

SB99 Pre-Rulemaking Stakeholder Input Process
Public Meeting Notes
April 11, 2014, 9-12:30

OEP Director Meredith Hatfield opened the meeting and she and Lisa Frantzis from Navigant Consulting gave an introduction to the schedule for the day. Director Hatfield introduced the agency representatives present:

PUC: Commissioner Amy Ignatius, David Shulock, Dave Wiesner
DES: Mike Fitzgerald, Barbara Hoffman
OEP: Brandy Chambers

The rulemaking process was discussed at a high level, draft criteria for discussion were presented, and additional input was requested. The starting criteria can be found in the presentation (<http://www.nh.gov/oep/energy/programs/documents/sb99slides-2014-4-11.pdf>). They focused on wind as a starting point for discussion:

- Setbacks
- Noise
- Shadow Flicker
- Ice Throw Mitigation
- Visual Appearance
- Lighting

In addition to these, the audience members recommended also considering the following:

- Natural Environment
- Safety
- Health
- Air quality
- Property values
- Height Limitations
- Cumulative impact of multiple projects
- Subpoena Power
- Community Rights
- Availability of information to Public
- Effectiveness or quality of energy sources

Director Hatfield noted that some of these issues could be outside the scope of the rulemaking required by SB99. There were suggestions regarding starting with the statutory criteria, and then working within each of those categories to develop more detailed comments. One potential option was the 2007 guidelines (http://www.nhsec.nh.gov/documents/siting_guidelines.pdf) as well as comments on the pre-rulemaking process submitted by a consortium of environmental groups (<http://www.nh.gov/oep/energy/programs/documents/sb99pc-ngo-submission-3-25-14.pdf>).

Although the initial idea was to split into working groups, the group decided to stay together and jointly discuss setbacks, noise, aesthetics, shadow flicker, ice throw, cumulative impacts and decommissioning, along with other issues raised during the discussion. The public comments on each of these sub topics are noted below. At the conclusion of the meeting the next steps and schedule were

reviewed, and a conversation was held about the difference between siting criteria and operational permits. The comments are organized by topic as:

- Public Comment
 - Response

Setbacks

- Should there be an exception for a property owner who wants to allow facilities to be closer?
- We should consider health agency recommendations from the WAUBRA Foundation in Australia
- Could setback requirements be different for vertical axis turbines vs traditional?
 - Lisa: There aren't many vertical axis turbines, something we'd need to research.
 - Lisa: If the concern for setbacks is safety rather than noise or visual, then different setbacks for different types would certainly make sense.
- Setbacks for safety are much shorter than those recommended for noise (up to 2 miles)
- I'm an engineer with extensive experience and I want to be assured that we won't just be looking at criteria that are near impacts (e.g. setbacks). The noise and visual issues need to be addressed, they affect potentially thousands of people for many miles around a project.
- Does SEC have any 'second look' on projects after being constructed, especially if they are going to change a part of it?
 - Commissioner Ignatius: If it's a change to one of the conditions in the permit, then it would have to go back to the SEC.
- What about height? It affects everything, flicker, visual, noise.
- SEC should consider echo effect due to geography.
- Consideration for transmission and wind are so different, don't see how one set of rules can cover everything.
 - Mike Fitzgerald: That is one of the challenges that the SEC faces, they site everything from gas plants in highly developed areas to gas pipelines in wilderness areas. There may need to be some general criteria, and then source-specific criteria.
- How do setbacks work? For example, Balsams is looking at reducing theirs, is that ok for recreational purposes?
 - Lisa: Great question, something to look into
- Where did these sample criteria come from?
 - Dave Wiesner: Lempster settlement, and they were designed to mitigate ice & blade throw issues
- One of the challenges with picking a distance is the lack of objective for that number; if we include the objective that the number is trying to accomplish, the SEC may have more discretion in interpreting a rule.
- Standards-based criteria would be extremely useful, so that if better technology came out mid-project, that new technology could be applied without re-starting the process.
- Do we want to make a distinction between offshore & onshore wind in the rules?
 - Lisa: Offshore is federally regulated.

