

OPPONENT TESTIMONY ON HB6

Norman Robbins, 3270 Norwood Road, Shaker Heights, OH 44122

Contact: e-mail nxr@case.edu telephone 216-767-1525 (home) 440-836-2624 (mobile)

HB 6 AS NOW WRITTEN WILL PUT OHIO BEHIND – ECONOMICALLY AND ENVIRONMENTALLY

Summary: Ohio does not have a coherent long term energy plan. If HB6 is passed as written, in 10 years,

- Ohio will have no replacements for its 2 nuclear plants at or near the end of their usable lifetime.
- Ohio will not increase jobs in energy efficiency jobs (currently over 80,000) or in renewable electricity (currently around 9,000), and nuclear jobs (1500) will stay the same. In terms of job maintenance and development, energy efficiency expenditure is 40 times more effective than the proposed amounts for nuclear jobs.
- Residents and industries will pay more for electricity because energy efficiency programs will not have decreased electricity utilization, and because by then low cost wind and solar electricity generation will not have increased very much, and equal- or higher priced natural gas will be the dominant energy source. In addition, a carbon fee, carbon tax, or cap-and-trade carbon program will likely further increase the cost of carbon emissions, which will be the dominant source of Ohio electricity.
- Ohio's energy mix for electricity will be over-weight with fossil fuels, and renewable energy will remain a small percentage, because of subsidies for nuclear plants, lack of renewable portfolio standards, and over-restrictive wind turbine setback rules.

Recommendations:

1. Retain current energy efficiency and renewable energy standard portfolio;
2. Restore reasonable wind turbine setback rules, in line with most of the country, as part of a program to replace nuclear energy with renewable energy over 10 years;
3. Add funds for a 10-year extension of David-Besse and Perry nuclear plants **but only if these plants are at the highest safety standards, if there is detailed financial justification and accountability for the subsidy funds awarded, and if there are concrete plans for job training as the plants reach the end of their useful lifetime or become even less competitive because as competitive sources increase, a higher subsidy might be required to prop up nuclear energy.**

Background justification for recommendations

Nuclear plant safety, funding:

Davis-Besse and to a lesser extent Perry have had serious safety problems¹. Before Ohio spends 180 million dollars annually per HB6 subsidizing these plants, there needs to be a thorough examination of

¹ [Perry plant Union Concerned Scientists info on licensing, safety](#)

safety protocols by the Nuclear Regulatory Commission, as well as an annual independent audit of First Energy Solutions (FES) costs and profits of its nuclear electricity generation, to be sure that taxpayers' money is spent only on absolutely necessary subsidies.

Replacement of energy supply at end of plant lifetime:

HB6 claims to be concerned with keeping down carbon emission from electricity generation during the lifetime of the two plants. An FES spokesman proposed at least a 10-year additional lifetime for the two plants². Therefore, prudent planning would provide for a 10 year term limit on nuclear subsidies with development of relatively inexpensive renewable energy to replace the nuclear energy by the end of the 10 year period. For the same reason, the HB6 funding should include a plan for retraining the 1500 nuclear plant employees over the 10 year period in preparation for the closing of the plants.

Restore reasonable wind turbine setback standards:

Wind energy could be a major source of low-cost energy for Ohio, eventually, along with solar, substituting for nuclear power. But it has been stalled by the 2014 setback standards, which make most proposed wind farms uneconomical. Ohio has already lost billions of investment by just one of the developers (APEX) attempting wind farm development in NE Ohio, and having to abandon 3 of their planned developments. Especially as energy storage technology becomes reliable and less expensive over the next 5 years, wind will be a highly desirable form of energy. Many large companies are choosing to build or contract with wind farms, and Ohio's setback standards presents a barrier to their choosing to move to or remain in the state. If wind energy is to grow to be part of replacing nuclear power, reasonable setback standards must be restored.

Energy efficiency standards and funding should be maintained for the sake of jobs:

In 2018, OH had 81,676 jobs in Energy Efficiency³, which is 72% of the all clean energy jobs in the state. Employers in this industry predict 7.4% growth in jobs in 2019, which amounts to more than 6,000 new jobs in energy efficiency in 2019. Ohio state Energy Efficiency expenditure \$187+\$47 million⁴= \$234 million for 81,676 jobs = \$2,866 per energy efficiency job (not including the 6,000 expected new jobs in 2019)

Compare dollars spent per job under HB6: Nuclear plants, \$170 million for 1500 direct jobs = \$113,333 per nuclear job per year! So in terms of maintaining jobs, energy efficiency funding is 40x more effective!

[Davis-Besse safety/licensing info from Union of Concerned Scientists](#)

² [Crain's Cleveland Business, March 24, 2019](#)

³ <https://www.cleanjobsmidwest.com/wp-content/uploads/2019/04/CJM-All-Exec-Summaries-2019.pdf>

⁴ Tables 12 and 14 in <https://aceee.org/sites/default/files/publications/researchreports/u1808.pdf>

If HB6 passes and reasonable wind turbine setback rules are not restored, Ohio’s energy mix will not be “all of the above”, which many legislators claim to support, but in 10 years could well be over 80% natural gas:

The table below shows the 2018 percentage of electricity sources for both NextEra and The Illuminating Company⁵.

	% total
coal	29
nat gas	31
nuclear	34.5
biomass	0.5
hydro	1.5
wind	2.5
solar	0.5

Even at present, S&P Global Market Intelligence⁶ states: “The revolution in US shale gas seemed destined to drive most future generation investment toward natural gas power plants. And indeed it did – for a few years. As costs have fallen for wind and solar PV facilities, Market Intelligence forecasts indicate returns are converging with new natural gas, even in markets where natural gas competes best.” So in 10 years, if nuclear and most of coal are phased out, natural gas could provide over 80% of Ohio’s electricity source, even though electricity from wind and solar could be cheaper, especially since lithium battery storage is already becoming competitive with natural gas “peaking” plants in supplying “dispatchable power” when the grid needs it⁷. At that point, companies that want 100% renewable electricity or that simply want the cheapest form of electricity would not choose to locate in Ohio, would buy renewable electricity or energy credits from out of state renewable sources, or would have to build their own renewable sources. The first two of these outcomes do not bode well for Ohio’s economy.

Likelihood of carbon fee or tax or cap-and-trade arrangements: Although referendums this last year or two have voted down such arrangements, economists of all stripes agree these approaches would be the most effective means of harnessing market forces to reduce carbon emissions. Already 11 states use such market-based approaches to reduce carbon emissions⁸. As atmospheric carbon dioxide increases, greater multi-billion-dollar environmental catastrophes are very likely to ensue, according to both US and International consensus reports, so that the pressure for such fees is highly likely to increase. If Ohio has a fossil-fuel dominated electricity program, it will greatly lose competitive edge.

⁵ NextEra Energy Services Ohio LLC , Environmental disclosure report, actual, for 2018.

⁶ <https://www.spglobal.com/marketintelligence/en/news-insights/blog/forward-spark-spreads-suggest-rising-profitability-of-us-renewables-as-sector-matures>

⁷ <https://about.bnef.com/blog/battery-powers-latest-plunge-costs-threatens-coal-gas/>

⁸ <https://www.c2es.org/content/market-based-state-policy/>