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20206-163782-02, and 20206-163929-01**

**What action(s) should the Commission take in response to the June  
8, 2020 requests to amend the Site Permit for the Freeborn Wind  
Project?**

**Reply comment**

*“The shadow flicker analysis submitted by the Company on August 20, 2019, analyzed the flicker potential for “263 structures found to be located within two kilometers of the 59 proposed wind turbine locations.”<sup>4</sup> Additionally, although the analysis, accounted for “turbine operational hours and direction as well as local sunshine probabilities,” no “blocking or shading effects due to trees or structures have been accounted for. This means that the ‘realistic’ estimates are still inherently conservative values.”<sup>5</sup> Finally, although the analysis modeled six receptors with shadow flicker values over 30 hours per year, the Company has developed a Shadow Flicker Management Plan designed to mitigate this flicker, so that no receptor will experience more than 30 hours of shadow flicker.”*

Mitigation is available NOW by moving the proposed turbines before construction. Dan Litchfield of Invenergy replied numerous times during PUC meetings that the turbines could not be moved at all. Xcel buys the project, changes to larger turbines, and is granted an amendment that moves numerous turbines up with some moving up to 2000+ feet.

Moving a couple now for these individual amendments would be doable if the project were requesting it, so it would appear by past actions and should be done for those living in the project, having filed for an amendment.

The property owner need not change their property for the project to be in compliance. The changes need to take place on the participants' property.

It has been put in black and white numerous times by me, and the Gaston, Severtson, Nelson, and AFCL comments that the flicker is not @ 30 hours. It is 60-70% higher than 30 hours using those “conservative” numbers.

This shadow flicker number also increases in that there will be multiple turbines contributing shadow flicker on each of these residences, making the cumulative total much more than the reduced 30 hours of shadow flicker. Each turbine contributes from a separate location providing shadows on different areas of the property at different times.

Where are the calculations to show how such huge reductions have taken place? Why won't the DOC EERA or the PUC address the real numbers?

*“While the ALJ questioned the reliability of Freeborn Wind’s prediction of shadow flicker exposure at various locations, the Commission concludes that Freeborn Wind’s testimony remains the best evidence in the record on this question. “*

Now let's look at reliability in regard to the compliance filing for shadow flicker.

There was NO shadow flicker compliance filed pre-construction. Sean Gaston found that error. He and others, including AFCL referenced this omission in the request for the shadow flicker amendment.

Xcel filed a letter saying thanks to the AFCL for noticing and Rich Davis of DOC EERA, whose job it is to go thru the check list of compliance also admitted the shadow flicker compliance had not been filed.

It is the responsibility of the Commission and the DOC to review compliance filings.....only if the project files them? It is the responsibility of the project to obtain and file all compliance.....only if it suits them?

At the Sue Madson amendment request meeting, Xcel was directed to provide a note for her, the non-participant, once again listing vegetation, blinds, awnings, as a means to control shadow flicker. Naturally, Xcel agreed. Why wouldn't they? Easy Peasy, it's already been three years of ignoring Ms Madson. All parties are armed with the full knowledge that Ms Madson doesn't desire to have her home altered, neither do those who filed for the shadow flicker amendment.

The permit allows for individuals to file for an amendment, 13.0 Special Conditions: “...any person”.

The Gaston, Nelson, and Severtson families didn't “couch” this as an amendment, they used the Special Condition as set forth in the amendment permit.

There are errors and ambiguities, there was no shadow flicker compliance filed 14 day prior to the pre-construction meeting. No shadow flicker compliance was filed until this amendment was requested and then the shadow flicker compliance was filed as a response to the amendment request.

The ambiguities and errors continue with the major reductions being taken from the ACTUAL flicker numbers and the random percentage in changes from one home to the next.

The permit reads: *Commission staff and EERA staff will be responsible for the review and approval of the Shadow Flicker Management Plan. The Commission may require the Permittee to conduct shadow flicker monitoring at any time during the life of this Permit.*

The Shadow flicker Plan was filed July 14, 2020 for a meeting that took place on May 13, 2020. I may not be a lawyer but July 14 is not 14 days before May 13! Violation, error.

Xcel has other plans than allowing the Commission to conduct shadow flicker monitoring at any time:

First, they will apparently monitor only the three residents' they have identified. I believe these three are participants, so they would not be complaining anyway per their contract!

Second, should any other resident figure out how to contact Xcel, Xcel has declared they will determine who and if they will monitor the complaint.

*".....will monitor and mitigate shadow flicker, as appropriate. However, use of additional monitoring and control technology will be at the sole discretion of Xcel Energy ...."*

Please note there is no contact information in this mitigation plan and there is no commitment to respond to complaints. There is no process listed.

This is most certainly ambiguous and provides good reason to relocate or remove the requested turbines in these amendment requests.

These families have not requested a complete overhaul of the project.

Xcel did that with little trouble shortly after their acquisition of the project and then again just weeks ago. Moving 2 more turbines will not kill the project. The moving of or removal of turbines 38 and 39, along with the removal of the 17 will complete the amendment requests made via 13.0 Special Conditions.

### 3.3 ADAPTIVE MANAGEMENT

*If the mitigative efforts described in section 3.2 above fails to address the three residents' concerns, Xcel Energy will communicate and work with the three home owners to identify additional, appropriate, site-specific shadow flicker mitigation measures such as the installation of interior screening mechanisms (curtains or blinds) and exterior screening devices such as awnings or vegetative buffers. Selection of the most appropriate option(s) will be collaboratively determined by working with the property owner at the time of the complaint. Xcel Energy may also consider additional shadow flicker monitoring technology that would monitor for shadow flicker in real-time and curtail the appropriate turbine(s) to address the shadow flicker concern.*

*Additionally, should other residents, who believe they are experiencing excessive flicker compared to the modeling, bring shadow flicker issues to the attention of Xcel Energy, the Company will monitor and mitigate shadow flicker, as appropriate. However, use of additional monitoring and control technology will be at the sole discretion of Xcel Energy based on customary engineering and operational considerations such as effectiveness, reliability, availability, cost, and maintainability.*

I cannot believe the best practice is to wait and see how bad the damage is and then try to put on a band-aid by asking non-participants to change their property with something as lame as trees, blinds, or an awning, or as also suggested leaving their home for extended periods of time.

**The Developer must re-site or remove a limited number of turbines into a configuration that will prevent adjacent landowners from receiving more than 30 hours of non-discounted shadow flicker on their property per the Freeborn county shadow flicker ordinance.**

Please amend for these families who did not choose to be part of this madness. It is no secret that there are ill effects from turbines. The project includes an extensive list in the contracts/easements that the participants cannot complain about.

During this “woke” time in our history, wouldn’t it be great if you, the Minnesota PUC, could be leaders in doing what’s right for the non-participant as well as the participant. To this point, it’s all been about maximizing PTC credits and those involved in the project thru easements, now is the time to admit that real people known as non-participants have property rights too.

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