



To: Environmental Protection Agency CPRG Program Officers
RE: Blue Lake Rancheria Climate Pollution Reduction Grant

To whom it may concern:

The **Schatz Energy Research Center** (Schatz) is excited to offer this letter of support on behalf of the **Blue Lake Rancheria** (BLR) in their pursuit of a **Climate Pollution Reduction Grant (CPRG)** from the **Environmental Protection Agency (EPA)**. BLR is the lead applicant for this opportunity, and the Schatz Center has been a long-term partner to BLR in pursuit of climate-friendly infrastructure and technology. Schatz is a research and development center on the campus of Cal Poly Humboldt committed to addressing climate change and improving human and ecosystem health through work that supports clean energy, climate-resilience, equity, and justice. Below we describe some of the efforts we have completed together with BLR in the last decade, and some of the impactful work we have identified together as next steps, including CPRG efforts:

Clean Energy and Electrification Projects: Schatz and BLR have a solid partnership and have worked together to design and implement a range of clean and resilient energy projects, from planning studies to megawatt-scale microgrids. In these projects, Schatz's engineers and BLR's dedicated electricians and project management team have collaborated to design, construct, operate, maintain, and share knowledge about innovative energy solutions. Paramount among these projects is the Blue Lake Rancheria Community Microgrid, an award-winning project integrating ~500 kW in solar generation with ~ 1 megawatt batteries and supporting infrastructure to provide clean energy resilience to the main campus at BLR. Another example is the "Solar+" microgrid powering the fueling station at BLR (60 kW solar + 170 kW battery + advanced building controls). Solar+ pushed forward on the state-of-art for standardizing inverter-based microgrid architectures and supports a critical facility. These innovative designs not only contribute to BLR's carbon reduction goals but also ensure emergency services during grid failures, such as the December 20, 2022, 6.4 earthquake that affected Humboldt County and took down the region's entire access to the grid. Both the community microgrid and Solar+ have helped to inform the design of several other microgrid projects across California and within Tribal communities. These include the Redwood Coast Airport Microgrid (the first multi-customer renewable energy microgrid in California) and the Cal Poly Humboldt campus microgrid (currently in development). The fundamental advances made through all of those projects have established and proven the technology platforms now being deployed across California for community microgrids through the Microgrid Incentive Program and other efforts. They demonstrate how BLR is effective both developing clean energy projects and promulgating the technology advances for broad impacts through strategic partnerships and knowledge exchange.

Nested Microgrid Project: Schatz and Blue Lake Rancheria are now partnered with three other Tribes in our region and local energy and utility partners to push clean energy microgrids to the next level with a set of nested and networked microgrids with frequency-based load flexibility control. This work would build on the fundamental technology currently in place at BLR, expanding the capabilities of community microgrids and aligning deployment to support deep decarbonization of transportation and heating at low costs. Our consortium is seeking funding through a range of federal and non-federal channels for this work and we anticipate having funding in place to begin deployment in 2025. The work aligns perfectly with the BLR CPRG proposal, which would strengthen the nested microgrid work through including several key elements: Solar carports to generate additional renewable energy within microgrid boundaries, DC fast chargers that can be integrated with microgrid controls to demonstrate support for fast vehicle charging within the constraints of the distribution system, and support for expanding the BLR fleet of electric vehicles to enhance and demonstrate readiness of zero-carbon transportation to meet a range of needs.

Next Steps and Regional Impacts: The Schatz Center is excited to continue in our partnership with BLR to continue pushing forward on advanced clean energy systems. The examples we mentioned above are emblematic of how BLR has been effective in strategic partnerships to develop clean energy and climate-friendly technology at home and also to have major impact on regional, inter-Tribal, and statewide efforts to replicate and learn from their success. Through building the Nested Microgrid Project and advancing clean energy and zero-carbon transportation demonstrations, Blue Lake Rancheria could continue leadership in energy development and deployment. The California Department of Transportation recognizes the need for more Fast Charging stations along the North Coast, connecting people and goods to both Highway 299 and Highway 101. BLR's project, near the intersection of these routes, could be an anchor and example for additional projects to come. These charging stations and the communities around them will continue to face climate-amplified challenges to grid reliability and resilience as well. Many communities across our region will continue to benefit from the lessons learned and pathways established by BLR as their portfolio of advanced energy projects continues to expand in scale and impact. This cooperative effort exemplifies how research centers, communities, and agencies can drive positive change in sustainable energy infrastructure. The Schatz Center stands ready to continue in this impactful partnership.

Best regards,



Arne Jacobson
Director, Schatz Energy Research Center



Peter Alstone
Faculty Scientist, Schatz Energy Research Center