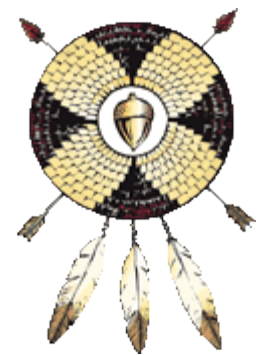




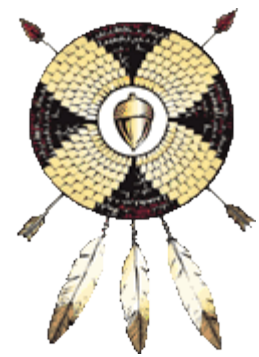
Colusa Indian Community Council (CA): Housing Energy Connection Project and Solar Canopy Expansion Project

Presented by Andrew Humphrey



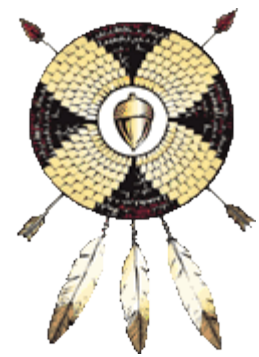
Summary of Colusa Indian Community

On November 23rd, 1941, the Constitution and By-Laws for the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community were ratified and adopted by the tribe's original 45 members. The Colusa Indian Community now consists of 150+ members residing in the heart of Northern California's agricultural land on a 290-acre reservation, along the bountiful Sacramento River, about four miles north of the Colusa city limits on Highway 45. The Colusa Indian Community owns and operates the Colusa Casino Resort, which is powered from the tribe-owned and operated cogeneration plant. The cogeneration plant operates islanded and autonomous from the local electric utility and employs a 4 MVA (mega volt amp) uninterruptible power supply (UPS) with 15 minutes of battery backup to provide highly reliable power supply to the Colusa Casino Resort, as well as tribal administration buildings, water and wastewater treatment facilities, a wellness center, and several houses.



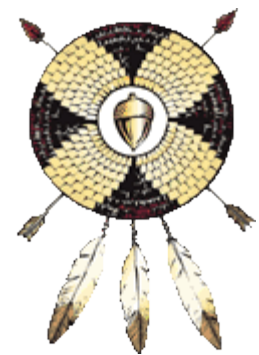
Description of Housing Energy Connection Project

The proposed project will expand existing medium-voltage distribution to more than 30 households, a daycare, a mechanical shop, irrigation pumps, and a sewer lift station, which currently receive electric service from the local electric utility. As part of the project automatic meter reading (AMR) and advanced metering infrastructure (AMI) will be installed to allow the Tribe to set up its own electric metering and billing like a utility.

