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Senator Frank Hoagland

Senate Building

1 Capitol Square, 1st Floor

Columbus, OH 43215

Dear Senator Hoagland,

I hope you are well. I am writing testimony in opposition of HB 434.

Please allow me to introduce myself. Loraine McCosker, constituent from Athens Ohio. I have lived in Appalachia for 20 years working as an educator at Ohio University in Environmental Studies and also as an engaged citizen with various civic groups. I have worked on energy issues during this time including the energy efficiency and transition of our energy to renewable less polluting methods. I know this is a long and difficult path but feel strongly that our current investments should be in energy that is not polluting and is affordable for the constituency of Ohio. During my learning through the years I found myself opposing any transition to the use of nuclear energy for many reasons and economic costs as well as safety, which I will explain below.

### **Economic concerns**

In 2022 this highly costly method of energy generation would be almost completely taxpayer or ratepayer subsidized. Nuclear power is far more expensive than renewables, and takes a minimum of 10 years to license and build. As you hopefully know, solar and wind energy costs have decreased over the years.

As an aging Ohioan who will have a limited income in the near future, I have a great concern with the cost to Ohioans. HB 434 does not provide specifics regarding the length of time that taxpayers would fund this nor the exact amount that will be needed.

The cost of nuclear research is extensive, greater than coal and gas. The federal government is spending billions on nuclear research and development. Why would Ohio, with no experience, do a better (or even acceptable job of oversight and running of research reactors?

It appears that Taxpayers would pay for any contamination or cleanup). Since the proposed Authority will be a public entity, Ohio would be responsible for all costs associated with the Authority, including reactor decommissioning, dismantling and disposal of waste and damages resulting from spills and accidents. The cost to 11 million people would likely be excessive.

Costs to the citizens of Ohio. -What environmental agencies would regulate this proposal? OEPA? Ohio Department of Natural Resources? Again, more costs to the citizens of Ohio and impacts to these already stretched thin agencies that do not have the trained employees to do this work.

### **Jobs**

Very few jobs would be created initially, and those would be for researchers. In contrast, the public does not have to pay for the salaries or the infrastructure of private solar and wind development.

### **Energy needs in Ohio**

Nuclear power is NOT “low carbon” or “carbon free” or “emissions free.” When the nuclear fuel cycle is included, nuclear has a high carbon footprint. And this does not include the energy that will be needed to attempt to isolate tens of thousands of tons of high-level radioactive waste for millennia to come.

### **Lack of Transparency and confusing relationships sponsoring supporting this bill**

According to HB 434 the public would have no way of knowing who is being paid in relation to the research and implementation of this nuclear entity, what is being developed; or where radioactive materials are being shipped.

One of the most serious problems with HB 434 is that the Authority would be put under the auspices of the Ohio Department of Development, which writes contracts for JobsOhio. When Ohio Representative and attorney Brian Stewart assured the House Energy and Public Utilities Committee that putting the Authority under the Department of Development would make no difference from being under the Department of Administrative Services, he ignored the extraordinary limitations on public access to JobsOhio that were written into law more than a decade ago. JobsOhio is beyond the reach of the Ohio Open Records Act, Ohio ethics laws, the Sunshine Act, the Ohio Administrative Procedure Act, and other accountability requirements.

House Bill 434 outlines a complex sequence of appointments that would keep the public off both the board and a Nominating Council that would recommend board members to the governor – and HB 434 forces the governor to choose only the people that this Council recommends!

HB 434 appears to benefit one small group, eGeneration of Cleveland and the associated Elysium Industries. This group has been attempting for years to get federal funding for thorium and molten salt reactor research. eGeneration had a heavy hand in writing HB 434 and is its major beneficiary. In two previous Ohio bills proposing a Nuclear Development Authority, HB 104 in 2019-20 and HB 771 in 2017-18, language was taken directly from the eGeneration website.

### **Great concern with the complexities of this proposed bill**

HB 434 is worded to remove the State of Ohio from any responsibility for accidents and radioactive contamination. Residents living near any Ohio Nuclear Development Authority facility handling radioactive materials would have no recourse if an accident or spill harmed or contaminated them or their property. The same would be true for workers. This reminds us of the lack of oversight of the coal industry prior to the 1977 SMCRA. We will forever clean up after coal.

Nothing in HB 434 suggests regulation, only commercialization and promotion. The Nuclear Development Authority does not have Nuclear Regulatory Commission-defined responsibilities. Nothing

on paper about watchdogs. The necessary staffing levels and technical expertise required of a regulatory agency would involve expensive personnel – engineers, health physicists, chemists, regulatory lawyers, and more. What about nuclear weapons proliferation safeguards?

How would this research project be protected from theft or malfeasance? Would it become a target for a terrorist or an opportunist? How many guards would be needed? Guards are not needed for windmills, solar panels, or geothermal units.

Spreading nuclear research and development from federal to state entities is unprecedented, removing federal public oversight for cost and safety. HB 434 would authorize Ohio to take ownership of high-level nuclear waste – see the next point.

HB 434 would allow the Authority to take high-level radioactive waste from the Davis-Besse and Perry reactors in Ohio and attempt to use it as fuel for a new nuclear reactor. Spent fuel would have to be disassembled under very stringent safety/heat/containment protocols. Zirconium cladding, flammable if exposed to air, must be removed. This was described by HB 434 proponents as “just chopping it up”. Regardless of denials by Ohio legislators, somewhere along the experimental line some type of processing (aka reprocessing) would be needed. Reprocessing has been a disaster wherever it has occurred: West Valley, NY; Sellafield, England; Rokkasho, Japan; La Hague, France; Kyshtym in Russia. This is how high-level nuclear waste is “reduced”. Do you want this in your backyard?

HB 434 mentions “United States Military” seven times. This should alert legislators that the technology can overlap with military use, i.e., nuclear weapons. In unprecedented language, the Authority would “assume any regulatory powers delegated from the U.S. Nuclear Regulatory Commission, the U.S. Department of Energy...the U.S. Department of Defense...or any branch of the U.S. military... governing the construction and operation...of advanced nuclear reactors...and high-level nuclear waste reduction.”

HB 434 mentions “isotopes” 7 times. Extracting isotopes from the waste of a yet-to-be-developed reactor is a secondary industry. It is also outdated. American companies and hospitals are already making medical isotopes using cyclotrons, which are far safer and cheaper, with no nuclear reactors needed. Due to the rapid breakdown of medical isotopes, it is much better to have them generated onsite and avoid shipping. Additionally, positron emission tomography (PET) produces sharper images, again with no need for nuclear reactors or waste.

Nuclear energy is not, with prohibitive costs and complexities of waste and contaminated materials an answer for our energy needs. There are alternatives as efficiency, wind and solar. Ohio must embrace an affordable, jobs intensive, clean energy future.

Best regards,

Lorraine McCosker

Athens, Ohio