



GRID RESILIENCE AND INNOVATION PARTNERSHIPS PROGRAM

Upgrading Interregional Transmission for Resilience and Smart Operations in the Northwest

Established by the Bipartisan Infrastructure Law, the Grid Resilience and Innovation Partnerships (GRIP) Program is a \$10.5 billion investment to enhance grid flexibility, improve the resilience of the power system against extreme weather, and ensure American communities have access to affordable, reliable, electricity when and where they need it. GRIP funding is administered by the U.S. Department of Energy's Grid Deployment Office (GDO). This project was selected through the second round of GRIP funding.

Avista Utilities and Idaho Power Company will reconstruct the Lolo-Oxbow 230kV transmission line, employing wildfire resilient designs and materials. Idaho Power's new Palette Junction Station will increase interregional transfer capability between the Pacific Northwest and Mountain regions. The project uses innovative construction approaches and power electronics to increase the transmission systems' utilization rate by optimally distributing power flows across the Lolo-Oxbow line and three other lines that comprise a currently constrained Idaho-to-Northwest transmission path. These technological shifts will optimize four transmission lines while limiting extensive construction to a single line. The project will improve resilience and reliability and increase interregional transfer capacity by approximately 635 MW in total, with benefits extending to hundreds of thousands of customers across the region.

Anticipated Outcomes and Benefits

Resilience and reliability: The project is expected to decrease experienced line outages to fewer than one per year by implementing wildfire-resilient designs and materials. In addition, the project will use Infravision's TX drone system using drones to string new lines, limiting outages during construction.

Increasing interregional capacity: The project will deploy innovative SmartValve devices, advanced power flow controllers that can provide real-time system visibility and control required to optimize power flow and energy dispatch. The increased interregional capacity will benefit customers, enable the Nez Perce Tribe to seek generation interconnection capacity for renewable resources on their reservation, harden the grid, and showcase innovative technologies.

Workforce development and job creation: Partnerships with local labor unions and the Tribal communities within the Avista and Idaho Power service territories will create opportunities for approximately 450 jobs on the project. In partnership with community-based organizations, this project aims to foster long-term employment in future energy roles via hiring, training, and retraining programs. Some of this project will be executed in collaboration with the International Brotherhood of Electrical Workers (IBEW).

Project Details



- **Project:**
Lolo-Oxbow Transmission Upgrade and Optimization
- **Applicant/Selectee:**
Avista Utilities
- **GRIP Program:**
Smart Grid Grants
(Bipartisan Infrastructure Law, Section 40107)
- **Federal cost share:**
\$85,664,781
- **Recipient cost share:**
\$87,296,824
- **Project location:**
Washington, Idaho, Oregon
- **Project type:**
Grid Enhancing Technologies and Applications

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GRID RESILIENCE AND INNOVATION PARTNERSHIPS PROGRAM

Artificial Intelligence, Analysis, and Automation for Resilience in the West

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The INERTIA project brings together a diverse coalition of small, mid-sized, and large grid operators, technology providers, and community partners in the Intermountain and Pacific Northwest regions to enhance grid resilience and safeguard high-risk communities from extreme environmental disruptions. This collaborative initiative addresses the growing threat of extreme environmental disruptions—such as wildfires, windstorms, ice storms, and extreme heat—by accelerating the deployment of innovative technologies and best practices across the energy sector. Situational awareness and automated response systems deployed through the INERTIA project will equip utilities to anticipate, respond to, and recover from increasingly unpredictable weather patterns.

Anticipated Outcomes and Benefits

Community and system benefits: The coalition—including Idaho Power, Northern Lights, NV Energy, and Puget Sound Energy—will implement technology deployment and data integration, knowledge sharing, and prioritization of grid planning and investment. Ongoing knowledge exchange, with the adoption of market-ready technologies, ensures the utilities are equipped to help high-risk communities. Some or all of this project will be implemented in collaboration with the International Brotherhood of Electrical Workers (IBEW).

Improved reliability and resilience: The project will deploy microgrids to provide backup power technology for high-risk areas, ensuring continuity in energy reliability services. The project expects to achieve a reduction in the duration and frequency of public safety power shutoffs (PSPS) by approximately 85% for certain impacted circuits or feeders where microgrids will be deployed.

Enhanced situational awareness: Predictive analytics and comprehensive wildfire risk modeling will identify wildfire risk days in advance and provide on-demand spread predictions, allowing for better preparedness. Additionally, by integrating advanced sensing technologies and AI-driven analytics, INERTIA aims to improve the speed of grid fault detection by 60% on average over non-automated solutions. Leveraging satellite imagery and AI for precise vegetation management near power lines, INERTIA targets around a 60% increase in proactive identification in the number of possible vegetation-related outages.

Project Details



- **Project:**
Increasing Energy Resilience via Technology Investment Acceleration (INERTIA)
- **Applicant/Selectee:**
E Source
- **GRIP Program:**
Smart Grid Grants
(Bipartisan Infrastructure Law, Section 40107)
- **Federal cost share:**
\$77,021,741
- **Recipient cost share:**
\$88,413,069
- **Project location:**
Idaho, Montana, Nevada, Washington
- **Project type:**
Situational Awareness and System Automation Solutions

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