pursue such projects with fewer costs and delays than current Section 248 and 248j proceedings.

[19] An alternative suggestion has been that the state welcome new, clean, alternative energy development through a production tax credit rather than through developmental work.

[20] Section 248j is already designed to provide expedited review for simple projects; however, several parties suggested that determination of eligibility for Section 248j treatment requires enough resources to undercut the desired goal of expedited consideration.

V. Open Season-Portfolio Review

The prime purpose of an "open season" amendment to Title 30 would be to initiate a comparative rather than sequential review of energy resource proposals. The "open season" concept has been used in regulatory proceedings allocating scarce or competing resources. For example, the Federal Communications Commission, in reviewing or renewing licenses for radio stations, defines a time period known as "open season" in which competing applications for competing bandwidth are assessed comparatively as opposed to sequentially. Similarly, the Federal Energy Regulatory Commission (FERC), when reviewing applications for natural gas pipelines, recognizes that granting some applications can render other proposals economically infeasible. Thus, once FERC receives an application to build a pipeline, it will stay pending proposals for a defined time period during which other competitive pipeline proposals may be submitted for comparative review.

In the Vermont electric facility siting context, Working Group I discussed two general approaches to "open season". The first would be to broaden the Section 248 process by giving competing proposals an opportunity to be considered by the Public Service Board in response to any major Section 248 filing. An example of this type of approach occurred late in the process for considering the Vermont Joint Owners proposed contract with Hydro-Quebec, when the Board expressed interest in seeing competing and alternative proposals for power or efficiency providers.[21] The second would be to strengthen the Section 218c resource planning process by requiring that the least cost integrated plans specify the kinds of projects or contracts that the utility will undertake to serve need, or to specify the decisional processes that the utility will use to choose projects or contracts that they may need. This type of approach occurred in the later stages of the Vermont Yankee sales proceedings in 2002-04, when the Vermont Owners, at the suggestion of the Conservation Law Foundation and with the encouragement of the Public Service Board, conducted a formal process to solicit competing bids for the sale of the facilities and associated power contracts (multi-utility requests for proposals).

Working Group I participants broadly recognized the desirability of open season goals. However, the specific mechanisms for implementing one or both of the approaches were not fleshed out in detail and they appear, to us, to raise several complex issues. Thus, we welcome comments as to whether to choose either of these processes, to blend them, or to set both aside.

Broadening Section 248 into Open Season through Rulings and Rulemaking

It appears that, under existing rulemaking authority, the Board could broaden Section 248 reviews by, upon its own initiative or the request of the DPS, or others, could define and modify the dates and procedures for a multi-utility request for proposals. See, e.g., the Vermont Yankee and Hydro-Quebec purchase proposals noted above. Whether the Board could take similar action in regard to strengthening Section 218c appears probable; however, there are no precedents for this.

[21] The fact that few such alternatives were presented, and that those presented lacked significant detail may be a useful warning of the complexity involved in soliciting alternatives and of the need for formalized and predictable selection criteria with reasonably long timeframes.

Concepts for Converting Section 218c Process into Open Season

- Utilities, by statute or PSB order, could be required to identify specific projects or proposals for meeting expected energy needs as part of their mandatory Section 218c planning requirements. That requirement could be fulfilled either by identifying specific projects or by clearly defining procedures, such as requests for proposals, which could lead to selection of specific projects; in either case, the meeting of energy needs would have to be achieved by resource parity.
- Open season request for proposals by one or more Vermont utilities could open on a specific date and close on a specific date. Some Working Group members liked the predictability and regularity of such a process. Others suggested this might not fit well with the timing of actual needs, and might better be done on an as needed basis.
- Section 218c could be amended to require triennial filing cycles, as Public Service Board orders have often, but not universally required.
- As Working Group I members appeared to agree, Section 248 process would continue to apply to projects proposed within the Section 218c triennial cycles.
- Section 248 would continue to apply to energy facility siting and contractual obligations. However, facilities specified in an approved Section 218c plan would be entitled to a rebuttable presumption of consistency with Section 248(b) criteria (2), (4), (6), (7) and (10).
- For proposals not specified in an approved Section 218c plan, but resulting from an approved Section 218c process, a rebuttable presumption of Section 248(b) criteria (4), (6), and (7) would apply.

Changes to Administrative Practice/Training

The Legislature should allocate funds from appropriate resources to educate decision-makers in land-use and planning to better understand and define the need that the request for proposals addresses. Trained decision-makers can make land-use part of the solution as an initial issue rather than as a follow-up consequence to be resolved separately.

VI. Conclusion

The purpose of this memorandum is to present a broad spectrum of potential changes suggested by several commenters in regard to Vermont's electric energy and land use planning and permitting processes. We are interested in creating change not just at the statutory level, but also at the level of formal and informal administrative practices. For this, second, Working Group Meeting, we are focusing on gathering feedback on these suggested changes as we narrow in on our strategy for proposing legislation in the 2008 Session of the Vermont Legislature and for encouraging more electric energy and land use conscious decision-making in the current utility and land use planning and permitting processes.

Working Group II Appendices

APPENDIX A. Office of Planning Coordination Draft Bill

DRAFT III
January 5, 2007

THE STATE PLANNING EFFICIENCY ACT

Sec.1. 3 V.S.A. § 2102 is amended to read:
§ 2102. POWERS AND DUTIES

The governor's cabinet shall adopt and implement a program of continuing coordination and improvement of the activities carried on at all levels of state and local government, including furtherance of the state planning goals established by 24 V.S.A. § 4302.

Sec. 2. 3 V.S.A. § 2104 is amended to read:
§ 2104. PLANNING

~~The central planning office and its state planning functions are transferred hereby to the office of the governor. The governor, by executive order, may specify the duties, responsibilities, and organization of the office as he deems necessary for the proper execution of its functions. The office shall be headed by a director of planning who shall be appointed by the governor to serve at his pleasure. The director of planning with the approval of the governor may:~~

~~1) coordinate the planning activities of departments of the executive branch;~~

~~(2) make studies, surveys and reports concerning that program;~~

~~(3) accept, contract for, and administer under this chapter and for its objectives and purposes contributions, capital grants, appropriations, gifts, services, and other financial assistance from or for any individual, association, corporation or other organization having an interest in planning and development, this state, and the United States, and any of their agencies, political or administrative subdivisions, and instrumentalities, corporate or otherwise; and~~

~~(4) perform such other acts as may be necessary or appropriate to carry out the objectives and purposes of this section.~~

(a) An office of planning coordination is created within the agency of administration. The office shall be headed by a director who shall be a professional planner and shall be appointed by, and report directly to, the secretary of the agency. The director shall be exempt from the classified service.

(b) The office of planning coordination shall

(1) Coordinate among all levels of government to ensure consistent and wise development of state, regional, and municipal plans that will integrate planning to ensure coordinated administration of government policies addressing the multitude of issues posed by the state's continued growth and development and consistency with the state planning goals established by 24 V.S.A. § 4302. Specifically, the office of planning coordination shall

(A) Coordinate state agency and department planning to assure consistency with the state planning goals and compatibility among state agency and department plans and with applicable regional and municipal plans.

(B) Compile and review all proposed regional plans and amendments, and, at the request of a municipality, review regional planning commission decisions on the confirmation or approval of municipal plans, to determine the consistency of regional plans and decisions with the state planning goals, and the compatibility of regional plans and decisions with state agency plans and the plans of other regions and municipalities.

(C) Maintain and make accessible to state, regional, and municipal planning bodies all current municipal plans, whether approved or not; compile and maintain a summary of the degree to which those plans are consistent with the state planning goals.

(D) Prepare and present annually to the secretary of administration, the cabinet, and the general assembly a report on the status of consistency of all state agency and department , and all regional and municipal, plans with the state planning goals.

(2) Coordinate research and the compilation of data and information necessary for planning at all levels. Serve as a clearinghouse of planning data and information. Systematically make critical data and information available and accessible to state, regional, and municipal planning agencies and the public.

(3) Provide technical assistance to state, regional, and municipal planning agencies by undertaking or contracting for special studies and plans, preparing or analyzing policy alternatives and identifying immediate and long-range needs and the resources to meet these needs.

(4) Participate with other states, Canadian provinces, or subdivisions thereof in interstate or bi-national planning, and assist regional and municipal planning commissions to participate in planning with other states or provinces or their subdivisions.

(5) Accept, contract for, and administer under this section and for its objectives and purposes contributions, capital grants, appropriations, gifts, services, and other financial assistance from or for any individual, association, corporation or other organization having an interest in planning and development, this state, and the United States, and any of their agencies, political or administrative subdivisions, and instrumentalities, corporate or otherwise.

(6) Perform such other acts as may be necessary or appropriate to carry out the objectives and purposes of this section.

Sec.3. 3 V.S.A. § 2202(a) is amended to read:
§ 2202. CREATION OF AGENCY

(a) An agency of administration is created. The agency shall consist of the following:

(1) The department of finance and management;
(2) The department of human resources;
(3) The department of buildings and general services;
(4) The department of libraries;
(5) The department of taxes;
(6) The department of information and innovation;
(7) The office of planning coordination.

Sec. 4. 3 V.S.A. § 2283c is added to read:
§ 2283c. OFFICE OF PLANNING COORDINATION.

The office of planning coordination is created within the agency of administration and is charged with all of the responsibilities assigned to it by law.

Sec. 5. 3 V.S.A. § 2293 is amended to read:
§ 2293. ~~DEVELOPMENT~~ PLANNING CABINET

(a) **Legislative purpose.** The general assembly deems it prudent to establish a permanent and formal mechanism to assure collaboration and consultation among state agencies and departments, in order to support and encourage Vermont's ~~economic~~ development and growth, while at the same time conserving and promoting Vermont's traditional settlement patterns, its working and rural landscape, its strong communities, ~~and~~ its healthy environment, and other values served by the state planning goals established by 24 V.S.A. § 4302, all in a manner set forth in this section.

(b) ~~Development~~ **Planning cabinet.** A ~~development~~ planning cabinet is created, to consist of ~~the secretaries of the agencies of administration, natural resources, commerce and community affairs, and transportation, and the secretary of the agency of agriculture, food and markets~~ the members of the governor's cabinet and the commissioners of those independent departments reporting directly to the governor that have programs or take actions affecting the state planning goals established by 24 V.S.A. § 4302 as determined by the office of planning coordination. The governor or the governor's designee shall chair the ~~development~~ planning cabinet. The ~~development~~ planning cabinet shall advise the governor on how best to implement the purposes of this section, and shall recommend changes as appropriate to improve implementation of those purposes. The ~~development~~ planning cabinet shall be staffed by the office of planning coordination ~~and~~ which may establish interagency work groups to support its mission, drawing membership from any agency or department of state government.

(c) All state agencies, and all independent departments that have programs or take actions affecting ~~land use, including those identified under 3 V.S.A. chapter 67,~~ the state planning goals established by 24 V.S.A. § 4302, shall, through or in conjunction with the members of the ~~development~~ planning cabinet, support those goals in all programs or actions that affect them and, specifically, shall:

(1) Support conservation of working lands and open spaces.

(2) Strengthen agricultural and forest product economies, and encourage the diversification of these industries.

(3) Develop and implement plans to educate the public by encouraging discussion at the local level about the impacts of poorly designed growth, and support local efforts to enhance and encourage development and economic growth in the state's existing towns and villages.

(4) Administer tax credits, loans, and grants for water, sewer, housing, schools, transportation, and other community or industrial infrastructure, in a manner consistent with the purposes of this section.

(5) To the extent possible, endeavor to make the expenditure of state appropriations consistent with the purposes of this section.

(6) Encourage development in, and work to revitalize, land and buildings in existing village and urban centers, including "brownfields," housing stock, and vacant or underutilized development zones. Each agency is to set meaningful and quantifiable benchmarks.

(7) Encourage communities to approve settlement patterns based on maintaining the state's compact villages, open spaces, working landscapes, and rural countryside.

(8) Encourage relatively intensive residential development close to resources such as schools, shops, and community centers and make infrastructure investments to support this pattern.

(9) Support recreational opportunities that build on Vermont's outstanding natural resources, and encourage public access for activities such as boating, hiking, fishing, skiing, hunting, and snowmobiling. Support and work collaboratively to make possible sound development and well-planned growth in existing recreational infrastructure.

(10) Provide means and opportunity for downtown housing for mixed social and income groups in each community.

(11) Report annually to the governor and the legislature, through the chair of the ~~development~~ planning cabinet and the secretary of administration, on the effectiveness and impact of this section on ~~the state's economic growth and land use development and~~

~~the activities of the council of regional commissions~~ the state planning goals established by 24 V.S.A. §4302.

.

(12) Encourage timely and efficient processing of permit applications affecting land use, including 10 V.S.A. chapter 151 and the subdivision regulations adopted under 18 V.S.A. § 1218, in order to encourage the development of affordable housing and small business expansion, while protecting Vermont's natural resources.

(d) **Limitations.** This cabinet is strictly an information gathering and coordinating cabinet and confers no additional enforcement powers.

Sec. 6. 3 V.S.A. § 2472(a) is amended to read:

§ 2472. DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS

(a) The department of housing and community affairs is created within the agency of commerce and community development. The department shall:

(1) Be the central state agency to coordinate, consolidate, and operate, to the extent possible, all housing programs enacted hereafter by the general assembly or created by executive order of the governor.

(2) Be the central state agency for allocation of funds and education and training for local and regional planning and coordination.

(3) Administer the community development block grant program pursuant to 10 V.S.A. chapter 29.

(4) In partnership with the division for historic preservation, direct, supervise, and administer the Vermont downtown program, and any other program designed to preserve the continued economic vitality of the state's traditional commercial districts.

Sec. 7. 3 V.S.A. § 4020 is amended to read:

§ 4020. STATE AGENCY PLANNING AND COORDINATION

(a) All ~~S~~state agencies, and all independent departments that have programs or take actions affecting ~~land use~~ the state planning goals established by 24 V.S.A. § 4302 as determined by ~~executive order of the governor~~ the office of planning coordination, shall engage in a continuing planning process to assure that those programs and actions are consistent with ~~the~~ those ~~state planning~~ goals ~~established in 24 V.S.A. § 4302~~ and compatible with the plans of other state agencies and departments and with applicable regional plans and applicable approved municipal plans~~, as those terms are defined in that section~~. For purposes of this section and section 4021of this chapter, "consistent" and "compatible" have the meanings assigned to them in 24 V.S.A. § 4302(f); state agency, department, regional, and approved municipal plans are plans adopted or approved pursuant to section 4021 of this chapter or 24 V.S.A. § 4348 or § 4350, respectively. This planning process shall be coordinated~~, in a manner established by executive order of the governor,~~ through the office of planning coordination with the planning

process of other agencies and departments and of regional and municipal entities of the regions in which the programs and actions are to have effect.

(b) In the process of preparing plans or amendments to plans, a state agency shall hold at least two public hearings which are noticed as provided in 3 V.S.A. § 839 for administrative rules, but plans shall not be adopted as administrative rules under 3 V.S.A. chapter 25. Specific notice also shall be provided to the following, at least 30 days prior to the public hearing:

(1) the executive director of each regional planning commission;

(2) the ~~department of housing and community affairs within the agency of commerce and community development~~ office of planning coordination; and

(3) ~~the council of regional commissions; and~~

~~(4)~~ business, conservation, low-income advocacy and other community or interest groups or organizations that have requested notice prior to the date the hearing is warned.

(c) Any of the foregoing bodies, or their representatives, may submit comments on the proposed plan or amendment, and may appear and be heard in any proceeding with respect to the adoption of the proposed plan or amendment. State agencies and departments shall use an informal working format at locations convenient and accessible to the public in order to provide opportunities for all persons and organizations with an interest in their plans and actions to participate.

Sec. 8. 3 V.S.A. § 4021 is amended to read:

§ 4021. ADOPTION OF STATE AGENCY PLANS

(a) ~~By January 1, 1991, each state agency that has programs or that takes actions affecting land use shall adopt an interim plan that is compatible with regional and approved municipal plans and that is consistent with the goals established in 24 V.S.A. § 4302.~~ By January 1, ~~1993~~ 2008, each state agency or independent department that has programs or takes actions affecting ~~land use~~ the state planning goals established by 24 V.S.A. § 4302 shall have adopted a plan that is compatible with the plans of other state agencies and departments and with applicable regional plans and approved municipal plans, and that is consistent with the state planning goals ~~established in 24 V.S.A. § 4302~~. Thereafter, the agency or department shall readopt its plan biennially, to ensure that its plan remains compatible with other state agency or department plans, regional plans, and approved municipal plans, and remains consistent with the goals established ~~in~~ by 24 V.S.A. § 4302. All proposed, adopted and readopted state agency plans and amendments~~, including interim plans and amendments,~~ shall be submitted to the ~~council of regional commissions~~ office of planning coordination] for review. ~~The term "approved municipal plans" as used in this section has the meaning established in 24 V.S.A. § 4350.~~

(b) Each state agency or department plan adopted, amended, or readopted pursuant to subsection (a) of this section shall contain a statement expressly explaining the respects in which it is compatible with the plans of other state agencies and departments and with applicable regional plans and approved municipal plans, and in which it is consistent with the state planning goals established by 24 V.S.A. § 4302. If a state agency or department plan, as adopted,

amended, or readopted, contains any provisions that are not compatible with the plans of other state agencies and departments and with applicable regional plans and approved municipal plans, or that is not consistent with the state planning goals, the plan shall contain a statement explaining:

(1) the nature of the incompatibility or inconsistency,

(2) why the incompatibility or inconsistency is necessary in the public interest to attain the desired effect of the plan as a whole,

(3) why there is no reasonable alternative way to achieve the desired effect of the plan, and

(4) how any incompatible or inconsistent provisions have been structured to mitigate their detrimental effects.

(c) Prior to preparation of the governor's annual budget request pursuant to 32 V.S.A., chapter 5, the office of planning coordination shall review the explanatory statements required by subsection (b) of this section in any state agency or department plan that has been adopted, amended, or readopted since the last annual budget request. On the basis of this review, the office of planning coordination shall report to the secretary of administration either that the plan as submitted is compatible with the plans of other state agencies and departments and with applicable regional plans and approved municipal plans and that it is consistent with the state planning goals established by 24 V.S.A. § 4302, or that in specific respects it is not compatible or consistent with those plans or goals. If the office finds that the plan is incompatible or inconsistent with those plans or goals, it shall further advise the secretary whether the explanatory statement of the agency or department provides a satisfactory justification for the incompatibility or inconsistency.

(d) Before delivering to the governor the budget estimates of state agencies and independent departments as provided in 32 V.S.A § 302, the secretary of administration shall review the reports of the office of planning coordination prepared as provided in subsection (c) of this section and shall advise the governor either that the plan of each agency and independent department is compatible with the plans of other state agencies and departments and with applicable regional plans and approved municipal plans and that it is consistent with the state planning goals established by 24 V.S.A. § 4302, or that in specific respects it is not compatible or consistent with those plans or goals. If the secretary finds that a plan is incompatible or inconsistent with those plans or goals, the secretary shall not deliver the budget estimate of the agency or department to the governor unless the secretary finds that the explanatory statement of the agency or department provides a satisfactory justification for the incompatibility or inconsistency.

Sec. 9. 24 V.S.A. §4305 is amended to read:

§ 4305. ~~COUNCIL OF REGIONAL COMMISSIONS;~~ REVIEWS OF ~~STATE AGENCY AND~~ REGIONAL PLANS; REVIEWS OPF CONFIRMATION AND APPROVAL DECISIONS BY REGIONAL PLANNING COMMISSIONS

~~(a) A council of regional commissions is hereby created. The council membership shall include a representative from each regional planning commission established under section 4341~~

~~of this title, three members who are state agency or department heads appointed by the governor and two members representing the public appointed by the governor. Each regional planning commission shall appoint its representative, or replacement in case of a vacancy, from among the commission's municipal representatives. The council shall annually elect one of its members as chairperson and another member as vice-chairperson. The powers and duties of these officers shall be determined by the council. A majority of members shall constitute a quorum. Members of the council, other than state officials, are entitled to the per diem and expenses authorized under 32 V.S.A. § 1010.~~

~~(b) The council shall provide, on request, an impartial mediator to help resolve disagreements between and among municipalities and regional planning commissions, and between and among regional planning commissions and state agencies, with respect to the compatibility of their plans with each other, and related matters.~~

(~~c~~a) (1) The ~~council~~ office of planning coordination shall review proposed regional plans or amendments~~, after public notice,~~ and determine the following:

(A) whether the plan, ~~as amended~~ with any amendments, contains the elements required by law;

(B) whether the plan, with any amendments, is compatible with the plans of state agencies and departments and adjoining regions; and

(C) whether the plan, ~~as amended~~ with any amendments, is consistent with the state planning goals established ~~in~~ by section 4302 of this title.

(2) If a municipality requests that a proposed regional plan or amendment be reviewed for compatibility with an approved municipal plan, the ~~council~~ office of planning coordination shall conduct that review.

(3) Upon completion of a review under this subsection, ~~one or more representatives of the council shall appear before the regional planning commission and~~ a representative of the office of planning coordination shall present the ~~council's~~ comments and recommendations of the office to the regional planning commission and may ask the commission to reconsider portions of its proposed plan.

