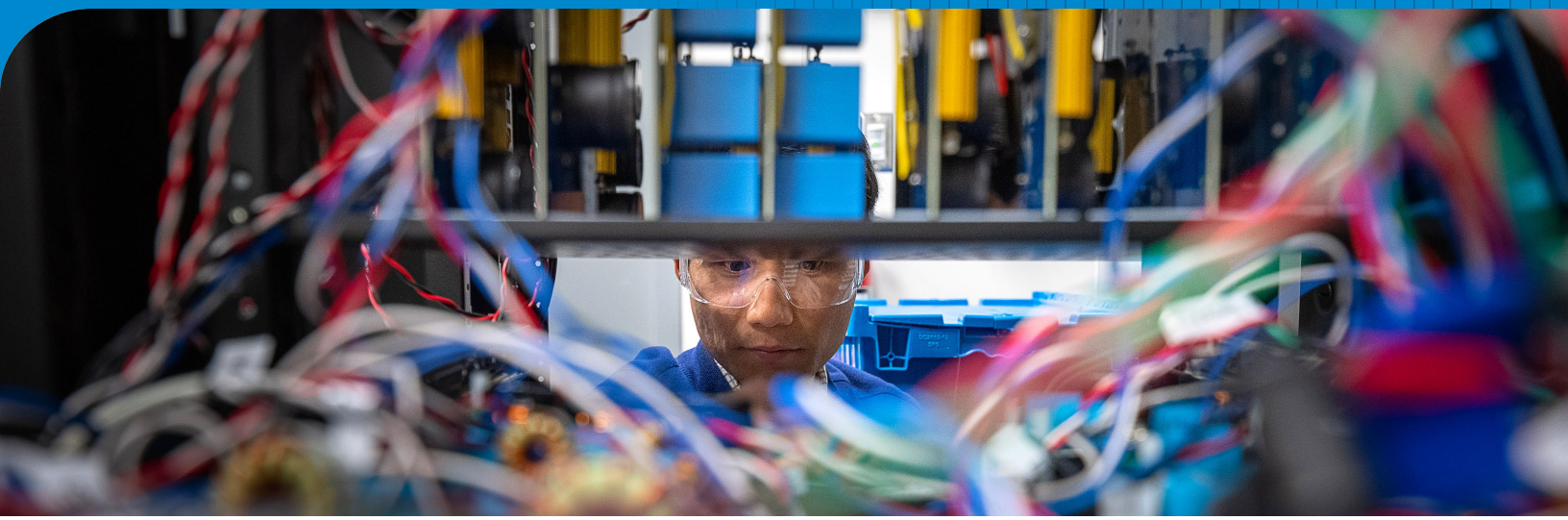
National Laboratory of the Rockies



Energy Systems Integration Facility

Work With Us

The Energy Systems Integration Facility (ESIF) is a world-class hub for research, development, and demonstration. Partners choose the ESIF to access leading-edge expertise and validate energy systems in real-world conditions—reducing cost, risk, and time to market.

Th ESIF research capabilities—including integrated energy hardware and controls, advanced modeling and emulation platforms, and high-performance computing—have served hundreds of partners, from utilities and top universities to data center providers.

What Does the ESIF Offer?

Companies make rapid strides toward profit and progress by iterating in our labs and our virtual research environments, unencumbered by the costs and risks of a field test. Whether you're a forward-thinking vendor, cooperative, or researcher, we provide the means to answer your big "what if" questions in energy.

By partnering with us, you will get access to:

- State-of-the-art energy systems test beds, models, and technologies
- Secure research facilities
- High-performance computing data center
- Engineering, operational, and technical support
- A catalog of 300+ energy devices

Housed in a data center with exceptional power usage effectiveness, the ESIF's computing system performance peaks at 56 petaflops.
Photo by Joe DelNero, National Laboratory of the Rockies (NLR) 101317

- Fast contracting and cost sharing opportunities
- Digital twin real-time high-fidelity modeling.

Our facilities help users:

- Conduct large-scale cost and benefit analyses for numerous energy investment options
- De-risk and optimize technology before deployment
- Accelerate technology commercialization
- Simulate, emulate, and visualize performance in real-life scenarios.

Funding Process

The National Labortory of the Rockies (NLR) can leverage our relationship with the U.S. Department of Energy (DOE) to connect partners with federal initiatives that align with their interests, opening potential paths to funding.

We do not provide direct funding under our technology partnership program agreements. In most cases, partners provide the necessary resources and cover the cost of NLR's technical services.

NLR researchers offer expertise and experience while the on-site operations team configures lab equipment to host any partner project.
Photos by Gregory Cooper, NLR 96061, 94079

How You Can Partner With the ESIF

We offer several contract and agreement types tailored to suit both proprietary and nonproprietary work in the ESIF:

Agreement for Commercializing Technology (ACT): Use if you need more flexible terms than other partnership agreements.

Bailment Agreement (BAE): Use when third-party equipment is loaned to NLR.

Cooperative Research and Development Agreement (CRADA): Use if you are a nonfederal partner doing research with NLR on a joint research and development project.

Funds-In Agreement (FIA): Use if you pay 100% of NLR costs for technical tasks and do not intend to perform joint research with DOE.

Interagency Agreement (IAG): Use if you are a federal agency other than DOE.

Memorandum of Understanding (MOU): Use to establish a nonbinding conceptual framework for project discussions, such as a technical and scientific collaboration between NLR and an industry partner or foreign agency.

Material Transfer Agreement (MTA): Use to confidentially protect material composition—such as enzymes or small equipment—in exchange for review and evaluation.

Technical Service Agreement (TSA): Use for projects $500,000 or less in value, up to 3 years in duration, and funded entirely by the sponsor for services not expected to result in any inventions.

User Facility Agreement (UFA): Use in the event of a DOE user call soliciting proposals for non-proprietary research on a specific topic.

ESIF Expertise

The ESIF's state-of-the-art capabilities and in-house experts can help you address key challenges for managing modern energy systems in the most secure, affordable, and reliable way. Our expertise includes:

- Grid controls and automation
- Energy materials
- Utility digitization and data
- Cybersecurity
- Advanced modeling and analysis
- Thermal systems
- Managing large loads
- Power electronics
- Microgrids

And much more.

Contact Us

Interested in partnering with the ESIF? Contact the User Program at userprogram.esif@nlr.gov.

Cover image: A senior electrical engineer conducts inverter research in the Energy Systems Integration Facility. *Photo by Werner Slocum, NLR 74268*

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