



LA JOLLA BAND
OF LUISEÑO INDIANS

A Sovereign
Indian Nation

La Jolla Tribal Renewable Energy Development Project

Funded by the USDOE
Office of Indian Energy



La Jolla Trading Post Solar Project

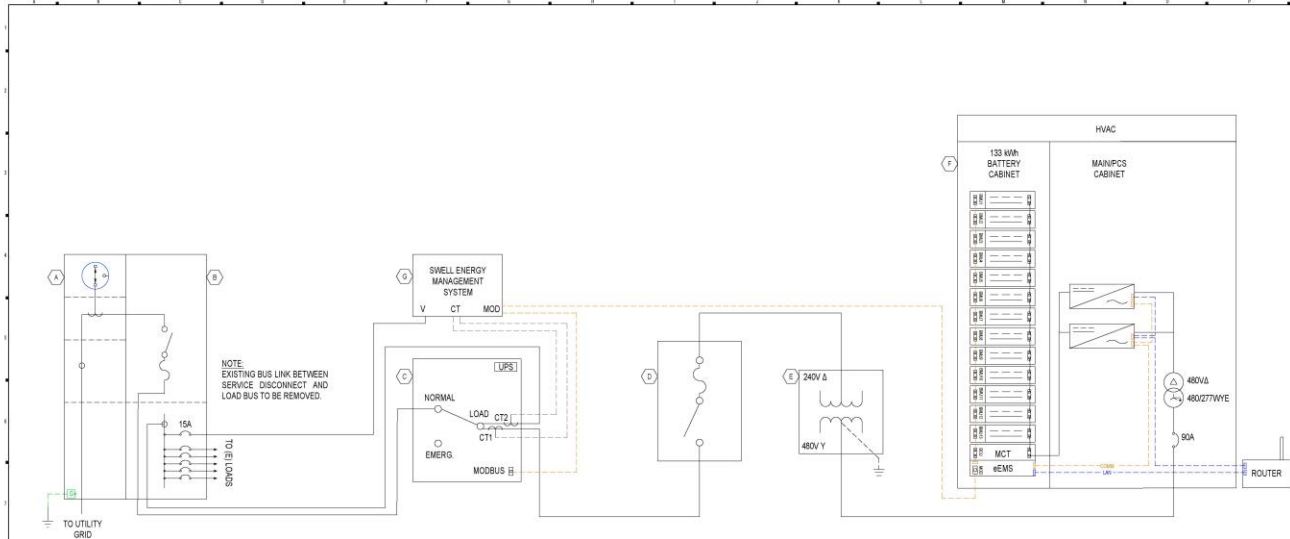
- The La Jolla Tribal Government Renewable Energy Development Project will provide 104.7 kW-DC of solar PV energy and 132 kWh energy capacity battery storage to annually supply 289,800 kWh electrical power to the La Jolla Trading Post, the only store and gas station on the La Jolla Indian Reservation.
- The system will reduce energy demand on the local power grid and reduce energy costs to the Tribe, which is classified as a Disadvantaged Community.
- This project will also provide hands-on training to up to twelve Tribal employees and members of the local community to develop their skills and increase employment opportunities.



Project Layout



Energy Storage System



SEQUENCE OF OPERATION

- UTILITY POWER IS PRESENT:
1. EPC ENERGY ESS WILL OPERATE IN GRID-TIE MODE
 2. EPC ENERGY ESS CHARGE AND DISCHARGE WILL BE CONTROL BY EMS TO OFFSET SITE LOADS.
- UTILITY POWER IS NOT PRESENT:
1. ASCO ATS DETECTS LOSS OF UTILITY POWER.
 2. ASCO ATS WILL TRANSFER ATS SWITCH TO EMERGENCY POSITION TO ISLAND MICROGRID LOADS.
 3. ASCO ATS WILL SIGNAL EMS VIA MODBUS OF GRID ISLANDING.
 4. EMS WILL SIGNAL EPC ENERGY ESS TO ENABLE GRID FORMING MODE.
 5. ONCE GRID FORMING MODE IS ENABLE AC POWER WILL BE AVAILABLE TO ISLANDED MICROGRID LOADS.
 6. WHEN ASCO ATS DETECTS UTILITY POWER IS PRESENT IT WILL SIGNAL EMS.
 7. EMS WILL SIGNAL EPC ENERGY ESS TO RETURN TO GRID-TIE MODE.
 8. ASCO ATS WILL TRANSFER TO NORMAL POSITION.
 9. UTILITY POWER WILL BE RESTORED TO LOADS AND EPC ENERGY ESS WILL OPERATE IN GRID-TIE MODE CONTROLLED BY EMS.

