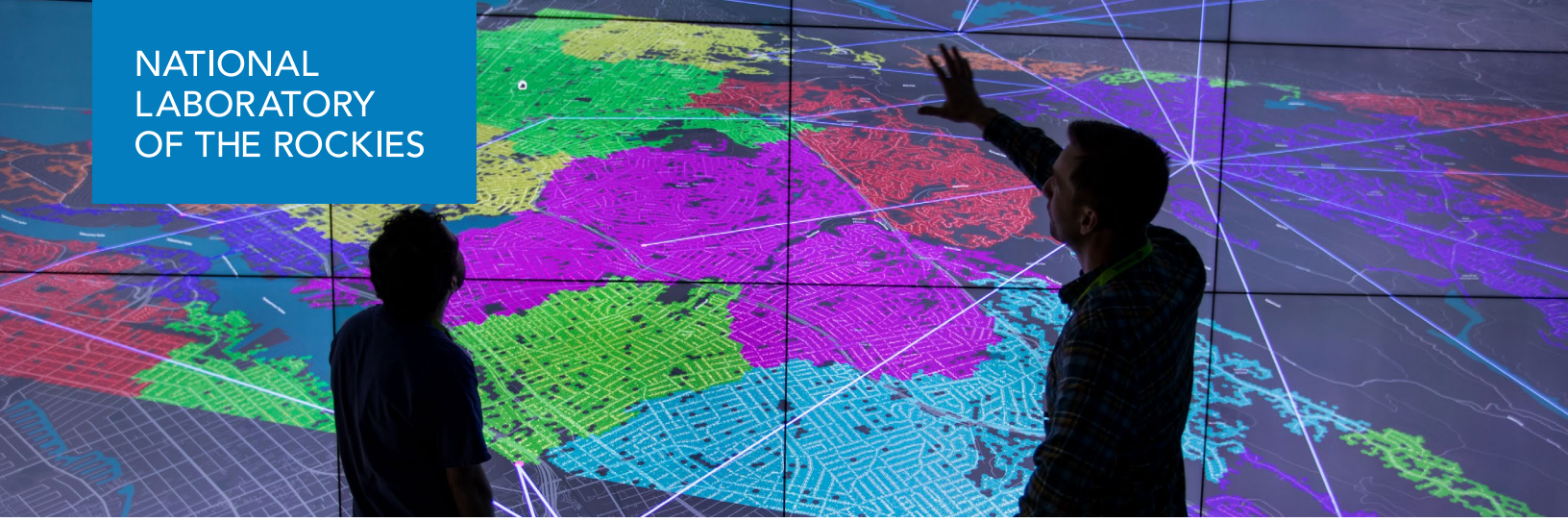
NATIONAL LABORATORY OF THE ROCKIES



State, Local, and Tribal Program

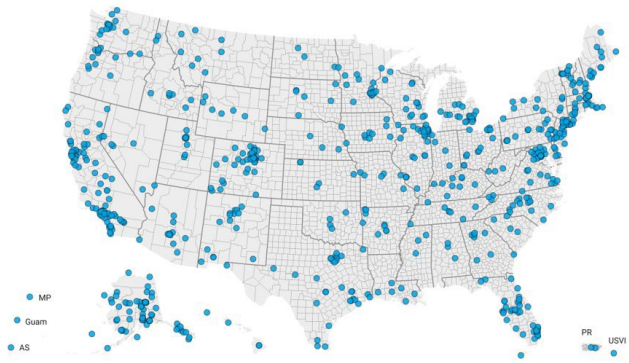
The National Laboratory of the Rockies' (NLR) State, Local, and Tribal Program delivers customized, data-driven support that strengthens local energy systems—expanding access to America's abundant energy resources, reducing costs, and supporting energy reliability across the country. NLR's world-class staff use a wide variety of cutting-edge energy tools and capabilities to deliver robust modeling, validation, and deployment support to hundreds of communities annually.

NLR advances U.S. Department of Energy (DOE) goals by providing comprehensive energy expertise in modeling, system engineering, grid integration, hardware validation, project finance, workforce development, regulatory strategy, and stakeholder engagement—all grounded in rigorous social science to accelerate deployment.

