

Testimony in Support of HB 104 by Prof. Richard Denning

Thank you for the opportunity to provide testimony in support of House Bill 104. I am a retired Professor of Nuclear Engineering at The Ohio State University but am still actively performing research related to the safety of nuclear power reactors, in particular molten salt reactors and sodium cooled fast reactors. I have previously served on the NRC's Advisory Committee on Reactor Safeguards, the DOE's Advisory Committee on Nuclear Facility Safety and the Advisory Committee for the No-action Alternative for the Yucca Mountain Spent Fuel Repository Environmental Impact Statement (which effectively is what is happening with spent fuel today). I will specifically address the aspect of the bill that relates to the provision for an advanced reactor demonstration plant in Ohio. As a scientist, I find the evidence for global warming incontrovertible and am dismayed by our inability as a society to act appropriately to rapidly decrease production of greenhouse gases. Our children and grandchildren will pay a terrible price for our inaction. Among other actions, we must decarbonize our electricity supply. Our options are solar, wind, nuclear and all of the above. The cost effectiveness of solar and wind are very dependent on location, which work to the disadvantage of Ohio. In addition to the benefits of much higher capacity factor, nuclear power is effectively independent of location. Ohio was once a leader in the nuclear supply industry. It could be again. There are a variety of small modular reactor designs that could decrease the cost of nuclear power plant construction and which have inherent safety characteristics that would decrease public concerns (actually unjustified) about nuclear power plant safety. However, if nuclear power is to play a major role in decarbonizing our electricity supply, we need demonstration projects for which standard designs have received regulatory approval. In collaboration with a design organization, Ohio could provide the location for a demonstration plant, with the agreement that the fabrication facilities for that design would be located in Ohio. H.B. 104 could be the vehicle by which an Ohio demonstration plant could be realized.