# SENATE BILL REPORT
# ESHB 1584

As of March 10, 2023

**Title:** An act relating to planning for advanced nuclear reactor technology in Washington.

**Brief Description:** Planning for advanced nuclear reactor technology in Washington.

**Sponsors:** House Committee on Environment & Energy (originally sponsored by Representatives Barnard, Fitzgibbon, Dye, Donaghy, Lekanoff, Slatter, Ybarra, Couture, Fey, Ryu, Riccelli, Berry, Schmidt, Sandlin and Timmons).

**Brief History:** Passed House: 2/28/23, 91-6.
**Committee Activity:** Environment, Energy & Technology: 3/10/23.

**Brief Summary of Bill**

- Modifies a guiding principle for the State Energy Strategy to include the consideration of advanced nuclear reactor technology, renewable natural gas, and green electrolytic hydrogen to reduce the state's dependence on fossil fuel energy sources, and removes the consideration of natural gas from the list of resources.

## SENATE COMMITTEE ON ENVIRONMENT, ENERGY & TECHNOLOGY

**Staff:** Kimberly Cushing (786-7421)

**Background:** Washington State Energy Strategy. In 2019, the Legislature directed the Department of Commerce (Commerce) to revise the State Energy Strategy (SES) to align the strategy with the requirements of the Energy Independence Act, the Clean Energy Transformation Act, and the state's greenhouse gas emissions reduction limits. The Legislature established a 27-member advisory committee to review the strategy and provide guidance to Commerce.

State law declares that a successful SES balances the following three goals:

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- maintaining competitive energy prices that are fair and reasonable for consumers and businesses, and support our state's continued economic success;
- increasing competitiveness by fostering a clean energy economy and jobs through business and workforce development; and
- meeting the state's obligations to reduce greenhouse gas emissions.

To meet these goals the Legislature lays out nine principles to guide strategy development and implementation. One of these nine principles directs the state to reduce dependence on fossil fuel energy sources through improved efficiency and development of cleaner energy sources, such as bioenergy, low carbon energy sources, natural gas, and leveraging the indigenous resources of the state for the production of clean energy.

The 2021 SES references nuclear energy. In particular, it notes that research and innovation efforts might yield efficiency gains or cost reductions for several technologies, including nuclear power generation.

Nuclear Energy. Nuclear energy comes from splitting atoms to produce heat that can be used to generate electricity. As an example, most nuclear reactors operating today heat water and produce steam that is then used to turn a turbine to generate electricity. According to the Pacific Northwest National Laboratory, "small modular reactors and other advanced reactors are expected to reduce economic, security, technical, perceived safety, and regulatory barriers to the accelerated establishment in the United States of the next generation of nuclear power."

**Summary of Bill:** Renewable natural gas, green electrolytic hydrogen, and advance nuclear reactor technology are added to, and natural gas is removed from, the list of resources to consider under the SES guiding principle to reduce dependence on fossil fuel energy sources.

**Appropriation:** None.

**Fiscal Note:** Available.

**Creates Committee/Commission/Task Force that includes Legislative members:** No.

**Effective Date:** Ninety days after adjournment of session in which bill is passed.

**Staff Summary of Public Testimony:** PRO: We want to advance goals of CETA to achieve deep decarbonization goals so that businesses can utilize clean, affordable, reliable, and safe energy such as advance nuclear reactor technology. A new business in Washington plans to produce nitrogen products with zero carbon emissions. This would be a first-in-the world operation, relying on new nuclear to fuel its operations. This bill highlights the Legislature's commitment to maintaining competitive energy prices, increasing competitiveness by fostering a carbon-free economy, and reducing greenhouse gas

emissions. The modular design and standardized manufacturing process will reduce construction costs. Nuclear reactors can be employed in a range of settings, including remote areas. China and our nuclear navy have successfully built and powered small modular reactors (SMRs). Most failures have to do with business models, not the reactors themselves. No one has ever been harmed by handling spent nuclear fuel from commercial reactors. The cost are in lines with renewables. Saving the planet is worth a penny a kilowatt hour. Nuclear should be our future. This economic lift is needed as we transition to a clean energy grid. We have a workforce of skilled craftsman that are trained to tackle the challenges of building the advanced nuclear reactors. These are well-paying, clean high-tech jobs. Washington already has one of the world's cleanest grids largely due to hydro, other renewable resources, and nuclear energy, but to fully realize our decarbonization goals and maintain a reliable and affordable electric system, it's vital that we embrace new clean energy technology and we believe advanced nuclear generation should be part of this mix. The region's hydro is already spoken for. We need to begin planning now to provide affordable, reliable, and responsible electricity moving forward and are considering advanced nuclear technology.

CON: We already consider advance nuclear reactor technology in the state energy strategy. Advanced nuclear technology remains the energy technology of the future. These reactors were supposed to set the gold standard but have bankrupted a company. The Fukushima nuclear disaster is ongoing in Japan. Nuclear is not the answer to anything. Nuclear power is dangerous and an unnecessary response to the climate crisis. Next generation reactors are not immune from safety issues. Technology such as storage can compensate for intermittent generation such as wind and solar. SMRs create more waste than traditional reactors. It is staggeringly expensive when looking at the entire chain of production.

**Persons Testifying:** PRO: Representative Stephanie Barnard, Prime Sponsor; Madison Schroder, Generation Atomic; Leila El-Wakil MD; James Conca, UFA Ventures, Inc.; Seth Worley, UA Plumbers and Steamfitters Local 598; Dave Arbaugh, Energy Northwest; Jodi Henderson, Benton PUD; Bill Clarke, Grant County PUD; Randall Coleman, IBEW.

CON: Cathryn Chudy, Oregon Conservancy Foundation; Phil Lusk; Roger Lippman, Nuclear Free Northwest; Laura Feldman; Suellen Mele; glenna cole allee.

**Persons Signed In To Testify But Not Testifying:** OTHER: Glenn Blackmon, Department of Commerce.