NLR also fosters connections among other DOE national laboratories, local leaders, and peer organizations—sharing insights, technical knowledge, and real-world examples to resolve common energy challenges.

Local Priorities Drive Solutions

NLR has decades of experience partnering with cities, counties, states, territories, Tribal governments, and organizations to navigate infrastructure constraints, permitting hurdles, workforce shortages, community concerns, and policy complexity. NLR works alongside these partners at every stage of their energy journey—drawing on wide-ranging backgrounds and cross-sector expertise to transform complex data and models into actionable strategies tailored to jurisdictional priorities, including energy abundance, affordability and economic opportunity, reliability and security, and efficiency.



Map representing more than 2,000 NLR engagements in locations across America. *Illustration by Thomas Young, National Laboratory of the Rockies*

Energy Abundance

NLR helps identify and integrate energy resources to fuel innovation, revitalize domestic manufacturing, and power emerging economic drivers such as data centers and artificial intelligence. Through advanced capabilities—including capacity expansion modeling, system validation and emulation, and transmission and distribution planning—NLR provides decision makers with the insights and analysis needed to optimize system performance and fully leverage U.S. energy resources.

Key tools:

PRAS: Probabilistic Resource Adequacy Suite
nrel.gov/analysis/pras

RAPID: Regulatory and Permitting Information Desktop Toolkit
openei.org/wiki/RAPID

Sienna: Scalable Integrated Energy Modeling and Analysis
nrel.gov/analysis/sienna

Affordability and Economic Opportunity

NLR equips local leaders with techno-economic modeling, lifecycle and cost-benefit analysis, and workforce assessments to uncover cost-saving opportunities, mitigate financial risk, support targeted job training, and chart clear implementation pathways for energy projects. By grounding its work in local energy needs, NLR helps lay the foundation for scalable economic growth in the United States.

Key tools:

JEDI: Jobs and Economic Development Impacts
nrel.gov/analysis/jedi

SAM: System Advisor Model
sam.nrel.gov

Reliability and Security

NLR provides expertise in scenario planning, system engineering, and hardware testing to help decision makers anticipate, respond to, and recover from energy disruptions—whether caused by natural hazards or human threats. Through innovative approaches and advanced tools, NLR strengthens America's energy systems and infrastructure to meet the challenges of today and prepare for those of tomorrow.

Key tools:

ARIES: Advanced Research on Integrated Energy Systems
nrel.gov/aries

ADMS: Advanced Distribution Management System
nrel.gov/grid/advanced-distribution-management

REopt: Renewable Energy Optimization Tool
reopt.nrel.gov/tool

NLR leverages its Advanced Research on Integrated Energy Systems (ARIES) platform to deliver modeling and analysis at an unmatched scale and complexity to accelerate the validation of secure, affordable, and integrated technologies across energy sectors. *Photo by Gregory Cooper, National Laboratory of the Rockies 98082*

Community Highlight: Nikolski, Alaska

The village of Nikolski, Alaska. *Photo from Getty Images 1365396877*

NLR worked with the village of Nikolski, Alaska through the Energy Technology Innovation Partnership Project from 2023-2024 to reduce its reliance on imported diesel fuel—which is often expensive and unreliable for remote communities, especially during severe weather. NLR supported Nikolski in identifying cost-effective solutions for generating heat and electricity locally, while also helping develop training opportunities for the villagers to maintain the new infrastructure.

Read more at docs.nrel.gov/docs/fy25osti/90685.pdf

Efficiency

NLR offers technical assistance to improve energy efficiency to reduce energy use, cut costs, and increase comfort, health, and resilience. Our applied research and technical assistance help communities identify practical, scalable strategies that improve building performance.

Whether through strategic planning, retrofits, high-performance design, or workforce development, NLR is supporting more efficient energy solutions across America.

Contact Us

Learn how NLR can support your energy goals at nrel.gov/state-local-tribal.

Cover image: NLR researchers use laboratory visualization capabilities to advance research and analysis. *Photo by Werner Slocum, National Laboratory of the Rockies 67843*

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The National Laboratory of the Rockies is a national laboratory of the U.S. Department of Energy, Office of Critical Minerals and Energy Innovation, operated under Contract No. DE-AC36-08GO28308.

NLR/FS-8A00-97433 • January 2026