

# OHIO SENATE

## HOUSE BILL 104

*Advanced Nuclear Technology Helping Energize Mankind (ANTHEM)*

**TESTIMONY TYPE:** Proponent

**TESTIMONY DATE:** November 23<sup>rd</sup>, 2019

**ADVOCATE NAME:** Donald Larson

### **TESTIMONY:**

Chairman Wilson, Vice Chair McColley, Ranking Member Williams, and the rest of the committee, thank you for the opportunity to provide testimony on HB104.

In the interest of full disclosure, I am an unpaid volunteer at the eGeneration Foundation. The Foundation is the non-profit organization mentioned in HB104. If passed, eGeneration will initially act as an agent to market the State initiated for-profit Public Benefits corporation created by the legislation. For this marketing eGeneration will receive compensation. I do not anticipate personally benefiting from the passage of this legislation, but want to make sure the committee is cognizant of these facts.

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.

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.

When the Atomic Energy Commission was broken up in the early 1970's giving rise to the Department of Energy and the Nuclear Regulatory Commission, innovation died in the nuclear power industry in the United States.

Please consider the technological change since 1974 and its impact on quality of life and standard of living. I would like to cite two industries that are unrecognizable from then, air travel and telecommunications.

Advances in material science have made aircraft phenomenally more efficient. Planes are lighter with aluminum alloys and carbon fiber composites. Engine have matured to the point where major maintenance is measured in tens of thousands of hours. Fuel consumption per passenger mile flown falls every year. As a

consequence, we have an abundance of inexpensive options. In 1979 the average domestic round trip flight was \$615. Prior to March of this year it was \$344.

The telecommunications revolution is even more impressive. When the DOE and NRC were created dial telephones were the technological standard. Not only was long distance across the country a prohibitive cost, toll calls existed inside of every area code. Calling too far across the city meant accruing charges by the minute. This discouraged communication, research and innovation in all other fields.

Today everyone has a phone in their pocket that lets you call anywhere in the US for a flat fee. Telephone calls are now too cheap to meter. New business models and employment around the technology from ecommerce, geo mapping, logistics and public safety were never envisioned but happened due to innovation.

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. Manufacturing and jobs are up due to this. Ohio has benefited greatly with these advances.

HB 104 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 or MIT 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 standard of living, life expectancy and quality of life.

Think of the 1980's with Microsoft based in Seattle innovating around IBM. Remember the 1990's with Google based in Silicon Valley innovating around AT&T and the Yellow Pages. Please consider the 2000's and Amazon based now in Virginia taking the Sears Catalog to new levels.

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. I urge you to pass HB 104 so that it happens here in Ohio and not in Communist China.