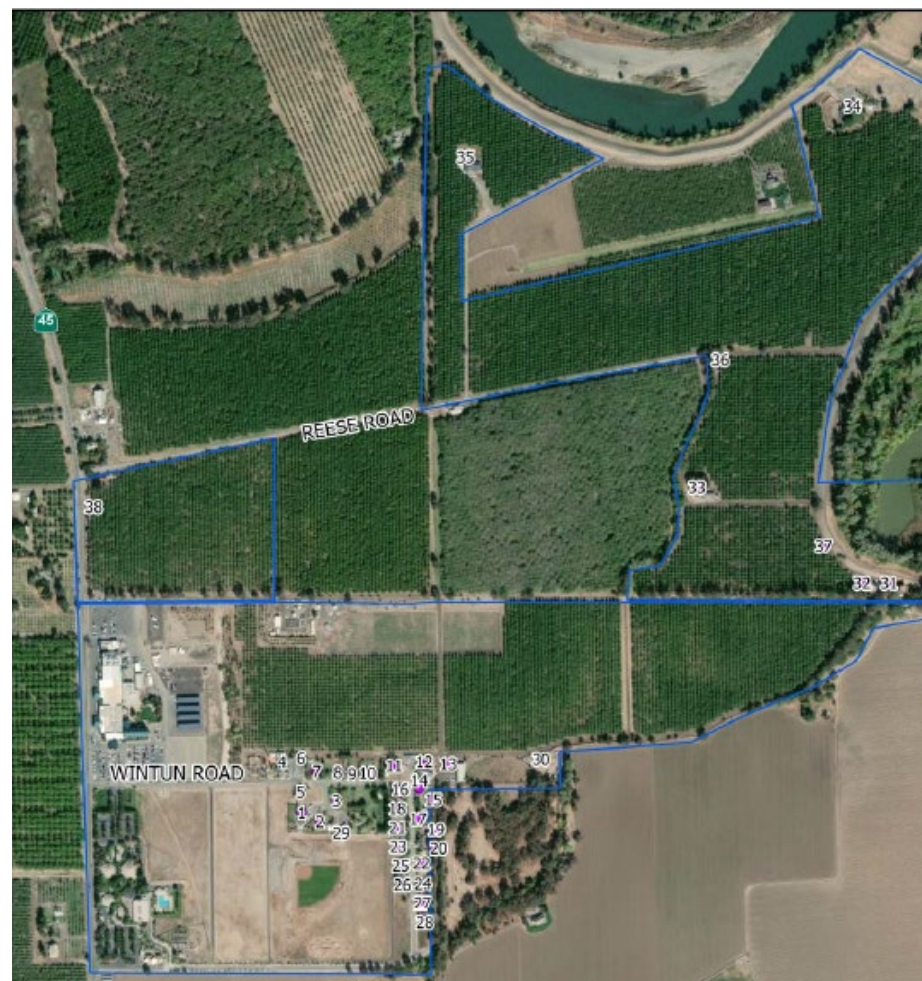


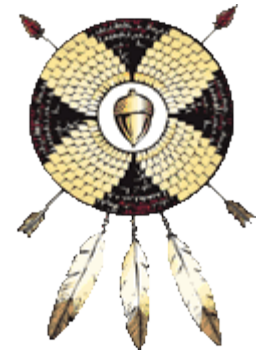
Description of Solar Canopy Expansion Project

The proposed project is a solar photovoltaic (PV) system integrated with a carport canopy in the parking lot to the east of the Colusa Casino Resort and north of the existing parking canopy solar system. The proposed system rating is 507.6 kW DC at Standard Test Conditions and 448kW AC (total inverter output rating). The proposed project will interconnect with the existing tribe-owned microgrid generation system at medium-voltage and will use existing electrical infrastructure from the existing parking lot canopy solar system to reduce system costs.



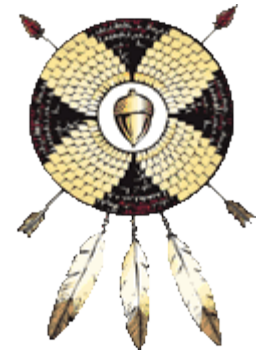
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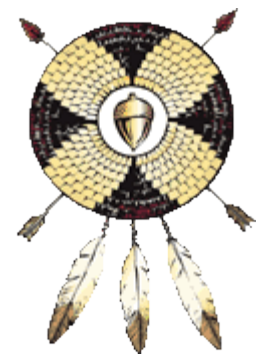
Project Location Housing Energy Connection Project





