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HB434 House Testimony
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Chair Stephens, Vice Chair Stewart, Ranking Member Weinstein, and members of the House Energy and Natural Resources committee, thank you for the opportunity to offer testimony on HB434.

Nuclear energy will play an increasing and pivotal role in securing the world's clean energy needs. Support of House Bill 434, the Advanced Nuclear Technology Helping Energize Mankind (ANTHEM) Act, will bring Ohio to the forefront of advanced nuclear innovation and strengthen our domestic supply chains.

In recent years, there has been a global shift in attitudes toward the development of new nuclear technologies to deploy scalable clean energy. Both Russia and China have adopted a "go global" policy with respect to exporting nuclear technology including complete reactor infrastructure. U.S. Department of Commerce DOC estimates the global civil nuclear market to be valued at $500-$740 billion over the next 10 years. Russia is advancing its economic and foreign policy influence around the world with $133 billion in foreign orders for reactors, with plans to underwrite the construction of more than 50 reactors in 19 countries. China, a strategic competitor that uses predatory economics as a tool of statecraft, is currently constructing four reactors abroad, with prospects for 16 more reactors across multiple countries, in addition to the 45 reactors built in China over the past 33 years, and the 12 reactors currently under construction in China.

These developments should trouble US regulators, academic communities, and domestic manufacturers involved in this highly specialized field. Fortunately, Congress has recognized the threat and is working to address deficiencies in the civilian nuclear fleet and its military applications.

Ohio is a key player in the nuclear technology supply chain:

• The Ohio State University offers one of the few remaining PhD nuclear engineering programs in the county

• Babcock & Wilcox has a large footprint in Euclid and Akron, employing over 4,000 high skill tradesmen, fabricating steam boilers and nuclear submarine reactor vessels

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• NASA operations at the Sandusky-Plum, Brook Neil A. Armstrong Test Facility and the Brook Park-Glenn Research Center are exploring the possibilities of deep space propulsion using nuclear isotopes

• Cardinal Health in Dublin maintains the world's largest medical isotope pharmacy network; the tracer elements used in nearly every medical diagnostic scan.

The ANTHEM ACT aligns with DOE's recently stated goals;

• Fund R&D for Accident Tolerant Fuels, fund R&D for High-Assay Low-Enriched Uranium (HALEU), complete HALEU enrichment demonstration program. This includes an Ohio facility, American Centrifuge. In early 2016, Centrus completed a successful three-year demonstration of a full, 120 machine cascade of advanced centrifuges at its Piketon, Ohio, facility.

• Support the National Reactor Innovation Center and Versatile Test Reactor

• Fund R&D and support demonstration of U.S. advanced nuclear reactor technology

• Demonstrate the Use of Small Modular Reactors (SMRs) and micro-reactors to power federal facilities.

Two example of the advanced being make in Carbon free base load energy are:

• The DOE recently award 1.2 billion to NuScale in Idaho for a 720 Mwh 12 unit SMR

• A second program funded by DOE is the TerraPower Natrium Traveling wave reactor allowing spent fuel to power our world for centuries. An interesting addition to the Natirum project is their "Molten Salt integrated Energy System" which would provide clean carbon free backup to intermittent sources like Ohio's wind and solar projects.

In Closing,

HB434 is a proactive measure to tell the federal government Ohio is here to be solution for companies that no longer trust foreign governments with their intellectual property. This legislation directs the establishment of a nuclear regulatory Authority upon delegated authority by the Dept. of Energy.

At a request of the Ohio House, HR518 of the 132nd GA was submitted to the DOE in December of 2018 and is currently in the rule making process.

The next generation of advanced reactors and micro reactors are being built, the question is will Ohio. Lead with its expertise or follow only to pick up the crumbs left behind by other more proactive states? Ohio can lead this technology sector with legislation like the ANTHEM Act.

Thank you for your attention. I will take any question the committee may have.