

# Karuk Tribe Solar & Storage Project

Casino, Elder Homes, and  
Wellness Center



Completion Update 11.16.23

# ABOUT KARUK TRIBE

The Karuk Tribe is one of the largest Tribes in CA, whose federal relation was reestablished in 1979 and have 4,800 members. They have demonstrated their ability to administer a multitude of social, cultural and economic programs effectively, earning the status of a "Self-Governance Tribe."

The mission of the Karuk Tribal Council is to promote the general welfare of all Karuk people, to establish equality and justice for our tribe, to restore and preserve Tribal traditions, customs, language and ancestral rights, and to secure to ourselves and our descendants the power to exercise the inherent rights of self-governance.

To accomplish that mission, The Tribal government currently employs more than 320 in administrative, child welfare, community/economic development, education, elders, energy assistance, health, housing, human services and natural resources programs in Orleans, Happy Camp and Yreka, its three major population centers. Additionally, the Karuk Tribe has developed tribal housing, dental and health clinics, and Head Start programs. Our tribal housing authority employees another 50 employees while the tribe's Rain Rock Casino employees 120.



# Karuk Tribe Highlights

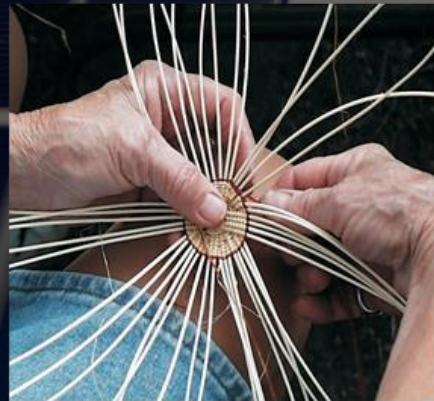
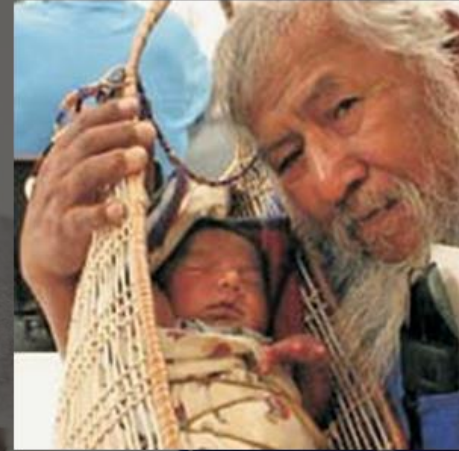
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- 2<sup>nd</sup> Largest Tribe in CA
- Leading the Klamath Dam decommissioning effort, largest in Nation
- Working to restore fire to the landscape





# Karuk, the “Upriver People”





# Project Summary Statement

The Karuk Tribe located in Northern California has embarked on achieving clean energy goals, as well as reducing the Tribal buildings dependence on traditional grid energy. Through the development of grid tied solar photovoltaic systems, as well as solar + storage for the Elder Homes, the Karuk Tribe will deploy a 948kW ground mounted solar PV system for the Tribal Casino and administrative trailers, as well as install solar + storage systems on each of their 39 tribally owned Elder Homes. Solar + storage will solve major problems during grid outages to maintain critical load equipment for the elders. Lastly, the Karuk Tribe shall power a new Wellness Center with solar PV. In aggregate, solar will provide 92% of their energy usage for a substantial amount of tribally owned buildings. Year one savings is estimated to be \$259,658 and \$13,404,241 over a 30 year outlook.



