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RE: Case No. 08-1024-EL-ORD Reply Comments of Tom Stacy October 6th, 2008

PUCO

I appreciate the opportunity to provide reply comments on the case referenced above. In the late spring of 2008 and based on my experience with several local governments over the prior year, I approached Senator Bill Seitz and shared my opinion that there existed a dire need for consistent, state-wide regulations for wind energy projects. The issues I brought forward included but were not limited to the following:

- Contrast between the rural home density of proposed wind energy facilities (WEFs) compared to home densities where WEFs have been constructed in North America previously with regard to the correlation between home density and poor acceptance of the facilities once constructed.
- Township zoning amendments established in specific townships of Logan County, which were accomplished with the urging and legal/financial assistance of WEF developers, and that these are incongruent with industry best practices and wind turbine (WT) manufacturer safety recommendations, and whose only basis appeared to be "whatever it takes to ensure every farmer who wants a wind turbine on his land can have one."
- The prospect of inconsistent standards across the state, especially those standards that are developed with a primary goal of commercial viability and treating property rights and safety as secondary considerations would lead to significant problems for all stakeholders across the state.
- That a metric should be established to measure the cumulative benefits and impacts of WEFs in general and for each WEF proposal
- The assertion that WEFs are simply not appropriate in every unincorporated area of the state, and that in depth study should be conducted to determine a go/no-go boundary that all stakeholders can plan from.
- That WEF dispatchability, generation capacity credit and annual capacity value are extremely low compared with other generation technologies, and that this is an important consideration for OPSB. That the relationship of capacity credit to nameplate capacity, and the corresponding limits of emissions offset must be well understood and acknowledged by all departments and agents of the state.
- Any and all negative impacts of WEFs, and any benefits from WEFs must be scientifically quantified and verified, the BALANCED in light of the capacity metrics.
- Ratios if benefit to impact for WEFs must then be compared to the same ratios of all other generation technologies appropriate for or existing in the state.
- This perspective should then be used amply in guiding the WEF developer to the most appropriate potential project sites in advance of the developer devoting significant resources toward contract acquisition and resource measurement. In a broad sense this can be summarized as "What do we really get compared to wait we really gain?"

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Technician Date Processed (1/7/2008)

- I provided extensive reports, studies, articles to the Senator as well as to the Public Utilities Committee of the General Assembly over the past year.
- Without careful cost/benefit analysis and due attention to the results of such analysis, it will not be possible for the state of Ohio to act appropriately and responsibly in this matter.

One source of relevant data potentially valuable in gaining the necessary perspective is found in the Green Energy Ohio September newsletter at:

http://www.greenenergyohio.org/page.cfm?pageID=2017

Please note the wind speed data collected by Honda of America Manufacturing and summarized beginning on page 11 at the last paragraph of the first column and forward. This type of analysis is important to all stakeholders and seems to indicate the glacial ridge in Logan County offers little if any wind resource advantage over the general northwest Ohio area including the Wood County landfill project.

In light of the overall traditional electric energy generation substitution WEFs technically and measurably provide, care must be taken to evaluate the <u>incremental gains offered by each potential site alternative over another</u>. For if incremental gains are substantially insignificant in light of overall substitution for traditional generators, then extra care is warranted in directing WEF developers to areas with the absolute least quantity of negative impact to existing land uses, property values and wildlife.

In summary, it is imperative the state and/or the OPSB acknowledge and address the aforementioned aspects of WEFs carefully and appropriately.

Specific comments replying to the initial comments of other select stakeholders:

Summary of select comments from: BABCOCK & BROWN

Wind is an extraction and generation facility.

Rules need to be consistent with our competitors in extraction industries therefore:

Delete the requirement of listing of all possible concerns

Coal burning plants do not need to file alternative site plans

Coal extraction plants not subjected to such due to "extract where occurs reality" Surface mining has larger area of disturb. but only 1,000 ft. perimeter considered.

High Winds and flood areas - 05A5b - request to delete.

4906-17-07(C)(3)(b, c) - operational water flow N/A

Coal mining viewshed impact can be greater than wind energy viewshed impact.

Reply Comment to above:

Actual wind measurement data shows that the resource is not concentrated in peak elevation areas of Ohio, rather modestly available over large sections of northwest Ohio, and that furthermore, the wind resource in higher elevation areas is not significantly greater than in the relatively flat portions of greater northwest Ohio, as wind shear tends to be less in flat, farmed areas due to less surface turbulence.

Areas subject to flooding and where exposure increases the likelihood of damaging straight-line winds are certainly relevant to the safe and permanent establishment of WTs.

