My testimony in favor of SB 279

Greetings members of the committee,

My name is Jonathan Sill, and I would first like to thank each and every one of you for the opportunity to speak before you today. The issue we are here to talk about is one of the many complicated multi-faceted issues facing our great state today. I believe that this bill, SB 279, is a necessary step in the right direction to laying the ground work for a fair system future wind farm projects can be built to. This groundwork in the form of basic protections and standards that everyone on both sides of the issue can rely on in the process of proposing, siting, and constructing an industrial wind farm generating facility.

My journey on how I came to this conclusion is rather unorthodox compared to your usual citizen concerned with an industrial wind farm going up in their backyard. I will quickly share a brief timeline of the events leading up to today concerning the wind facility currently being proposed/constructed in my little part of Kansas.

- About this time last year I had heard rumblings about a wind farm going up in a community in the extreme south east portion of Marshall County around the Lillis area. Since this was a decent distance from where I live I really didn't pay it much attention due to it really being only gossip at this point. I had never saw anything official.
- Fast forward to last July and I was made aware that a windfarm was being proposed to be built surrounding the town I live in. This really concerned me, due to having worked in and around industrial wind farms in Oklahoma and Texas. I know just how loud they can be, so I naturally attended some disorganized meetings held by some concerned citizens.
- I then attended a city council meeting where I heard one of the council members ask a representative of the company looking to construct this farm point blank if they had enough ground signed up to build this project. This individual said that they did. I was able to speak with this representative after the council meeting and asked some more technical questions. Those being: do you have a client for the power to be generated? (was answered with a no, but a Power Purchase Agreement (PPA) was being negotiated) What is the style of transmission substation they intended to build? (was answered with not sure on the style, but the transmission voltage will be 345,000 Kv)
    - I became even more concerned due to these answers, especially with the 345,000 Kv transmission voltage. That is considered an Extra High Voltage by the Federal Energy Regulatory Comission (FERC), and the capabilities of this transmission voltage far exceed the generating capability of the proposed windfarm. This told me they were intending on building more windfarms in the area. I asked what the plans were and was told that at this time there are no further projects in this area.
- I felt that I needed to do something about letting people know that I believed that more of these windfarms were maybe on our horizon. I then attended a County Commissioner meeting and was graciously allowed to speak. I stated that I felt there would be more of these projects on the horizon for us, due to my limited experience in this field, and that we needed to look at this matter seriously.

- I kept researching this proposed wind farm and it was then I came across what is called a Generation Interconnection Agreement for this project. In layman's terms this agreement is an agreement between the facility builders, the entity/utility lined up to purchase the power generated, and the Southwest Power Pool. The Southwest Power Pool is a non-profit group that operates the bulk electrical transmission system ensuring reliability, efficiency, and cost from Canada all the way down into northern Texas.
    - There is a multitude of information in these documents, and I also found that there were four proposed industrial wind farm projects to be built in the four counties in my area of the state. Nemaha, Marshall, Washington, and Republic counties each had a projected wind farm to be built in them all sharing the same 345,000Kv transmission line carrying all the power generated to an Evergy Substation over by Lansing Kansas. The Stranger Creek Substation to be exact.
    - Within these documents it also states when these agreements were entered into by the signing parties. All four of these projects were entered into an agreement on in April of 2020
- I found this information shocking. Partially due to the amount of power these four windfarms were looking to generate: just over 1,200 megawatts broken down to 302 megawatts per farm. Partially due to the sheer number of turbines on the proposed list: 151 turbines per farm totaling 604 turbines. And partially due to me having to do exhaustive research to come across this information myself. Neither the company proposing this farm, nor the county government would share any real information as to the nature of the project.
    - So I decided to speak again to the county commissioners about what I had found. It seemed to me that they were rather surprised that I was able to provide the information I did. I felt they had a rather lack of concern for what I was telling them. I also briefly touched on potential revenue off these projects.
        - These revenues, depending upon variables of runtime, wholesale pricing, and many other factors, could be projected to be in the hundreds of millions if not billions of dollars over the life of the project. Of that only an average of 2-6% goes back to the county and citizens in the form of landowner payments, taxes, and contributions in lieu of taxes.
- It was then I felt that the events taking place concerning this project needed further research and I needed to try to educate people to what actually goes into constructing and operating these industrial wind farms.
    - I kept researching anything to do with this and the neighboring industrial wind projects and came up with some rather startling conclusions
    - I shared these concerns and conclusions with various citizens and spoke at several more county commissioner meetings. Even being the last citizen to speak at the special September meeting where the county commissioners signed the initial agreements with the wind developer.
- Fast forward to December of 2020, in the height of a Covid spike in Marshall County, the wind developer submitted their official site plan for the facility just before the Christmas Holiday, giving any concerned citizen only two weeks to formally file any opposition documents for the individual turbine locations. This timeframe was monumentally inconvenient for any concerned

citizen due to the local government buildings being not only shut down for various holidays in this two week period, but the heightened Covid restrictions they were operating under.