Noise

- You're missing frequency and infrasound; Maine's wind regulations do address those types of issues.
- Relative limits tend to be difficult, if not impossible, to test on an on-going basis.
- When you're measuring noise, is it an average over time or at a given moment?
- Lot of challenges as far as how and when do you measure. Has to be decided whether that should be covered in rules or not. Another approach is to have noise studies submitted as part of the application. How would you prove a violation if constant measurement isn't being done?
- It would be helpful to develop criteria for what has to be included in the study, to create uniformity.
- We want to make sure that the decibel levels are based on proven science.
- Like for setbacks, a waiver process needs to be available for nearby owners.
- SEC will struggle most with where standards leave off and regulations take over. ANSI standards cover thousands of topics; don't know if they're applicable to wind turbines, but there must be someone who's looked at the applicability of existing national standards that are developed and maintained by organizations who are experts.
 - Mike: DES has rules that use "incorporation by reference"—is that applicable here?
 - Commissioner Ignatius: Yes, but incorporation by reference has to explicitly state the document being referenced.
- Could we consider putting in things that are not allowed when measuring ambient, e.g. measuring near a highway or stream?
 - Ben Barrington: I think those are likely covered in one of these standards
- We need to collect information from people who agreed to sign off on projects after the projects are constructed; if we're buying silence, we're not learning what the true impacts are. We need to compare what the participants are saying compared to the abutters.
 - Director Hatfield: This could take the form of a request to the SEC to undertake that study as part of their rulemaking.
 - Commissioner Ignatius: Certificates are for specific projects. It may not be fair to ask applicant to support study for future projects brought by others, and findings may not be applicable in other cases. It would be great to have data on everything, but must be realistic. Is there someone other than the SEC that can do research that isn't site-specific?
- SEC issues certificates, but then doesn't follow up and make sure the criteria are being met. So we should consider monitoring, enforcement.
- In the health & safety field, it's about analyzing failures. While some criteria will be site-specific, a lot will be general, and we need to evaluate whether they are working.
- It sounds like we're talking about post-construction feedback, does that fit here? Monitoring is a separate issue from siting criteria.
- Noise is a real science, there are highly educated individuals who do this for a living, and it is odd that we would be trying to determine these levels by ourselves instead of consulting experts.
 - Lisa: Are there specific organizations you are recommending? We don't want to re-do studies, of course, but if there are lessons learned out there that we can pull from that would be helpful.

- Science is a great tool, but science isn't going to tell you what the noise standard should be, it's a judgment issue.

Aesthetics

- Criteria are minimization standards, but we should be talking about the criteria by which the SEC makes a decision on whether the impact of a project is acceptable.
 - Meredith: NGO document does include requirements for what has to be submitted in terms of studies.
 - Chris Wells, Forest Society: Yes, and we also included criteria for decision. E.g. Is the impact on a particular resource unacceptable? Is it a significant viewpoint? How significant is the impact?
 - Commissioner Ignatius: The rulemaking process requires definition of those terms, we need to deal with specifics.
- See Jean Vissering's work to help establish rules.
- How would you identify significant views? Statewide study or case by case?
 - Dave Publicover, AMC: There should be a defined list of places, yes. The places we have in mind are places that are publicly accessible. The impact on private landowners is a separate category that we didn't try to address.
- If the state has already built a "scenic overlook," then that view probably has value?
- I live in a development, and if I want to make a change to my house, I have to get approval so that it can be determined whether it fits in visually. A visual depiction may be a good filing requirement.
 - Commissioner Ignatius: Just to clarify, there are currently visual simulations submitted as part of the application process. One good addition might be to include in the simulations any transmission lines that would have to be built to take the power from a wind project.
- Photographs are static; they don't capture the movement of wind turbines. That motion is a huge distraction and should be considered.
- FAA lighting requirements are a major issue. FAA allows for less than every single turbine to have lighting, but they have to be a certain color if they do that. The technology exists to use radar to detect planes and only turn the lights on when a plane is nearby, so they'd be on rarely, need FAA to approve it. Some installations in Maine & Vermont have agreed to retrofit this technology once it's approved.
- We have to be careful not to set up rules that only very large wind farms can comply with; this technology is expensive.
- The public needs a lot more information, we didn't even know about these projects until they were basically done.
- I live 10 miles from a wind farm and I can see the lights; these things are horrendous, they affect way more than 10 miles, and there's no way my property is worth the same amount as before. We need to look at what they do to the economy, tourism. Transmission towers are abusing our rights of way, those farmers gave away those rights to bring power up to the North Country, not to bring power south.

