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JUN 0 4 2018 SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

Commissioners and South Dakota Residents,

In regard to EL18-003 I request you require APEX to provide a scientific study on impacts to residents. I listened to the Crocker Wind hearing and heard Adam Holven of Tetra Tech of Bloomington, MN, testify that it is possible to study the effects on residents in close proximity of wind structures. I would ask the Commission to order that study on our behalf, regarding wind turbines and transmission lines.

The large 4.2 mw turbines APEX is planning to use must be vetted for public safety in our community. These large turbines should be miles from people, not in close proximity. There is NO reason to place ANY turbines close to non-participating land owners in any community, especially these turbines that are not anywhere in SD or MN, or anywhere else on land that we know of. They are off shore turbines and should not be allowed into populated areas.

Not only are they a safety and nuisance issue, but the visual impacts to nonparticipating land owners will be devastating to their mental health and property values. The flicker of any turbine should be confined to participating land owners property and never cross the property line of a non-participator. They should also be place out of view of non-participators.

I attended a public meeting sponsored by APEX in Wilmot, May 23<sup>rd</sup>. There, Mark Mauersberger answered a question by one of the attendees. The attendee said, "What if I don't want to look at them? I don't like them, and don't want to see them." Mark Mauersberger answered by saying they would move them. All you have to do is say you find them visually displeasing, and we will move them. He said other people had come to county meetings and brought up phony health things, when all they had to do was say they didn't want to see them.

You could have knocked me over with a feather. But, that is what he said in a public forum, and I believe you must keep him to his word.

Another thing he said when asked about ice throw, was the turbines they would use have an option for a heated blade, a wire that runs down the blade to heat it up and would eliminate ice concerns. We are counting on the PUC to require heated blades on each turbine.

Ice can be thrown very far, and a 1 pound chunk of ice can travel with the force and speed of a bullet. There were 2 incidents in MN last year, that I am aware of. One incident that was pictured by news media, showed a picture of the semi with huge area of the cab bashed in by ice throw. In another incident, an outbuilding of a non-participating land owner was hit by thrown ice. We live in areas of icing and ice is a huge concern for residents on their property, and residents traveling by turbines on their way to work, school, church, and pleasure activities. We need safe setbacks from roadways. I would ask the Commission to commission **accurate** to conduct an ice throw study of these turbines. Mark Mauersberger used a slide from them in his Power Point presentation, but it was not readable, and was not specific to these turbines. I saw one of their studies that showed ice throw from smaller turbines to reach 985'. The turbines APEX wants to use have much larger blades, giving them a much larger launch capability.

Blade failure rates in the industry are .54% per year, according to a 2015 article in Wind Power Monthly; another huge area of concern for residents. The figures cited were from research carried out by renewable energy insurance underwriter GCube. There are 1500 turbines being proposed to our small area of northeastern South Dakota, that would be 4500 blades. The blade failure on average would be over 24 per year in our small corner of South Dakota. That is staggering. Pieces of blades can be thrown over a half mile.

Our setbacks are not nearly far enough, especially on this Dakota Range project. We live here. We work here. We play here. Please deny this current application and study these concerns for the well being of all of our residents.

Thank you for your consideration of our safety, health, property values and nonparticipating land owners' property rights.

Sincerely,

Amber Christenson



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