

## **Validate | Accelerate | Collaborate | Educate**

Grid energy storage is critical to a future resilient and flexible U.S. electric grid that will enable decarbonization of energy supply, ensure transition of cars from oil to electric, and unlock a broad array of economic and societal benefits for all U.S. citizens.

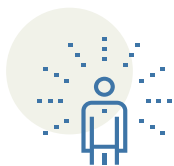
Pacific Northwest National Laboratory (PNNL) in Richland, Washington will be the home to the U.S. Department of Energy (DOE), Office of Electricity's (OE) new \$75 million facility, the Grid Storage Launchpad (GSL).



GSL's goal is to accelerate the development and deployment of next generation grid storage technologies through systematic and independent validation – from basic materials and components to prototypes that enable technologies that are safer, more cost effective, and more durable.

Strategic funding from the State of Washington, Battelle and PNNL provide further support for GSL equipment and research and development activities that complement the DOE OE investment.

The facility will foster collaboration between national labs and other stakeholders to support OE's mission, the Energy Storage Grand Challenge, and the Long Duration Storage Shot.



## Research Directions

Through independent testing and validation of grid energy storage technologies, the GSL at PNNL will develop and implement rigorous grid performance standards and requirements that span the entire energy storage R&D development cycle — from basic materials synthesis to advanced prototyping. This mission focuses on four outcomes that address critical challenges in grid energy storage development:

- **Validate:** Independent testing of next generation storage materials and systems (<100kW) under realistic grid operating conditions
- **Accelerate:** Reduce risk and speed development of new technologies by propagating rigorous grid performance requirements to all stages of development
- **Collaborate:** Link DOE and storage R&D communities in a new collaboration center to solve key crosscutting challenges
- **Educate:** Provide standardized training and development of the next generation workforce, from skilled labor to first responders and safety officials, to utility planners and regulators.

- **AUGUST 2019:** DOE selects PNNL as site for Grid Storage Launchpad
- **JULY 2020:** Solicitation for design-build contractor bids issued
- **AUGUST 2020:** Secretary of Energy visits PNNL to dedicate GSL site
- **SPRING 2021:** Award of design-build contract
- **SPRING 2022:** Groundbreaking
- **SPRING 2024:** Expected occupancy and start of operations



## Facility Cost Estimate: \$75M

Leveraged Funding: \$35M

- **\$20 million** in advanced research equipment and specialized instrumentation (\$8 million from State of Washington, \$7 million from PNNL, \$5 million from Battelle)
- **\$15 million** from PNNL in Lab-directed R&D support

If you have questions about the GSL, please contact:

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Pacific Northwest National Laboratory advances the frontiers of knowledge, taking on some of the world's greatest science and technology challenges. Distinctive strengths in chemistry, Earth sciences, biology and data science are central to our scientific discovery mission, laying a foundation for innovations that advance sustainable energy through decarbonization and energy storage, and enhancing national security through nuclear materials and threat analyses. PNNL collaborates with academia in its fundamental research and with industry to transition technologies to market.