Chairmen Stein and O’Brien and members of the Energy Generation Subcommittee, thank you for allowing me to speak here today.

Terming nuclear power as “zero emissions,” as “clean energy” and equating it with clean air is a reversal of reality.

**What clean air?** Nuclear is an immense industry that uses lots of carbon-emitting energy. Uranium mining, milling, refining, conversion and enrichment; nuclear fuel fabrication, transportation throughout the industry, and building reactors and these many other facilities emits lots of carbon. Energy use is ongoing, including making more canisters for waste. And does not take into account the amount of energy needed to keep nuclear waste isolated for hundreds of thousands of years.

**What zero emissions?** Nuclear power plants are allowed to, and all do, have regular radioactive releases into the air and water. They all leak tritium. Uranium mining, milling and refining all produce dangerous waste piles and emissions of radioactive and other hazardous materials, including radon gas. Groundwater, surface water and community drinking water systems have been contaminated. Radioactive contamination occurs all throughout the industrial facilities that make nuclear fuel.

**What clean energy?** One thing that FirstEnergy does not talk about is radioactive waste. After searching for 70 years, the U.S. has yet to find a permanent location for a waste repository. The reality is that there is no real “disposal” solution for nuclear waste. Moving it around the country with no final plan can only cause more problems. It is currently being stored in dangerously overcrowded cooling pools and in thin dry canisters that are welded shut and cannot be monitored or repaired. This waste is going to remain in its current locations for a long time, if not indefinitely. More waste will compound this problem. A 1000-MW nuclear plant produces about 27 tons of spent nuclear fuel every year. Immediate steps must be taken to store this waste more safely than currently – a large, expensive but critically important undertaking. It defies credibility that federal regulatory agencies could be compromised on issues of safety. But look at the Federal Aviation Administration letting Boeing do its own safety checks. Similar things have been going on with the Nuclear Regulatory Commission for decades. Both agencies have been captured by the industries they were designed to regulate, putting the public at risk. I list hyperlinked references in your electronic copies: [Spent Nuclear Fuel Pools in the U.S.: Reducing the Deadly Risks of Storage. Nuclear Regulatory Commission (NRC) states the waste may need to be stored at current sites indefinitely. NRC documents provide data that indicate thin storage containers can fail 16 years after a crack initiates.](https://www.nrc.gov/reading-rm/doc-collections/nrr/827040752.pdf)

Maintenance, repairs and upgrades are being deferred. Longer periods between inspections. Emergency plans not updated. Flooding and other recommendations from Fukushima Lessons Learned not implemented. Davis-Besse’s shield building continues to crack. Our committee has submitted a 4-page paper with hyperlinked references to problems at Davis-Besse and Perry and maintenance deferrals and exemptions given by the NRC. NBC NEWS/AP 3-15-19: [Nuclear industry pushing for fewer inspections at plants.](https://www.nbcnews.com/technology/nuclear/nuclear-industry-pushing-fewer-inspections-plants-n1023767)

**FirstEnergy is dishonest.** Strong legal objections to FirstEnergy Solutions’ restructuring plan were filed by the U.S. Securities and Exchange Commission, the NRC, FERC, U.S. EPA, the federal bankruptcy court’s
U.S. Trustee, Ohio Consumers’ Counsel, and the Environmental Law and Policy Center. The court has rejected the plan. The court also denied FirstEnergy a bonus plan that excluded union members. The Environmental Law and Policy Center challenged FirstEnergy Solution’s plan to not fully fund its Decommissioning Trust. FirstEnergy “competes” by pushing legislation for a wind setback, then wants a bailout due to their failure to modernize like other utilities have done.

How long can you drive an old car?  Davis-Besse is operating past its 40-year engineered lifespan. Nuclear reactors have a problem that old cars don’t – weakening of concrete and steel by continuous radioactive bombardment. Lake Erie is a critical resource for drinking water, recreation and livelihoods for millions of people. Even a “small” accident could wreak billions of dollars in property damage, with life-altering health consequences for tens of thousands. FirstEnergy’s Beaver Valley reactors sit only 4 miles east of the Ohio border in Pennsylvania. In HB 6 proponent testimony, it was noted that the Bennett Carroll Salem School District superintendent could not be at the hearing because he was attending an evacuation drill at Perry. No evacuation drills or potassium iodide tablets are needed for solar and wind. Nor are they terrorist targets, like the Indian Point nuclear reactor that the 9-11 terrorists flew over and had considered targeting.

FirstEnergy is already getting a $200 million per year bailout from the PUCO. This has caused a 5% increase in FirstEnergy electric bills. PJM, the regional authority over electricity capacity, says nuclear is not needed to ensure electric supply in Ohio and surrounding states. Forbes also says the same in an April 20 article, “State Nuclear Subsidies Not Needed.”

SO WHAT SHOULD THE OHIO LEGISLATURE DO?

Develop an energy policy. “All of the above” is not an energy policy. Bailouts put off the inevitable, while delaying the solution.

Promote sustainable energy. The Ohio legislature must remove obstacles to wind and solar. This will lower electric bills. Wind is available in Ohio for less than 3 cents per KWh. Utility scale solar is available in Ohio for less than 4 cents per KWh. Efficiency saves electricity at about 1.7 cents per KWh. Nuclear’s cost before profit is estimated to be between 6-7 cents. Wind and solar generation distributed around Ohio will distribute tax revenues more fairly than the current central generators.

Create jobs by advancing renewables. There are now more jobs in solar and wind than in nuclear or coal. Jobs in solar energy are growing all across Ohio. Wind was booming across Ohio until 2014 when Ohio legislators gave wind the harshest setback regulations in the nation. Ohio Power Siting Board applications for new solar in 2018 were 7 times the total existing solar in Ohio.

Communities need aid, not utilities. Unemployed workers, vacant homes, decreased tax revenues, business closures – can constitute a vicious circle. It is counterproductive to give billions to utilities that have failed to modernize, failed to compete, and “cannot afford” to make critical safety upgrades. So much more could be done if money went directly to communities. Electric rate increases double the unfairness because they hurt poor families most. Ohio can and should support reactor communities.

Nuclear jobs can be retained. It is cost effective, more efficient and decreases safety risks if decommissioning begins as soon as a nuclear plant closes. The workers at Davis-Besse and Perry are experts on the workings of their plants. The smartest thing would be to rehire these experienced workers to begin decommissioning. FirstEnergy wants their reactors to be put into Safstor, which simply means postponing decommissioning for 60 years while conditions deteriorate. Waiting and hiring new workers unfamiliar with these plants would pose significant cost increases and safety concerns.

Thank you again for allowing me to testify here today.