(d) ~~(1) The council shall review state agency plans or amendments proposed under 3 V.S.A. chapter 67, after providing public notice as required under 3 V.S.A. § 839 with respect to administrative rules notwithstanding the notice requirements established in section 4447 of this title, and determine the following:~~

~~(A) whether the plan or amendment is compatible with the plans of other state agencies;~~

~~(B) whether it is consistent with the goals established in 24 V.S.A. § 4302;~~

~~(C) whether it is compatible with regional plans; and~~

~~(D) whether it is compatible with approved municipal plans of municipalities that have requested review by the council.~~

~~(2) Upon completion of a review under subdivision (1) of this subsection, one or more representatives of the council shall appear before the state agency and present the council's comments and recommendations.~~

~~(3) After the agency has adopted a plan or amendment, the council, after providing public notice as required under 3 V.S.A. § 839 with respect to administrative rules notwithstanding the notice requirements established in section 4447 of this title, shall review the plan, as amended or adopted, and shall prepare a written evaluation of the plan's compliance with the criteria established in subdivision (1) of this subsection. The written evaluation shall be sent to all persons who request a copy in writing, to the governor, to the speaker of the house and president of the senate, who shall forward them to appropriate legislative committees. If the council determines that the plan or amendment as adopted is not compatible with a regional plan or is not compatible with the approved municipal plan of a municipality that has requested review by the council, the evaluation shall be sent also:~~

~~(A) to the regional planning commission,~~

~~(B) to the legislative body and planning commission of the relevant municipality and to the state representatives that represent that municipality, and~~

~~(C) to state senators who represent the relevant region or municipality.~~

~~(e)~~ The ~~council~~ office of planning coordination, at the request of a municipality, shall ~~establish, by rule adopted according to 3 V.S.A. chapter 25, a process to conduct formal review of the sufficiency of an adopted regional plan or amendment and formal~~ review ~~of~~ a regional planning commission decision~~s~~ with respect to the confirmation of municipal planning efforts~~, and~~ or the approval or disapproval of municipal plans or amendments. ~~Formal review shall be conducted by a three-person regional review panel composed of council members, including at least two representatives of regional planning commissions, all assigned by the council in a manner established by rule. A representative of a regional planning commission shall not participate in formal review of the actions of the regional planning commission which the person represents. Council members who participate in the review of a regional plan under subsection (c) of this section shall not participate in a formal regional review panel proceeding on the same matter.~~ After the review, a representative of the office shall present the ~~council's~~ comments and recommendations of the office to the regional planning commission and the municipality and may ask either party to reconsider its prior decisions on the municipal plan.

~~(f) The council shall adopt rules, according to the provisions of 3 V.S.A. chapter 25, that are necessary for the performance of its functions under this chapter.~~

~~(g) The council shall receive administrative support from the department of housing and community affairs.~~

APPENDIX B. Proposed Changes to Act 250 Application, Schedule B

Criterion 9F) Energy Conservation: Demonstrate that the project reflects the principles of energy conservation and utilizes the best available technology for energy efficiency:

a) **Residential Buildings:** Residential buildings three stories or less are subject to Vermont's Residential Building Energy Standards (RBES) (21 V.S.A. §§266-267). ~~Conformance with these standards creates a presumption of compliance with Criterion 9(F) (21 V.S.A. §266(d)).~~ Will the project comply with the RBES? [ ] Yes [ ] No. For more information, contact the Vermont Residential Energy Code Hotline at 1-888-373-2255 or visit publicservice.vermont.gov/energy-efficiency/ee_energyefficiency.html.

b) **Commercial Buildings:** Commercial buildings (all buildings which are not residential buildings three stories or less) are subject to Vermont's Commercial Building Energy Standards (CBES) (21 V.S.A. § 268). The *2005 Vermont Guidelines for Energy Efficient Commercial Construction* serves as the handbook for compliance with the CBES. The *Guidelines* can be found on the web site of the **Vermont Department of Public Service** (http://publicservice.vermont.gov/energy-efficiency/ee_commstandards.html) or by contacting the department at **828-4020.** Will the project comply with the *Guidelines*? [ ] Yes [ ] No

c) Please provide details related to energy related features of the project including: interior and exterior lighting, space heating and cooling, domestic water heating, ventilation system, insulation levels, and other proposed energy conservation measures.

ADDITIONAL LANGUAGE:
"Will the development use Energy Star rated or [other energy ratings?] appliances? ___ Yes ___ No"

"Will the development incorporate [?High efficiency/insulation/glazed?] windows? ___Yes ___No"

"Will the development include on-site renewable energy sources? ___Solar ___Wind ___Geothermal [is that even an option in VT?] ___Hydro ___Other.

Describe the specific plans including the amount of on-site electricity generation expected."

"Will the development use heating and electricity co-generation? ___Yes ___No"

"Do the building or subdivision plans include design and landscaping elements aimed at reducing energy consumption and elements encouraging bicycle/pedestrian circulation? ___Yes ___No Please Describe."

d) Would you agree to this permit condition: "The installation of electric resistance space heating or stand-alone electric domestic water heating equipment in any building subject to

this permit is expressly prohibited without prior District Commission approval"?
[ ] Yes [ ] No.

Criterion 9G) Private Utilities: Demonstrate that any private utilities shared by two or more owners will not become a burden on the municipality if it must assume responsibility for them:

a) Indicate whether the project involves any utilities (road, water system, sewer line, septic system, etc.) which will be controlled by more than one owner, and if so, indicate who will be legally and financially responsible for ongoing maintenance and eventual replacement.

_____
_____
_____

b) If a private utility will likely be transferred to the municipality, indicate whether it will meet municipal specifications.

_____
_____

c) If a private utility will not be transferred to the municipality, indicate how the utility will continue to be maintained so as to not become a burden for the municipality at a later date. Indicate whether a sinking fund or other long term fund will be established to provide for future repair or replacement of the private utilities. (Attach copy of deed restrictions, maintenance schedule, or other evidence which will ensure private maintenance and eventual replacement of the utilities.)

_____
_____

AMENDED LANGUAGE:

Modify (b) and (c) to include references to the electric utilities:

b) If a private utility will likely be transferred to the municipality or area electric utility, indicate whether it will meet municipal specifications or electric utility specifications or requirements.

c) If a private utility will not be transferred to the municipality or electric utility, indicate how the utility will be maintained so as not to become a burden for the municipality or electric utility at a later date. Indicate whether a sinking fund or other long term fund will be established to provide for future repair or replacement of the private utilities. No such fund is required for privately owned electric generation.

Criterion 9H) Scattered Development: Demonstrate that if the project is not physically contiguous to an existing settlement, it will not result in greater costs to the municipality than it provides in additional tax revenues and other public benefits:

a) Indicate whether the project tract is physically contiguous to an existing settlement. Existing settlement has been defined by case precedent as "an extant community center similar to the traditional Vermont center in that it is compact in size and contains a mix of uses, including commercial and industrial uses, and, importantly, a significant residential component. It is a place in which people may live and work and in which the uses largely are within walking distance of each other." For more information see the decision Re: St. Albans Group and Wal*Mart Stores, Inc., Application #6F0471-EB, Findings Of Fact, Conclusions Of Law, And Order (Altered)(Jun. 27, 1995). (www.nrb.state.vt.us/lup/decisions/eb/1995/6f0471.txt)

_____

_____

b) If the project is not contiguous to an existing settlement, provide an analysis comparing the public benefits and costs of the project. "Public benefits" include, but are not limited to, tax revenues generated by the project, increased employment opportunities, and the provision of needed and balanced housing accessible to existing or planned employment centers. "Public costs" include the costs of public services and facilities caused directly or indirectly by the proposed development. Information generated under criteria 5, 6, 7 and 9A may also be relevant under this criterion. **If you are uncertain how to address this part of the criterion, contact the District Coordinator.**

_____

_____

_____

AMENDED LANGUAGE

Change (b) so that the language directly addresses electric utility costs and recognizes that indirect costs extend back up the grid from the distribution line that would serve the proposed development:

" 'Public costs' include the costs of public services and facilities caused directly or indirectly by the proposed development. If the proposed development is expected to result in new electricity demand more than --- kWh, such costs include the costs of upgrading transmission and/or generation systems that will serve the development, not merely the cost of extending a new distribution line to the proposed site. Information generated under criteria . . . 9(F) and 9(J) may also be relevant to this criterion."

Criterion 9J) Public Utilities: Demonstrate that the project will not place an excessive or uneconomic demand on any necessary governmental or public utility facilities or services:

a) Indicate what governmental services or public utility services are needed and demonstrate that such services can be provided without undue burdens. Examples of public utility services are natural gas, electric, telephone, cable, water, and sewer services. Include an "ability to serve" letter from the utility company.

_____
_____

b) If the project involves commercial, institutional, or industrial uses, indicate how electrical use will be minimized during peak periods of energy demand in the service area for the utility (include major sources of energy usage, letter from the utility serving the project, etc.).

_____
_____
_____

c) If any utility lines cross the project site other than along the highway, demonstrate that the utility lines will not be significantly affected (include letter from utility company). Show any existing utility lines on site plan.

ADDED LANGUAGE

Add the following language to (a):

"For electric utility services, in addition to an 'ability to serve' letter, include a copy of the utility's Public Service Board-approved Least Cost Integrated Plan (30 V.S.A. § 218c) and indicate how the utility's provision of service to the proposed development or subdivision complies with the utility's LCIP. This may be indicated by a letter from the Department of Public Service stating that it has found that the utility's provision of service so complies."

Criterion 10) Local and Regional Plans: Demonstrate that the project conforms to the municipal plan and regional plan.

a) Is there a duly adopted town plan? [ ] Yes [ ] No. If Yes, explain how the project conforms to that plan with regard to land use, goals and objectives, and comments from local authorities. Evidence of plan conformance can include a copy of the plan's land use map and relevant sections of the plan regarding appropriate land uses or building densities. A letter from the planning commission or town planner may be relevant evidence but is generally not sufficient on its own.

_____
_____
_____

b) Indicate what type of land uses are encouraged or allowed on the project site under the regional plan if one exists (include copy of plan's land use map, relevant plan language on appropriate land uses or building densities). (Contact your regional planning commission for assistance.)

_____
_____
_____

c) Does the municipality have a capital program? If so, indicate how the project conforms to that program. (Contact your town planner or planning commission for assistance.)

_____
_____

AMENDED AND ADDED LANGUAGE

Amend the heading: Demonstrate that the project conforms to the municipal plan and the regional plan and the municipal and regional Greenhouse Gas Budget and applicable regulations.

d) Does the town or region have a Greenhouse Gas Budget or Greenhouse Gas regulations? If so, indicate how the project conforms to that Budget or those regulations.

ACT 250
MUNICIPAL IMPACT QUESTIONNAIRE

This questionnaire is intended to help applicants gather evidence to submit under Criterion 7 - Municipal Services. A letter or narrative from the Town Manager, Selectboard Chair or appropriate official may also serve as evidence.

APPLICANT TO COMPLETE:
Applicant Name: _____
Municipality: _____
Title and Date of Site Plan Submitted: _____

TOWN MANAGER, DEPARTMENT HEADS, OR EQUIVALENT TO COMPLETE:

a) Does the municipality have the capacity to provide the following services without unreasonable burdens for the above project:

Fire Protection	__Yes __No __ Mun. does not provide this service.
Police Protection	__Yes __No __ Mun. does not provide this service.
Rescue Service	__Yes __No __ Mun. does not provide this service.
Solid Waste Disposal	__Yes __No __ Mun. does not provide this service.
Road Maintenance	__Yes __No __ Mun. does not provide this service.

b) If "no", what are the deficiencies?

c) If the service is unavailable from the municipality, who provides the service so that the town doesn't have to?

d) Would the deficiencies occur without this project? __Yes or __No? If "no", what measures can the applicant take to alleviate the deficiencies?

e) If the deficiencies are common to many projects, does this project create burdens which are disproportionate to the taxes and user fees to be paid to the municipality? __Yes or __No? If "yes", does the municipality recommend the imposition of an impact fee or other means to mitigate any unreasonable burdens?

Add the following questions:

Does the municipality have any form of Greenhouse Gas Budget?

If so, does the budget apply to individual development or development types?

Or is the budget for the municipality as a whole?

Do the specifications of this proposed project conform to the municipality's Greenhouse Gas Budgetary requirements?

f) Are you available, after sufficient notice, to answer questions related to the above statements at an Act 250 hearing? __Yes or __No

I certify that the above information is true and accurate to the best of my knowledge.

Name: _____
Position:_____
Date: _____

Working Group II Summary

MEMORANDUM[22]

TO: Merging the Regulatory Streams Working Group
FROM: Vermont Law School Land Use Institute & Institute For Energy And The Environment
RE: Summary of Comments from November 28, 2007 Working Group Session
DATE: 1/25/2008

I. Introduction

This memo summarizes the comments from the November 28, 2007 Working Group Meeting—the second meeting addressing Vermont Law School's Energy and Land Use Institutes' project, "Energy and Land Use: Merging the Regulatory Streams." The first Working Group meeting was held at Vermont Law School on October 23, 2007. Attendees expressed interest in holding another meeting to discuss more specific proposals for revising Vermont's current utility and land use regulatory schemes and offer further comments. Based on this interest, Vermont Law School's Land Use Institute (LUI) and Institute for Energy and the Environment (IEE) proposed several amendments for Vermont's land use and utility statutes. Working Group members came to the second meeting to discuss and comment on these proposed changes.

The following synthesizes the major ideas and suggestions discussed during the second meeting. We have grouped the discussion into three main topics: Public Participation, Education, and Open Season. The appendices consist of the written comments that participants submitted. We emphasize that many of the views noted below are those of individual speakers; not necessarily those of a consensus of the group or of the LUI and IEE participants.

II. Public Participation

One major theme running throughout the entire meeting was the importance of public participation in land use and utility planning and permitting processes. Attendees emphasized that public support for proposed changes is essential if such changes are to have any meaningful effect. There is a difference between what a law says and how the public and regulatory community implement and enforce it. For example, a town plan has little effect if the community does not abide by it. Attendees agreed that an effective way of getting advance public support for development and utility projects is to encourage public participation at the earliest stage possible. Local control over municipal land use planning is a deeply ingrained

[22] This summary was prepared by Vermont Law students Natalie Firestine and Caitlin Callaghan of the Institute for Energy and the Environment research team, Frank Skiba of the Land Use Institute research team, and Elizabeth Catlin of both teams.

value in Vermont. The more input that municipalities have during a project's initial planning stages, the more likely that the project will have public support when it comes time to build.

One example of the need for public support during the planning process is the former Council of Regional Commissions established under 24 V.S.A. § 4305. The Council had public support during its early years, but reviewing all Chapter 117 plans was a daunting task, so much so that the review process lacked significant public participation. The Council also lost funding and staffing, and the lack of public participation in the review process meant that there was no public response when the Council eventually faded from sight.

Other participants told success stories of stronger public involvement at the early planning stages. Representatives from the utilities, for example, discussed bringing in public participation at early stages of transmission line projects. The utilities were pleased by the number of people who participated in the workshops and meetings. While the utilities had to offer certain amenities to entice the public to participate, i.e., hotel accommodations, food, stipends, they felt that by involving the public at the early stages of the planning process, they would be able to proceed with the project with less resistance once the time came for constructing new lines.

These examples emphasize a key component of promoting public participation that was expressed by several of the attendees—getting the public involved in the process before the need becomes pressing. A subcomponent of this is to get the public to focus on the need rather than the thing itself. Focusing on future needs rather than present aesthetic concerns would shape the public's mindset toward more long-term planning decisions. Local planners and the utilities could face less resistance to specific projects if the public considered future problems from a need-based perspective, and were aware that need for future electricity transmission lines would occur if the town continues to develop in a proposed way.

One attendee pointed out that towns are skeptical of dealing with utilities and the Public Service Board because if the need for more electricity exists, the project will go forward regardless of public participation in local planning efforts. Public participation is only successful when participants believe that their input will influence the final decisions. However, public participation at the early stages would at least raise awareness of future needs should a town proceed with a particular development strategy. The internet and the fact that some selectboard meetings are broadcast live on public access channels offer two options for broadening public involvement.

Others raised concerns that we should not confuse planning and permitting. For example, Act 250 is inherently a permitting statute; not a planning statute. The proposed change to section 9(f) to include more public participation is well-suited for planning, but less well-suited for permitting decisions. Permitting is a quasi-judicial function while planning is more of a democratic community effort. That is, public participation belongs in long-term planning, but once plans are settled, there should be limits on how large a role the public can play in individual project permitting decisions.

III. Education

a. Educating Land Use Planners about Energy and Utility Planners about Land Use

The Working Group agreed that education is crucial if any changes to current planning and permitting processes are to succeed. Communities are eager to implement up-to-date efficiency standards, but many local planners simply lack the knowledge and understanding necessary to implement and enforce standards. Middlebury, for example, considered adopting a best available technology (BAT) standard for future development, but decided not to because planners feared that it would be too difficult to agree on what the best available technology is and how to tell if projects are employing it properly. The best technology changes so fast that the technology employed in designing a development is different from the best technology when the project becomes approved. Attendees were also concerned that local planners would not be able to handle implementing and enforcing complex building codes such as the Leadership in Energy and Environmental Design (LEED) standards.

Municipal planners are laypeople who often do not have the expertise to make informed decisions about the issues that a project is raising. For example, the proposed changes to Act 250 section 9(g) sounded to the attendees like an idea that the Act 250 District Commissioners could implement, but attendees expressed that it was unreasonable to expect a municipality to effectively establish and enforce the best available technology. Similarly, our proposals for greenhouse gas budgets in Act 250 section 10 may be overly ambitious. Energy efficiency issues are some of the most complex issues that local planners face. Consequently, their response is often to ignore it. Because utility planning information is so complex, it is questionable how much effect sharing information between land use and utility planners would have, at least for land use planners. Attendees suggested that it would also be beneficial to teach utility planners more about land use.

Many attendees were optimistic because municipalities are making efforts to learn about how to make their communities more efficient as energy conservation and climate change become more mainstream topics. A handful of cities have begun enforcing the state building code and many communities have formed energy committees. These efforts are largely due to market forces.

b. Educating the Public

The group also suggested that public education efforts would be one way of increasing public participation. Utilities are interested in educating affected communities on future transmission needs and gathering their input on how to proceed. An educated public is more likely to listen to project proposals for new transmission with open minds. However, there is a fine line between education and indoctrination. The public should at least know how much power supply Vermont will lose when the contracts with Vermont Yankee and Hydro-Quebec expire and what that means for future electricity reliability. If the public understands the future energy concerns that it faces, it may start to view utility planning with a broader need-based focus rather than project-by-project. Again, the concern arises of how much we can expect the public to learn about

technical energy issues or long-term planning. Any public education efforts will require significant funding to have any success.

IV. Open Season-Portfolio Review

Some attendees were eager to offer additional comments on the open season proposal that Michael Dworkin described at the October 23 Working Group meeting. Some expressed that an open season-portfolio review process for utility projects would be a way to shift public and regulatory focus to a more need-based perspective. For example, a ten-year open season carries the message: this need will be here, so where will you put the source? Such a perspective changes the dynamic from searching for ways to oppose a project to searching for places to put it. From the public perspective, it allows the public to meaningfully participate in utility site selection at an earlier stage and develop land use plans around that decision. This kind of participation may avoid opposition at the time when the need is pressing. From the investor's perspective, long-term planning creates more certainty, which may attract more investors to the state.

Under the current laws, the regulated utilities have a duty to provide power even if the project never goes through. One concern with the open season system is that non-regulated electricity generators could get approved for certain projects. Because unregulated generators have no duty to provide power, the regulated utilities could get stuck providing power if the non-regulated generator fails to provide power. Another comment on open season concerned the need to distinguish between state-wide and smaller projects. Some feel that it is preferable if more projects can qualify for Section 248(j). Our efforts should focus on a way to encourage smaller utility projects while at the same time ensuring that non-regulated providers are held accountable for their commitments.

V. Conclusion and Next Steps

On behalf of Vermont Law School's Land Use Institute and the Institute for Energy and the Environment, thank you to all who participated in this meeting. This project would not be the success that it is without your thoughtful comments and ideas. The discussion from this meeting and all of your comments will play an integral role in going forward. The project is now entering its implementation phase. In this phase we will further consider Working Group comments to prepare and present proposed legislation addressing these issues in the 2008 and 2009 legislative sessions. We welcome additional feedback by sending comments to Alicia Cordero via email at acordero@vermontlaw.edu.

Working Group II Summary Appendix: Written Comments of Participants

APPENDIX A.

Comments Submitted by Debra L. Sachs of the Alliance for Climate Action

Hi All,

Thank you for the invite. Unfortunately my schedule today is too demanding and I cannot make the trip and participate. What a great discussion and after quickly reviewing the document, I'm encouraged that we're moving in a positive direction. I have three quick points:

1) I'm not sure I'd use the word "merging the regulatory streams" really gives this piece of work justice (i.e., you are speaking about non-regulatory approaches as well.

2) In addition, I like the proposed question posed in Act 250 Municipal Impact Questionnaire about "Does your Community have any form of Greenhouse Gas budget"? I think this is great, however, we're a fair distance from having municipal carbon budgets in place (unless there is some discussion I'm unaware of). As you know the State of Vermont and UVM recently established a partnership to explore developing standards for carbon credits, which should be related to this.
Though I recognize the market is moving fast, I doubt that municipalities will enter the discussion of RGGI for the electricity market (though I think they should be well aware of it).

I would hope that the carbon budget would be for the municipality as a whole, but it could be for municipal buildings and operations only. I'm not sure, but I think there are less that ½ dozen communities that have an inventory of carbon emissions. To my knowledge none have established an explicit carbon budget. I'm not sure the inventory data that is available comes close to assessing project impacts. But it is something I'd like to see happen, for all capital projects. They should be assessed on their impacts to a carbon budget.

3) In the same Municipal Impact questionnaire no mention was made under "private utilities" to have the information produced for the 248 permit process to be submitted in the 250 permit process to help inform both 250 coordinators and the municipality of the background data behind the project. Seems like a lost opportunity. Since I haven't read the document cover to cover, I might have missed this somewhere else.

I'm rambling. In short, I'd like to continue discussing these ideas to help communities move along and become more active on matters of electricity and land use and carbon budgets.

Have fun today. And Thanks for all you are doing.

Cheers, Deb

Debra L. Sachs, Executive Director
Alliance for Climate Action

585 Pine Street
Burlington, VT 05401
802-865-7330
www.10percentchallenge.org

Comments Submitted by Eli Emerson

MEMORANDUM

DATE: December 12, 2007

TO: Vermont Law School's Land Use Institute and Institute for Energy and the Environment

FROM: Eli Emerson on Behalf of Fourteen Municipal Electric Departments

RE: Merging the Utility and Land Use Regulatory Streams

During two recent working groups (the most recent on November 28th), Vermont Law School's Land Use Institute and the Institute for Energy and the Environment (the "Institutes") presented a number of proposals for amending the energy and land use regulatory processes. This memorandum contains the reactions of the fourteen municipal electric departments[23] ("Municipalities") to two of the proposals related to energy and utility development. Although the Municipalities are certainly concerned with any impacts based on changes to Act 250, they are not providing comments on those proposals.

Prior to providing their comments, the Municipalities would first like to applaud VLS, the Institutes, and the students involved with this process. These are extremely complicated matters and it is obvious substantial thought has been put into the various proposals.