That is a brief timeline of events as I saw them, concerning the industrial wind project around the town I live in. Now I will briefly touch on some of my interactions with the various officials, third party officials hired to negotiate on behalf of the county's citizens, and various wind developer representatives. These interactions range from asking pointed questions over valid concerns I had, and still have, of the physical project itself, the constraints as to how it is now being constructed and the general lack of meaningful communication I feel has taken place.

- I developed an extensive questionnaire voicing some of my initial concerns over this wind project. We were directed to turn in however many questions we wanted to our county commissioners. I covered a wide range of topics but here are some of the highlights:
    - I was very concerned about the use of SF6 gas in the wind turbines themselves and in the various switchgear and breaker applications in the substation. SF6 gas is 23,000 times more potent a greenhouse gas than C02 is. IF there is a big enough leak, the amount leaked could possibly negate any greenhouse gas this windfarm is supposed to save us.
        - I had a quick conversation with some of the wind company personnel about the topic and was promised it would be looked into further, it never was.
    - I asked for a tentative location for the wind turbines or when the locations will be shared. Was told they did not know there locations as of yet and would pass any information along when the time was right.
        - In fact, through the Federal Aviation Administration citizens were able to find public information regarding the placement of all the turbines the wind company wanted for this project. This is due to the "case studies" for each turbine being required by federal law due to them being nearly 500' tall. The initial locations found by the citizens was applied for and approved in July of 2020. So this shows that the wind company knew exactly where they initially wanted these turbines placed, but refused to share this information with the public or, as I understand it, our county commissioners.
        - I also asked about the use of ADLS lighting systems for this wind farm. I was told by wind farm company representatives that they had asked for these but were told no due to there being military shared airspace in the area
            - In my research on this topic, I have discovered that every turbine has to have an individual application for an ADLS lighting system to be used on it. I have also learned how the process is done in dealing with the FAA, various government agencies that review these projects, and the third party contractor who facilitates these permits from start to finish.
            - It is my belief that the ADLS systems were never applied for on this project. I have come to this conclusion through conversations I have had with individuals from various government agencies. I find this highly controversial.
        - In recent weeks there has been conversations concerning the total amount of turbines that will ultimately be erected if this project is completed. Various

wind company representatives, county representatives, and county commissioners have promised that only 108 turbines will be constructed. No more, no less.

- In my research I came across a study conducted by a third party engineering firm for the Southwest Power Pool. This study is called a Modification Request Impact Study. It was submitted on September 14 2020. The purpose of this study was to evaluate the change of what will be constructed at this wind farm in the way of the actual turbines. The initial application and Generator Interconnection Application called for 151 GE 2.0 Mw turbines to be built for a total generating capacity of 302 Mw. Under the new application submitted by the wind company consists of 59 GE 2.3 Mw turbines + 3 GE 2.52 Mw turbines + 58 GE 2.72 Mw turbines. This brings the total generating capacity to 301.02 Mw but the total turbine count is 120. I believe that it is the wind company's intention to go ahead and construct the full 120 turbines so they can meet the full generating capacity they have entered into agreements with. So once again promises that have been made by wind company representatives and local government officials is categorically false.
- I also asked about whether landowners who have turbines on their ground will be advised to wear the same level of PPE that the wind company employees are mandated to wear by their own corporate policy. Would they educate the landowners and public as to the hazards and distances to stay from the turbines? Would this take away from the ability of landowners to fully utilize their ground when the turbines are in operation?
    - The replies I got were a generic non-answer. Basically they would never tell a landowner what to do on their ground.

That is just but a few of my concerns I had about this project and some of the responses, or lack thereof, I received from the developer and county officials.

Everything I have mentioned previously brings me to this final section of my testimony. Everything that has happened or I have witnessed is concerning in and of itself, but this is just concerning one project in Kansas. This could be explained away as a one off as far as the sour taste in my mouth concerning the development of this project through our town and local government. I am afraid however that these concerns have and will happen in other projects and I will now share with you the true scale of the explosion of renewable energy we are really facing in Kansas.

