



Ohio Sierra Club Nuclear Free Committee
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Testimony of Patricia A. Marida, chair
Ohio House Energy and Natural Resources Committee
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Ohio HB 104: to enact the Advanced Nuclear Technology Helping Energize Mankind (ANTHEM) Act by establishing the **Ohio Nuclear Development Authority** and the **Ohio Nuclear Development Consortium** and authorizing tax credits for investments therein.

QUESTION: Does federal law allow the Nuclear Regulatory Commission (NRC) and the Department of Energy (DOE) to delegate the responsibilities outlined in HB 104 to the proposed Authority and the proposed Consortium?

- 1) **HB 104 appears to be written by and for e-Generation.** This Cleveland-based organization promotes on its website “[An Ohio Petition Asking the United States Department of Energy to Promulgate Rules for State Cooperative Research and Development Agreements.](#)” The parent organization of eGeneration is [Energy from Thorium](#). Checking the web, these organizations are made up of the same few individuals. We stress that this is a tiny group with pie-in-the-sky, unworkable proposals. The goal is getting public money, whether or not anything could ever come to fruition. We note the similarity of HB 104 to Ohio [HB 771](#) introduced by Rep. Stein in late 2018.
- 2) **Major shift of nuclear accountability.** Spreading nuclear research and development from the federal government to state entities and/or public-private partnerships is unprecedented, removing public accountability for cost and safety, as well as losing regulatory control over radioactive materials and waste – as if control has been good under the Nuclear Regulatory Commission and the Department of Energy.
- 3) **Dangerous crossover and comingling between military and civilian nuclear activities:** P. 19: “with consent of the United States department of energy, the United States nuclear regulatory commission, or the United States military, may build one or more demonstration power-producing nuclear reactors located in this state.” P. 16: “Serving as an interdisciplinary study, research, and information resource for the state, the United States nuclear regulatory commission, the United States department of energy, and the United States department of defense on isotopes.” [Nuclear watchdogs warn against blurring energy, military uses at Ohio fuel plant.](#)
- 4) **Dirty and dangerous.** Every site involved with commercial nuclear power from uranium mining, milling, refining, enrichment, fuel fabrication, and reactor operation has been irreversibly contaminated with lethal radioactive waste. For over six decades, the U.S. has failed to find a repository for high-level radioactive waste (HLRW). How would the new Ohio Authority and Commission be able to operate an experimental reactor and handle HLRW safely without risking a meltdown or explosion of reactors, HLRW fuel pools and waste canisters, let alone find a place for HLRW disposal? According to HR 104; p. 16 “The consortium shall be solely responsible for the internment (sic) and sequestration of high-level nuclear waste, or its destruction or reduction that is produced in the state if the federal government defaults on its obligation to dispose of or store Ohio produced high-level nuclear waste. The consortium shall have legal standing to represent the state if the United States department of energy fails in its obligation to provide a viable repository for the state's high-level nuclear waste.” This also gives authority to the state that it currently does not have under federal law. Ohio cannot override federal law with a state bill.
- 5) **What happened to free enterprise?** Nuclear research, development and construction, for any type of nuclear facility or endeavor, depends almost entirely on government and/or ratepayer handouts, safety compromises and government indemnity from liability. HB 104 sets up multiple ways for nuclear research and development to be subsidized by taxpayers. Calling a project a “demonstration” or “experimental” paves the way for the

entire amount of funding to be borne by taxpayers. P. 19: “may build one or more demonstration power-producing nuclear reactors located in this state.”

- 6) **Subsidies are for new, innovative industries.** The nuclear industry has proven itself dirty and dangerous and cannot rebrand itself as new and innovative using terms like “small” and “modular.” The proposed reactors are not so small when it comes to the subsidies they are asking for and the radioactive contamination that would be inevitable with their deployment. As far as modular goes, hundreds or thousands of them would need to be mass-produced in order to be even theoretically profitable or termed modular. Renewables and efficiency are safer and cheaper.
- 7) **Taxpayers pay for nuclear “cleanup”:** Since the Authority will be a public entity, the state would be responsible for any and all costs associated with the Authority/ Consortium, including reactor decommissioning, dismantling and disposal and any damages resulting from a catastrophic meltdown. Ohio would also be responsible for damages from high-level radioactive waste.
- 8) **More taxpayer costs, and use of eminent domain (public necessity):** P. 8: “right of eminent domain” and “matters of public necessity for which public moneys may be spent and private property acquired” reflect still more hands at the public till. The e-Generation Foundation, an unrelated entity, will act as the consortium's agent, entitled to spend \$1 million annually as well as pay its manager \$110,000 and an unspecified number of employees \$70,000 each, presumably from consortium funds and likely above and beyond its \$1 million spending limit. In addition, the directors of the Authority having the right to authorize more spending by eGeneration Foundation but apparently ONLY before the first organizational meeting (Section 4164.50).
- 9) **Expensive.** Efficiency and renewable energy cost less and produce more jobs. These jobs are decentralized. The energy distribution grid is decentralized as well, eliminating major blackouts.
- 10) **Nothing but failure in international reactor builds:** Attempts to build next-generation reactors are failing in multiple locations, including reactors in South Carolina which have been cancelled and Vogtle in Georgia which has extreme cost overruns. The cost and budget overruns and construction failures are staggering. See [“New setbacks for French nuclear reactor amid €400m cost overrun, delays.”](#)
- 11) **Reprocessing of High Level Radioactive Waste (HLRW):** HB 104 uses the terms “reduction” and “recycling” to refer to a technology that adds nitric acid to HLRW, making a much-harder-to-contain *liquid* from which components can be extracted. Reprocessing has been a disaster wherever it has been tried. Reprocessing in West Valley, NY, was never successful and has left the site highly contaminated. Cleanup has been seriously underfunded, and radioactivity is migrating toward Lake Erie. Much has been written about West Valley and the insurmountable problems at Hanford, Washington.

Sellafield is polluting the Irish Sea, La Hague is polluting the English Channel (and the Atlantic all the way to the Canadian Arctic), and Russian reprocessing badly contaminating the Techa River.

In 1957 at Kyshtym in the Ural Mountains of Siberia an explosion in a reprocessing storage tank for post-reprocessing, liquid high-level radioactive waste contaminated a vast region, making it uninhabitable. A large number of towns and villages were literally wiped off the map.
- 12) **Weapons proliferation risk.** eGeneration promotes thorium reactors, which would produce uranium 233 as waste, a fissionable uranium isotope that could be used for bombs. This technology could be imitated and spread. See Beyond Nuclear’s [“Nuclear Fuel Reprocessing equals Weapons Proliferation.”](#)
- 13) **Medical isotopes:** HR 104 refers to “extracting isotopes.” In HR 771, this refers to the production of the medical isotopes technetium/molybdenum. To accomplish this, HRLW would be reprocessed. Then a medical isotope plant must be built. The Sierra Club does not oppose nuclear medicine. Yet we point out the massive radioactive contamination at Chalk River, Ontario, the last place in the Western Hemisphere where technetium/molybdenum isotopes were made. About 150 unprecedented shipments of *liquid, highly-radioactive medical isotope waste* are in the process of moving from Canada to Savannah River, S. Carolina, for disposal. Making isotopes will not “consume” or reduce radioactive waste. A considerable amount of

research has been done on producing medical isotopes using particle acceleration technology, which does not involve the use of radioactive waste and is a far safer technique.