

# Renewable and Resilient Energy

## Introducing the Sector

The Renewable and Resilient Energy (RRE) sector is driving a regional strategy to **foster clean energy careers, enhance local infrastructure, and support Tribal innovation**. Under the leadership of Sector Investment Coordinator Matthew Marshall and his team at the Blue Lake Rancheria, the initiative is actively **building capacity for key energy solutions**. These include developing **microgrids**, supporting **offshore wind** development and other **renewable energy deployment**, implementing **efficiency upgrades**, and promoting **community-led projects** designed to ensure both environmental and economic sustainability for the region.

Leveraging its natural resources and a strong tradition of environmental stewardship, California's Redwood Region is poised to lead a **just energy transition**. The RRE sector aims to harness this potential through the guidance of Tribal leadership, innovative practices, and collaborative cross-sector partnerships. By doing so, the region is working to build a renewable energy framework that not only **prioritizes equity and long-term economic stability** but also serves as a **powerful model** for how rural communities can steer towards a clean energy future.



## Regional Partners

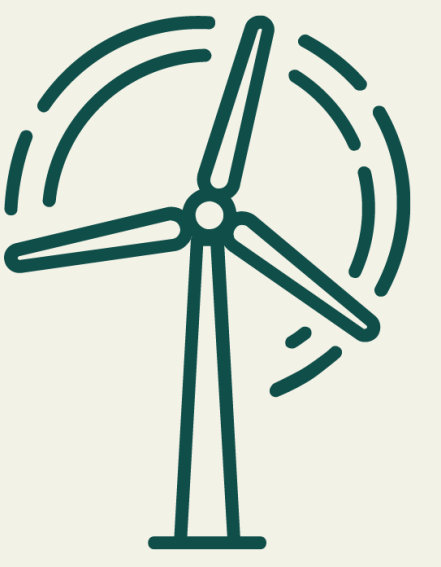
Current regional partners represent the diversity of Tribal, public, private, non-profit, and utility organizations:

- Blue Lake Rancheria
- Greater Eureka Chamber of Commerce
- GRID Alternatives
- Hoopa Valley Public Utility District
- Pacific Gas & Electric
- Redwood Coast Energy Authority
- Redwood Region Climate and Community Resilience (CORE) Hub
- Schatz Energy Research Center at Cal Poly Humboldt
- Sonoma Clean Power
- Vineyard Wind

## Major Employers

- **Utilities** (Pacific Gas & Electric, Redwood Coast Energy Authority, Ukiah Municipal Utility, Pacific Power, Sonoma Clean Power).
- **Renewable energy providers** (Calpine, Humboldt Sawmill Company)
- **Commercial and residential energy service providers** (solar installers, HVAC companies, weatherization and energy efficiency program implementers).





# Renewable and Resilient Energy

## Workforce and Training

The Renewable and Resilient Energy sector in the Redwood Region requires a skilled workforce trained in both **traditional building trades** and **emerging clean energy technologies**. Programs at Cal Poly Humboldt, College of the Redwoods, and Mendocino College offer pathways into careers that span **construction, electrical systems, sustainable design, and energy policy**. The overview below highlights programs that prepare students for work in the renewable energy ecosystem—from hands-on trades like welding and electrical work to engineering and climate leadership.

## Education Pathways

### Cal Poly Humboldt:

- Climate Justice & Resilience Leadership Certificate
- Energy Systems Engineering
- Environmental Resources Engineering
- Environmental Systems
  - Energy Technology & Policy
  - Environmental Resources Engineering

### Mendocino College:

- Introduction to the Construction Trades
- Sustainable Construction & Energy Technology – Renewable Energy (Certificate of Achievement)
- Sustainable Construction & Energy Technology – Construction (Certificate of Achievement)
- Sustainable Construction and Energy Technology– Building Efficiency and Performance
- Sustainable Construction and Energy Technology– Construction
- Sustainable Construction and Energy Technology– Renewable Energy

### College of the Redwoods:

- Construction Technology
- Construction Technology (AS & Certificate of Achievement)
- Drafting and 3D Modeling
- Electrician Trainee (Certificate of Achievement)
- Historic Preservation and Restoration Technology
- Photovoltaic Systems
- Residential Construction
- Welding Technology (AS & Certificate of Achievement)

**BA = Bachelor of Arts**

**BS = Bachelor of Science**

**AA-T = Associate in Arts for Transfer degree**

**AS-T = Associate in Science for Transfer degree**

**AS = Associate of Science**







# Renewable and Resilient Energy

## Renewable and Resilient Energy Projects (California Jobs First)

### **Pinoleville Solar Port & Renewable Energy Workforce Development–** *Redwood Region RISE Catalyst Project*

The Pinoleville Pomo Nation addresses critical energy and employment challenges through an innovative dual-purpose initiative. This project installs a 42KW solar carport system with EV charging stations at the Tribal government complex, reducing utility costs by 25% while providing covered parking for the community of 350 citizens.