I have studied what is called General Interconnection Active Request list for the Southwest Power Pool. This list shows all kinds of information concerning all future generation projects that are being considered for inclusion onto the electrical grid. For the basis of my research I only looked at the projects to be located in the state of Kansas and I went from 2016 to present. Present being March 3rd of this year 2021. I was shocked to learn that from 2016 to present there are 139 projects slotted to be studied, already in some form of construction, or have already been completed and are generating power. Of these 139 projects, 71 of them are wind farm projects with a potential generating capacity of

just over 130,000 Mw of power. These 71 projects are spread out between 30 counties and some counties have multiple projects sited in them. Some counties have upwards to ten plus facilities looking to be built in them. To put this in perspective according to the Department of Energy Kansas only had a peak generating capacity of around 16,500 Mw in the summer of 2019, the most recent figure I could find as the 2020 data was not available yet. Now do keep in mind that these 71 wind projects are in some state of study, construction, or generation. This does not mean that every one of these 71 projects will be constructed. In my conversations with experts in the field only about 25% of these projects will make it to the General Interconnection Agreement phase and from there its almost a lock the project will go through. Well going off that percentage from the 71 projects we can anticipate around 18 projects to reach the near completion point with an expected generational capacity of around 32,500 Mw of power. This is no trivial amount of power. With these numbers concerning wind power alone we are looking at an exponential potential output the likes the state will not have a need for. This means that the bulk of this power will be sold on the wholesale market ran by the Southwest Power Pool. Concerning the matter of selling on the wholesale market, the Southwest Power Pool's 2019 average wholesale electricity price was $30.43 per megawatt hour. If the afore mentioned 32,500 Mw of generating capacity comes online and is sold at that rate for one hour you are looking at over $16 billion dollars of revenue. Now the likelihood of all that generation coming online is slim and for it all to be generating on the system at the same time is just as slim, but the whole purpose for these large scale wind projects is to produce bulk electrical power to sell on the wholesale markets or through lucrative agreements with electrical utilities and co-ops

With this explosion of renewable energy production Kansas, as a member of the Southwest Power Pool, has witnessed there have been some consequences that further inhibit the construction/study process from moving along at a consistent manner. In my research I have come across information from the Southwest Power Pool concerning the study schedule and process for all generation interconnection applications. This form states that due to unprecedented volumes of generator interconnection requests, the SPP had to transition to a new three phase study process and they are currently years behind in conducting individual connection studies. These studies are required before any project is deemed approved to be connected to the overall SPP system, with these delays projects listed in the active request list who were supposed to be already online have yet to complete the study process. Add to that the concerns raised in the Southwest Power Pool's Annual State of the Market Reports for 2018 and 2019 regarding the addition of wind generational capacity to the system. Concerns ranging from ramp-price scarcities, price chasing, and wind forecasting errors just to name a few. This is just another example of the true scope of the boom industry renewable energy has become throughout the state of Kansas and across the country.

I would like to take the time to state that I am not against the use of wind turbines to provide us with electricity. I do believe they are a viable source for non-dispatchable power to service the overall electrical grid and system during peak load times and take some of the strain off other sources of generation. I was formerly employed in the electrical field in the form of substation construction and testing. I have built multiple electrical substations whose sole purpose was to transfer power from wind farms to the overall electrical grid. I know what goes into these projects and the permanent marks they leave behind. I am just very concerned at the rampant disregard for citizens viable and documented criticisms of the placing of an industrial wind farm in their back yard. I believe that this legislation is paramount for the protection of people deemed by the wind farm developers as not mattering. I also

believe that this legislation is needed to protect citizens who are FOR the further proliferation of wind in this state and for it to be placed on their property if possible. I have witnessed events take place in my little corner of Kansas that sicken me, so I have prepared this testimony in hopes of bringing these issues to light and for you to see what the future has in store for the state of Kansas. Now is the time to act. Is this bill perfect? No, but I believe it sets a good foundation, that with proper debate in the full Senate and House, meaningful input from various wind developers, and possible contributions from the Southwest Power Pool and Kansas Corporation Commission that good policy can come from this. Policy that lets everyone from the industrial wind developers, all forms of state and local governing bodies, and average citizens know the standards and rules that all wind farms in the state of Kansas are constructed and held to protecting and lifting up everyone involved.

I would like to also submit that if this legislation were to pass out of this committee that language be added to it, or the final bill in the full Senate, that will put a cease and desist in place to allowing a meaningful review of all wind projects currently in any sort of process from initial development to final construction, so they can be reviewed against this bill to determine if any of the criteria laid out can be met or compromised to in good faith by the developer.

Thank you to all the members of the committee for letting me submit my testimony. I would like to add that if any committee member has any questions for me over my testimony or would like clarification on my findings to please contact me, I would be glad to assist in whatever manner I can.

Regards,

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