IRP Process

The IRP proposal is, put generally, to increase the review and input during the IRP process. This would include a more thorough, detailed review by regulators and local planning commissions and would, hopefully, provide for more public involvement. The Municipalities have a few concerns with this approach. First, the number one concern of customers and regulators is that Municipalities keep their rates as low as possible. A cumbersome IRP process will only put upward pressure on rates as additional or increased litigation with regulators or third parties could be possible.

It is also important to note that a litigated IRP does very little to inform the general public. If anything, a formal and litigious process will dissuade already burdened local officials from participating and reviewing an IRP. If the goal is to achieve more public input on utility sources of power and planning events, adding more review of the IRP process is not the method to accomplish the goal. An IRP tends to be a complicated document which is not clearly

[23] Barton Village, Inc. Electric Department; Enosburg Falls Electric Light Department; Hardwick Electric Department; Hyde Park Electric Department; Jacksonville Electric Department; Johnson Electric Department; Ludlow Electric Light Department; Lyndonville Electric Department; Morrisville Water & Light Department; Northfield Electric Department; Inc. Village of Orleans Electric Department; Readsboro Electric Light Department; the Town of Stowe Electric Department and Swanton Electric Department.

understood by the general public. There are other methods in which communities can inform or enlighten the IRP process, however, such as surveys and meetings with public officials. Also, all Municipalities that are building major infrastructure such as a power plant must hold a municipal vote. In this way, the general public and all interested parties have an opportunity to voice an opinion. The democratic process is alive and well in municipal service territories and public votes are the ultimate test of public input.

The Institutes have indicated that an increase in the scrutiny of IRPs can lead to a corresponding decrease in Section 248's regulatory burden. From the Municipalities' perspective, the ease in the Section 248 process may be of little value. It is infrequent that the Municipalities file Section 248 petitions, as most of their infrastructure development is on the distribution level and exempt from Section 248. All the Municipalities, however, must go through the IRP process. Thus, there is unlikely to be a corresponding benefit for the Municipalities.

On the other hand, a more burdensome process may not bring added benefits that the Institutes seek. For instance, the Municipalities are currently pursuing a process-based IRP as opposed to a results-based IRP. In short, they are asking the Board to approve a model, not to approve specific projects or resources. Therefore, public input in review of a model does little to inform communities as to what power plants will be built in certain communities. Those decisions come later on in a formal Section 248 proceeding. Additionally, it is unlikely that the Board's review and approval of the model will lead to efficiencies in the updated Section 248 process because Section 248 does not seek to approve models, but specific projects. This is further complicated by the fact that IRPs can become "stale" quickly if the assumptions used therein change. Therefore, it is not good policy to give preferential treatment to a project during the Section 248 process that may no longer be the best "least cost" alternative.

Another concern is to what degree the public and/or the planning commissions can or will participate. For planning commissions, they may not have the expertise or time to participate in such a complicated proceeding. The public, on the other hand, may not react to an IRP proceeding the same way it would for a specific project. If they failed to provide input, would these groups then be foreclosed from providing participating in the Section 248 process for approval of project that was included in the IRP? If they are not, has the process then become longer, more burdensome, and none of the efficiency delivered?

Finally, there has not been significant discussion of how the IRP process would work in light of the open season proposal. If a project is approved during the IRP process, how will other proposals get equal treatment during the open season proceeding?

Open Season

The Institutes have also proposed an open season for Section 248 projects whereby the Board would define an electric system problem and entities could propose competing solutions. The Municipalities would first suggest that this proposal not be applicable to smaller projects Section 248 projects.[24] For these projects, there are not likely to be entities that have the capacity or desire to offer competing solutions. An open season in these circumstances would simply add

[24] This would include both Section 248(j) and other projects that are too large to qualify for Section 248(j) treatment.

delay without any corresponding benefit. Additionally, a major concern is with the distribution utility's ultimate responsibility to provide the solution. All utilities have an obligation to serve and it would be dangerous to take a chance on a company that does not have a similar responsibility to deliver the solution. It will be the customers of that utility that end up paying for any failure to deliver.

Finally, there are many unanswered questions with the open season proposal. How will the process work? Is there still a need for Section 248 after the open season process? Who ultimately pays for the solution and how would it be collected by the ratepayers? The answers to these questions are critical and must be resolved before an open season process can seriously be considered.

As stated earlier, these are incredibly difficult issues for which no easy solutions are apparent. However, these are only a handful of questions that are likely to be asked when these proposals are presented to the Legislature. With that said, the Municipalities thank you for the opportunity to provide comments and look forward to seeing the final product.

S00500-00194\Doc #:

Comments from Natural Resources Board, December 14, 2007

[The comments below are integrated into an excerpt from the original memo.]

b. The Act 250 Process

The following Act 250 subcriteria directly or indirectly address electric energy issues. After introducing the full text of each criterion, we raise potential statutory and administrative changes to address the problems inherent in current statute and practices. Appendix B of this document is a possible revised version of the Act 250 Application Form, Schedule B, addressing the same problems in a different format.

One overarching change we suggest is that Efficiency Vermont/the Department of Public Service shall be a party to all Act 250 proceedings and shall comment on the development or subdivision's compliance with Criteria 9(F), 9(G), 9(H), and 9(J).

> **NRB Note: As an affected State Agency, the Department of Public Service has always been a statutory party in the Act 250 process and frequently participates.**
> **(9)(F) Energy conservation. A permit will be granted when it has been demonstrated by the applicant that, in addition to all other applicable criteria, the planning and design of the subdivision or development reflect the principles of energy conservation and incorporate the best available technology for efficient use or recovery of energy.**
>
> ***Specific Suggestions for Change to Statute***

- **Add 9(F)(2)**: Best available technology means:
    - the most stringent technology available, either through normal or specialized construction and supply channels,
    - for minimizing energy demand from utilities and for reducing the project's overall demand for energy.
    - Such technology shall/may include on-site energy sources, combined heat and electric generation facilities, whole building or subdivision design elements, as well as insulation factors and other traditional technologies.
- **Add 9(F)(3)**: Life cycle cost calculations shall be independently verified by the Department of Public Service/Efficiency Vermont.
    - When comparing life cycle cost of potential technology compared to life cycle cost caused by the applying development if it does not use such technology, include costs of upgrading transmission or generation facilities that would be needed if the energy-saving technology were not used.

- Use energy prices as forecast for the expected life of the applying project, rather than past energy prices, in calculating life cycle cost

NRB Note: Since the Commissions rarely conduct an independent review of energy conservation measures for Act 250 projects, it may be more effective to amend the Vermont's energy conservation codes: Vermont's Residential and Commercial Building Energy Standards (RBES and CBES). For residential projects, the applicant must demonstrate compliance with the RBES in order to satisfy Criterion 9(F). Compliance with the RBES constitutes a legal presumption of compliance and can not be successfully rebutted without a showing that the applicant's demonstration is inadequate. There can be no challenge to the Code's specific energy standards since they are legally presumed to constitute the "best available technology." However, the law requires the Code to be updated every three years.

Residential Building Energy Standards
Residential construction in Vermont (one family dwellings, two family dwellings, and multi-family housing three stories or less in height) is subject to Vermont's Residential Building Energy Standards (RBES) (21 V.S.A. §§ 266 - 267). Compliance with these standards creates a rebuttable presumption of compliance with Criterion 9(F), except no presumption is created regarding the use of electric resistance space heating (21 V.S.A. § 266(d)).

Commercial Building Energy Standards
Commercial buildings (all buildings which are not residential buildings three stories or less) are subject to Vermont's Commercial Building Energy Standards (CBES) (21 V.S.A. § 268). The 2005 Vermont Guidelines for Energy Efficient Commercial Construction (2005 Guidelines) serves as the handbook for compliance with the CBES. The CBES do <u>not</u> create a rebuttable presumption with respect to Criterion 9(F) for commercial buildings, however compliance with the CBES provides strong evidence and may serve as a "de facto" presumption.

The Department of Public Service (DPS) may recommend that an applicant consider <u>specific</u> energy conservation measures for commercial buildings. The recommendations are based on a life-cycle cost approach to determine the appropriate type of equipment, trading off greater capital costs for lower energy consumption and lower operating costs. Since every project involves different energy conservation opportunities, DPS evaluates each project for energy conservation measures, using the 2005 Guidelines as a starting point. Applicants are encouraged to list details related to the

energy features of the project including: interior and exterior lighting, space heating and cooling, domestic water heating, ventilation system, insulation levels, and other proposed energy measures. Here's the permit condition that is typically incorporated into an Act 250 permit for large phased commercial projects:

> **Energy design and construction shall at minimum comply with The 2001 Vermont Guidelines for Energy Efficiency Commercial Construction and shall include custom measures judged cost effective by lowest life-cycle analysis. Prior to finalization of the mechanical and electric design, for each subphase of phase one of the master plan, the permittee shall request a plan review by the Department of Public Service. The Department will then file written comments with the District Commission based on that review concerning the project's conformance with energy Criterion 9(F). (See Exhibits 60 and 134)**

Changes to Administrative Practice/Training

Change District Commission training guide so that conformance with Vermont's Commercial Building Energy Standards alone no longer counts as "strong evidence" that a project complies with criterion 9(F) and conformance with the Residential Building Energy Standards does not create a presumption of compliance with the criterion.

> **NRB Note: This would take a legislative change, not a change to the Act 250 Training Manual. As noted above, the RBES have been given a legal presumption of compliance in Act 250 while the CBES, adopted at a later date, were not given that status although demonstrated compliance with the CBES generally constitutes a "de facto" presumption in Act 250 proceedings.**

The training guide should also omit the definition of Best Available Technology (BAT) as "proven building practice or design" and materials that are available through "normal construction and supply channels." By omitting that definition, the Department of Public Service and the district commissions will share the lowest life cycle cost definition of BAT.

> **NRB Note: For reference, the former Environmental Board interpreted the phrase "best available technology" in Criterion 9(F) to include any proven building practice or design, and any equipment and materials that can be obtained through normal construction supply channels. Re: Twin State Development Association, #5W1021-EB, Findings of Fact, Conclusions of Law and Order at 8 (Jun. 12, 1990). In that decision the Board stated:**

A project that reflects the principles of energy conservation will include all such energy efficiency siting and design features, building practices, and equipment that can be justified on a life-cycle cost basis. This is modified in practice by allowing for consideration of factors specific to a development, such as aesthetics, special functions, maintenance problems, safety or other unique concerns of the proposed design and use.

Implement the practice that life cycle cost calculations shall be independently verified by the Department of Public Service/Efficiency Vermont, and that those calculations include the utility-borne and publicly-borne costs of upgrading the transmission or generation facilities and services that would be necessary to serve the development or subdivision if a given best available technology measure were not implemented. The Department did undertake the life cycle cost calculation job during some time periods in the past, and presumably nothing is blocking it from being in that position again, but time and budget constraints may prevent DPS from contributing to today's Act 250 proceedings in the same way it has during other times.

NRB Note: As mentioned above, the District Commission no longer consider life cycle cost analysis since the adoption of the RBES and the CBES creates legal and "de facto" presumptions of compliance. Compliance with these standards is all that is legally required for the construction of a residence or a commercial building. This is far more efficient than conducting an independent review of each building subject to the jurisdiction of Act 250. However, the Department of Public Service often conducts an independent review of large commercial buildings to insure compliance with the CBES. The Commissions routinely rely on the expertise of the Department.

Commissions will obtain cost of energy updates for every Act 250 proceeding, either from the Department of Public Service or Efficiency Vermont or the area electric utility. Those updates will include information regarding the cost of energy for the past 5-10 years and forecasts of energy costs in order to calculate life cycle costs. Include workshops or presentations by Efficiency Vermont and the Department of Public Service in annual District Commissioner training.

NRB Comment: Again, this needs to be addressed within the context of Vermont's universal energy codes which by law are updated every three years in an open public process.

(9)(G) Private utility services. A permit will be granted for a development or subdivision which relies on privately-owned utility services or facilities, including central sewage or water facilities and roads, whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, the privately-owned utility services or facilities are in conformity with a capital program or plan of the municipality involved, or adequate surety is provided to the municipality and

conditioned to protect the municipality in the event that the municipality is required to assume the responsibility for the services or facilities.

Specific Suggestions for Change to Statute

- **Add 9(G)(2)** *(to acknowledge and encourage the possibility that developments can rely on on-site electricity generation, which, if it were used purely on-site and not attached to the grid, would fall outside of the Public Service Board's Section 248 jurisdiction)*: For a proposed development or subdivision which relies on privately-owned electricity generation that is used solely on-site, the applicant must demonstrate that the electric services or facilities conform to the least cost integrated plan (30 V.S.A. § 218c) of the electric utility that serves the area in which the development is located. If the privately-owned generation does not so conform, then the applicant must demonstrate that the private generation conforms to the energy and utility elements of any affected municipal and regional plans.

  NRB Comment: Our concern is that this proposal seems to blur the distinction between the roles of the Public Service Board and the District Environmental Commissions. Applications for on-site generation of electricity are rarely seen in the Act 250 process except in the case of diesel generation of electricity for snowmaking equipment at ski areas. Often, these snowmaking activities are subject to load management strategies and automatically shut down during periods of high demand. Or they are operated only during off peak hours.

Changes to Administrative Practice/Training

Ensure that Commissioners understand that electricity generation that is used solely on-site will not pass through Public Service Board processes because of the limits in Section 248 jurisdiction. Educate District Commissioners on the types of on-site electricity generation available, from renewables to fossil fuel-based generators, and including co-generation, so that they are prepared to inquire into whether developers have considered the possibilities. Provide updates to the Commissioners on avoided costs and benefits of such generation, as well as the risks of unsound construction and materials.

(9)(H) Costs of scattered development. The district commission will grant a permit for a development or subdivision which is not physically contiguous to an existing settlement whenever it is demonstrated that, in addition to all other applicable criteria, the additional costs of public services and facilities caused directly or indirectly by the proposed development or subdivision do not outweigh the tax revenue and other public benefits of the development or subdivision such as increased employment opportunities or the provision of needed and balanced housing accessible to existing or planned employment centers.

Specific Suggestions for Change to Statute

- **Amend 9(H)**: The applicant does not create a presumption that it has covered the additional electricity-related public costs created by the proposed development or subdivision by paying for the cost of a distribution line to its development or subdivision.

  NRB Note: We are not aware that paying for the cost of a utility line or hookup has ever created a blanket presumption of compliance under Criterion 9(H). The Commissions must consider all of the "additional costs of public services and facilities caused directly or indirectly by the proposed development of subdivision" and then weigh those costs against the public benefits. Often there are no other costs associated with the provision of utility services but when there are, the Commissions are obligated to consider them.

- **Add 9(H)(2)**: For any proposed scattered development or subdivision that will require electricity delivered through distribution and transmission facilities, the applicant is required to determine the cost of upgrading both transmission and generation as necessary to serve that area. That cost shall be independently verified by the Department of Public Service/the area's electric utility, and it shall be determined even if such development would not immediately create the need for a utility to build the facility. The verified cost of the generation or transmission upgrade shall be included in the applicant's cost calculation under this section.[25]

  NRB Comment: This is the normal practice not only under Criterion 9(H) but under Criterion 9(J) as well. In a 1986 decision, the Environmental Board explained the purpose of Criterion 9(J):

  > **The Board believes that in enacting Criteria 9(F) [energy conservation] and 9(J), as well as Criterion 9(K) dealing with impacts on public investments including generating and transmission facilities, the General Assembly wanted the [Environmental Board and] District Commissions to take a broad view of the problem of energy conservation and the impact which new developments have on the demand for public utility services. Each project which comes through Act 250 usually has only a minor impact if looked at**

[25] This change reflects something of the "last in" cost sharing approach, which may be criticized for discouraging development or punishing later developers unfairly to the comparative advantage of earlier developers; however, because this applies only to scattered development, which the State is already battling on different fronts, this kind of cost allocation promotes a statewide policy of clustering growth, and does not discourage all types of development or growth. Additionally, the cost calculation does not imply that the developer will actually bear the costs, it only ensures that the District Commissioners are aware of the full extent of electricity related *publicly*-borne costs of scattered development.

Note that the Public Service Board's existing line-extension rules already lead to the direct assignment of most, but not all distribution costs associated with new development. To the extent that distribution costs are not fully recognized in line extension cost assignments, they should be considered with transmission and generation assignments, as "publicly-borne" costs.

individually. Cumulatively, however; the impact may be enormous. In deciding this case, the Board is keeping the cumulative impact firmly in mind. Failure to do so would inevitably result in higher additional costs to all rate-payers, as public utilities are forced to speed up their timetables in the construction of new generating and transmission facilities.

Re: Killington 43 Associates, #lR0522-4-EB, Findings of Fact, Conclusions of Law, and Order at 7 - 8 (Aug. 20, 1986).

With respect to Footnote No. 1 below, the "rough proportionality" test is the current standard by which the Commissions determine whether to impose development impact fees to pay for the cost of newly required public infrastructure. We instruct the Commission not to use the "last in" cost sharing approach since it will not withstand a legal challenge under current precedent.

Changes to Administrative Practice/Training

District Commissions will invite comments and testimony from the service area electric utility and the Department of Public Service regarding the current capacity of the existing infrastructure to serve the proposed scattered development, the timing, based on projections of population and economic growth and the utility's Section 218c plan, of when the infrastructure would need upgrades, and the costs of the upgrades.

(9)(J) Public utility services. A permit will be granted for a development or subdivision whenever it is demonstrated that, in addition to all other applicable criteria, necessary supportive governmental and public utility facilities and services are available or will be available when the development is completed under a duly adopted capital program or plan, an excessive or uneconomic demand will not be placed on such facilities and services, and the provision of such facilities and services has been planned on the basis of a projection of reasonable population increase and economic growth.

Specific Suggestions for Change to Statute

No applicant will satisfy this criterion if a utility's ability to serve the development or subdivision depends on construction of a project that has not yet been approved by the governmental body responsible for its approval. This criterion shall not be satisfied by any condition stating that the District Commission will retain jurisdiction over the project pending the approval of the utility's needed upgrade. No development or subdivision shall be permitted under this chapter unless and until the necessary utility upgrade has been approved by the responsible governmental body and any appeals of such approval have been finally resolved.

NRB Comment: Again, we believe this is normal practice under Criterion 9(J). A district commission can not legally issue a permit without an affirmative finding that: "necessary supportive governmental and public utility facilities and services are available or will be available when the development is completed .." This requisite finding can not be satisfied by retaining jurisdiction to find out what will happen in the future. This issue has recently been argued in Stowe and directly relates to the construction of a new 115 KV VELCO transmission line from Duxbury to serve the Stowe community. The affected projects, Stowe Mountain Resort, Topnotch and Ampersand, could not go forward until it had been adequately demonstrated that power would be available to serve these developments. In April of this year, the District #5 Commission issued a land use permit specifically authorizing the demolition and reconstruction of the main hotel at Topnotch in Stowe. The project includes a new lobby with a porte-cochere, a dining area with 208 seats, a main kitchen, a great room, a library, and a gift shop. There will also be a new seasonal outdoor dining area with 70 seats. Thirty-three new condominium units will occupy the second story of the new hotel, with an additional 43 units in a new adjacent wing. In that decision, the Commission concluded:

> **SECTION 6086(a)(9)(J) PUBLIC UTILITY SERVICES:**
>
> **The current peak load [at Topnotch] is 280 kW. The applicant has calculated an additional maximum of 500 kW, resulting in a total connected load of 780 kW. (Exhibit 29A) A 750 kW generator will be provided as part of the project. (Exhibit 29A) .At the [February, 2007] hearing, the Stowe Electric Department (SED) affirmed its ability to serve electrical needs of this project at the 780 kW level with or without the VELCO upgrade. SED informed the District Commission that an enhanced 115kV transmission line between Duxbury and Stowe will be constructed by Fall 2008. Although there is dispute about who must pay for this significant project, VELCO testified that the improvements will be constructed even if a dispute concerning the cost shares of the subject utilities is not resolved. The transmission line will resolve the capacity constraints of transmission service providers and ensure the reliability of the SED system. SED further explained that it has managed [peak demand] to 15 MW, but has 20-21 MW in capacity. (Testimony of Burt and Exhibit 51)**
>
> **CONCLUSION**
>
> **Therefore, the Commission concludes that utility service is available to this project, that an excessive or uneconomic demand will not be placed on such facilities or services, and that the provision of such**

services has been planned on the basis of a projection of reasonable population increase and economic growth.

Changes to Administrative Practice/Training

At the broadest level, District Commissioners need to understand that by approving land use projects that increase electricity demand, they are contributing to the weight that "need" has in the calculations that the Public Service Board makes when exercising Section 248 jurisdiction to determine whether utility proposals serve the public good. It will also be important for District Commissioners to recognize that even if they retain jurisdiction over a project pending Public Service Board action, the utilities and the Board will likely still calculate the need for electricity infrastructure upgrades based on the approved development. Thus, retaining jurisdiction does not diminish the impact of their approval of the project on the Public Service Board's Section 248 jurisdiction.

District Commissioners will need to learn how to read and understand Section 218c least cost integrated plans so that they can judge whether applicants have accurately represented whether the utilities' ability to serve guarantees are consistent with their Section 218c approved plans.

NRB Comment: A better understanding of the requirements of Section 218c of Title 30 would help insure a more cohesive review and improved coordination between the two regulatory processes.

(10) Is in conformance with any duly adopted local or regional plan or capital program under Chapter 117 of Title 24. In making this finding, if the district commission finds applicable provisions of the town plan to be ambiguous, the district commission, for interpretive purposes, shall consider bylaws, but only to the extent that they implement and are consistent with those provisions, and need not consider any other evidence.

Specific Suggestions for Change to Statute

- **Amend 10** (*To reflect our proposed amendments to Chapter 117, encouraging towns to create Greenhouse Gas Budgets*): Is in conformance with any duly adopted local or regional plan or capital program under Chapter 117 of Title 24, and any duly adopted Greenhouse Gas Budget or Greenhouse Gas municipal or regional regulations that are adopted by local governmental bodies, regardless of whether such budgets or regulations have been approved by regional planning commissions and whether the municipality has been confirmed under 24 V.S.A. § 4350.

