

Connection | Collaboration | Discovery

These cornerstones of innovation are central to the Energy Sciences Center, which opened in 2022 on Pacific Northwest National Laboratory's Richland, Washington campus. The facility is a focal point for PNNL's collaborative research with industry and university partners.



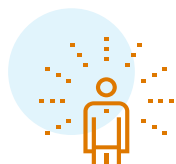
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With core construction funding of \$90 million from the U.S. Department of Energy, Office of Science, the Energy Sciences Center is accelerating scientific discovery in chemistry and materials science. Researchers are applying new knowledge in these areas to develop high-value

carbon-neutral fuels from wastes and high-performance, cost-effective batteries and other energy storage technologies.

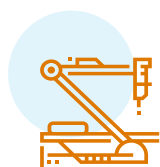
\$8 million from the State of Washington's Clean Energy Fund enabled the purchase of specialized instrumentation that positions the Energy Sciences Center on the forefront of research in energy sustainability.

The facility features an energy- and water-reducing design using natural light and waste heat generated by high-performance computers in an adjacent building.



Research Directions

- ▶ Advance the frontiers of chemistry and materials science, laying foundations for new energy technologies
- ▶ Learn from biology to achieve advances in chemical transformations and hierarchical materials
- ▶ Develop advanced computational and data methods to accelerate scientific discovery in chemistry and materials science



World-Changing Science Impacts

- ▶ Transforming abundant wastes into high-value fuels and materials
- ▶ Developing new catalysts to cut vehicle emissions
- ▶ Discovering cheaper, safer, and higher-performing energy storage materials
- ▶ Developing more efficient ways to produce chemical feedstocks for fertilizers
- ▶ Advancing materials and methods for chemical separations



Capability Funding

\$8M

from State of Washington to fund equipment & instrumentation

\$5M

from Battelle to fund equipment & instrumentation

\$7M

from PNNL overhead to fund scientific research equipment



Facility Funding

\$90M

from Department of Energy to fund facility design & construction

\$4M

from PNNL for facility startup activities