Project Location Housing Energy Connection Project



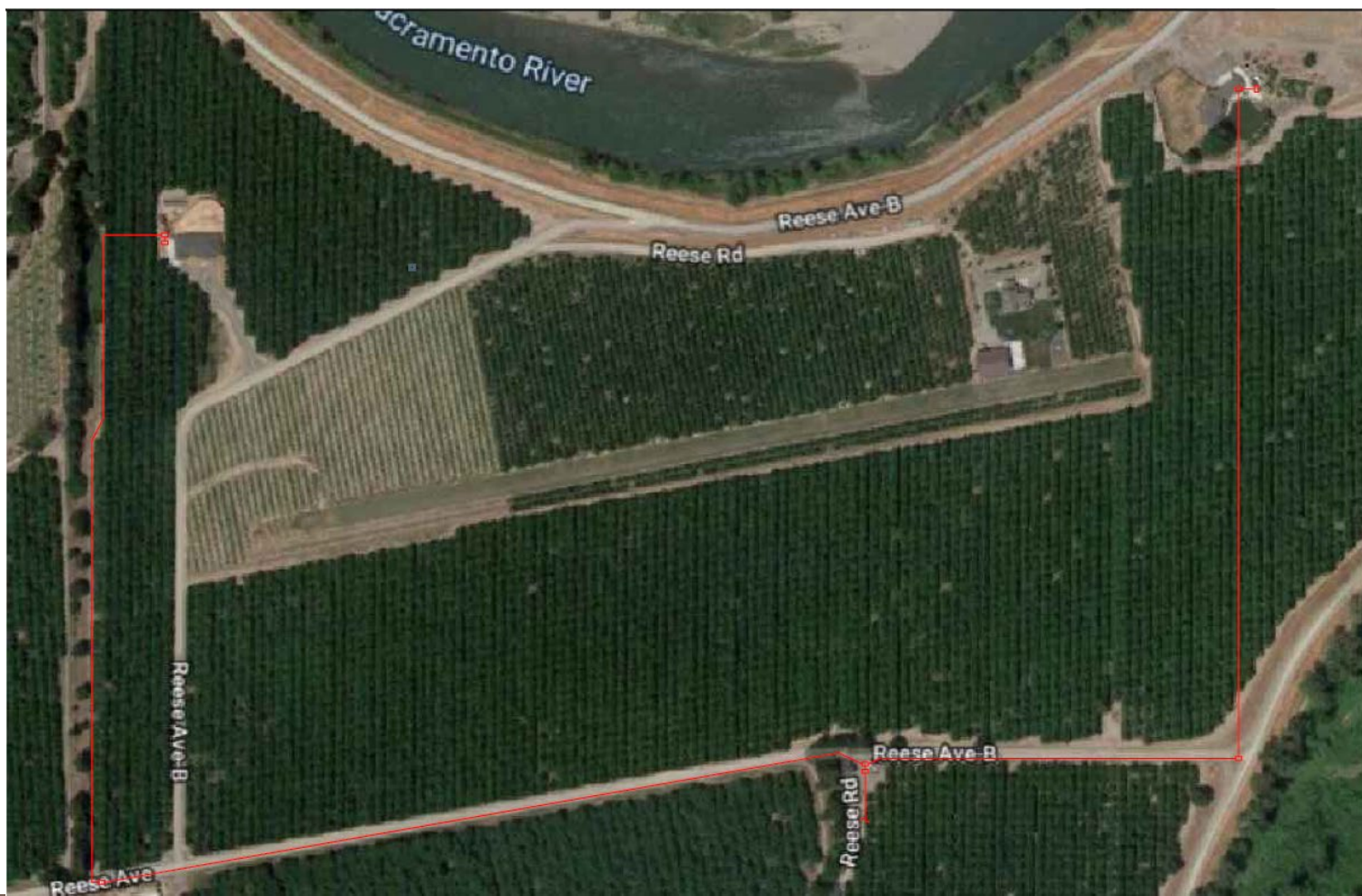


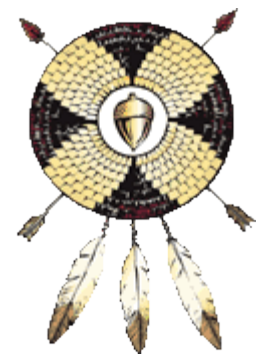
Project Location Housing Energy Connection Project





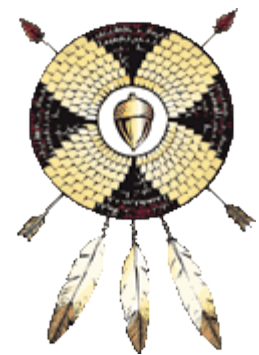
Project Location Housing Energy Connection Project