Changes to Administrative Practice/Training

If any municipalities include Greenhouse Gas Budgets as part of their town plans, or develop Greenhouse Gas Budgets notwithstanding lack of a town plan, as we hope will result from amendments to Chapter 117, then any Act 250 applications in those municipalities will have to

include information relating to the proposed development's impact on, or ability to comply with, the town's GHG Budget. District Commissioners may need extra training to understand and be able to work with any technical language of GHG budgets or measurements.

Letter From Rep. Kathy Lavoie (R-Swanton)

Energy initiatives we must pursue
St. Albans Messenger Daily Evening Newspaper
Thursday, 29 November 2007

On October 17th, I had the opportunity and privilege to speak at the 6th Annual Renewable Energy Vermont convention. This event, with almost 700 attendees, has become very important toward Vermont's goal of ensuring clean, reliable, affordable electricity. It reinforces that Vermonters must come together to advocate, promote, support and enact energy policies that support our goals.

Over the last few weeks I have submitted initiative 1-7 that I had addressed in my speech; below are initiatives 8-10.

I am a supporter of an energy portfolio that includes conservation and efficiency, in-state renewable, hydro and nuclear. I think that it is not realistic and not economical to think that we can meet our demands without a consistently generated, 24/7 base load like we presently have with Vermont Yankee and Hydro Quebec which provides 2/3 of our power. I also believe that we must continue to support private and public initiatives for in-state renewables - wind, small hydro, solar, biomass and geo-thermal. And none of these initiatives will be enough if we don't continue to focus our efforts on energy efficiencies and conservation. Toward that end, I believe the following need to be supported through policies, practices and money:

8) Support the initiatives of the Governor's Commission on Climate Change - Created by executive order in 2005, the group was charged with examining the effects of climate change on Vermont, including the impact on public health, natural resources and the economy.

Since my REV presentation, this group has been further charged by Governor Douglas to determine how to create a “Vermont Green Standard” for the multi-billion dollar carbon trading market—an effort the Governor says could position Vermont to become the leader in the emerging market. To accomplish this mission, the Commission will work with the state’s leaders in academic, public and private sectors, through the Vermont Climate Collaborative, attracting the best and brightest minds. The Commissions’ suggestions also include: directing the Education Commissioner to work with UVM to establish an ecological literacy standard that can help prepare students for future career opportunities in the green economy; providing $350,000 in state matching grants for local communities to move forward with their own initiatives to save energy and stimulate green jobs; allowing maple sugar operators to expand their access to state forest lands; expanding timber harvest in the state forests as a source of local renewable energy, high-quality wood products and habitat management; creating the Center for Climate Change and Waste Reduction within the Agency of Natural Resources to act as a clearinghouse and coordination arm for state government in helping Vermonters reduce their energy needs, both in the public and private sectors I support these initiatives.

9) Consider the work and suggestions of the Vermont Law School's Institute for Energy and the Environment and its Land Use Institute. Awarded a Windham Foundation grant, they are to

initiate a collaborative process to re-draft portions of Section 248 and Act 250. As they state, the project goal is to "harmonize land use and energy planning in Vermont so that high efficiency in new construction and redevelopment is achieved, renewable and distributed energy use is maximized, and new electricity load is added in locations where minimal new generation and transmission infrastructure will be needed." Legislation could be proposed at the start of the 2008 session.

10) Simplify and stabilize taxation of wind energy towers to meet the goal of creating a predictable tax in lieu of the non-residential property tax. This does not have to be a direct "loss" to the education fund. We need to also review and verify tax calculations for all types of renewable energy projects so that we have a fair environment.

I believe that even though Vermont's carbon footprint is the smallest in the nation, we still need to do our part toward protecting our environment from greenhouse gases. Burning less non-renewable fossil fuels is better for Vermont's environment, promotes the health of our economy, and secures our independence. The total energy consumption in Vermont is the lowest in the nation and we are already a leader in energy efficiency. We should continue to strive toward greater efficiencies, increased state renewables, and a portfolio solid in base load power. The cost-benefit analysis that we perform must recognize that sometimes the cost just isn't worth the benefit AND that at other times, the benefit may come at a disproportional cost. But in both instances, we always need to understand who will receive the benefit, how much it cost, and who will pay the bill.

Next week I will submit initiatives 11-13.

Rep. Kathy Lavoie
Swanton

ENERGY AND LAND USE: MERGING THE REGULATORY STREAMS

VERMONT LAW SCHOOL

LAND USE INSTITUTE AND THE INSTITUTE FOR ENERGY AND THE ENVIRONMENT

Memorandum Regarding Proposed Changes to Land Use and Electric Utility Planning and Permitting Processes
March 2009

I. Introduction

The Land Use Institute and Institute for Energy and the Environment at Vermont Law School, with the assistance of a grant from the Windham Foundation, have hosted three working group meetings from October 2007 to December 2008. The purpose of the meetings was to discuss statutory solutions to the problems that are sure to arise under the current statutory scheme, which features a utility planning and siting processes which is wholly separated from the land use planning and development regulatory processes.

This memorandum proposes a series of statutory amendments to the land use and utility planning processes (Chapter 117 and Section 218c) as well as to the land use and utility permitting processes (Chapter 117, Act 250, and Section 248). The possible changes contained in this memorandum do not necessarily represent the views or positions of the Institute for Energy and the Environment or the Land Use Institute; rather, they represent some of the views we heard during previous Working Group sessions and some ideas for change that the Institutes have been working with over the past year.

In this memo, discussion of each of the principal statutes is prefaced with a short passage meant to better explain the statute as a whole, and better delineate the steps we collectively feel are necessary in order to achieve our stated policy goals of minimizing new electricity demand across the state, encouraging clustered growth around areas that already have the infrastructure able to serve new demand, and encouraging new, in-state electricity and transmission generation to be built in areas that will minimize adverse land use impacts. There then follows a brief explanation of the principal amendments proposed for each. Appendix I sets out changes from the language considered at the December 2008 Working Group session. Appendix II is a draft bill containing all the presently proposed amendments to all four principal statutes.

II. Possible amendments and/or additions to 10 V.S.A. §6086 (Act 250)

Act 250 (10 V.S.A. §§6001-6093) is Vermont's statewide land use development review statute. Act 250 jurisdiction extends to residential, commercial and industrial development over a certain size, statewide. About forty percent of Vermont's development falls within Act 250 jurisdiction. Vermont comprises nine Act 250 districts, and a three-member District Commission presides over the Act 250 review process in each district. The commissioners, who are appointed by the governor, are responsible for determining whether applicants have satisfied ten statutory criteria, and a number of subcriteria, before approving land use permits. The ten criteria cover diverse areas of land use concern in the state, including impact on water and air quality, aesthetics, traffic, and utilities.

Several Act 250 criteria have direct and indirect connections with energy planning in a new development. One of the goals of this project is to harmonize the objectives between

land use developers and the state's electric utilities to ensure that land use development is consistent with the state's electric utilities long-term service plans. Act 250 has been amended to address the separation between the land use development and public utility regulatory systems. The objective of these proposed amendments is to prevent a situation where issued permits under Act 250 for developments lead to unanticipated electricity demand that requires transmission upgrades or new generation facility construction. The proposed amendments and added changes to Act 250 described below incorporate recommended changes from the Fall 2007 "Energy and Land Use: Merging the Regulatory Streams" report.

10 V.S.A. §6086(a) (9) (F) Energy Conservation.
In amending this section, the objective was to clarify what is meant by utilizing the principles of energy conservation and energy efficiency measures. Specifically, this section sought to unify standards between the electric utility sector and land use development. The first part of section F describes what tasks are necessary to achieve energy conservation. The subcriteria F(2) and F(3) give a more detailed explanation about how energy conservation methods can be achieved by defining "Best Available Technology" and "Life Cycle Costs." Lastly, F(4) allows for some input by the Department of Public Service. The Department of Public Service is given the opportunity to make specific energy conservation suggestions to the district commission based on Vermont Guidelines for Energy Efficient Commercial Construction.

The term "Best Available Technology" should be understood to factor in cost. It would be unreasonable and impracticable to demand that land use developers use the best available technology if this technology is economically infeasible. In defining this term, the goal is to encourage developers to utilize the most responsible energy conservation and efficiency technology. Thus, when deciding on a particular type of technology to be used, it is important to look at upfront cost as well as long-term benefits and costs of installation. By comparing short-run costs to long-term costs and benefits to consumers and society, developers will be choosing the most responsible energy efficient technology.

To comply with the goals of this section to achieve adequate energy efficiency measures, the land use developer may use "best available technology" or "life cycle costs." This gives the land use developer the option to determine how it will meet the energy conservation measures. Thus, if a land use developer decides not to implement the best available technology within the meaning of the definition in F(2), the developer may have to bear some of the costs of upgrading existing transmission or generation facilities based on reasonable forecasts of future energy costs.

Finally, under F(4), it is important to note that recommendations may be made regarding energy conservation measures for commercial buildings in accordance with 21 V.S.A § 268 with additional suggestions from the Department of Public Service. Presently, the standards for Vermont's commercial and residential buildings differ in qualifications for meeting energy conservation criteria. It may be preferable to align these standards to better achieve energy conservation goals.

Overall the objective of this section is to create a more cohesive plan between land use development and the electric utility to ensure that energy demand can meet new land development in the most efficient and least wasteful manner.

10 V.S.A. §6086(a)(9)(G) Private Utility Service.
In this section, the amendments seek to address the potential of private utility service providers, who do not fall within the Public Service Board's jurisdiction that may create increased energy demand over time in a development, thus requiring a public utility service. Under G(i), the privately owned utility service or facility must provide a surety that will protect the municipality, if the municipality needs to assume responsibility for the electricity services. Section G(ii), contemplates the possibility of a private utility service provider failing to meet its energy demand and therefore requiring the public utility service provider to serve its energy needs. This additional section is a preventive section for this possible outcome. A private utility service must demonstrate that it can provide electricity that is consistent with the public utility's least cost integrated plan. The requirement that a private utility service be consistent with a public utility's least cost integrated plan reduces potential problems from arising if a private utility is no longer viable. Again, the objective is to ensure that land development which later needs connection to the public utility is done in the most efficient manner. If land use development is encouraged to rely on private utility service, this may give more freedom to developers in the short-run, but the potential that these energy needs will not have been planned for over time may prove to be more costly to the public utility provider and consumers in the long-run by forcing transmission upgrades that were previously not accounted for. It may be beneficial to provide specific criteria regarding the cost of generation or transmission upgrades caused directly or indirectly by proposed scattered development.

10 V.S.A. §6086(a)(9)(H) Costs of Scattered Development.
This section seeks to disseminate criteria that a proposed land developer may want to consider when attempting to develop land outside of existing town and/or villages.

The new section, H(ii), requires an applicant to determine costs of building either a distributed generation facility or a new transmission line to serve the new electricity demand created by the new proposed development location. Under H(i) and (ii), the developer must seek independent approval from the department of public service regarding the developers calculated costs of upgrading both transmission and electric generation necessary to serve the area. Here, the land use developer when deciding to develop outside of an area generally serviced by the public utility provider is forced to consider his actions in the larger scope of future energy demand and the ability of the utility to serve this development needs. The burden on the applicant is slightly increased because no presumption is created that additional-related energy costs will be covered by simply paying for the additional transmission lines to its development or subdivision.

10 V.S.A. §6086(a)(9)(J) Public Utility Services.

This is amended to ensure that land use development does not begin based on the pending approval that the necessary public utility services will be available. This section has been changed to ensure that public utility services must be available. Here, the objective is to prevent a developer from forcing a public utility to serve an area if development has commenced prior to the public service boards approval to provide electricity. A developer must seek approval from the public service board that it will be able to adequately meet the developer's energy needs. Under J(3), the developer must seek a letter from the public service board certifying that it will be able to provide for the proposed development or subdivisions energy needs consistent with the utility's least cost integrated plan. If a developer wants approval for a non-residential project, the applicant under J(4) must demonstrate in his fullest capacity how energy use will be minimized during peak periods of energy demand.

Overall, the above recommended and amended changes are trying to balance the interest of land use development with energy demand. The purpose of these proposed changes to Act 250 is to ensure that review of land development will responsibly include review of the electricity needs it will require. In striving to strike a balance between the interests of both these regulatory processes, which are often interrelated, an increased burden on land use developers and public utilities may be necessary. Forced communication and cross-checking required by the proposed amended version of the statute will hopefully allow for strategic land development that will not generate unnecessary energy-related costs.

III. Possible amendments and/or additions to Chapter 117

Chapter 117 (24 V.S.A. §§ 4301-4498) is Vermont's enabling statute for local and regional land use planning and regulation. Planning actions taken at the state, regional, and municipal levels pursuant to Chapter 117 must be consistent with the Chapter's broad goals, which include encouraging the efficient use of energy and the development of renewable energy resources. The Chapter also requires regional and municipal planning commissions to assess present and future energy needs in creating and implementing plans and bylaws.

Chapter 117 encourages energy efficient development, but it fails to outline standards for regional and municipal planners to follow. The proposed statutory changes attempt to address the statute's deficiency by incorporating specific energy guidelines for planners and including expertise of members of Vermont's energy community. The proposed changes also call for the reinstatement of the council of regional commissions to have statewide oversight of regional and municipal plans and the respective plan's compliance with energy guidelines. The Council of Regional Commissions is created by 24 VSA § 4305. It will be necessary to restore funding for it if it is to fulfill this function. It is acknowledged that, in the current political and economic environment, this is not likely to occur in this biennium.

The proposed changes require more stringent energy considerations in the regional and planning process and promote statewide oversight. Specifically, the changes alter the planning goals of Chapter 117 to require the efficient use of energy and the development of renewable energy resources. It adds a member of Efficiency Vermont to the council of regional commissions, requires the council to review plans with respect to the least cost integrated plans of the public service board and distributes funds to regional commissions based on performance standards. One proposed change requires regional planning commissions to consult with the Department of Public Service, Efficiency Vermont, the area service utility and VELCO when evaluating energy and utility elements of municipal and regional plans.

In addition, a series of updates is proposed to the development review provisions under conditional use, site plan review and subdivision review to increase the capacity and likelihood that energy conservation and energy efficiency will be increased in new development in the future in Vermont.

While more stringent requirements may be difficult to pass with present statewide funding constraints, the changes are essential to bridging the gap between land use planning and efficient energy development.

IV. Proposed Changes to 30 V.S.A. § 218c

The following proposed changes are consistent with our stated goal of promoting responsible, long term decision making on the part of those involved in the utility siting process. Section 218c serves an important purpose as our primary statutory tool designed to address the planning responsibilities of regulated utilities. This requires that such entities engage in "least cost integrated planning" to ensure that public's needs are met by the "lowest present value life cycle cost." The current language, however, falls short of providing the level of statewide oversight and consistency necessary to ensure a coordinated effort towards sound, energy conscious land use planning.

We will begin with subsection (a). We recommend the inclusion of a definition for "life cycle costs" immediately following the explanation of a "least cost integrated plan". This is recommended not only to resolve any ambiguity, but also to ensure consistent interpretation of this phrase. This definition is the standard construction of the phrase, and can be found in 3 V.S.A. § 2291 as part of the State Agency Energy Plan.

It is important that this section reflect the need to consider long term demand as part of a utility's least cost integrated plan. In our proposed changes, we used subsection (a) (4) to require that a least cost integrated plan include calculations establishing the public's need for energy services. This provision is most effective when it is required that these calculations are consistent with those of the municipal and regional planning commissions. The prospects for responsible and efficient planning improve markedly when the same set of population and economic growth projections are used for a given

service area. These figures need to be coordinated so that utilities are able to plan properly to serve the area, and so that the approved development of electric generation and transmission matches the expected development needs of Vermont's towns, and vice-versa.

Subsection (a) (6) provides that the energy demand projections required as part of a utility's least cost integrated plan should set forth long-term sustainable strategies for meeting electricity demand. This also provides a timeline over which a utility must plan. Without that baseline, there is the potential for plans to take too short a view of resource planning, and potentially to miss some of the most "cost-effective alternatives." Further, a planning horizon provides a long term opportunity to promote coordination between the utility and land use planners. Our proposed changes require a 20-year planning horizon, with energy demand projections for each five year period. This works to ensure that the land use process is aligned with the utility planning process throughout.

Subsection (b) (1) provides an opportunity to give guidance to the regulated utility in the application process. Central to this guidance is the frequency in which a plan should be updated. A three year requirement provides a timeframe for action while working to improve the efficacy and accuracy of the least cost integrated plan. Allowing flexibility will ease cost restrictions to the utility while discouraging irrational and inconsistent decisionmaking if faced with a growing need to update over the short term.

If we are to plan responsibly, it is necessary that we promote coordination between utility and land use planners at the earliest possible stage in the planning process. It is also necessary that an ongoing dialogue be maintained between the land use and utility planners. The updated least cost integrated plan should be submitted to the department of public service, the public service board, each municipal and regional planning commission within the service area of the utility, as well as the council of regional commissions.[1]

If a Section 218c application is approved, following an opportunity for a hearing in front of the public service board, an additional opportunity is presented for each planning commission to voice its opinion and express any concerns with the plan as submitted. If this relationship is to be effective, due consideration must be given to the comments of the municipal and regional planning commissions as the Public Service Board assesses each application. This will allow land use planners to remain part of the process.

Language mandating that a least cost integrated plan shall be approved if the requirements of subdivision (a) are complied with will serve as welcome guidance to both the utility and the Board. This will encourage efficient planning and serve as a benchmark for performance. To carry this a step further, we suggest that if the Board does not approve a plan, it shall provide written notice to the submitting utility setting forth the reasons for the adverse decision. A plan that is not rejected by the Board within

[1] The Council of Regional Commissions is created by 24 VSA § 4305. It will be necessary to restore funding for it if it is to fulfill this function.

a period of nine months, beginning on the date of its submission, shall be deemed to have been approved.

An important consideration involves what, if any, circumstances may necessitate a need for a revised plan. Factors such as a change in anticipated demand or a failure to adequately comply with a prior approved plan may lead to a change in circumstances sufficient to render the originally approved plan inoperable. Allowing the Board to require an update, pursuant to the same requirements and procedures as would apply otherwise, would allow a utility to account for and respond to a change of circumstances. A requirement stating that the plan is returned within nine months will ensure timely compliance.

V. Proposed Changes to 30 V.S.A. § 248

The purpose of Section 248 is to require the Public Service Board to consider criteria before issuing a certificate of public good (CPG) for proposed electricity generation and transmission projects. It prohibits a "company" from beginning site preparation for an electric generation or transmission facility, unless the Public Service Board first finds that such facility "will promote the general good of the state and issues a certificate to that effect."

Sound choices about which energy projects are in the state's best interests, and which are not, require a less piecemeal approach than the project-by-project analysis currently contemplated by section 248. Therefore, we propose a series of significant revisions to the section 248 process that are ultimately calculated to require utilities and, ultimately, the Public Service Board, to consider potential energy facility choices in relation to one another rather than in isolation.

The Public Service Board in 2005 granted a CPG to a 63-mile transmission upgrade from West Rutland to South Burlington, the first such major project in Vermont for approximately 30 years. In authorizing the project, the Board expressed concerns about its inability to consider other alternatives. Two years later, in an effort to confront those concerns, the Board approved a settlement agreement that called for the creation of the Vermont System Planning Committee (VSPC) (with voting members drawn from the state's electric utilities, including the one providing statewide transmission utility, together with three public members and certain nonvoting representatives) to plan the future of Vermont's bulk power system.

The proposal set forth here would expand the work of the VSPC to include planning of energy facilities generally. To that end, the central task of the VSPC would remain the preparation of a system plan that covers a 20-year-horizon. To that task would be added the responsibility of issuing periodic requests for specific proposals for the development of new energy capacity. The basic concept is that of a "portfolio open season" in which the overall capacity portfolio of the state's electric providers is expanded, when necessary according to the system plan, in an orderly manner in light of the relevant policy considerations.

Under the proposed revision to section 248, the specifics of the VSPC's organization is a matter significantly consigned to the rulemaking discretion of the Board. It is assumed that the framework the Board has already adopted by rule and order (themselves the result of a consensus decision making process) would continue and should not be revisited absent compelling reasons.

After the issuance of a RFP for specific capacity resources, attention shifts from the VSPC to the utilities themselves as the focus moves from planning to execution. The affected utilities would be obliged to review responses to the RFP and ultimately to submit proposed disposition of the proposals to the Board for approval according to enumerated criteria. Central among them are consistency with the least cost planning process required by 10 V.S.A. § 218c.

To promote clarity in light of these proposed changes, the recodification of section 248 is proposed such that section 248 itself would be limited to the broad prohibition on new energy investments without Board approval. A new section, 248a, would cover the VSPC and development of new utility-related capacity and a new section 248b would likewise contain the CPG provisions applicable to other energy facilities. New sections 248c, 248d, 248e and 248f would contain, respectively, existing section 248 provisions governing nuclear power facilities, gas facilities, wireless facilities and municipal/cooperative facilities. Existing section 248a, which concerns "multiple telecommunications facilities," is unrelated to the present discussion but would require recodification as section 248g.

Appendix I

This following sections have been changed since the Working Group Meeting on December 4th: New changes are in italics.

10 V.S.A. §6086(a)(9)(J) is amended to read:

The 12/04/08 version required a copy of the 'ability to serve' letter, a copy of the utility's public service board-approved least cost integrated plan with a description of how the development complied with the LCIP. The proposed language now states…

> *(vi) the applicable electric utility can provide service to the development or subdivision in a manner that is consistent with the utility's least cost integrated plan as approved pursuant to 10 V.S.A. section 218c without requiring any system upgrades or projects not specifically contemplated by the plan.*

10 V.S.A. §6086(a)(10) is no longer going to be amended.

24 V.S.A. § 4302(c)(7) is amended to read:
To ~~encourage~~ require the efficient use of energy and the development of renewable energy resources *consistent with the specifications outlined by the Vermont Energy Plan and New England Regional Greenhouse Gas Initiative.*

This section was previously drafted to require consistency with specifications outlined by the council of regional commissions. Based on the concerns that the CRC would not have funding, the language was changed to require consistency with the Vermont Energy Plan and New England Regional Greenhouse Gas Initiative

The proposed statutory changes do call for the reinstatement of the council of regional commissions. The CRC is created by 24 V.S.A. § 4305. While, it will be necessary to restore funding for it to fulfill its mission, some statutory sections have been changed.

