

HB 6 Testimony: Richard Denning, Retired Professor, Ohio State University

Senate Committee on Energy and Public Utilities

June 12, 2019

Mr. Chairman, thank you for the chance to provide written testimony on what I feel is the most important reason to support HB 6 and preserve nuclear power as part of Ohio's electric energy supply.

My name is Richard Denning. I am a former professor of nuclear engineering at The Ohio State University and an internationally recognized expert in the fields of risk analysis, risk-informed decision making, nuclear safety, and severe accident behavior of nuclear reactors. I have managed studies of the safety and risk of a variety of nuclear facilities including commercial nuclear power plants and a number of DOE's non-reactor nuclear facilities, as well as serving on senior advisory committees for the NRC and DOE regarding the safety of nuclear facilities and the long-term storage of radioactive waste.

I speak in favor of HB 6 because of the importance of our two nuclear plants in limiting the release of greenhouse gases. As a scientist, I see the evidence for global warming as incontrovertible. The 2018 report of the UN Intergovernmental Panel on Climate Control provides perspective on what the impacts will be and the nature of the threat of global warming to the lives of my children and grandchildren, if we do not take immediate action to address this issue.

In Ohio nuclear energy is responsible for producing 90 percent of the state's carbon-free electricity. The lost power these plants currently provide would not be replaced by renewables like wind and solar as they are unable to provide baseload power and will require time to build out and scale up. It would require 26 solar plants the size of the recently approved AEP Appalachian solar plant to replace the annual electric output of the two nuclear plants. Instead, if these nuclear plants are forced to close, their energy contribution will be replaced by natural gas and coal, contributing to a significant increase in carbon dioxide to the atmosphere that is unnecessary and irretrievable.

The U.S. needs a national commitment to decarbonize our electricity supply quickly (30 years is an achievable target). The price will not be small. The cost of electricity from carbon free alternatives, such as adding carbon capture equipment to fossil fuel plants, solar energy, wind energy or new nuclear plants, will be much more expensive than the small subsidy required for the continued operation of our existing nuclear plants. For Ohio, continuing to operate our two nuclear plants is the most cost-effective action we can take in limiting carbon emissions. Once our two nuclear plants are closed they cannot be moth-balled and restarted later. If we close those plants today, we will regret it tomorrow. Don't take a step backward in addressing climate control.

The performance of U.S. nuclear power plants is excellent consistently achieving a national average capacity factor greater than 90 percent. It is also important to recognize the significant improvements in safety and reliability that Ohio's nuclear fleet has achieved over the last decade. Major capital investments made to increase reliability and modernize these facilities have resulted in the Davis-Besse and Perry plants ranking among the highest-performing nuclear power plants in the country.

Nuclear power is safe. The Nuclear Regulatory Commission has adopted probabilistic safety goals to assure that the operation of nuclear power plants has insignificant impact on the health risk of members of the public. The nuclear power plant safety record has easily satisfied those goals. People die from oil rig accidents, coal mine explosions, natural gas explosions, carbon-monoxide poisoning and even in the installation of rooftop solar panels. No one dies from accidents in commercial nuclear power plants, as operated in the U.S.

The bottom line is nuclear power is a safe, reliable, and clean energy resource that Ohio must preserve in order to protect our environment and safeguard public health.

Please support and pass HB 6. I thank you for your time and consideration today.