Measured in impact-days, the energy potential from WTs pales to surface coal extraction operations. The latter are repaired to an environmentally benign state upon retirement, typically in 5 to 10 years.

Summary of select comments from: AUDUBON SOCIETY

Support maintaining limited existing wildlife (avian) habitat and migration General comments urge OPSB to establish stronger protocols Alternative Site Evaluation strongly supported Comments outside realm of expertise also urging stronger rules Wish to see an admission in rules that rules are only a "starting point" Mandatory ODNR coop agreement signing as condition of application approval. Call for study of cumulative impacts of many turbines on numerous species.

Reply Comment to above:

I am in agreement with these comments made by Audubon.

Summary of select comments from: AWEA

Rules must only apply to 5-50 MW facilities as stated in SSB562 Specifically WEF's are not to be considered a major utility facility (MUF) It is not legal for OPSB apply MUF rules to economically significant wind farms (ESWF) as defined in statute.

- NEED is not a factor OPSB is allowed to consider
- enlarging statutory SETBACKS is illegal
- Eliminate substantial additions to statute i.e. ALTERNATIVE SITES
- BUFFER ZONES are established by min. setbacks remove all refs.

Reply Comment to above:

AWEA apparently seeks to avoid its industrial developers being subjected to alternative site analysis on all fronts, pushing for omission of responsible siting analysis by anyone except the developer itself. As explained to me by the executive staff and OPSB in advance of the passage of SSB 562, the minimum setbacks were expressly established as one facet of micro-siting considerations of OPSB. If the statute clearly states otherwise, then the statute should be modified to reflect the possibility of greater minimum setbacks based on safety, noise, lighting, flickering, property value, low frequency vibration, aesthetics and neighboring property values, blade and ice throw, electromagnetic interference, environmentally sensitive areas, cultural resources and other relevant considerations.

The content of the 2008 AWEA Wind Energy Siting Handbook and the recommendations made by AWEA to OPSB in this matter are not well matched,

and the Association appears to be condoning siting that are grossly inadequate compared with respected wind turbine manufacturer safety guidelines.

Summary of select comments from: AMERICAN MUNICIPAL POWER

Statute calls for ESWFs to be treated consistent w/ MUF to the extent practicable.

Not fair to treat 6MW WEFs same as 1,600MW WEFs

Wind Resource Maps based on modeling not accurate (comment on 4906-17-04)

Alternative site analysis impractical due to need for anemometers

Wind resource measured data highly confidential.

Financial data too dynamic and sensitive to practical for using and sharing

Reply Comment to above:

I agree with the first three assertions above, however:

I disagree that alternative site analysis in impractical. As a percentage of total capital cost, anemometer towers and devices are a small fraction of one percent of capital costs.

I also disagree that wind resource data is highly confidential. It is in the interest of the public, who is significantly paying for wind energy's advancement in the first place, for all wind resource data to be shared with all stakeholders. This provides for the advancement of research and modeling, as well as for prudent site and alternative site analysis. Once a WEF is constructed, wind speed data should be used for production correlation as one means of accountability for tax credit and REC determination.

Finally, I disagree that financial data is too dynamic to be of practical use by the public and OPSB. The wind industry's extensive reliance on public funds for it's propagation and sustenance must come with an extremely high degree of transparency, to the benefit and potential detriment of all developers, stakeholders and the public.

Summary of select comments from: FPL ENEGRY

Clarify 5MW and greater vs. 5-50MW definitions

Add "participating landowner" to definitions as anyone getting paid.

Want alternative site analysis removed

One mile radius map acceptable, but 5 mile radius map not

Deny responsibility for identifying area airports

Geological physical integrity analysis provision challenged

Promise not to construct WTGF in extremely windy spots or flood plains if OPSB promises to eliminate reference to them in the rules.

Only provide simulation art if there is public concern

Delete MANUFACTURER SAFETY MANUAL requirement (bottom page 3)

Disclosing financial data could be detrimental to development success.

PUBLIC SAFETY IS NOT AN ISSUE

Noise assessments should apply only if there is a standard

Admission of ice/blade throw concern – calls for clarified wording.

Loosen rules on SHADOW FLICKER, as effects are just temporary.

Limit the relevance of homestead density in and out of project boundary.

Developer promises to be good and carry necessary LIABILITY INSURANCE

Reply comments to above:

Alternative site analysis is both practical and prudent to maximize benefit and minimize impacts of WEFs in Ohio.

Additional opinions on this stakeholder's initial comments are self evident.

This concludes my reply comments regarding Case No. 08-1024-EL-ORD.

Respectfully,

Tom Stacy

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