24 V.S.A. § 4305(c)(1) is amended to read:

(1) The council shall review proposed regional plans or amendments *every five years, or more frequently if requested by the regional planning commission or a municipality. The review shall be conducted* after public notice ~~and determine the following:~~. *The council shall approve the plan or amendment if it finds that*

(A) ~~whether~~ the plan, as amended , contains the elements required by law;

(B) ~~whether~~ the plan is compatible with the plans of adjoining regions; ~~[and]~~

(C) ~~whether~~ the plan, as amended, is consistent with the goals established in section 4302 of this title; *and*

(D) the plan is consistent with the energy guidelines established by the council under subsection (i) of this section.

24 V.S.A. § 4306 (b) (4) and (5) have been deleted. The sections required bylaws to be enacted and approval by the CRC before the disbursement of certain funds. Based on the concerns that towns already have too many restrictions before being awarded funds, these sections were deleted.

24 V.S.A. § 4345a(5)(H) is added to read:

> (H) *apply the guidelines developed by the Council of Regional Commissions pursuant to section 4305(i) of this title and* consult with the department of public service, Efficiency Vermont, the area service utility and VELCO when evaluating energy and utility elements of municipal and regional plans.

24 V.S.A. § 4348c has been deleted. This section required a RPC to consult with the CRCs with respect to the region's planning efforts and only approve plans if they are consistent with the energy guidelines determined by the CRCs. This issue is addressed in § 4305(c)(1)(D).

Sec. 19. 30 V.S.A. § 218c (a) is amended to read:
(a) (4) A plan prepared pursuant to this section shall include calculations establishing the public's need for energy services. These calculations *shall give due consideration to the* economic and population growth projections, as well as the energy and utility demand projections, made available by each municipal or regional planning commission within the service area of the utility preparing the plan.

30 V.S.A. §248 has not been changed since the December 4th memo.
30 V.S.A. § 248a will be amended to read:

(a) The system planning committee shall consist of one representative from each Vermont electric utility and three members of the public.
(b) The public service board shall appoint the public members of the committee, who shall serve for five-year terms.
(c) In addition, the committee shall also include non-voting representatives,

consisting of

(1) a representative of each entity appointed by the board under 30 V.S.A. § 209(d) to deliver system wide programs, unless such an entity is also an electric utility holding voting membership in the committee, and
(2) a representative of the entity appointed by the board to serve as a facilitator under 30 V.S.A. § 8005(b), and
(3) a representative of the department of public service.

(d) The purpose of the committee shall be to provide, under the supervision of the board and in consultation with the department, a mechanism for the orderly development

of the state's electricity grid in accordance with the least cost planning principles set forth in 30 V.S.A. § 281c.

(e)(1) At such times and with such frequency as the board shall by order direct, the committee shall prepare and submit to the board a system plan, employing a 20-year planning horizon, that sets forth in detail how the state's utilities, including any utility without a designated retail service territory if such utility owns or operates electric transmission facilities in the state, will meet their obligation to provide safe and reliable service to the public at the lowest possible cost.

(2) A system plan submitted under this section shall address necessary improvements and changes to both the transmission system and generation capacity, with specific additions to generation capacity to be implemented via one or more requests for proposals as provided in paragraph (f) below.

(f)(1) The committee shall issue a request for energy capacity proposals whenever required pursuant to a plan approved by the board pursuant to subsection (e).

(2) Responses to such a request for proposals shall be due within such time as the board shall direct and shall be submitted to such utilities as the board shall likewise order, taking into account the commercially sensitive nature of such proposals.

(3) Each affected utility shall review the proposals received and, within such time as specified by the board, shall make a filing with the board indicating which proposals it intends to accept. The utility shall also furnish a copy of any such filing to the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which any facility proposed to be constructed will be located.

(4) After notice and hearing, the board review the utility's proposed disposition of the proposals for

(A) the extent to which it is consistent with the most recently approved least cost integrated plan of each company to be served by the proposed projects,

(B) the extent to which the benefits of the projects exceed costs,

(C)the extent to which the projects are financially viable,

(D) the extent to which they are consistent with the purposes of the Planning and Development Act as stated in 24 V.S.A. § 4302,

(E) the extent to which they would result in a resource portfolio for the company, and for the state as a whole, that is diverse;

(F) the extent to which they would meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to those developed pursuant to the provisions of sections 209(d), 218c, and 218(b) of this

title;

(G) the extent to which any proposed in-state facilities will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality;

(5) The board shall reject any proposals that

(A) would adversely impact system reliability,

(B)_is not in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;

(C) involves any facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, and would have an undue adverse effect on those outstanding resource waters;

(D) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and

(E) involve the construction of facilities that cannot be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers; and

(F) would have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

(6) The board shall indicate which, if any, proposals do not satisfy minimum standards for acceptance according to the criteria in this subdivision, and, as to the remainder, provisionally approve those proposals that are reasonably necessary to meet the service obligations of each company.

(7) The board shall issue a certificate of public good as required under subsection (b) of this section for projects that are included in a proposal that has been accepted under this section unless it determined after notice and hearing by clear and convincing evidence that it would be inconsistent with the purposes of this title to do so.

(g) The board shall promulgate such rules as are necessary to effectuate an orderly and efficient process for appointing utility representatives on the committee, voting by the committee, the issuance of requests for proposals, the evaluation proposals, and the issuance certificates of public good pursuant to this section.

30 V.S.A.§ 248b will be amended to read:

(a)(1) Notwithstanding section 248a, the public service board shall have the authority to

issue a certificate of public good in connection with construction not intended to provide service to a Vermont electric utility. Before issuing such a certificate of public good under this subsection, the board shall find that the construction:

(A) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. However, with respect to a natural gas transmission line subject to board review, the line shall be in conformance with any applicable provisions concerning such lines contained in the duly adopted regional plan;

(B) will not adversely affect system stability and reliability;

(C) will result in an economic benefit to the state and its residents;

(D) will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

(E) with respect to purchases, investments, or construction by a company, is consistent with the principles for resource selection expressed in that company's approved least cost integrated plan;

(F) is in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;

(G) does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, except that with respect to a natural gas or electric transmission facility, the facility does not have an undue adverse effect on those outstanding resource waters;

(H) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and

(I) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

(2) The public service board shall hold a nontechnical public hearing on each petition for such finding and certificate in at least one county in which any portion of the construction of the facility is proposed to be located.

(b) Nothing in this section shall be construed to prohibit a company from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the company's obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.

(c)(1) Notwithstanding any other provisions of this section, the board may waive, for a specified and limited time, the prohibitions contained in this section or section 248a upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility, pending full review under this section.

(2) A person seeking a waiver under this subsection shall file a petition with the board

and shall provide copies to the department of public service and the agency of natural resources. Upon receiving the petition, the board shall conduct an expedited preliminary hearing, upon such notice to the governmental bodies listed in subdivision (a)(4)(C) of this section as the board may require.

(3) An order granting a waiver may include terms, conditions and safeguards, including the posting of a bond or other security, as the board deems proper, considering the scope and duration of the requested waiver.

(4) A waiver shall be granted only upon a showing that:

(A) good cause exists because an emergency situation has occurred;

(B) the waiver is necessary to provide adequate and efficient service or to preserve the property of the public service company devoted to public use;

(C) measures will be taken, as the board deems appropriate, to minimize significant adverse impacts under the criteria specified in subdivisions (b) (5) and (8) of this section; and

(D) taking into account any terms, conditions and safeguards that the board may require, the waiver will promote the general good of the state.

(5) Upon the expiration of a waiver, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation or alteration of the facilities subject to the waiver, as it finds will best promote the general good of the state.

(d) Notwithstanding other provisions of this section and section 248a, and without limiting any existing authority of the governor, and pursuant to subdivisions 9(10) and (11) of Title 20, when the governor has proclaimed a state of emergency pursuant to section 9 of Title 20, the governor, in consultation with the chair of the public service board and the commissioner of the department of public service or their designees may waive the prohibitions contained in this section upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility. Waivers issued under this subsection shall be subject to such conditions as are required by the governor, and shall be valid for the duration of the declared emergency plus 180 days, or such lesser overall term as determined by the governor. Upon the expiration of a waiver under this subsection, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation, or alteration of the facilities, subject to the waiver, as the board finds will best promote the general good of the state.

Draft # 1 VLS 01.22.09

Introduced by <Sponsor>

Referred to Committee on

Date:

Subject:

Statement of purpose: This bill would provide authority for

AN ACT RELATING TO

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1 LEGISLATIVE FINDINGS AND INTENT

(a) The General Assembly finds:

Sec. 1. 10 V.S.A. §6086(a)(9)(F) is amended to read:

(a) Before granting a permit, the district commission shall find that the subdivision or development:

*****

(9) Is in conformance with a duly adopted capability and development plan, and land use pla

n when adopted. However, the legislative findings of subdivisions 7(a)(1) through (19) of Act 85 of 1973 shall not be used as criteria in the consideration of applications by a district commission.

*****

(F) Energy Conservation.—A permit will be granted when it has been demonstrated by the applicant that, in addition to all other applicable criteria,

(i) the planning and design of the subdivision or development reflect the principles of energy conservation and incorporate the best available technology for efficient use or recovery of energy, or

(ii) the energy conservation measures proposed by the applicant have the lowest life cycle cost as determined and communicated to the district commission by the department of public service or an efficiency entity duly appointed by the public service board pursuant to 30 V.S.A. § 209(d)(2) and

(iii) the subdivision or development is consistent with any energy efficiency or conservation standards in an applicable municipal or regional plan.

(iv) As used in this section, 'best available technology' means technology that can be obtained through either normal or specialized construction and supply channels and that will, to the maximum degree possible, reduce the project's overall energy requirements and use of power from the electricity grid. Such technology shall include but not be limited to on-site energy sources, combined heat and electric generation facilities, whole buildings or subdivision design elements, as well as insulation factors and other traditional technologies.

(v) In determining life cycle costs for purposes of this subdivision, the department of public service or efficiency entity shall include in its calculations the utility and publicly-borne costs of upgrading existing transmission or generation facilities and services that would be necessary to serve the development or subdivision if a given technological measure were not implemented, with such costs based on reasonable forecasts of future rather than historical energy costs.

(vi) In conducting a review pursuant to this subdivision, the department of public service may recommend that an applicant consider specific energy conservation measures for commercial buildings in accordance with 21 V.S.A. §268, evaluating them using the most recently adopted Vermont guidelines for energy efficient commercial construction as a baseline. The district commission may adopt any such recommendation as a condition of the permit.

Sec. 2. 10 V.S.A. § 6086(9)(G) is amended to read:

(G) Private utility services. – A permit will be granted for a development or subdivision which relies on privately-owned utility services or facilities, including central sewage or water facilities and roads, whenever it is demonstrated by the applicant that, in addition to all other applicable criteria

(i) the privately-owned utility services or facilities are in conformity with a capital program or plan of the municipality involved, or adequate surety is provided to the municipality and conditioned to protect the municipality in the event that the municipality is required to assume the responsibility for the services or facilities, and,

(ii) in the case of private utility services that provide on-site electricity,

electric services or facilities, conform to the least cost integrated plan of the electric utility that serves the area in which the development is located, as approved pursuant to 30 V.S.A. § 218c. A development or subdivision that does not conform must demonstrate that the private generation conforms to the energy and utility elements of any affected municipal and regional plans.

Sec. 3. 10 V.S.A. §6068(a)(9)(H) is amended to read:

(H) Costs of scattered development. – The district commission will grant a permit for a development or subdivision which is not physically contiguous to an existing settlement whenever it is demonstrated that, in addition to all other applicable criteria, the additional costs of public services and facilities caused directly or indirectly by the proposed development or subdivision do not outweigh the tax revenue and other public benefits of the development or subdivision such as increased employment opportunities or the provision of needed and balanced housing accessible to existing or planned employment centers.

(i) The applicant does not create a presumption that it has covered all additional electricity related costs by paying for the costs of any distribution lines to its development or subdivision.

(ii) The additional costs of upgrading either transmission lines or electric generation shall be independently verified and communicated to the district commission by the department of public service or the area's electricity utility provider, and cost shall be determined even if such development would not immediately create the need for a utility to build the facility. The verified cost of

generation or transmission upgrade shall be included in the applicant's cost calculation under this section.

Sec. 4. 10 V.S.A. §6086(a)(9)(J) is amended to read:

(J) Public utility services -- A permit will be granted for a development or subdivision whenever it is demonstrated that, in addition to all other applicable criteria,

(i) necessary supportive governmental and public utility facilities and services are available ~~or will be available when the development is completed~~ under a duly adopted capital program or plan;

(ii) an excessive or uneconomic demand will not be placed on such facilities and services;

(iii) the provision of such facilities and services has been planned on the basis of a projection of reasonable population increase and economic growth;

(iv) non-residential projects will minimize energy use during peak periods of energy demand to the fullest practicable extent;

(v) where applicable, the public service board and district commission have given final approval for projects and necessary upgrades; and

(vi) the applicable electric utility can provide service to the development or subdivision in a manner that is consistent with the utility's least cost integrated plan as approved pursuant to 10 V.S.A. section 218c without requiring any system upgrades or projects not specifically contemplated by the plan.

Sec. 5. 24 V.S.A. § 4302(c)(7) is amended to read:

(c) In addition, this chapter shall be used to further the following specific goals:

(7) To ~~encourage~~ require the efficient use of energy and the development of renewable energy resources consistent with the specifications outlined by the Vermont Energy Plan and New England Regional Greenhouse Gas Initiative

Sec. 6. 24 V.S.A. § 4305(a) is amended to read:

A council of regional commissions is hereby created. The council membership shall include a representative from each regional planning commission established under section 4341 of this title and the following members appointed by the governor: three members who are state agency or department heads ~~appointed by the governor,~~ ~~and~~ two members representing the public ~~appointed by the governor~~, a member representing the department of public service, and a member of Efficiency Vermont. Each regional planning commission shall appoint its representative, or replacement in case of a vacancy, from among the commission's municipal representatives. The council shall annually elect one of its members as chairperson and another member as vice chairperson. The powers and duties of these officers shall be determined by the council. A majority of members shall constitute a quorum. Members of the council, other than state officials, are entitled to per diem and expenses authorized under 32 V.S.A. § 1010.

Sec. 7 24 V.S.A. § 4305(c)(1) is amended to read:

(1) The council shall review proposed regional plans or amendments every five years, or more frequently if requested by the regional planning commission or a municipality. The review shall be conducted after public notice ~~and determine the following:~~. The council shall approve the plan or amendment if it finds that

(A) ~~whether~~ the plan, as amended , contains the elements required by law;

(B) ~~whether~~ the plan is compatible with the plans of adjoining regions; ~~[and]~~

(C) ~~whether~~ the plan, as amended, is consistent with the goals established in section 4302 of this title; and

(D) the plan is consistent with the energy guidelines established by the council under subsection (i) of this section.

Sec. 8. 24 V.S.A. § 4305(h) is added to read:

(h) The council shall review the public service board least cost integrated plans under 30 V.S.A. § 218c and new gas and electric purchases, investments, and facilities under 30 V.S.A. §§ 248, and determine the following:

(1) whether the plan, purchase, investments, and facilities are compatible with the plans of other state agencies;

(2) whether it is consistent with the goals established in section 4302 of this title;

(3) whether it is compatible with regional plans; and

(4) whether it is compatible with approved municipal plans of municipalities that have requested review by the council.

The council shall present its findings to the public service board for consideration under 30 V.S.A. § 218c(b)(2) or 30 V.S.A. § 248aas appropriate.

Sec. 9. 24 V.S.A. § 4305(i) is added to read:

(i) The council shall establish specific guidelines for the energy component of municipal and regional plans which reflect forecasting energy demands.

Sec. 10. 24 V.S.A. § 4306(b) is amended to read:

Disbursement to regional planning commissions shall be according to a ~~formula to be adopted by rule~~ performance-based competitive program administered under chapter 25 of Title 3 by the department for the assistance of the regional planning commissions. The

rules shall give due consideration to the region's progress in adopting a regional plan approved by the council of regional commissions. Disbursement to municipalities shall be through a competitive program administered by the department providing the opportunity for any eligible municipality or municipalities to compete regardless of size, provided that to receive funds:

Sec. 11 24 V.S.A. § 4306(b)(6) is added to read:

(6) Regardless of eligibility under subdivisions (1) and (2)(A) of this subsection, municipalities and regional planning commissions may apply to use the funds exclusively to research and implement greenhouse gas budgets for municipal, residential or commercial purposes.

Sec. 12. 24 V.S.A. § 4342 is amended to read:

A regional planning commission shall contain at least one representative appointed from each member municipality and one member from the department of public service and one member who qualifies as an expert in electrical planning, both appointed pursuant to rules adopted under section 4343(c) of this title.

Sec. 13. 24 V.S.A. § 4345a(5)(H) is added to read:

A regional planning commission created under this chapter shall:

****

(5) Prepare a regional plan and amendments that are consistent with the goals established in section 4302 of this title, and compatible with approved municipal and adjoining regional plans. When preparing a regional plan, the regional planning commission shall:

****

(H) apply the guidelines developed by the Council of Regional Commissions pursuant to to section 4305(i) of this title and consult with the department of public service, Efficiency Vermont, the area service utility and VELCO when evaluating energy and utility elements of municipal and regional plans.

Sec. 14. 24 V.S.A. § 4345a(6) is amended to read:

(6) Prepare and maintain implementation guidelines that will assist municipalities and the regional commission in developing a planning process that will attain, within a reasonable time, consistency with the goals established in section 4302 of this title. Guidelines, which may be revised at any time, shall be prepared initially by July 1, 1989.

Sec. 15. 24 V.S.A. § 4414 (6) is amended to read:

(6) Energy conservation, energy efficiency and access to renewable energy resources. Any municipality may adopt zoning and subdivision bylaws to encourage energy conservation and energy efficiency in proposed development and to protect and provide access to, among others, the collection or conversion of direct sunlight, wind, running water, organically derived fuels, including wood and agricultural sources, waste heat, and geothermal sources, including those recommendations contained in the adopted municipal plan, regional plan, or both. The bylaw shall establish a standard of review in conformance with the municipal plan provisions required pursuant to subdivision 4382(a)(9) of this title.

Sec. 16 24 V.S.A. § 4414(3) is amended to read:

(3) Conditional uses

(A) In any district, certain uses may be allowed only by approval of the appropriate municipal panel, if general and specific standards to which each allowed use must

conform are prescribed in the appropriate bylaws and if the appropriate municipal panel, under the procedures in subchapter 10 of this chapter, determines that the proposed use will conform to those standards. These general standards shall require that the proposed conditional use shall not result in an undue adverse effect on any of the following:

(i) The capacity of existing or planned community facilities, including public utilities providing electricity and gas;

(ii) The character of the area affected, as defined by the purpose or purposes of the zoning district within which the project is located, and specifically stated policies and standards of the municipal plan;

(iii) Traffic on roads and highways in the vicinity;

(iv) Bylaws then in effect;

(v) Utilization of renewable energy resources; or

(vi) State, regional or municipal energy conservation and efficiency programs.

Sec 27. 24 V.S.A. § 4416 is amended to read:

Site plan review

As prerequisite to the approval of any use other than one- and two-family dwellings, the approval of site plans by the appropriate municipal panel may be required… In reviewing site plans, the planning commission or the development review board may impose appropriate conditions and safeguards with respect to: the adequacy of vehicular, bicycle and pedestrian traffic access, circulation and parking; landscaping and screening, including design and orientation to increase energy conservation and efficiency; the protection of the utilization of renewable energy resources; exterior lighting; the size, location, and design of signs; and other matters specified in the bylaws. The bylaws shall

specify the maps, data and other information to be presented with applications for site plan approval and a review process…

Sec 18. 24 V.S.A. § 4418 is amended to read:

Subdivision bylaws

1) Subdivision bylaws shall be administered in accordance with the requirements of subchapter 10 of this chapter, and shall contain:

(A) Procedures and requirements for the design, submission, and processing of plats, any drawing and plans, and any other documentation required for review of subdivisions.

(B) Standards for the design and layout of streets, sidewalks, curbs, gutters, streetlights, fire hydrants, landscaping, water, sewage and stormwater management facilities, public and private utilities, and other necessary improvements as may be specified in a municipal plan. Standards in accordance with subdivision 4412(3) of this title shall be required for lots without frontage on or access to public roads or public waters.

(C) Standards for the design and configuration of parcel boundaries and location of associated improvements necessary to implement the municipal plan and achieve the desired settlement pattern for the neighborhood, area, or district in which the subdivision is located and to increase energy conservation and efficiency.

(D) Standards for the protection of natural resources and cultural features and the preservation of open space, as appropriate in the municipality.

(E) Specific development standards to promote the conservation of energy or to permit the utilization of renewable energy resources, or both.

(2) Subdivision bylaws may include:

~~(C) Specific development standards to promote the conservation of energy or to permit the utilization of renewable energy resources, or both.~~

Sec. 19. 30 V.S.A. § 218c (a) is amended to read:

(a) (1) A "least cost integrated plan" for a regulated electric or gas utility is a plan for meeting the public's need for energy services, after safety concerns are addressed, at the lowest present value life cycle cost, including environmental and economic costs, through a strategy combining investments and expenditures on energy supply, transmission and distribution capacity, transmission and distribution efficiency, and comprehensive energy efficiency programs.

(2) "Life cycle costs" shall mean the present value purchase price of an item, plus the replacement cost, plus or minus the salvage value, plus the present value of operation and maintenance costs, plus the energy and environmental externalities' costs or benefits. Where reliable data enables the department of buildings and general services to establish these additional environmental externalities' costs or benefits with respect to a particular purchasing decision or category of purchasing decisions, that is energy related, the department may recommend the addition or subtraction of an additional price factor.

~~(2)~~ (3) "Comprehensive energy efficiency programs" shall mean a coordinated set of investments or program expenditures made by a regulated electric or gas utility or other entity as approved by the board pursuant to subsection 209(d) of this title to meet the public's need for energy services through efficiency, conservation or load management in all customer classes and areas of opportunity which is designed to acquire the full amount of cost effective savings from such investments or programs.

(4) A plan prepared pursuant to this section shall include calculations establishing the public's need for energy services. These calculations shall give due consideration to the economic and population growth projections, as well as the energy and utility demand projections, made available by each municipal or regional planning commission within the service area of the utility preparing the plan.

