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Blue Lake Rancheria Native American reservation microgrid goes live



- **Microgrid powering critical infrastructure will save \$200,000 per year, reduce 150 tons CO2 emissions annually and create clean energy jobs**
- **Deployment represents industry-leading standard for collaboration between state, tribal, federal, and local entities, academia, technology providers, and utility partners**

Blue Lake Rancheria, a century-old Native American reservation in Northern California, has launched its low-carbon community microgrid that is helping power government offices, economic enterprises, and critical Red Cross safety shelter-in-place facilities across 100 acres. In collaboration with Humboldt State University's Schatz Energy Research Center, Siemens, Idaho National Laboratory and additional partners, the microgrid uses decentralized energy resources and intelligent software to provide its residents and economic enterprises with reliable power without interruption.

The microgrid includes a 500-kilowatt solar photovoltaic system designed and built by REC Solar and a 950 kWh Tesla battery storage system, all managed and controlled with Siemens Spectrum Power Microgrid Management System (MGMS) software. Funded in part through a \$5 million grant from the California Energy Commission's Electric Program Investment Charge (EPIC) program, the system allows the reservation to operate independently of the power grid in coordination with local utility Pacific Gas & Electric. This project incorporates the largest solar array in currently in operation in Humboldt County, California, is estimated to save the Tribe over \$200,000 in annual energy costs, will reduce at least 150 tons of carbon per year and will grow Tribal clean energy jobs by 10 percent.

"With the help of our state, academic, technology, federal, and utility partners, this microgrid project has fulfilled the Tribe's aggressive energy security, economic, and environmental goals," said Jana Ganion, the Tribe's Sustainability Director. "We have proven we can efficiently deploy the fiscally-responsible solar and storage sources of energy, create clean energy jobs, and transition away from fossil fuels at a brisk and feasible pace."

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[**Jana Ganion, Blue Lake Rancheria Sustainability...**](#)



[**Jana Ganion, Blue Lake Rancheria Sustainability...**](#)



[**Pat Wilkinson, VP, Siemens Digital Grid, on Blue Lake**](#)



[**Pat Wilkinson, VP, Siemens Digital Grid, on system**](#)

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"At its core, this microgrid is an example of motivated governments investing in distributed grid improvements and low-carbon energy in a novel and replicable way," said Arla Ramsey, Blue Lake Rancheria's Vice Chair. "Our partners have contributed their expertise and goodwill far above what we expected. This partnership approach has transformed our energy sector with significant employment and other economic co-benefits."

"The Blue Lake Rancheria community is leading the way in their commitment to the environment," said Alan Russo, senior vice president of sales and marketing at REC Solar. "We enjoyed working alongside a customer with shared values and a willingness to build such innovative energy solutions."

"This project demonstrates how national laboratory assets can be leveraged as part of a diverse partnership to reduce risks and build resilient community microgrids," said Rob Hovsopian, Power & Energy Systems manager at Idaho National Laboratory.

"The continuing trend toward decentralized energy is made feasible in large part by the introduction of intelligent software to manage and control a vast array of energy resources," said Pat Wilkinson, Vice President at Siemens Digital Grid. "With our intelligent microgrid management software, Blue Lake Rancheria is able to rely on a complex mix of generation and storage to work together to deliver efficient, reliable and cleaner power for the Tribe's government offices and other critical infrastructure."

"The Blue Lake Rancheria has been a pioneer in bringing together a number of different energy technologies in one location through their microgrid," said David Rubin, PG&E's Director of Service Analysis. "We have welcomed the opportunity to participate in this microgrid project because it showcases the use of multiple distributed energy resources while playing an important role in the community in the event of a natural disaster or another emergency."

The software is able to accurately predict power needs and dynamically manage generation and distribution through integrated weather data, load forecasting, and load-shed scenarios. In grid-connected mode, the software will help the Tribe reduce peak loads and conduct other energy management optimization to help relieve pressures on the larger grid. In cases of emergency when the larger grid is down, the system will operate in islanded mode. In both scenarios, the software prioritizes the use of the cleanest and most financially beneficial forms of energy, in this case solar and battery storage, within a portfolio of on-site generation sources.

For further information on the Blue Lake Rancheria microgrid, please visit <http://news.usa.siemens.biz>.

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