Shadow Flicker

- It would be great to have a set distance at which it is determined there is no perceivable impact. So if a project is more than x miles from a house or business, there's a presumption of no impact. That would simplify the application and review process.
- Shadow flicker is ruining sunsets; we have to look through the turbines as the sun is setting.
- Where did this definition of flicker come from?
 - Dave Wiesner: This is based on the model wind siting guidelines adopted by NARUC [National Association of Regulatory Utility Commissioners]. There may be more refined definitions that could be used. Shadow flicker is a very specific effect related to health impacts, which occurs at certain times of day under certain specific conditions; it is not just that the turbines are casting shadows.
- In addition to concerns about health, people are also concerned about the impacts of shadow flicker on solar installations.
 - That issue would be covered as a regular shadow, and be in a separate category.

Ice Throw

- I don't understand the purpose of number 4 (visual inspection), given the existence of sensor technology and assuming adequate setbacks.
- Seems like this should fall under setbacks as well.
 - Lisa: You're right, this is all interconnected, that is one of our challenges.
 - David Shulock: The setbacks that we proposed earlier were intended to provide ice throw mitigation. These guidelines come from the American Wind Association.
- In terms of distance, are the calculations adjusted for turbines on mountain tops or ridgelines? Could potentially have further throw if on the edge of a cliff.

Cumulative Impacts

- Given the reality of where the wind resources are, we are seeing that there is likely to be an accumulation of many projects over fairly limited geographies. This is something that should be woven into other criteria rather than being a standalone.
- Important to consider not just similar projects, but all projects (e.g., transmission + wind + hydro + wood)
- Can you give us some insight into how cumulative impacts are currently considered?
 - Commissioner Ignatius: If something has already been certificated, you take that as a baseline case, and that could make it more difficult for the next project. However, we are sometimes encouraged to do the opposite, to place development in fragmented areas and be extra protective of areas that aren't fragmented yet. In either case, it doesn't seem appropriate to consider the impact of potential future applications.
- The unfragmented lands issue is hugely important for SPNHF.
- Mike Mooiman's blog had a statistic that looked at what we need to meet the RPS 25x25 goal; 135 25MW wind farms or 80 15MW wood plants or 780 10MW solar. So if in fact we work to meet the RPS, the SEC is really going to have its hands full.
- Couldn't we put in a rule that said no more than 1 wind farm in a given area?

- Or we could go other way and identify dense wind areas and cluster them there, to minimize the number of areas that are affected.
 - Dave Wiesner: Should also note that there may be a number of projects that will never come before the SEC because they're under the 30MW jurisdictional limit, so that's something to consider for cumulative impacts.

Decommissioning

- Critical that funding is guaranteed, and has to be in place prior to the start of construction
- That would be extremely difficult for most developers. The SEC already requires companies to demonstrate financial health.
- For existing operating projects, are those plans considered adequate?
- How do we determine lifespan of project?
- How is salvage value accounted for in setting the decommissioning amount?
 - The salvage value at the beginning of the project is high, helps reduce the amount the developer has to have on hand, and then the fund can grow over time. Maine follows this approach.
 - In Vermont, all projects are required to have secure financial instrument and they do not net out the salvage value. There are multitudes of ways to take down a turbine, and some of them destroy salvage value.
- Interconnecting lines between turbines and from wind farms to the distribution line/larger network isn't currently part of RSA 162-H. They have to be over 10 miles before they get reviewed. We know it has an impact – look at the interconnection in Groton/Plymouth. It was put in place by the electric co-op.

Director Hatfield thanked everyone for attending. The meeting was adjourned at 12:30. The next meeting is Monday, April 21, 2014, at 9:00, in LOB 302-304.