EQUIPMENT SCHEDULE

ID	ITEM/DETAIL
A	(E) UTILITY METER 120040208 HIGH LEG DELTA, 600A, METER #666055
B	(E) SERVICE DISCONNECT, 600A, 240V, 3P, FUSED AT 600A
C	(N) ASCO ATS, 240V, 600A, 3P, NEMA 3R
D	(N) 200A, 240V, 3P, NEMA 3R DISCONNECT SWITCH, FUSED AT 200A
E	(N) 60 KVA 120/240V DELTA - 480/277 WYE TRANSFORMER, BI-DIRECTIONAL
F	(N) EPC ENERGY 60 KWH/133 KWH BESS (480V)
G	(N) EPC ENERGY MANAGEMENT SYSTEM (EMS)

EMS/CONTROL SCHEDULE

ID	ITEM/DETAIL
(V)	LINE VOLTAGE (240/208/120V)
CT	ENERGY METER INPUTS
CT-1	CT - BESS ENERGY MONITORING
CT-2	CT - SITE LOAD ENERGY MONITORING
MOD	MODBUS (TCP)

EPC ENERGY EQUIPMENT SCHEDULE

ID	ITEM/DETAIL
1	EPC ENERGY 680133 BATTERY ENERGY STORAGE SYSTEM (BESS)
2	SINEXCEL: PWS2-30K-NA (480V) 30 KVA UTILITY INTERACTIVE BATTERY INVERTER
13	DONGGUAN POWERAMP TECHNOLOGY LTD. C-M5120ESAT 6KW BATTERY MODULE

01 SINGLE LINE DIAGRAM
REVISION



DEVELOPER
swell energy
10000 WILLOW CREEK DRIVE
SAN DIEGO, CA 92121
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NO.	DESCRIPTION	DATE

PROJECT
NEW ESS SYSTEM 60 KWH/133 KWH
LJBL1001
**LA JOLLA BAND OF
LUSENO INDIANS**
12001-01-15
PALMA VALLEY CA 92051
APR 15S-20-04
ENGINEER OF RECORD

PROJECT NO.
SINGLE LINE DIAGRAM
DATE: 03E-2020
DRAWN BY:
CHECKED BY:
DATE: 03E-2020
E-601.00



The Community

- The activities will occur on the La Jolla Indian Reservation. The Reservation is located in northern San Diego County, California, at the southern base of Palomar Mountain State Park. The Reservation encompasses approximately 9,400 acres. The topography is mountainous with elevations ranging from 900 feet at the southwest border to more than 5,200 feet in the northeast corner. Tribal membership consists of approximately 792 people. The Reservation population consists of approximately 480 Tribal members with a total resident population of approximately 540 people occupying 207 homes. These homes are primarily clustered into five communities.



Project Partners

- La Jolla Band of Luiseño Indians, GRID Alternatives, Swell Energy, SDG&E, DOE
- La Jolla Band: Rob Roy, Mark Webb
GRID Alternatives: Paul Cleary
Swell Energy: Mark Tholke
- SDG&E: Jennifer Summers
- DOE Office of Indian Energy: Josh Gregory



Project Outcomes

- The PV system with battery storage installed in this project is anticipated to produce over 289,800 kWh annually.
- LJBLI and tribal members are expected to benefit from annual savings on electricity bills amounting to approximately \$43,000.
- Estimated lifetime savings incurred by LJBLI is expected to amount to over \$1,366,000 over the 25-year lifetime of the installed systems.
- Up to twelve Tribal members of the La Jolla Band of Luiseño Indians will be able to receive hands-on training.
- The largest energy infrastructure project yet completed on the Reservation
- Will increase Tribal capacity for future projects.



La Jolla's Enterprises & Programs

The Tribe currently operates three business enterprises on the Reservation – a Campground, Zip Zoom Zipline, Mountain Bike Park, Water Park and the Trading Post gas station and convenience store. Governmental functions carried out by the Tribe include the following: Environmental Program, Tribal Law Enforcement, Avelleka Domestic Violence Program, Public Works, Fire Department, Economic Development, White Oaks Senior Program, and an Education Program.



Tribal History

The La Jolla Band of Luiseño Indians was established by Presidential decree in 1875. The Luiseño people, traditionally known as the Payomkawichum, or People of the West, have lived in this region for at least 10,000 years and have a rich culture with a long tradition of working with nature and protecting the environment.