The workforce development component creates ten paid internships—four in renewable energy and six in traditional Tribal skills, agriculture, and social services—providing valuable training for Tribal youth and adults. Building on successful previous solar installations with GRID Alternatives, the project extends partnerships with local Tribes, educational institutions, and health services while implementing the Nation's Strategic Energy Plan through culturally sensitive decision-making that ensures equitable distribution of benefits throughout the Tribal community.



### **Red Hills Bioenergy Facility & Central Wood Processing Plant** *Redwood Region RISE Catalyst Project*

The Scotts Valley Energy Company, a Tribal subsidiary, is developing a bioenergy facility that transforms agricultural and forest waste into renewable energy and carbon-neutral biochar. This solution reduces wildfire risk through biomass removal while creating economic opportunities.

The facility will generate 200 net kW of clean energy hourly, reduce 2,140 tons of biomass annually, produce 360 tons of biochar, and create 10–12 full-time positions prioritizing Indigenous employment. With projected annual revenue of \$325,000, the project provides sustainable income for the Scotts Valley Band of Pomo Indians.

Serving as a regional sustainability hub, the facility benefits local agricultural businesses and disadvantaged communities by contributing clean energy to the grid while addressing critical biomass management needs.





# Renewable and Resilient Energy

## High-Level Strategy and Tactics

### Strategy 1: Strengthen Regional Workforce Development

- Tactic 1.1: Establish Regional Partnerships for Comprehensive Clean Energy Workforce Training Programs
- Tactic 1.2: Clean Energy Corps
- Tactic 1.3: Engage and Prepare Local Businesses to Increase Participation in RRE Sector Projects and Supply Chain

### Strategy 2: Support Community Energy Resilience and Reliability

- Tactic 2.1: Deploy Community Microgrids and Other Resilient Clean Energy Infrastructure
- Tactic 2.2: Implement Comprehensive Programs to Support Efficiency, Electrification, and Resilience for Households, Businesses, and Public Facilities
- Tactic 2.3: Support Tribal- and Worker-Owned Clean Energy Enterprises

### Strategy 3: Foster Information and Resource Sharing

- Tactic 3.1: Establish Regional "Clean Energy Hubs" and a Comprehensive Digital Knowledge Platform
- Tactic 3.2: Develop a Collaborative Research Network That Integrates Traditional Ecological Knowledge
- Tactic 3.3: Build Broad-Based Support for the Clean Energy Transition Through Public Education and Engagement Programs
- Tactic 3.4: Provide Policy and Regulatory Support to Local Governments

## Additional RRRISE-Aligned Investment Projects

### GeoZone Initiative:

Sonoma Clean Power, in partnership with Sonoma and Mendocino counties, is leading the GeoZone initiative to develop 600 MW of next-generation geothermal energy to ensure long-term, affordable, and reliable clean energy for the region. The GeoZone effort aims to provide well-paid jobs, local investments, and tax revenue through the advancement of next-generation geothermal technologies to combat climate change statewide and globally.

### Northern Rural Energy Network (NREN) Program:

Funded through the CA Public Utilities Commission and implemented regionally by the Redwood Coast Energy Authority, Mendocino Council of Governments, and Lake Area Planning Council, NREN was launched in 2025 to provide energy efficiency services to homes and businesses in rural northern CA communities. Incentives for energy-efficient appliances and heat pumps, NREN offerings will include innovative financing offerings, workforce education and training, home and business energy assessments and upgrades, support for contractors and building officials addressing energy codes and standards, and more.





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## Additional RRRISE-Aligned Investment Projects (Continued)

### **Tribal Energy Resilience and Sovereignty (TERAS) Project:**

The TERAS project is working to empower local Tribes to transform one of the state's least reliable electrical circuits into a highly resilient renewable energy system. Led by the Hoopa Valley, Yurok, and Blue Lake Rancheria Tribes in partnership with the Schatz Energy Research Center, Redwood Coast Energy Authority, and PG&E, this project will significantly advance Tribal Energy Sovereignty, climate resilience, jobs equity, and clean energy innovation through the co-development of cutting-edge nested microgrid solutions.

### **WindLINK Collaborative:**

Focused on supporting the local business community's participation in emerging offshore wind energy sector, the WindLINK Program is a strategic partnership among the County of Humboldt Economic Development Division, Redwood Region Economic Development Commission (RREDC), Redwood Coast Chamber Foundation, Greater Eureka Chamber of Commerce, Northern California Small Business Development Center, Blue Lake Rancheria, and NorCal APEX Accelerator.

