

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

Mr. Chairman, thank you for the chance to speak to the committee today to highlight just a few of the myriad of important reasons to support HB 6 and preserve nuclear power as part of Ohio's diverse energy mix. As a former professor of nuclear engineering at Ohio State University, this issue hits close to home for me.

My name is Richard Denning and I am a former professor of nuclear engineering at 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.

I speak in favor of House Bill 6 because of my concern about the global environment and the welfare of my children and grandchildren. Global warming is real. As a scientist, I see the evidence as incontrovertible. The 2018 report of the UN Intergovernmental Panel on Climate Control provides perspective on what those impacts will be and the existential nature of the threat. We need a national plan to decarbonize electric power generation quickly at minimum cost. For Ohio, continuing to operate our two nuclear plants is the most cost-effective first step in reducing carbon emissions.

HB 6 is necessary to restore balance to Ohio's existing energy policy, which currently fails to protect Ohio's largest source of zero carbon emission energy—nuclear power. As a point of fact, nuclear energy is responsible for producing 90 percent of the state's carbon-free electricity. There is no doubt as to the impact on air quality if our state's two nuclear plants are forced to close down prematurely. It will get worse.

The lost power these plants provide will 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. Instead, if these nuclear plants are forced to close, they will most likely be replaced by natural gas and coal, contributing to a significant increase in air pollution and threatening public health and safety.

HB6 provides a mechanism by which we can continue to operate our nuclear plants for their remaining lifetime at a small additional cost to the consumer. 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. Once these plants are closed they cannot be restarted. Don't take a step backward in addressing climate control.

It is also important to keep in mind the significant improvements regarding safety, reliability, and efficiency that Ohio's nuclear fleet has achieved over the last decade. Hefty capital investments over the past 10 years to increase reliability and modernize these facilities has resulted in the Davis-Besse and Perry plants now ranking among the highest-performing nuclear power plants in the country. The fleet's industry-standard Institute of Nuclear Power plant performance index has improved by 18% over the last decade to what is currently the combined second-highest in the country.

The fleet of nuclear power plants of which Davis-Besse and Perry are a part is the longest running major nuclear fleet in the country without a fuel defect. Workers at the Davis-Besse

plant have put in more than 14 million manhours with a lost time accident—and average collective radiation exposure to workers has been reduced over 75% and 60% at Davis-Besse and Perry, respectively, in the past decade. What is most remarkable is that all of these safety, reliability, and performance improvements have been made even as operating and maintenance costs have been reduced by roughly 25% just in the past four years alone.

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.