(5) Economic costs reflected in a plan submitted pursuant to this subdivision shall be determined with due regard to:

(A) the greenhouse gas inventory developed under the provisions of 10 V.S.A. § 580;

(B) the state's progress in meeting its greenhouse gas reduction goals; and

(C) the value of the financial risks associated with greenhouse gas emissions from various power sources.

(6) A plan prepared pursuant to this section shall include energy demand projections for the most immediate five-year period as well as the next succeeding five-year period, and shall set forth long-term sustainable strategies for meeting electricity demand over a full 20-year planning horizon.

Sec. 20. 30 V.S.A. § 218c (b) is amended to read:

(b) (1) Each regulated electric or gas company shall prepare and implement a least cost integrated plan for the provision of energy services to its Vermont customers no less than once in a three year period. Proposed plans shall be submitted to the department of public service, the public service board, each municipal and regional planning commission within the service area of the utility, as well as the council of regional commissions.

(2) After due consideration has been given to comments of the municipal and regional planning commissions, and the council of regional commissions after notice and

opportunity for hearing, the Board shall approve a company's least cost integrated plan if it determines that the plan complies with the requirements of subdivision (a) of this section.

(3) If the board does not approve a plan, it shall provide written notice to the submitting utility setting forth the reasons for the adverse decision. A plan that is not rejected by the Board within a period of nine months, beginning on the date of its submission, shall be deemed to have been approved.

(4) The board may require a utility to update a previously approved least cost integrated plan when the board determines there has been a significant change in the assumptions or projections contained in the plan. Any such updated plan shall be submitted pursuant to subdivision (b)(1) within nine months of the date of the board's directive and reviewed by the board pursuant to subdivisions (b)(2) and (b)(3).

(5) Any expense incurred by a utility that is inconsistent with its most recently approved least cost integrated plan shall be rebuttably presumed to have been incurred imprudently and thus to be inappropriate for recovery in any rates approved pursuant to section 218 of this title.

Sec. 21. 30 V.S.A. § 248 is amended to read:

§ 248 New ~~gas and~~ electric purchases, investments and facilities; certificate of public good

(a)(1) No company, as defined in section 201 of this title, may:

(A) in any way purchase electric capacity or energy from outside the state, for a period exceeding five years, that represents more than one percent of its historic peak demand; or

(B) invest in an electric generation or transmission facility located outside this state unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect pursuant to section 248a or 248b of this chapter.

(2) Except for the replacement of existing facilities with equivalent facilities in the usual course of business, and except for electric generation facilities that are operated solely for on-site electricity consumption by the owner of those facilities:

(A) no company, as defined in section 201 of this title, and no person, as defined in subdivision 6001(14) of Title 10, may begin site preparation for or construction of an electric generation facility or electric transmission facility within the state which is designed for immediate or eventual operation at any voltage; and

(B) no such company may exercise the right of eminent domain in connection with site preparation for or construction of any such transmission or generation facility, unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect.

~~(3) No company, as defined in section 201 of this title, and no person, as defined in subdivision 6001(14) of Title 10, may in any way begin site preparation for or commence construction of any natural gas facility, except for the replacement of existing facilities with equivalent facilities in the usual course of business, unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect pursuant to this section.~~

~~(A) For the purposes of this section, the term "natural gas facility" shall mean any natural gas transmission line, storage facility, manufactured-gas facility, or other structure incident to any of the above. For purposes of this section, a "natural gas transmission line" shall include any feeder main or any pipeline facility constructed to deliver natural gas in Vermont directly from a natural gas pipeline facility that has been certified pursuant to the Natural Gas Act, 15 U.S.C. § 717 et seq.~~

~~(B) For the purposes of this section, the term "company" shall not include a "natural gas company" (including a "person which will be a natural gas company upon completion of any proposed construction or extension of facilities"), within the meaning of the Natural Gas Act, 15 U.S.C. § 717 et seq.; provided however, that the term "company" shall include any "natural gas company" to the extent it proposes to construct in Vermont a natural gas facility that is not solely subject to federal jurisdiction under the Natural Gas Act.~~

~~(C) The public service board shall have the authority to, and may in its discretion, conduct a proceeding, as set forth in subsection (h) of this section, with respect to a natural gas facility proposed to be constructed in Vermont by a "natural gas company," for the purpose of developing an opinion in connection with federal certification or other federal approval proceedings.~~

~~(4)(A) With respect to a facility located in the state, the public service board shall hold a nontechnical public hearing on each petition for such finding and certificate in at least one county in which any portion of the construction of the facility is proposed to be located.~~

~~(B) The public service board shall hold technical hearings at locations which it selects.~~

~~(C) At the time of filing its application with the board, copies shall be given by the petitioner to the attorney general and the department of public service, and, with respect to facilities within the state, the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which the proposed facility will be located.~~

~~(D) Notice of the public hearing shall be published in a newspaper of general circulation in the county or counties in which the proposed facility will be located two weeks successively, the last publication to be at least 12 days before the day appointed for the hearing.~~

~~(E) The agency of natural resources shall appear as a party in any proceedings held under this subsection, shall provide evidence and recommendations concerning any findings to be made under subdivision (b)(5) of this section, and may provide evidence and recommendations concerning any other matters to be determined by the board in such a proceeding.~~

~~(b) Before the public service board issues a certificate of public good as required under subsection (a) of this section, it shall find that the purchase, investment or construction:~~

~~(1) with respect to an in-state facility, will not unduly interfere with the orderly development of the region with due consideration having been given to the~~

~~recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. However, with respect to a natural gas transmission line subject to board review, the line shall be in conformance with any applicable provisions concerning such lines contained in the duly adopted regional plan; and, in addition, upon application of any party, the board shall condition any certificate of public good for a natural gas transmission line issued under this section so as to prohibit service connections that would not be in conformance with the adopted municipal plan in any municipality in which the line is located;~~

~~(2) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy efficiency and load management measures, including but not limited to those developed pursuant to the provisions of subsection 209(d), section 218c, and subsection 218(b) of this title;~~

~~(3) will not adversely affect system stability and reliability;~~

~~(4) will result in an economic benefit to the state and its residents;~~

~~(5) with respect to an in-state facility, will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in subsection 1424a(d) and subdivisions 6086(a)(1) through (8) and (9)(K) of Title 10;~~

~~(6) with respect to purchases, investments, or construction by a company, is consistent with the principles for resource selection expressed in that company's approved least cost integrated plan;~~

~~(7) except as to a natural gas facility that is not part of or incidental to an electric generating facility, is in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;~~

~~(8) does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, except that with respect to a natural gas or electric transmission facility, the facility does not have an undue adverse effect on those outstanding resource waters;~~

~~(9) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and~~

~~(10) except as to a natural gas facility that is not part of or incidental to an electric generating facility, can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.~~

(b) Whenever reasonably necessary to meet the state's future needs for electricity in a cost-effective and prudent manner, but no less frequently than once every five years, the board shall direct the state's electric utilities to issue a request for proposals pursuant to this section.

~~(c) In the case of a municipal plant or department formed under local charter or chapter 79 of this title or a cooperative formed under chapter 81 of this title, any proposed investment, construction or contract which is subject to this section shall be approved by a majority of the voters of a municipality or the members of a cooperative voting upon the question at a duly warned annual or special meeting to be held for that purpose. The municipal department or cooperative shall provide to the voters or members, as the case may be, written assessment of the risks and benefits of the proposed investment, construction or contract which were identified by the public service board in the certificate issued under this section. The municipal department or cooperative also may provide to the voters an assessment of any other risks and benefits.~~

(c) A request for proposals shall:

(1) cover the unmet energy needs of the utility's service territory,

(2) seek proposals for the development of or investment in new generation and transmission facilities within or without the state, as well as sales of energy and capacity produced by facilities outside the state, and

(3) be consistent with the utility's least cost integrated plan as most recently approved pursuant to section 218c of this title.

~~(d) Nothing in this section shall be construed to prohibit a company from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the company's obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.~~

(d) In complying with the requirements of this section, one or more electric utility may opt to issue a joint request for proposals.

~~(e)(1) Before a certificate of public good is issued for the construction of a nuclear energy generating plant within the state, the public service board shall obtain the approval of the general assembly and the assembly's determination that the construction of the proposed facility will promote the general welfare. The public service board shall advise the general assembly of any petition submitted under this section for the construction of a nuclear energy generating plant within this state, by written notice delivered to the speaker of the house of representatives and to the president of the senate. The department of public service shall submit recommendations relating to the proposed plant, and shall make available to the general assembly all relevant material. The requirements of this subsection shall be in addition to the findings set forth in subsection (b) of this section.~~

~~(2) No nuclear energy generating plant within this state may be operated beyond the date permitted in any certificate of public good granted pursuant to this title, including any certificate in force as of January 1, 2006, unless the general assembly approves and determines that the operation will promote the general welfare, and until the public service board issues a certificate of public good under this section. If the general assembly has not acted under this subsection by July 1, 2008, the board may commence proceedings under this section and under 10 V.S.A. chapter 157, relating to the storage of radioactive material, but may not issue a final order or certificate of public good until the general assembly determines that operation will promote the general welfare and grants approval for that operation.~~

(e) Within a reasonable time as fixed by the board, a utility issuing a request for proposals shall file the responses thereto with the board, the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which any facility proposed to be constructed will be located. The filing shall include the utility's proposed disposition of the proposals in light of the purposes of this section.

~~(f) However, plans for the construction of such a facility within the state must be submitted by the petitioner to the municipal and regional planning commissions no less than 45 days prior to application for a certificate of public good under this section, unless the municipal and regional planning commissions shall waive such requirement. Such municipal or regional planning commission may hold a public hearing on the proposed plans. Such commissions shall make recommendations, if any, to the public service board and to the petitioner at least seven days prior to filing of the petition with the public service board.~~

(f) After notice and hearing, the board review the utility's proposed disposition of the proposals for

(1) the extent to which it is consistent with the most recently approved least cost integrated plan of each company to be served by the proposed projects,

(2) the extent to which the benefits of the projects exceed costs,

(3) the extent to which the projects are financially viable,

(4) the extent to which they are consistent with the purposes of the Planning and Development Act as stated in 24 V.S.A. § 4302,

(5) the extent to which they would result in a resource portfolio for the company, and for the state as a whole, that is diverse,;

(6) the extent to which they would meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to those developed pursuant to the provisions of sections 209(d), 218c, and 218(b) of this title;

(7) the extent to which any proposed in-state facilities will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality;

~~(g) However, notwithstanding the above, plans involving the relocation of an existing transmission line within the state must be submitted to the municipal and regional planning commissions no less than 21 days prior to application for a certificate of public good under this section.~~

(g) The board shall reject any proposals that

(1) would adversely impact system reliability,

(2) is not in compliance with the electric energy plan approved by the

department under section 202 of this title, or that there exists good cause to permit the proposed action;

(3) involves any facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, and would have an undue adverse effect on those outstanding resource waters;

(4) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and

(5) involve the construction of facilities that cannot be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers; and

(6) would have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

~~(h) The position of the state of Vermont in federal certification or other approval proceedings for natural gas facilities shall be developed in accordance with this subsection.~~

~~(1) A natural gas facility requiring federal approval shall apply to the public service board for an opinion under this section (on or before the date on which the facility applies for such federal approval in the case of a facility that has not applied for federal approval~~

~~before January 16, 1988). Any opinion issued under this subsection shall be developed based upon the criteria established in subsection (b) of this section.~~

~~(2) If the board conducts proceedings under this subsection, the department shall give due consideration to the board's opinion as to facilities of a natural gas company, and that opinion shall guide the position taken before federal agencies by the state of Vermont, acting through the department of public service under section 215 of this title.~~

~~(3) If the board conducts proceedings under this subsection, it may consolidate them, solely for purposes of creating a common record, with any related proceedings conducted under subdivision (a)(3) of this section.~~

(h) The board shall indicate which, if any, proposals do not satisfy minimum standards for acceptance according to the criteria in this subdivision, and, as to the remainder, provisionally approve those proposals that are reasonably necessary to meet the service obligations of each company.

~~(i)(1) No company, as defined in sections 201 and 203 of this title, without approval by the board, after giving notice of such investment, or filing a copy of that contract, with the board and the department at least 30 days prior to the proposed effective date of that contract or investment:~~

~~(A) may invest in a gas-production facility located outside this state; or~~

~~(B) may execute a contract for the purchase of gas from outside the state, for resale to firm-tariff customers, that:~~

~~(i) is for a period exceeding five years; or~~

~~(ii) represents more than 10 percent of that company's peak demand for resale to firm-tariff customers.~~

~~(2) The department and the board shall consider within 30 days whether to investigate the proposed investment or contract.~~

~~(3) The board, upon its own motion, or upon the recommendation of the department, may determine to initiate an investigation. If the board does not initiate an investigation within such 30 day period, the contract or investment shall be deemed to be approved. If the board determines to initiate an investigation, it shall give notice of that decision to the company proposing the investment or contract, the department, and such other persons as the board determines are appropriate. The board shall conclude its investigation within 120 days of issuance of its notice of investigation, or within such shorter period as it deems appropriate. If the board fails to issue a decision within that 120 day period, the contract or investment shall be deemed to be approved. The board may hold informal, public or technical hearings on the proposed investment or contract.~~

~~(4) Nothing in this subsection shall prohibit a company from negotiating or adjusting periodically the price of other terms of supply through a supplement to such a contract, provided that the supplement falls within the terms specified in such a contract, as approved. The board's authority to investigate such adjustments under other authorities of this title shall not be impaired. Such a company shall file with the department and the board a copy of any such supplement to the contract or other documentation that states~~

~~any terms that have been renegotiated or adjusted by the company at least 30 days prior to the effective date of the renegotiated or adjusted price or other terms.~~

~~(5) Nothing in this subsection shall be construed to prohibit a gas company from executing a development contract, a contract for design and engineering, a contract to seek regulatory approvals for a gas-production facility, or a letter of intent for such purchase of gas that makes the company's obligations under that letter of intent subject to the requirements of this subsection, prior to the filing with the board and department of such notice or proposed contract or pending any investigation under this subsection.~~

(i) The board shall issue a certificate of public good as required under subsection (a) of this section for projects that are included in a proposal that has been accepted under this section unless it determined after notice and hearing by clear and convincing evidence that it would be inconsistent with the purposes of this title to do so.

~~(j)(1) The board may, subject to such conditions as it may otherwise lawfully impose, issue a certificate of public good in accordance with the provisions of this subsection and without the notice and hearings otherwise required by this chapter if the board finds that:~~

~~(A) approval is sought for construction of facilities described in subdivision (a)(2) or (3) of this section;~~

~~(B) such facilities will be of limited size and scope;~~

~~(C) the petition does not raise a significant issue with respect to the substantive criteria of this section; and~~

~~(D) the public interest is satisfied by the procedures authorized by this subsection.~~

~~(2) Any party seeking to proceed under the procedures authorized by this subsection shall file a proposed certificate of public good and proposed findings of fact with its petition. The board shall give written notice of the proposed certificate to the parties specified in subdivision (a)(4)(C) of this section, to any public interest organization that has in writing requested notice of applications to proceed under this subsection and to any other person found by the board to have a substantial interest in the matter. Such notice shall be published on two occasions at least one week apart. Such notice shall request comment within 21 days of the last publication on the question of whether the petition raises a significant issue with respect to the substantive criteria of this section. If the board finds that the petition raises a significant issue with respect to the substantive criteria of this section, the board shall hear evidence on any such issue.~~

(j) However, notwithstanding the above, plans involving the relocation of an existing transmission line within the state must be submitted to the municipal and regional planning commissions no less than 21 days prior to application for a certificate of public good under this section.

~~(k)(1) Notwithstanding any other provisions of this section, the board may waive, for a specified and limited time, the prohibitions contained in this section upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility, pending full review under this section.~~

~~(2) A person seeking a waiver under this subsection shall file a petition with the board and shall provide copies to the department of public service and the agency of natural resources. Upon receiving the petition, the board shall conduct an expedited preliminary hearing, upon such notice to the governmental bodies listed in subdivision (a)(4)(C) of this section as the board may require.~~

~~(3) An order granting a waiver may include terms, conditions and safeguards, including the posting of a bond or other security, as the board deems proper, considering the scope and duration of the requested waiver.~~

~~(4) A waiver shall be granted only upon a showing that:~~

~~(A) good cause exists because an emergency situation has occurred;~~

~~(B) the waiver is necessary to provide adequate and efficient service or to preserve the property of the public service company devoted to public use;~~

~~(C) measures will be taken, as the board deems appropriate, to minimize significant adverse impacts under the criteria specified in subdivisions (b)(5) and (8) of this section; and~~

~~(D) taking into account any terms, conditions and safeguards that the board may require, the waiver will promote the general good of the state.~~

~~(5) Upon the expiration of a waiver, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation or alteration of the facilities subject to the waiver, as it finds will best promote the general good of the state.~~

(k) Nothing in this section shall be construed to prohibit a company from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the company's obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.

~~(l) Notwithstanding other provisions of this section, and without limiting any existing authority of the governor, and pursuant to subdivisions 9(10) and (11) of Title 20, when the governor has proclaimed a state of emergency pursuant to section 9 of Title 20, the governor, in consultation with the chair of the public service board and the commissioner of the department of public service or their designees may waive the prohibitions contained in this section upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility. Waivers issued under this subsection shall be subject to such conditions as are required by the governor, and shall be valid for the duration of the declared emergency plus 180 days, or such lesser overall term as determined by the governor. Upon the expiration of a waiver under this subsection, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation, or alteration of the facilities, subject to the waiver, as the board finds will best promote the general good of the state.~~

(l) The board shall promulgate such rules as are necessary to effectuate an orderly and efficient process for issuing requests for proposals, evaluating proposals, and issuing certificates of public good pursuant to this section.

~~(m) In any matter with respect to which the board considers the operation of a nuclear energy generating plant beyond the date permitted in any certificate of public good granted under this title, including any certificate in effect as of January 1, 2006, the board shall evaluate the application under current assumptions and analyses and not an extension of the cost benefit assumptions and analyses forming the basis of the previous certificate of public good for the operation of the facility.~~

(m)(1) Notwithstanding any other provisions of this section, the board may waive, for a specified and limited time, the prohibitions contained in this section upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility, pending full review under this section.

(2) A person seeking a waiver under this subsection shall file a petition with the board and shall provide copies to the department of public service and the agency of natural resources. Upon receiving the petition, the board shall conduct an expedited preliminary hearing, upon such notice to the governmental bodies listed in subdivision (a)(4)(C) of this section as the board may require.

(3) An order granting a waiver may include terms, conditions and safeguards, including the posting of a bond or other security, as the board deems proper, considering the scope and duration of the requested waiver.

(4) A waiver shall be granted only upon a showing that:

(A) good cause exists because an emergency situation has occurred;

(B) the waiver is necessary to provide adequate and efficient service or to preserve the property of the public service company devoted to public use;

(C) measures will be taken, as the board deems appropriate, to minimize significant adverse impacts under the criteria specified in subdivisions (b) (5) and (8) of this section; and

(D) taking into account any terms, conditions and safeguards that the board may require, the waiver will promote the general good of the state.

(5) Upon the expiration of a waiver, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation or alteration of the facilities subject to the waiver, as it finds will best promote the general good of the state.

~~(n)(1) No company as defined in section 201 of this title and no person as defined in subdivision 6001(14) of Title 10 may place or allow the placement of wireless communications facilities on an electric transmission or generation facility located in this state, including a net-metered system, without receiving a certificate of public good from the public service board pursuant to this subsection. The public service board may issue a certificate of public good for the placement of wireless communications facilities on electric transmission and generation facilities if such placement is in compliance with the criteria of this section and board rules or orders implementing this section. In developing such rules and orders the board:~~

~~(A) may waive the requirements of this section that are not applicable to wireless telecommunication facilities, including but not limited to criteria that are generally applicable to public service companies as defined in this title;~~

~~(B) may modify notice and hearing requirements of this title as it deems appropriate;~~

~~(C) shall seek to simplify the application and review process as appropriate; and~~

~~(D) shall be aimed at furthering the state's interest in ubiquitous mobile telecommunications and broadband service in the state.~~

~~(2) Notwithstanding subdivision (1)(B) of this subsection, if the board finds that a petition filed pursuant to this subsection does not raise a significant issue with respect to the criteria enumerated in subdivisions (b)(1), (3), (4), (5), and (8) of this section, the board shall issue a certificate of public good without a hearing. If the board fails to issue a final decision or identify a significant issue with regard to a completed petition made under this section within 60 days of its filing with the clerk of the board and service to the director of public advocacy for the department of public service, the petition is deemed approved by operation of law. The rules required by this subsection shall be adopted within six months of the effective date of this section, and rules under this section may be adopted on an emergency basis to comply with the dates required by this section. For purposes of this subsection, "wireless communication facilities" include antennae, related equipment, and equipment shelter.~~

(n) Notwithstanding other provisions of this section, and without limiting any existing authority of the governor, and pursuant to subdivisions 9(10) and (11) of Title 20, when the governor has proclaimed a state of emergency pursuant to section 9 of Title 20, the governor, in consultation with the chair of the public service board and the commissioner of the department of public service or their designees may waive the prohibitions

contained in this section upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility. Waivers issued under this subsection shall be subject to such conditions as are required by the governor, and shall be valid for the duration of the declared emergency plus 180 days, or such lesser overall term as determined by the governor. Upon the expiration of a waiver under this subsection, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation, or alteration of the facilities, subject to the waiver, as the board finds will best promote the general good of the state.

