Climate Resilience Planning Among California Native Tribes

The Blue Lake Rancheria (“Tribe”), a federally-recognized tribe in rural Humboldt County, has undertaken an aggressive, integrated strategy to improve public health, lower greenhouse gas (GHG) emissions, and adapt to a changing climate. Pollution and climate hazards are amplified on these tribal lands due to geographic isolation; the region’s main roads are prone to landslides and connections to outside electricity, natural gas, and communication grids are tenuous. The Tribe has identified nearby hazardous infrastructure and air and water pollution concerns, and these impacts are exacerbated by the effects of climate change.

Aligning with California, the Tribe’s government, elected leaders, and staff have made significant progress toward clean energy, GHG reductions, and community resilience. The Tribe has implemented a wide range of projects to address these goals, including steps to ensure greater critical infrastructure and resource reliability during emergencies. For example, with funding from the California Public Utilities’ Electric Program Investment Charge, the Tribe developed a low-carbon, community-scale microgrid with a 500-kW solar array, a 1-MWh Tesla battery storage system, and a Siemens microgrid management system. Backed by numerous partners, including the California Energy Commission, Schatz Energy Research Center, California State University at Humboldt, Pacific Gas and Electric Company, Idaho National Laboratory, Siemens, Tesla, REC Solar, McKeever Energy, Colburn Electric, Kernen Construction, and the American Red Cross, the microgrid enables the Tribe to supply its own power to a campus of critical infrastructure during emergencies, and it has resulted in energy savings of $200,000/year, a 10% increase in clean energy employment, and a reduction of at least 150 tons/year of GHG emissions. Other projects to improve the Tribe’s resilience to climate change include 1) development of a smart community water system, 2) a food sovereignty initiative, 3) development of a Resilience Training and Innovation Center, 4) transition to green transportation, including development of regional Electric Vehicle (EV) infrastructure, adding EV buses within the Tribe’s public transit system, and biodiesel manufacturing using the Tribe’s waste cooking oil, and 5) an agreement with the American Red Cross to serve as a shelter-in-place in the event of a regional emergency. The Tribe’s efforts, including significant mitigation of greenhouse gas emissions, improved energy and water efficiency, and plans to shelter and protect indigenous and other communities in the event of climate emergencies or extreme events, are critical for sustainable climate change adaptation.

Images provided by Blue Lake Rancheria

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