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**Dick Stein  
State Representative**

House Bill 434 Senate Sponsor Testimony  
May 24, 2022

Chairman McColley, Vice-Chair Schuring and Ranking Member Williams thank you for allowing sponsor testimony of House Bill 434 the ANTHEM ACT to be heard before your committee today. The ANTHEM act is an idea manifest in action; the goals of this legislation are needed more than ever, to provide Advance Nuclear Technology helping Energize Mankind. HB 434 has been presented here before in similar form, but never with such urgency.

Today, I will share why we need more research and development of advanced nuclear technology for the future of our planet our country and Ohio. The fact is we need new modular costs effective designs for our clean energy future, our current aging fleet has served us well and continues to do so safely. However if we truly want a reliable green energy future it cannot be accomplished with our current aging fleet or by simply propping up intermittent variable output like wind and solar. Here are three goals of this legislation:

First... Ohio needs delegated authority from the federal government, specifically the Department of Energy, to establish a research and development program for 10Mw and less research reactors here in Ohioans around the country. In 2019, our chamber voted 82 to 2 to support House Resolution 518, which petitioned the DOE for just such authority, however without the passage of HB 434 the federal government, has nowhere to exercise that delegated authority. HB 434 simply creates the potential for this agency to accept federal authority with appropriate over-site and then at a later date for the legislature to determine how to proceed with funding implementing this new agency.

Second... One of the primary concerns addressed in HB434 is how to manage spent fuel from the world's fleet of nuclear power generators. In the U.S. and around the world spent fuels represent huge potential for our green energy future. Are you aware that after creating millions of Megawatt hours clean carbon free energy over the five to six year life inside a power-reactor vessel that 90 plus percent of the fuel rods potential energy remains? Many companies are developing new systems to extract this remaining energy from these existing fuel rods and use it to power the next generation of walk-a-way safe, green energy generation. For example, recent research funded by DOE grants for Elysium Industries at Argon Nation Laboratory has confirmed a chemical conversion process to utilize this spent fuel and encouraged its future development. Ohio could be part of a solution that would provide clean safe and affordable energy for hundreds of years from our current NUCLEAR SPENT FUEL.

Third... This bill looks to leverage these research and development reactors for medical isotopes production. Much like the current fleet of nuclear power generators, our research fleet used for medical isotope production is also aging to their end of life. Only five aging research reactors provide the majority of these lifesaving medical isotopes around the world, none of which is located in the U.S. The United State is the largest user of these lifesaving medicines and I venture that all of us here today have ourselves or have had loved ones who have benefited from nuclear medicine. Years ago, my wife was treated with

radioactive Iodine-131 for thyroid cancer and has fully recovered; we all have and will benefit from nuclear medicine. Let's make Ohio a place where these lifesaving nuclear medicines are produced.

Finally, one last comment on safety, the Columbus Dispatch ran an article by Randall Reames titled:

Nuclear reactors crucial to ending climate change, and boosting Ohio economy.

Randall Reames is a nuclear engineer working in the global supply chain industry and a former quality engineer for the U.S. Naval reactor program in Barberton, Ohio.

In his article, he mentions the following:

Ohio's long history manufacturing reactors that power our ships makes it a de facto contender to manufacture the reactors that will plug directly into closing fossil fuel plants. Momentum is already rolling for new nuclear. Our neighbors, Indiana, Kentucky and West Virginia, recently adopted laws making them available for new nuclear power. Coal town Kemmerer, Wyoming, will soon be home to a new reactor (Created by Terra Power) designed to store energy while burning nuclear waste. Alaska and Tennessee are siting new builds. On the issue of safety Mr. Reames continues: The Navy operates dozens of flexible small modular reactors - turning teenage recruits into operators in little more than a year's time — and has been since the 1950s. That we trust our sons and daughters to depend on and live alongside these systems should be all the information any American needs to support their use.

Thank you, Chairman McColley and the Energy and Natural Resources committee for hearing HB434 today. As you consider HB 434 ask the following: *"Would we have the current level of worldwide conflicts if we lived in a world where every country had abundant, clean affordable energy independence and had no need to rely on fossil fuels from around the globe to support the energy needs their or our citizens?"*

Thank you for your time and I would welcome any questions from the committee.