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I am testifying in support of HB 434.

I again bring my testimony before this committee on this issue as a two-time Cancer survivor. Nuclear Medical Diagnostic Testing made early detection and accurate diagnosis possible.

These procedures have saved my life and that of millions of others. There are over 22 million nuclear medical diagnostic tests in the US per year. Yet, they are still expensive. Production of nuclear medical materials in our state will bring the costs of diagnosis down and make Ohio a ready and secure supplier of nuclear medical materials for the entire USA.

Again, I bring this testimony: that in Ohio, we need our own nuclear consortium authority to make a home for the molten salt reactors that produce those isotopes needed for early detection of cancers. Ohio is home already to some of the most world renowned hospitals and universities. Making more nuclear medical materials available to these community assets, will accelerate the research and development of new cancer treatments.

I am still a military mom and unlike the last time I was before this committee, my son, Gabriel, like the great-grandfather (with whom he shares his middle name), is now deployed to South Korea in the US Army. Any nuclear technological advancement made in the US is a military achievement over our enemies. It is strength and the perception of strength that deters hostility toward Americans at home and abroad. Our nuclear strength isn't simply in multiple warheads, it is in the intelligent innovations that emerge from our free society and the contributions of those innovations that strengthen our economy...the economy that supports our military.

Lastly, I will add to my own testimony and to that of others, another reason to support HB434. An Ohio nuclear consortium authority is needed to work with governing agencies, solid waste districts, sewer districts, and stakeholders to address the problems associated with Ohio's many landfills and waste streams.

This is just a miniscule sample of Ohio landfill issues from different parts of the state:

- Cuyahoga county: Harvard Refuse Landfill "The Facility has also had persistent problems with leachate outbreaks entering Mill Creek and explosive gas migration. In the 1980s, explosive gas migrated into nearby sewers and exploded."
(<http://www.millcreekpartnership.org/conservation-news/harvard-refuse-landfill-history-and-current-status/>) This site is orphaned and never properly closed.
- Mahoning county: Million+ tons annually of solid waste and construction and demolition debris disposed of in Mahoning County landfills. Six closed and two active landfills are in Mahoning County's fourteen townships. The closed Hilltop landfill in Ellsworth Township is currently regulated as a potential contamination source by the Ohio EPA, and the closed Toth landfill in Canfield Township is abandoned and classified as an orphan landfill. The two solid waste landfills located in Poland and Springfield Townships have recently received major expansion permits, thereby ensuring waste disposal capacity for the foreseeable future. (<https://www.mahoninghealth.org/landfills-solid-waste/>)
- Fostoria: Hancock, Wood, and Seneca counties: Attempting to resolve the years long hydrogen sulfide stink from the ~600+ acres and ~100ft high landfill, WIN Waste Innovations, under an EPA consent order, is installing methane and gas capturing devices over the next 18 months. (<https://news.yahoo.com/sunny-farms-landfill-secures-ohio-040200701.html?src=rss>)

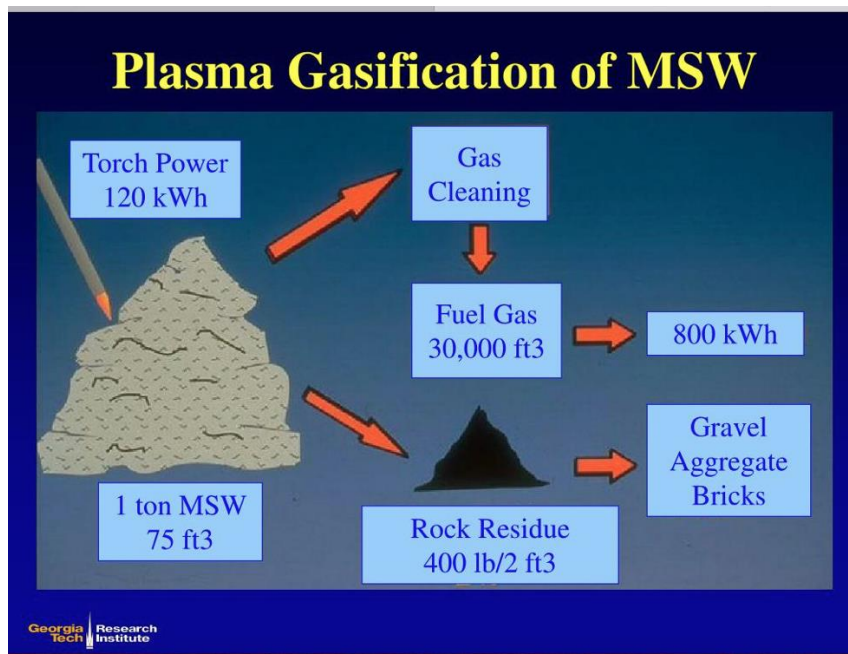
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No mention made of the integrity of the landfill liner that not intended to shield the soil and groundwater from heavy metals and contamination from a compacted 100' high landfill.

What can be done with all of this waste, instead?

All municipal solid wastes, toxic, hazardous, medical wastes, tires, sewage, asbestos, industrial sludge, contaminated landfill soil, dumped coal ash, and batteries can be fed into a plasma gasification chamber heated to several thousands of degrees by a Molten Salt Reactor and the trash become %100 reclaimed with zero emissions.

It is a closed loop: Trash turns into Gas and some really useful, valuable stuff. (This slide from a power point presentation out of Georgia Tech by Louis J Circeo, PhD, available on slideserve.com, titled "Plasma Arc Gasification".)



Aside from the energy from the reclaimed fuel gas and potentially reclaiming the many acres that landfills occupy, 1) the coarse and fine aggregates are non-leaching and useful for asphalt, roads and concrete products 2) metals can be reclaimed, and 3) when cooled by blowing air, "rock wool" is created. It is used in agriculture, stabilization of oil spills, soundproofing and insulation that is cheaper, safer, and more effective than fiberglass.

We have the potential to remedy the inevitable problems with Ohio's many faulty landfills by plasma gasification, reclaiming trash into gas and non-leaching byproducts. We can lower the costs of life saving nuclear medicine. We can provide ample nuclear medical materials to hospitals and universities for research and development of breakthroughs in cancer treatments. The potential to advance in nuclear technology on the world stage as a deterrent can only be met after we have our own Ohio nuclear consortium authority.

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