

# OHIO SENATE

## HOUSE BILL 434

*Advanced Nuclear Technology Helping Energize Mankind (ANTHEM)*

**TESTIMONY TYPE:** Proponent

**TESTIMONY DATE:** November 29<sup>th</sup>, 2022

**ADVOCATE NAME:** Donald Larson

### **TESTIMONY:**

Chairman McColley, Vice Chair Schuring, Ranking Member Martin, and the rest of the committee, thank you for the opportunity to provide testimony on HB434. It is a pleasure to be in front of the committee again, it has been a long road to bring to this legislation to fruition.

This testimony is submitted on behalf of the Molten Salt Reactor Association. We support and work with the firms that are developing the next generation of reactors. There are more than a dozen start up companies that want to design and build power plants. They want to make a reality of the promises from the beginning of the atomic age that electricity will be too cheap to meter.

When I was last here, I recounted stories of innovation in aerospace, telecommunication over the last 50 years. For example, in 1979 the average domestic round trip flight was \$615. In March of 2020 it was \$344 and with an economic recovery it can be again. Previously I have spoken how the potential for more and more energy is a boon for quality of life, standard of living and life expectancy. This is all still true today and the future is bright with the passage of HB 434.

However there has been a huge change in our interaction with energy since my last testimony to this committee. In February of 2021, Texas went dark when a Winter storm took out the 42% of the power supply coming from intermittent sources. There was not enough baseload 24/7/365 power to keep the grid up.

This year has seen the worst energy crisis in Europe since WWII. The markets are in turmoil, supplies are in doubt and industries from Great Britain through Germany are closing. Glass, steel, fertilizer, plastics and other energy intensive industries are closing. If you are in the Ukraine, the lights, heat and running water may be out. These problems are going to bedevil Europe for years to come. There is no quick solution when you have outsourced power.

Therefore need for home grown, reliable, base load power is clearly in focus. American ingenuity can do this. The S9G reactor in the Virginia Class submarine has design life of over 30 years on a single fuel load. Please let that sink in. A ship launched today would still be running in the 2050's and would be on the first batch of fuel.

That is energy independence.

The energy sector in Ohio has seen great innovation in the last decade. Hydraulic fracturing has unlocked vast energy reserves, but equally important is the value of the raw materials for the polymer industry. The workers of Europe wish they had these resources in their backyard. HB 434 promises to create the next wave of energy, manufacturing and employment for the state.

There are variety of new technologies such as molten salt reactors, high temperature gas reactors and liquid metal fast breeders. I do not know which of these will be the technology breakthrough. Perhaps it is not on this list but is in the mind of graduate student at Ohio State now. It is foolish to believe that we know exactly what the future holds but the results throughout the entire industrial age are always increases in my favorite three metrics: standard of living, life expectancy and quality of life.

There will be a company that develops the technology that gives us a Terawatt of electricity, abundant medical isotopes and global manufacturing advantages. It is inevitable that electricity becomes too cheap to meter.

However, the largest, best funded and aggressive efforts are underway outside of the United States. Specifically the Shanghai Institute of Applied Physics in China. At a conference in Oak Ridge Tennessee I got to hear one of their officials speak about the construction of multiple test facilities for a variety of new reactor types. This effort has not been seen in the US since the late 1960's.

I urge you to pass HB 434 so that it happens here in Ohio.