Sec. 22. 30 V.S.A. § 248a is amended to read:

§ 248a. ~~Certificate of public good for multiple telecommunications facilities~~ Electric System Planning

~~(a) Notwithstanding any other provision of law, if the applicant in a single application seeks approval for the construction or installation within three years of three or more telecommunications facilities as part of an interconnected network the applicant may obtain a certificate of public good issued by the public service board under this section, which the board may grant if it finds that the facilities will promote the general good of the state consistent with subsection 202c(b) of this title.~~

~~(b) For the purposes of this section:~~

~~(1) "Telecommunications facility" means any support structure extending more than 50 feet above the ground that is proposed for construction or installation which is primarily~~

~~for communications purposes and which supports facilities that transmit and receive communications signals for commercial, industrial, municipal, county, or state purposes.~~

~~(2) Telecommunications facilities are "part of an interconnected network" if those facilities would allow one or more communications services to be provided throughout a contiguous area of coverage created by means of the proposed facilities or by means of the proposed facilities in combination with other facilities already in existence.~~

~~(c) Before the public service board issues a certificate of public good under this section, it shall find that, in the aggregate:~~

~~(1) the proposed facilities will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, and the public health and safety, with due consideration having been given to the relevant criteria specified in subsection 1424a(d) and subdivisions 6086(a)(1) through (8) and (9)(K) of Title 10; and~~

~~(2) unless there is good cause to find otherwise, substantial deference has been given to the land conservation measures in the plans of the affected municipalities and the recommendations of the municipal and regional planning commissions regarding the municipal and regional plans, respectively.~~

~~(d) When issuing a certificate of public good under this section, the board shall give due consideration to all conditions in an existing state or local permit and shall harmonize the conditions in the certificate of public good with the existing permit conditions to the extent feasible.~~

~~(e) No less than 45 days prior to filing a petition for a certificate of public good under this section, the applicant shall serve written notice of an application to be filed with the board pursuant to this section to the legislative bodies and municipal and regional planning commissions in the communities in which the applicant proposes to construct or install facilities; the secretary of the agency of natural resources; the commissioner of the department of public service and its director for public advocacy; and the landowners of record of property adjoining the project sites. In addition, at least one copy of each application shall be filed with each of these municipal and regional planning commissions. Upon motion or otherwise, the public service board shall direct that further public or personal notice be provided if the board finds that such further notice will not unduly delay consideration of the merits and that additional notice is necessary for fair consideration of the application.~~

~~(f) Unless the public service board identifies that an application raises a substantial issue, the board shall issue a final determination on an application filed pursuant to this section within 90 days of its filing or, if the original filing did not substantially comply with the public service board's rules, within 90 days of the date on which the clerk of the board notifies the applicant that the filing is complete. If the board rules that an application raises a substantial issue, it shall issue a final determination on an application filed pursuant to this section within 180 days of its filing or, if the original filing did not substantially comply with the public service board's rules, within 180 days of the date on which the clerk of the board notifies the applicant that the filing is complete.~~

~~(g) Nothing in this section shall be construed to prohibit an applicant from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.~~

~~(h) An applicant using the procedures provided in this section shall not be required to obtain a local zoning permit or a permit under the provisions of chapter 151 of Title 10 for the facilities subject to the application or to a certificate of public good issued pursuant to this section. Ordinances adopted pursuant to subdivision 2291(19) of Title 24 or a municipal charter that would otherwise apply to the construction or installation of facilities subject to this section are preempted. Disputes over jurisdiction under this section shall be resolved by the public service board, subject to appeal as provided by section 12 of this title.~~

(a) The system planning committee shall consist of one representative from each Vermont electric utility and three members of the public.

(b) The public service board shall appoint the public members of the committee, who shall serve for five-year terms.

(c) In addition, the committee shall also include non-voting representatives, consisting of

(1) a representative of each entity appointed by the board under 30 V.S.A. § 209(d) to deliver system wide programs, unless such an entity is also an electric utility holding voting membership in the committee, and

(2) a representative of the entity appointed by the board to serve as a facilitator under 30 V.S.A. § 8005(b), and

(3) a representative of the department of public service.

(d) The purpose of the committee shall be to provide, under the supervision of the board and in consultation with the department, a mechanism for the orderly development of the state's electricity grid in accordance with the least cost planning principles set forth in 30 V.S.A. § 281c.

(e)(1) At such times and with such frequency as the board shall by order direct, the committee shall prepare and submit to the board a system plan, employing a 20-year planning horizon, that sets forth in detail how the state's utilities, including any utility without a designated retail service territory if such utility owns or operates electric transmission facilities in the state, will meet their obligation to provide safe and reliable service to the public at the lowest possible cost.

(2) A system plan submitted under this section shall address necessary improvements and changes to both the transmission system and generation capacity, with specific additions to generation capacity to be implemented via one or more requests for proposals as provided in paragraph (f) below.

(f)(1) The committee shall issue a request for energy capacity proposals whenever required pursuant to a plan approved by the board pursuant to subsection (e).

(2) Responses to such a request for proposals shall be due within such time as the board shall direct and shall be submitted to such utilities as the board shall likewise order, taking into account the commercially sensitive nature of such proposals.

(3) Each affected utility shall review the proposals received and, within such time as specified by the board, shall make a filing with the board indicating which proposals it intends to accept. The utility shall also furnish a copy of any such filing to the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which any facility proposed to be constructed will be located.

(4) After notice and hearing, the board review the utility's proposed disposition of the proposals for

(A) the extent to which it is consistent with the most recently approved least cost integrated plan of each company to be served by the proposed projects,

(B) the extent to which the benefits of the projects exceed costs,

(C)the extent to which the projects are financially viable,

(D) the extent to which they are consistent with the purposes of the Planning and Development Act as stated in 24 V.S.A. § 4302,

(E) the extent to which they would result in a resource portfolio for the company, and for the state as a whole, that is diverse;

(F) the extent to which they would meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to

those developed pursuant to the provisions of sections 209(d), 218c, and 218(b) of this title;

(G) the extent to which any proposed in-state facilities will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality;

(5) The board shall reject any proposals that

(A) would adversely impact system reliability,

(B) is not in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;

(C) involves any facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, and would have an undue adverse effect on those outstanding resource waters;

(D) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and

(E) involve the construction of facilities that cannot be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers; and

(F) would have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

(6) The board shall indicate which, if any, proposals do not satisfy minimum standards for acceptance according to the criteria in this subdivision, and, as to the remainder, provisionally approve those proposals that are reasonably necessary to meet the service obligations of each company.

(7) The board shall issue a certificate of public good as required under subsection (b) of this section for projects that are included in a proposal that has been accepted under this section unless it determined after notice and hearing by clear and convincing evidence that it would be inconsistent with the purposes of this title to do so.

(g) The board shall promulgate such rules as are necessary to effectuate an orderly and efficient process for appointing utility representatives on the committee, voting by the committee, the issuance of requests for proposals, the evaluation proposals, and the issuance certificates of public good pursuant to this section.

Sec. 23. 30 V.S.A. § 248b is added to read:

§ 248b Other Generation Projects

(a)(1) Notwithstanding section 248a, the public service board shall have the authority to issue a certificate of public good in connection with construction not intended to provide service to a Vermont electric utility. Before issuing such a certificate of public good under this subsection, the board shall find that the construction:

(A) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. However, with respect to a natural gas transmission line subject to board review, the line shall be in conformance with any applicable provisions concerning such lines contained in the duly adopted regional plan;

(B) will not adversely affect system stability and reliability;

(C) will result in an economic benefit to the state and its residents;

(D) will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

(E) with respect to purchases, investments, or construction by a company, is consistent with the principles for resource selection expressed in that company's approved least cost integrated plan;

(F) is in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;

(G) does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, except that with respect to a natural gas or

electric transmission facility, the facility does not have an undue adverse effect on those outstanding resource waters;

(H) with respect to a waste to energy facility, is included in a solid waste management plan adopted pursuant to 24 V.S.A. § 2202a, which is consistent with the state solid waste management plan; and

(I) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

(2) The public service board shall hold a nontechnical public hearing on each petition for such finding and certificate in at least one county in which any portion of the construction of the facility is proposed to be located.

(b) Nothing in this section shall be construed to prohibit a company from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the company's obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.

(c)(1) Notwithstanding any other provisions of this section, the board may waive, for a specified and limited time, the prohibitions contained in this section or section 248a upon site preparation for or construction of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility, pending full review under this section.

(2) A person seeking a waiver under this subsection shall file a petition with the board and shall provide copies to the department of public service and the agency of natural resources. Upon receiving the petition, the board shall conduct an expedited preliminary hearing, upon such notice to the governmental bodies listed in subdivision

(a)(4)(C) of this section as the board may require.

(3) An order granting a waiver may include terms, conditions and safeguards, including the posting of a bond or other security, as the board deems proper, considering the scope and duration of the requested waiver.

(4) A waiver shall be granted only upon a showing that:

(A) good cause exists because an emergency situation has occurred;

(B) the waiver is necessary to provide adequate and efficient service or to preserve the property of the public service company devoted to public use;

(C) measures will be taken, as the board deems appropriate, to minimize significant adverse impacts under the criteria specified in subdivisions (b) (5) and (8) of this section; and

(D) taking into account any terms, conditions and safeguards that the board may require, the waiver will promote the general good of the state.

(5) Upon the expiration of a waiver, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation or alteration of the facilities subject to the waiver, as it finds will best promote the general good of the state.

(d) Notwithstanding other provisions of this section and section 248a, and without limiting any existing authority of the governor, and pursuant to subdivisions 9(10) and (11) of Title 20, when the governor has proclaimed a state of emergency pursuant to section 9 of Title 20, the governor, in consultation with the chair of the public service board and the commissioner of the department of public service or their designees may waive the prohibitions contained in this section upon site preparation for or construction

of an electric transmission facility or a generation facility necessary to assure the stability or reliability of the electric system or a natural gas facility. Waivers issued under this subsection shall be subject to such conditions as are required by the governor, and shall be valid for the duration of the declared emergency plus 180 days, or such lesser overall term as determined by the governor. Upon the expiration of a waiver under this subsection, if a certificate of public good has not been issued under this section, the board shall require the removal, relocation, or alteration of the facilities, subject to the waiver, as the board finds will best promote the general good of the state.

Sec. 24. 30 V.S.A. § 248c is added to read:

§ 248c. New nuclear generating plants, certificate of public good

(a)(1) Before a certificate of public good is issued for the construction of a nuclear energy generating plant within the state, the public service board shall obtain the approval of the general assembly and the assembly's determination that the construction of the proposed facility will promote the general welfare. The public service board shall advise the general assembly of any petition submitted under this section for the construction of a nuclear energy generating plant within this state, by written notice delivered to the speaker of the house of representatives and to the president of the senate. The department of public service shall submit recommendations relating to the proposed plant, and shall make available to the general assembly all relevant material. The requirements of this subsection shall be in addition to the findings set forth in subsection (b) of this section.

(2) No nuclear energy generating plant within this state may be operated beyond the date permitted in any certificate of public good granted pursuant to this title, including

any certificate in force as of January 1, 2006, unless the general assembly approves and determines that the operation will promote the general welfare, and until the public service board issues a certificate of public good under this section. If the general assembly has not acted under this subsection by July 1, 2008, the board may commence proceedings under this section and under 10 V.S.A. chapter 157, relating to the storage of radioactive material, but may not issue a final order or certificate of public good until the general assembly determines that operation will promote the general welfare and grants approval for that operation.

(b) However, plans for the construction of such a facility within the state must be submitted by the petitioner to the municipal and regional planning commissions no less than 45 days prior to application for a certificate of public good under this section, unless the municipal and regional planning commissions shall waive such requirement. Such municipal or regional planning commission may hold a public hearing on the proposed plans. Such commissions shall make recommendations, if any, to the public service board and to the petitioner at least 7 days prior to filing of the petition with the public service board.

(c) In any matter with respect to which the board considers the operation of a nuclear energy generating plant beyond the date permitted in any certificate of public good granted under this title, including any certificate in effect as of January 1, 2006, the board shall evaluate the application under current assumptions and analyses and not an extension of the cost benefit assumptions and analyses forming the basis of the previous certificate of public good for the operation of the facility.

Sec. 25. 30 V.S.A. § 248d is added to read:

§ 248d. New natural gas purchases, investments, and facilities; certificate of public good

(a) No company, as defined in section 201 of this title, and no person, as defined in 10 V.S.A. § 6001(14), may in any way begin site preparation for or commence construction of any natural gas facility, except for the replacement of existing facilities with equivalent facilities in the usual course of business, unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect pursuant to this section.

(b) For the purposes of this section, the term "natural gas facility" shall mean any natural gas transmission line, storage facility, manufactured-gas facility, or other structure incident to any of the above. For purposes of this section, a "natural gas transmission line" shall include any feeder main or any pipeline facility constructed to deliver natural gas in Vermont directly from a natural gas pipeline facility that has been certified pursuant to the Natural Gas Act, 15 U.S.C. § 717a et seq.

(c) For the purposes of this section, the term "company" shall not include a "natural gas company" (including a "person which will be a natural gas company upon completion of any proposed construction or extension of facilities"), within the meaning of the Natural Gas Act, 15 U.S.C. § 717a et seq., provided however, that the term "company" shall include any "natural gas company" to the extent it proposes to construct in Vermont a natural gas facility that is not solely subject to federal jurisdiction under the Natural Gas Act.

(d) The public service board shall have the authority to, and may in its discretion, conduct a proceeding, as set forth in subsection (h) of this section, with respect to a

natural gas facility proposed to be constructed in Vermont by a "natural gas company," for the purpose of developing an opinion in connection with federal certification or other federal approval proceedings.

(e)(1) With respect to a facility located in the state, the public service board shall hold a nontechnical public hearing on each petition for such finding and certificate in at least one county in which any portion of the construction of the facility is proposed to be located.

(2) The public service board shall hold technical hearings at locations which it selects.

(3) At the time of filing its application with the board, copies shall be given by the petitioner to the attorney general and the department of public service, and, with respect to facilities within the state, the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which the proposed facility will be located.

(4) Notice of the public hearing shall be published in a newspaper of general circulation in the county or counties in which the proposed facility will be located two weeks successively, the last publication to be at least 12 days before the day appointed for the hearing.

(5) The agency of natural resources shall appear as a party in any proceedings held under this subsection, shall provide evidence and recommendations concerning any findings to be made under subdivision (b)(5) of this section, and may provide

evidence and recommendations concerning any other matters to be determined by the board in such a proceeding.

(f)(1) Before the public service board issues a certificate of public good as required under subsection (a) of this section, it shall find that the purchase, investment or construction:

(A) is consistent with the utility's approved least cost integrated plan pursuant to 30 V.S.A. § 218c;

(B) with respect to an in-state facility, will not unduly interfere with the orderly development of the region with due consideration having been given to the economic and population growth projections, as well as the energy and utility demand projections, made available by each municipal or regional planning commission within the service area of the utility preparing the plan, the recommendations of those commissions, recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality or region. However, with respect to a natural gas transmission line subject to board review, the line shall be in conformance with any applicable provisions concerning such lines contained in the duly adopted regional plan; and, in addition, upon application of any party, the board shall condition any certificate of public good for a natural gas transmission line issued under this section so as to prohibit service connections that would not be in conformance with the adopted municipal plan in any municipality in which the line is located;

(C) is required to meet the need for present and future demand for service, with due consideration having been given to the economic and population growth

projections, as well as the energy and utility demand projections, made available by each municipal or regional planning commission within the service area of the utility preparing the plan, which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to those developed pursuant to the provisions of sections 209(d), 218c, and 218(b) of this title;

(D) will not adversely affect system stability and reliability;

(E) will result in an economic benefit to the state and its residents;

(F) with respect to an in-state facility, will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K);

(G) except as to a natural gas facility that is not part of or incidental to an electric generating facility, is in compliance with the electric energy plan approved by the department under section 202 of this title, or that there exists good cause to permit the proposed action;

(I) does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, except that with respect to a natural gas or electric transmission facility, the facility does not have an undue adverse effect on those outstanding resource waters;

(J) except as to a natural gas facility that is not part of or incidental to an electric

generating facility, can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

(2) The approval of a utility's least cost integrated plan pursuant to 30 V.S.A. § 218c shall create a rebuttable presumption of compliance with (C), (D) and (E) above. This presumption is rebuttable upon a showing of clear and convincing evidence to the contrary.

(g) Nothing in this section shall be construed to prohibit a company from executing a letter of intent or entering into a contract before the issuance of a certificate of public good under this section, provided that the company's obligations under that letter of intent or contract are made subject to compliance with the requirements of this section.

(h) However, notwithstanding the above, plans involving the relocation of an existing transmission line within the state must be submitted to the municipal and regional planning commissions no less than 21 days prior to application for a certificate of public good under this section.

(i) The position of the state of Vermont in federal certification or other approval proceedings for natural gas facilities shall be developed in accordance with this subsection.

(1) A natural gas facility requiring federal approval shall apply to the public service board for an opinion under this section (on or before the date on which the facility applies for such federal approval in the case of a facility that has not applied for federal approval before January 16, 1988). Any opinion issued under this subsection shall be developed based upon the criteria established in subsection (b) of this section.

(2) If the board conducts proceedings under this subsection, the department shall give due consideration to the board's opinion as to facilities of a natural gas company, and that opinion shall guide the position taken before federal agencies by the state of Vermont, acting through the department of public service under section 215 of this title.

(3) If the board conducts proceedings under this subsection, it may consolidate them, solely for purposes of creating a common record, with any related proceedings conducted under subdivision (a)(3) of this section.

(j)(1) No company, as defined in sections 201 and 203 of this title:

(A) may invest in a gas-production facility located outside this state; or

(B) may execute a contract for the purchase of gas from outside the state, for resale to firm-tariff customers, that:

(i) is for a period exceeding five years, or

(ii) represents more than ten percent of that company's peak demand for resale to firm-tariff customers,

without approval by the board, after giving notice of such investment, or filing a copy of that contract, with the board and the department at least 30 days prior to the proposed effective date of that contract or investment.

(2) The department and the board shall consider within 30 days whether to investigate the proposed investment or contract.

(3) The board, upon its own motion, or upon the recommendation of the department, may determine to initiate an investigation. If the board does not initiate an investigation within such 30 day period, the contract or investment shall be deemed to be approved. If the board determines to initiate an investigation, it shall give notice of that decision

to the company proposing the investment or contract, the department, and such other persons as the board determines are appropriate. The board shall conclude its investigation within 120 days of issuance of its notice of investigation, or within such shorter period as it deems appropriate. If the board fails to issue a decision within that 120 day period, the contract or investment shall be deemed to be approved. The board may hold informal, public or technical hearings on the proposed investment or contract.

(4) Nothing in this subsection shall prohibit a company from negotiating or adjusting periodically the price of other terms of supply through a supplement to such a contract, provided that the supplement falls within the terms specified in such a contract, as approved. The board's authority to investigate such adjustments under other authorities of this title shall not be impaired. Such a company shall file with the department and the board a copy of any such supplement to the contract or other documentation that states any terms that have been renegotiated or adjusted by the company at least 30 days prior to the effective date of the renegotiated or adjusted price or other terms.

(5) Nothing in this subsection shall be construed to prohibit a gas company from executing a development contract, a contract for design and engineering, a contract to seek regulatory approvals for a gas-production facility, or a letter of intent for such purchase of gas that makes the company's obligations under that letter of intent subject to the requirements of this subsection, prior to the filing with the board and department of such notice or proposed contract or pending any investigation under this subsection.

(k)(1) The board may, subject to such conditions as it may otherwise lawfully impose, issue a certificate of public good in accordance with the provisions of this subsection and without the notice and hearings otherwise required by this chapter if the board finds that:

(A) approval is sought for construction of facilities described in subdivision (a)(2) or (3) of this section;

(B) such facilities will be of limited size and scope;

(C) the petition does not raise a significant issue with respect to the substantive criteria of this section; and

(D) the public interest is satisfied by the procedures authorized by this subsection.

(2) Any party seeking to proceed under the procedures authorized by this subsection shall file a proposed certificate of public good and proposed findings of fact with its petition. The board shall give written notice of the proposed certificate to the parties specified in subdivision (a)(4)(C) of this section, to any public interest organization that has in writing requested notice of applications to proceed under this subsection and to any other person found by the board to have a substantial interest in the matter. Such notice shall be published on two occasions at least one week apart. Such notice shall request comment within 21 days of the last publication on the question of whether the petition raises a significant issue with respect to the substantive criteria of this section. If the board finds that the petition raises a significant issue with respect to the substantive criteria of this section, the board shall hear evidence on any such issue.

Sec. 26. 30 V.S.A. § 248e is added to read:

§ 248e Certain new wireless communications facilities; certificate of public good

(a)(1) No company as defined in section 201 of this title and no person as defined in 10 V.S.A. § 6001(14) may place or allow the placement of wireless communications facilities on an electric transmission or generation facility located in this state, including a net-metered system, without receiving a certificate of public good from the public service

board pursuant to this subsection. The public service board may issue a certificate of public good for the placement of wireless communications facilities on electric transmission and generation facilities if such placement is in compliance with the criteria of this section and board rules or orders implementing this section. In developing such rules and orders the board:

(A) may waive the requirements of this section that are not applicable to wireless telecommunication facilities, including but not limited to criteria that are generally applicable to public service companies as defined in this title;

(B) may modify notice and hearing requirements of this title as it deems appropriate;

(C) shall seek to simplify the application and review process as appropriate; and

(D) shall be aimed at furthering the state's interest in ubiquitous mobile telecommunications and broadband service in the state.

(2) Notwithstanding subdivision (1)(B) of this subsection, if the board finds that a petition filed pursuant to this subsection does not raise a significant issue with respect to the criteria enumerated in subdivisions (b)(1), (3), (4), (5) and (8) of this section, the board shall issue a certificate of public good without a hearing. If the board fails to issue a final decision or identify a significant issue with regard to a completed petition made under this section within 60 days of its filing with the clerk of the board and service to the director of public advocacy for the department of public service, the petition is deemed approved by operation of law. The rules required by this subsection shall be adopted within six months of the effective date of this section, and rules under this section may be adopted on an emergency basis to comply with the dates required by this section. For purposes of this subsection, "wireless communication facilities"

include antennae, related equipment, and equipment shelter.

Sec. 30. 30 V.S.A. § 248f is added to read:

§ 248f New facilities of municipalities and cooperatives.

(a) In the case of a municipal plant or department formed under local charter or chapter 79 of this title or a cooperative formed under chapter 81 of this title, any proposed investment, construction or contract which is subject to this sections 248, 248a, or 248c of this title shall be approved by a majority of the voters of a municipality or the members of a cooperative voting upon the question at a duly warned annual or special meeting to be held for that purpose. The municipal department or cooperative shall provide to the voters or members, as the case may be, written assessment of the risks and benefits of the proposed investment, construction or contract which were identified by the public service board in the certificate issued under this section. The municipal department or cooperative also may provide to the voters an assessment of any other risks and benefits.

Sec. 27 EFFECTIVE DATE

This act shall take effect July 1, 2009.

Jim Sullivan
Director
Bennington County Regional Commission
Bennington

Category: Biomass

Comments: The VAPDA presentation is attached. I expect that is the final version I will be using, but there may be a minor change or two by the end of the day as other RPCs review it. If there are any changes, I will get the revised version to you first thing in the morning.

