

Testimony Submitted for Senate Bill No. 279
Senate Utilities Committee Hearing Held on March 22, 2021

by Ronald Young

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Chairman Mike Thompson and Members of the Senate Utilities Committee
Proponent Testimony SB 279

Wind Turbine advocates may oppose this bill with the argument that it would impede the spread of their method of “cheaper and more efficient” electricity production in Kansas. They usually present this superiority argument as fact beyond question, not subject to critical review. I would hope the Committee will not take these assertions without question.

It is important that this bill strives to protect people from the adverse effects wind installations would have on their lifeways and property values. I only hope it is enough. Wind is a less technically efficient and economically viable option than other forms of energy production now in use. It also demands huge land masses up to hundreds of times greater than those required by other technologies to deliver the same amount of energy. This conclusion becomes more stark when the technical and economic benefits of wind power are compared to those of other power generating options.

Advocates for wind power tend to focus on turbine output (e.g., 4% of power in state X comes from wind). In response to questions about whether wind turbine power output (however measured) actually exceeds the input power costs required to generate output, a method called Life Cycle Analysis (LCA) has been adopted by the wind industry to show that turbines produce more energy than they consume. LCA input costs include production, installation, operation, maintenance, decommissioning, salvage, and disposal of a turbine. Most wind turbine LCA studies focus on proving that wind turbines produce more energy than they consume ($R = \text{output}/\text{input} > 1$). While important for answering the limited question about turbines, these studies become trivial pursuits when taken in isolation without comparison to other power generating options.

There are very few studies that compare multiple power generation technologies regarding their relative power output/input efficiency, “R.” A study by D. Weissbach, et. al. in *Energy*, vol52, April 1, 2013 is one of those studies. It does not contradict wind power industry studies regarding the finding that $R > 1$. Indeed, it finds that all major electricity producing technologies currently in use do exhibit $R > 1$. However, it does find that wind power, using comparable input/output measures, is not as efficient as nuclear, hydro, coal, and natural gas. In effect, wind and solar power trail the pack and, depending on the option, by a wide margin. For instance, I have seen studies finding that nuclear's R ranges from 2 to 19 times greater than that of wind. Further, Weissbach's study finds that wind power falls below a “threshold” of economic viability, perhaps explaining wind power's decades-long need for public financial subsidy before companies are willing to construct turbines in the first place.

Land use demands for wind energy exceed that for all the others by far. Using standard output efficiency measures, the Nuclear Energy Institute posits that wind demands at least 250-300 times more land than nuclear to produce the same output. That's one reason why so many people who face the prospect of wind turbines in their backyards oppose it. There is no looking the other way. Still, wind advocates often vilify and dismiss people who oppose locating wind power in their communities as

obstructionist NIMBYs. It's as if they consider wind-turbine-free rural lifeways as inferior and readily expendable.

Wind industry representatives deny the concerns of local people that wind installations will lower property values. But I haven't yet heard of land values skyrocketing around wind installations driven by wind advocates bidding up prices because they so want to live in the shadow of their beloved turbines. I haven't heard of land speculators snapping up land around wind installations in expectation of making a quick buck when land values jump after wind turbines go in.

I won't argue the science describing global climate change. But I will argue that the science for wind power as the short-term and/or long-term remedial solution to problems accompanying climate change is far, far, far from convincing. In fact, when compared to other options, science places wind power near the bottom, technically, and economically. In addition, due to its massive land use demands, wind power is near the top in its own potential for environmental destruction.

I hope SB279 can offer sufficient respite for people unwilling to live next to wind factories until officials willing to provide public subsidy to the wind industry come to their senses and begin seriously evaluating other options free from wishful thinking and blind faith as to assertions by wind advocates about the "superiority" of wind power.