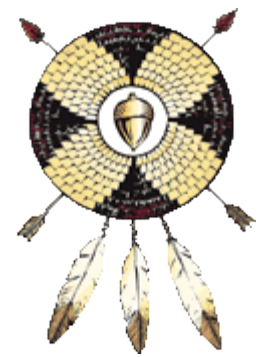
Project Location Solar Canopy Expansion Project





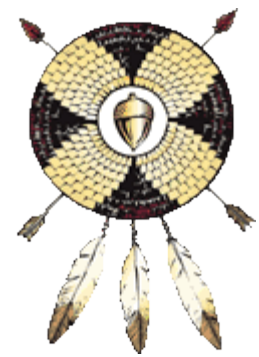
Project Participants

- Business Contact is Mr. Daniel Gomez, Tribal Chairman
- Technical Contact is Mr. Ken Ahmann, Director of the Cogeneration Plant
- Engineering and construction work will be done by subcontractors, under the supervision of Mr. Ahmann. Some of the construction work will be self-performed by the Colusa Indian Community. The solar carport structure, modules and inverters will be provided by a vendor.
 - Contractor: Geveden Industrial, Inc.
 - Engineer: Andrew Humphrey Engineering, LLC
 - Solar Carport Vendor: Sunpower



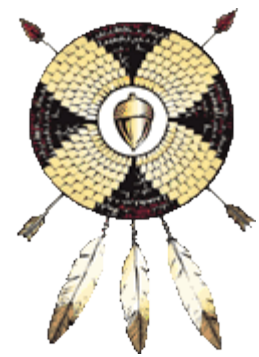
Project Objectives Housing Energy Connection Project

- The proposed project will provide less expensive, more reliable electric energy to the tribe for its members' households, and commercial, agricultural and industrial facilities than existing supply from the utility.
- Over the 30-year expected lifespan of the project, it is expected to save the Tribe \$9,381,420, taking members' money away from the incumbent utility and giving it back to the tribe's own Economic Development Corporation.



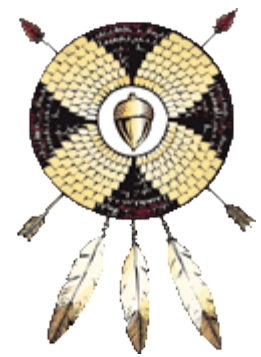
Project Objectives Solar Canopy Expansion Project

- The proposed project will cost approximately \$2.3 million and generate approximately \$5.2 million in energy savings and reduce carbon emissions by approximately 10,000 tons of CO₂ over the 30-year life of the project. The proposed project integrates into the tribe's long-term energy goals and vision by providing tribe-owned, low-cost, self-sufficient and renewable energy supply to the community. It will also reduce demand and prolong the life of existing conventional generators.



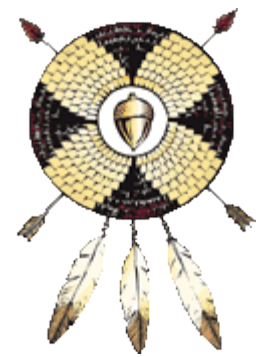
Relevant Background Information Housing Energy Connection Project

- The Colusa Indian Community owns and operates an existing cogeneration plant. The cogeneration plant operates islanded and autonomous from the local electric utility and employs a 4 MVA (mega volt amp) uninterruptible power supply (UPS) with 15 minutes of battery backup to provide highly reliable power supply to the Colusa Casino Resort, as well as tribal administration buildings, water and wastewater treatment facilities, a wellness center, and several houses.



Relevant Background Solar Canopy Expansion Project

- The Colusa Indian Community Economic Development Corporation owns an existing solar canopy rated for 336kW-AC.
- The proposed project is an expansion of the existing parking canopy solar array.



Progress to Date

- Engineering and design is complete for both projects.