Because several of the comments in the presentation refer to the complexity of the issues being addressed and the needed commitment of resources by RPCs, I was wondering if it would be beneficial for the Commission to take a look at a report that the BCRC produced in anticipation of preliminary PSB hearings on the Beaver Wood biomass project proposed for (but subsequently withdrawn) development in Pownal? This memo is just a summary of the review work – we produced detailed studies of net energy yield, jurisdictional questions, feedstock availability and transport,… prior to drafting the memo. In any event, if you think it would be useful in any way, it is attached. Otherwise, feel free to ignore it (or read it if you feel like reading about something other than wind energy issues!).

As we discussed yesterday, I will be sure to submit separate BCRC comments to the Commission through the website and will let other RPCs know that they can do so as well.

Thank you for your willingness to listen to all of the issues and perspectives; we truly appreciate your efforts and those of the Commission members.

To: Bennington County Regional Commission

From: BCRC Regional Energy Committee
Jim Sullivan, BCRC Senior Planner

Date: November 2, 2010 / revised February 18, 2011

Subj: Beaver Wood Energy Biomass Project – Comments

The Regional Energy Committee has reviewed information submitted by Beaver Wood Energy concerning their proposed 29.5 MW biomass generating facility and wood pellet fuel manufacturing facility in Pownal. The Committee also has listened to a presentation on the project by Beaver Wood principals and consultants, asked a series of questions of the developers, and read letters submitted by residents, municipal governments, and other local organizations. The Committee's specific interest and expertise is in the area of energy; the comments in this memo, therefore, focus on the types of issues that are covered in the Bennington Regional Energy Plan, and less specifically on issues that may be part of the Section 248 review that are peripherally related to the use and conversion of energy resources.

It also should be noted that Scott Printz, chair of the Committee, disclosed the fact that he is an employee of Col-East, a company based in North Adams, Massachusetts, and that Col-East has been retained to provide some aerial photography for the owners of the property where the facility is to be located. The Committee felt that Mr. Printz could, and did, fairly and objectively participate in discussions related to the project.

The 2009 Bennington Regional Energy Plan provides information, policy guidance, and recommended actions that direct the work of the Energy Committee. That Plan provides comprehensive information about our region's utilization of various energy resources and includes an extensive discussion related to the development of renewable energy resources. Perhaps the most important concept contained in the Energy Plan is the assertion that, because of the decreasing availability and escalating cost of obtaining fossil fuels, in the near future we – as a society – will have available to us considerably less total energy than we have had at any time in the past several decades. The Energy Plan addresses the role of

alternative energy in our future by stating that "Alternative energy in the form of renewable resources such as solar, wind, hydroelectric, and biomass…can provide significant amounts of clean energy well into the future," but that "the total amount of energy that can be extracted from such resources is markedly less than what we currently obtain from fossil fuels." Consequently, the Energy Plan's primary thrust is to encourage energy conservation in all aspects of our lives and economic systems.

At the same time, the Energy Plan recognizes that availability of a considerable amount of energy will be necessary to maintain an acceptable quality of life for our residents and to support future economic progress. Several basic goals and objectives are spelled out that relate directly to our future energy supplies:

- Increase opportunities to make energy choices at the local level.
- Assure diversity in the mix of energy sources to minimize the impacts of a supply restriction in any particular fuel.
- Decrease our reliance on non-local energy sources through conservation and development and use of local renewable energy resources.
- Make energy choices that minimize adverse impacts to the environment.
- Assure both an adequate supply of electricity and a secure distribution network to meet the region's needs.

The chapter of the Energy Plan that covers renewable energy resources includes a section dedicated specifically to biomass (wood) energy. That section observes that wood, together with direct solar energy, "is the most obvious and ubiquitous source of locally available energy." And while the Plan agrees with Beaver Wood's contention that sufficient biomass is available for both existing uses and the new facility within the region and surrounding area, it also points out a number of concerns (that will be discussed in more detail below); for example:

- ❖ Heavy and continual removal of woody biomass to maximize energy yield will deplete soil nutrients and reduce future productivity.
- ❖ Net energy yield of biomass production is relatively low because of the energy inputs required to cut, transport, and process the wood, and most of those energy inputs are derived from petroleum fuels (with all of the uncertainties related to supply and cost noted above).
- ❖ Considerable potential for adverse local environmental and community impacts.

Despite those concerns, the local abundance of the resource, its relative environmental benefits (compared to utilization of coal, oil, or natural gas), potential benefit to the regional economy, and ability to contribute to the smaller-scale distributed energy production facilities that will be required in the future "suggest that planning for greater utilization of the resource should be pursued."

The Energy Plan does contemplate use of biomass for both electricity generation and production of wood pellet fuel. According to the Plan, because electricity will become an increasingly important way

to “provide energy for everything from manufacturing to transportation and communication, the feasibility of using wood from the region’s forests to generate electricity should be considered.” The Plan goes on to say, however, that any such a facility must be located to minimize negative impacts on the environment, residential neighborhoods, and public infrastructure. Concerning pellet fuel, the Plan observes that although cord wood used for space heating provides the most effective use of biomass – in terms of net energy yield and displacement of the maximum amount of fossil fuel use – the convenience and efficient burn characteristics of wood pellet fuel are attractive. Because pellet fuel currently must be transported into the region from a considerable distance, the Plan suggests that there may well be sufficient demand for a pellet manufacturing plant in the area.

Although the Energy Plan clearly supports the development of local renewable energy resources such as biomass, the actual benefits and effectiveness of any particular project must be closely scrutinized. The Energy Committee discussed numerous aspects of the Beaver Wood Energy project; the issues and concerns identified are covered in the following categories: Use of Biomass Resource, Sustainability of the Project, Transport Options and Truck Traffic, Environmental Concerns (air quality, water supply and quality), and “Other Concerns” (aesthetics, property values, economic impacts, and jurisdictional issues).

<u>Does the proposed project represent a wise use of our biomass energy resource?</u>

The Regional Energy Plan reports that there is enough wood biomass in the region to supply a significant portion of the area’s energy demand. The most efficient and effective use of this resource is to maximize its use in modern space heating systems (furnaces and wood stoves) in area residences. The significant investment in biomass heating systems at local schools and colleges has shown that heating of large buildings and institutions can be cost-effectively accomplished with biomass as well. Electricity generation is inherently less efficient than space heating biomass applications, but produces a very useful and versatile energy carrier.

Because burning cord word from area forests in residential applications is the most efficient and cost-effective use of our biomass resource, in terms of net energy yield and reduced consumption of imported fossil fuels, transitioning to such applications should be a high priority for the region. Initially, it may appear that a less-efficient biomass-based electricity generating facility might conflict with such applications by diverting wood from residential space heating applications. The type of biomass product used in a biomass energy facility, however, is not cord wood, but the residual material (branches, tops, and other woody debris) remaining after the harvest of trees for firewood, saw logs, and other applications. Expanded use of forest resources for efficient residential space heating applications, therefore, actually produces additional product that can be used for the generation of electricity. The wood pellet fuel manufacturing facility that is a component of this project uses whole logs for pellet production, and thus is another source of the residual biomass that can be made available for the generating facility. Although the wood chip based heating systems at large institutional uses (schools, colleges, hospitals) demand the same residual biomass product, there remains adequate forest growth to supply both markets.

Two major concerns related to the proposed intensive use of the regional biomass resource need to be carefully considered. The first issue involves the effects on forest soils and productivity of removing large quantities of biomass. Whenever material is removed from the forest, a portion of the energy and nutrient base needed to maintain productive growth of all forest biota is removed as well. Moreover, most of this productive-potential is tied up in the very products being removed for the biomass facility: the branches and tops of the trees. If forest productivity significantly declines, our future ability to economically and sustainably obtain wood products – for biomass energy or any other purpose – will be compromised. A related concern is the potential decline in the ability of the land to support healthy and diverse ecosystems and to maintain surface and ground water quality. For these reasons, we feel it is critical that qualified soil scientists and forest ecologists review the harvesting methods proposed to ensure that sufficient material is left in the woods to replenish the natural systems. Once operating, effective monitoring of harvesting should be required to ensure that adverse impacts are minimized.

The Energy Committee also notes that because of the intensive energy inputs required for the production of wood pellet fuel (grinding whole logs, drying and compressing the product into pellets, packaging, and transport to markets largely outside the region), pellets are a very low net energy fuel and generally not the preferred use of our biomass resource. The advantages of pellet fuel include convenience and the clean-burning nature of the fuel (and consequent reduced particulate emissions). The Committee recognizes that the biomass generating facility will be producing a large amount of heat and it is appropriate and efficient to make use of that heat energy in some way. Ideally, that "waste" energy could be used for some type of district heating, but the location of the facility is not conducive to such use. (If the biomass energy facility were in a suitable location and scaled to match the heating needs of an identified user, the overall efficiency and net energy yield of the project would be greatly increased.) Given the subject proposal, however, the pellet manufacturing facility derives one of its major energy inputs from a resource (heat from the biomass facility) that would be lost if the biomass generating facility were built with no secondary use of the waste heat. If the pellet facility is built, it is hoped that the local market for the product will expand to limit the export of the pellets (and energy) from our region.

<u>Is the project sustainable; will it be producing electricity to meet regional needs will into the future?</u>

The energy density of biomass is low relative to fossil fuels, but it has the advantage of being available locally. The relatively low energy density of biomass means that large volumes of this feedstock need to be procured and transported to the facility every day (further details provided in discussion of environmental issues). Our analysis indicates that the net energy (amount of energy output relative to energy inputs required to obtain the electricity for the end-user) produced by the proposed electricity generating facility appears to be less than 3:1, a relatively inefficient and costly energy source. Considering the large initial capital expenditure and the energy-intensive (and expensive) nature of the operation, it appears that the business will require significant federal financial support. If operating subsidies are required in addition to the initial ARRA funding, future loss of the subsidies would jeopardize the viability of the plant. Higher operating costs – in the form of reduced subsidies or higher feedstock prices – will require additional revenues in the form of higher prices for electricity and pellet

fuel. Increasing petroleum prices are likely to be a significant factor driving up operating costs, but it is likely that pellet and electricity prices will, in fact, rise along with them.

A significant concern is that biomass energy facilities rely heavily on petroleum (largely diesel) for the harvesting, processing, and transport of wood, and future interruptions in the supply of diesel fuel would render the project inoperable, eliminating revenue flow and making the project unsustainable. The fact that oil reserves are becoming more difficult and costly to access is evident. It is inevitable that at some point in the future (when the energy required to obtain, process, and deliver the petroleum product approaches the energy derived from it) those liquid fuels will not be available at all. Although there is disagreement as to when that point will be reached, there is widespread agreement that world oil production has peaked and that as production declines in coming years, there will be supply disruptions. The further that feedstock fuel must travel to get to a biomass energy facility, the more damaging are these disruptions in diesel fuel availability, thus prompting the Energy Committee to speculate whether a smaller-scale facility that would derive its fuel from a more local area, would be more sustainable. We are, however, evaluating the project proposed by the developer, and thus note only that this potential is real and poses a threat to the sustainability of the project that the developer should consider seriously.

<u>What are the best transportation options for the facility and what are the likely impacts of truck traffic?</u>

The trucks delivering wood chips to the biomass energy plant and logs to the pellet manufacturing facility, as well as trucks shipping finished pellets and waste ash from the site, represent a significant impact on roadways in the vicinity of the project and to adjacent residential neighborhoods. Beaver Wood Energy points out that the increase in overall traffic volume on US 7 attributable to the vehicles accessing the facility will not reduce the level of service on the highway, at any intersection, or require turning lanes, but it is important to recognize that 97 of the vehicles arriving at the facility every day (194 round trips) will be large trucks. Although truck traffic may not affect level of service, heavy trucks certainly do affect the roadway and the neighborhoods they pass through to a much greater extent than do cars.

According to projections provided by Beaver Wood Energy, approximately two-thirds of the trucks will arrive from (and supposedly depart to) the south on US 7 and the balance from the north on US 7 (Route 346 apparently is unavailable due to a restricted bridge). Further breakdowns in routing (e.g., trucks using Routes 2 E/W versus US 7 to Williamstown and Routes 9 and 67 versus US 7 to Bennington) were not available. The potential noise, safety, and roadway infrastructure impacts in all of these areas, particularly to residents living along US 7 and to businesses in Bennington and Williamstown (and to Williams College in Williamstown) could be considerable. Currently, there is very little through truck traffic on US 7 – most of the trucks on this route are making deliveries to local destinations – so the increase certainly will be noticeable. An eventual bypass highway around Bennington could alleviate some of the truck traffic impacts in the center of that town, but impacts in other areas would occur for as long at the biomass facility operates.

An active rail line passes by the project site, but use of rail in this case would be inefficient compared to direct truck deliveries. With most of the wood being sourced locally, trucks would have to drive to a rail terminal, probably using many of the same roads they would use to deliver directly to the Beaver Wood Energy facility, and load the wood onto the rail cars. The rail cars would then have to be unloaded at the facility. Use of rail for deliveries would only make sense if the feedstock were harvested at a distant location, but that would involve additional transport costs (thus reducing already marginal net energy yields) and fail to achieve the objective of using local renewable energy resources.

The towns most affected by the truck traffic: Pownal, Bennington, and Williamstown, Massachusetts, should be consulted to determine how they would prefer deliveries be staged. For example, if trucks are not allowed to make deliveries during evening hours, higher volumes of truck traffic would occur during the day (because a minimum amount of biomass must be delivered to the site every day).

Noise and dust generated by trucks operating on the site also must be considered. Truck maneuvering areas should be designed and located to avoid excessive impacts to off-site locations. Trucking and other site operations should conform to the performance standards contained in the Pownal Zoning Bylaw.

Will the project adversely impact air quality, water quality, or water supplies?

Most of the written comments submitted to the BCRC by residents of the area express grave concerns over the project's affect on air quality and the quality and quantity of both ground water (wells that serve existing homes and businesses) and surface water (the Hoosic River). The Energy Committee feels that these concerns must be given great weight and that the project must not go forward unless and until a rigorous examination of the evidence by state regulators determines that all safety and other standards are clearly satisfied. One reason that renewable energy projects are often viewed favorably is because they are perceived as being environmentally advantageous compared to other sources of energy; if public health and the availability of clean drinking water is compromised in any way, support for the projects becomes untenable.

The Energy Committee does not feel it has the expertise to evaluate air and water quality data and models, but enumerates below several issues that are of critical concern.

- Air quality: Any air quality modeling must reflect a full understanding of the unique narrow valley where the project site is located. Particulate emissions and any contaminants in water (whether found in source surface or ground water or added as part of any industrial process on site) that may be released in steam must be identified, controlled within regulatory standards, and continuously monitored to prevent releases that could affect public health.

- Carbon Emissions: A great deal of controversy has been generated recently around the issue of CO_2 emissions/carbon footprint/climate change impacts of biomass facilities. It is clear that burning biomass releases large amounts of carbon (a larger amount than coal by volume of

material burned since wood is less energy dense), but it is carbon that is circulating in our contemporary ecosystem. If the forest soil remains productive (see concerns with removal of excessive material noted above), new growth rapidly takes up comparable amounts of carbon. Fossil fuels such as coal, oil, and natural gas, on the other hand, release carbon that has been sequestered for tens of millions of years and is, essentially, adding new carbon to the contemporary ecosystem. To minimize the carbon footprint of a biomass energy operation, it is critical to ensure that areas of harvested forest be maintained in a condition where they can continue to support strong new forest growth. Conversion of harvested areas to non-forest uses would adversely affect net carbon flow attributable to biomass energy operations.

Even if emitted carbon were replaced one for one by carbon take up by new vegetative growth, a biomass energy operation cannot be "carbon neutral," because of the large quantity of fossil fuels used to harvest and transport the wood. If the 97 trucks accessing the Beaver Wood Energy site each drove an average of 75 miles per day, based on mileage data from the Bureau of Transportation Statistics, the total daily fuel consumption would be over 1,000 gallons of diesel. If trucks accessed the site 300 days per year, trucking operations alone would account for the consumption of close to 400,000 gallons of diesel fuel per year. In fact, Beaver Wood Energy's own estimates suggest that a total of over one million gallons of petroleum fuel would be required to support the plant's annual operations. Notwithstanding these rather large numbers, the electricity we use must be generated somewhere and biomass-fueled systems may produce less net carbon than facilities that rely on direct combustion of fossil fuels to run their turbines.

- Water Quality: Waste water from the biomass facility will be discharged into the ground. Any contaminants in the water – whether originating from pollution in the Hoosic River, from the plant's well, or from any industrial additives – may be concentrated in the waste water. The waste water must be monitored, treated, and discharged in a manner that ensures that hazardous materials do no migrate to any off-site potable water supply or to any surface water feature, including the Hoosic River.

- Water Supply: Water withdrawals from the well at the site must not impact the recharge rates or long-term viability of any existing well. If the project is permitted and constructed, and an adverse impact on a well is found to have occurred in the future, a system must be in place that requires Beaver Wood Energy to fully remediate the situation.

  The amount of water drawn from the Hoosic River also must be strictly limited to ensure that lower flow levels do not result in changes in water temperature, substrate, or other features that would degrade aquatic habitat or impair traditional river uses. The Town of Pownal owns a dam downstream from the Beaver Wood Energy site and has been in active discussions with a development company seeking to re-start the hydroelectric generating activity at the site. Hydroelectricity generated at an existing dam site has a high net energy yield and is a preferred source of local electricity. The viability of the hydro site in Pownal is heavily dependent upon

adequate flows in the river; the amount of water withdrawn at the Beaver Wood Energy facility must be shown to have no adverse impact on generating capacity at this downstream dam.

Other issues related to development of the project.

- ✓ Aesthetics: The project will impact the visual landscape in two principal ways: (1) the buildings on the site and (2) the steam plume that will be emitted and most evident on cold days. The site is in an extremely scenic natural location, on the banks of the Hoosic River and surrounded by mountains. At the same time, a large decrepit grandstand, a relic of a former racetrack, dominates the site and detracts from the visual quality of the landscape. The new buildings on the site will be prominent, but properly sited and maintained, would not further degrade the visual character of the area as viewed from US 7. The steam plume would be visible over a much larger distance. Currently, two public schools and a college in Bennington that use biomass heating systems emit steam plumes which are noticeable from many locations around that town. The appearance of the plume at the Beaver Wood Energy site would be similar, but would be discharged higher into the atmosphere from a stack approximately 200 feet in height. On days with significant wind, the steam would dissipate relatively quickly, but on calm days it would rise to a considerable altitude and remain very much in evidence. The significance of this impact to the visual landscape of the valley should be given due consideration.

- ✓ Property Values: With real estate prices having fallen dramatically over the past two to three years, residents in the vicinity of the proposed facility are understandably concerned over further losses in the value of their properties. Studies have shown that proximity to an industrial facility reduces property values, but that the effect falls off fairly quickly with distance. The number of properties likely to be affected and the magnitude of the impact should be given full and careful consideration.

- ✓ Economy: The potential positive economic impacts of a biomass energy project in the region are considerable, including creation of jobs at the facility, support jobs in logging and transportation, and reducing the outflow of dollars to purchase energy from distant locations. The payroll generated by the facility will lead to secondary impacts (multiplier effects) as that money is spent in local businesses. Property tax revenues would reduce residential tax bills locally and provide some funding for education statewide. Although the general trend is that increased levels of development in a community lead to an increased demand for services and thus an increase in public expenditures, utilities tend to have a relatively modest impact on the demand for services.

- ✓ Jurisdictional Issues: The Town of Pownal maintains that the wood pellet manufacturing facility is separate from the electricity generating utility portion of the project and should be subject to local zoning review (and assumedly Act 250 review as well). The Energy Committee does not offer an opinion on this issue, noting only that although key aspects of the facilities' operations are integrated, they could be constructed and operated individually.

Conclusion

The Bennington Regional Energy Plan supports the use of locally available resources to develop renewable energy projects in the region. The Energy Plan seeks first and foremost to encourage energy conservation, but recognizing that our basic energy needs must be met, identifies local resources (such as woody biomass) that hold promise as sources of renewable energy. Even though electricity generation does not represent the most efficient uses of biomass, it does have considerable value and can be complementary to other uses of the regional biomass resource. An electricity generating facility would ideally be sited and scaled so that its waste heat could be most efficiently used for space heating, although the proposed pellet manufacturing operation would benefit from the heat energy that would otherwise be lost.

Pellet fuel, despite its low net energy yield, has certain advantages and would be most beneficial if local markets were developed so that the energy does not have to be exported from the region.

Great care must be taken to ensure that the extensive logging needed to fuel this project does not damage natural resources and reduce the productive capacity of the forest.

Because large-scale biomass energy projects such as the Beaver Wood Energy facility are marginal in terms of net energy yield, there are concerns over the sustainability of the project. Procurement and transport of the large quantities of biomass fuel necessary for this project require large amounts of fossil (diesel) fuel that will be increasingly expensive and probably periodically unavailable. A smaller-scaled project would use less fuel for transportation, result in reduced environmental impacts, and would likely be more sustainable. If the Beaver Wood Energy project cannot be sustained in the future because of cost, disruptions in the supply of diesel fuel, or other reasons, plans should be in place to allow it to be decommissioned and the site returned to productive use. As long as the plant does operate, it will have a beneficial effect on the regional economy.

The location of the proposed facility presents difficult challenges in terms of truck traffic and potential impacts to air quality, water quality, and water supply. State regulators must rigorously examine the project to ensure that public health and safety and important natural systems are not compromised.

Justin Turco
Ira

Category: Wind

Comments: Is there ANY question that wind turbines change the lives of those who live in the sacrificial zone? Not in my mind. My neighbor put up a 120 foot tall wind turbine with blades that had about an 8 foot diameter, 1,300 feet from my home. When that turbine was spinning we could clearly hear it through the well insulated walls and closed weathershield windows of my home. Very disturbing! Fortunately it was very disturbing to the man who owned it and it "blew" down in a storm soon after it was installed.

It is also disturbing to me the Dorathy Schnure would try to make wind power sound reasonably priced, by subtracting the revenue that GMP collects in the form of the PTC and the sale of RECs from the per KWh price. Since that revenue comes directly out of the pockets of Americans.
Wind power is NOT in the public good! Why can't you appreciate that?