

To: Chairmen Senator Andrew Mathews and Senator Nick Frenz, and Honorable Members of the Committee,

Nuclear energy is widely believed to be a low-carbon solution to growing energy needs and climate instability. In reality, nuclear energy is an expensive, dangerous, damaging waste of taxpayer money and government resources. It is a poor source of the quality jobs we need to secure Minnesota's economic security. New forms of nuclear power are not yet technologically advanced enough to meet our energy and employment goals.

After decades of government subsidies, nuclear power is still not adequately safe, secure, affordable, renewable, or economically beneficial compared to wind, solar, geothermal, and battery technologies and many other truly sustainable technologies. Used together, the truly renewable forms of energy provide many more well-paying, safe, long-term, and healthy jobs that require much less government regulatory and public health resources.

Nuclear Power is Not Low-Carbon, Nor Sustainable

The construction and operation of nuclear power plants require a large amount of energy and raw materials, including concrete, steel, and water, which often come from non-renewable sources. While the nuclear reaction does not emit greenhouse gases, every other aspect of nuclear energy—the entire production of fuel rods, construction of power plants, transport and waste management—emits high levels of greenhouse gases. For example, the fuel for nuclear reactors, uranium, is limited. It is increasingly expensive and energy intensive to mine. As global supplies of accessible uranium dwindle, consumers will be increasingly burdened with costs. Fuel recycling and breeder reactors do not solve the fundamental issue of resource availability. Instead, they bring greater risks: breeder reactors are “bomb factories” that pose huge national security and terrorism threats.

After decades of research, the issue of radioactive waste remains unsolved. Nuclear power generates high-level radioactive waste that remains hazardous for up to hundreds of thousands of years. No long-term, safe disposal solution is in place. Spent fuel rods pile up in temporary storage facilities, often near populated areas. Storage units can leak, posing risks to human health and the environment. They are vulnerable to attack.

Nuclear Power is Not Affordable

Compared to renewable energy, nuclear is extremely expensive, and the costs never go away. Construction of nuclear plants involves enormous capital expenditures —often well over \$10 billion per plant. Long development timelines – even decades – with massive cost overruns – are the norm. The Vogtle nuclear plant in Georgia cost billions of dollars more.

Ongoing costs of nuclear power – operation, maintenance, security, waste, etc. – are substantial. Nuclear power saddles consumers with higher rates than renewable power.

Nuclear Power is Not Safe

Nuclear power meltdowns at Chernobyl in 1986 and Fukushima in 2011 are warnings of the dangers of nuclear energy. Even with rigorous safety protocols, the potential for human error, technical failure, or natural disasters can lead to devastation that can never be undone.

Renewable energy sources, along with energy efficiency measures, offer the promise of a cleaner, safer, and more equitable energy future without the profound risks and drawbacks of nuclear power. I urge this committee to consider these alternatives as we move toward a truly sustainable and green energy landscape.

Thank you for your time and consideration. Full citations available at your request.

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