# KEY TEAM MEMBERS

Business Contact	Joshua Saxon, Executive Director
Technical Contact	Scott Quinn, Land Management
Casino Contact	Michael Rose, GM (presenter)
Housing Contact	Sara Spence, Director of Housing
CFO	Lara Mayton
Developer Contact	John McDonnell (presenter)
EPC Contact	Barry Coe (presenter)



# DEVELOPMENT PARTNERS

Developer:

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EPC:

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# PROJECT #1 Casino

Rain Rock Casino & Casino  
Office Ground Mount Solar PV



# Casino & Office Ground Mount 948kW-DC

## Project Overview:

948 kW-DC  
1755 Panels  
540 Watts/panel  
30 Tilt Racking

## Highlights:

1,575,464 Yr 1 Production  
\$182,210 Yr 1 Savings  
\$9,406,168 30 Yr Savings  
\$.115 Av. kWh Savings

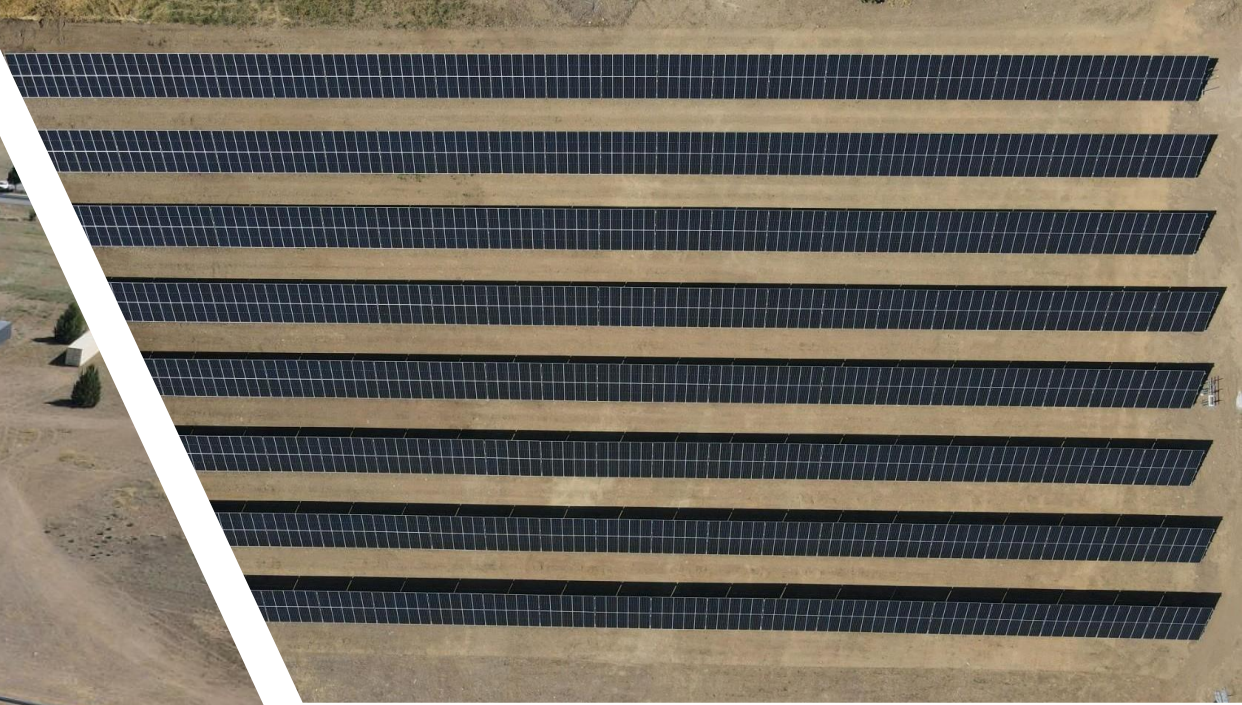


















# PROJECT #2 Elder Homes

(39) Elder Homes Solar + Storage Energy Resilience

Kit 1  
4.2 kW  
10 kWh



Kit 3  
8 kW  
15 kWh



Kit 2  
6 kW  
10 kWh



Kit 4  
11 kW  
20 kWh





# Elder Homes 310kW PV + 580 kWh BESS

## Project Overview:

310 kW-DC (combined)

816 Panels

380 Watts/panel

Roof Mounted

580 BESS kWh

## Highlights:

473,811 Yr 1 Production

\$74,308 Yr 1 Savings

\$3,835,978 30 Yr Savings

48 Av. Backup Hrs

\$.16 Av. kWh Savings

















# PROJECT #3 Wellness Center

Happy Camp, CA Wellness  
Center Solar PV



# Wellness Center 18kW-DC

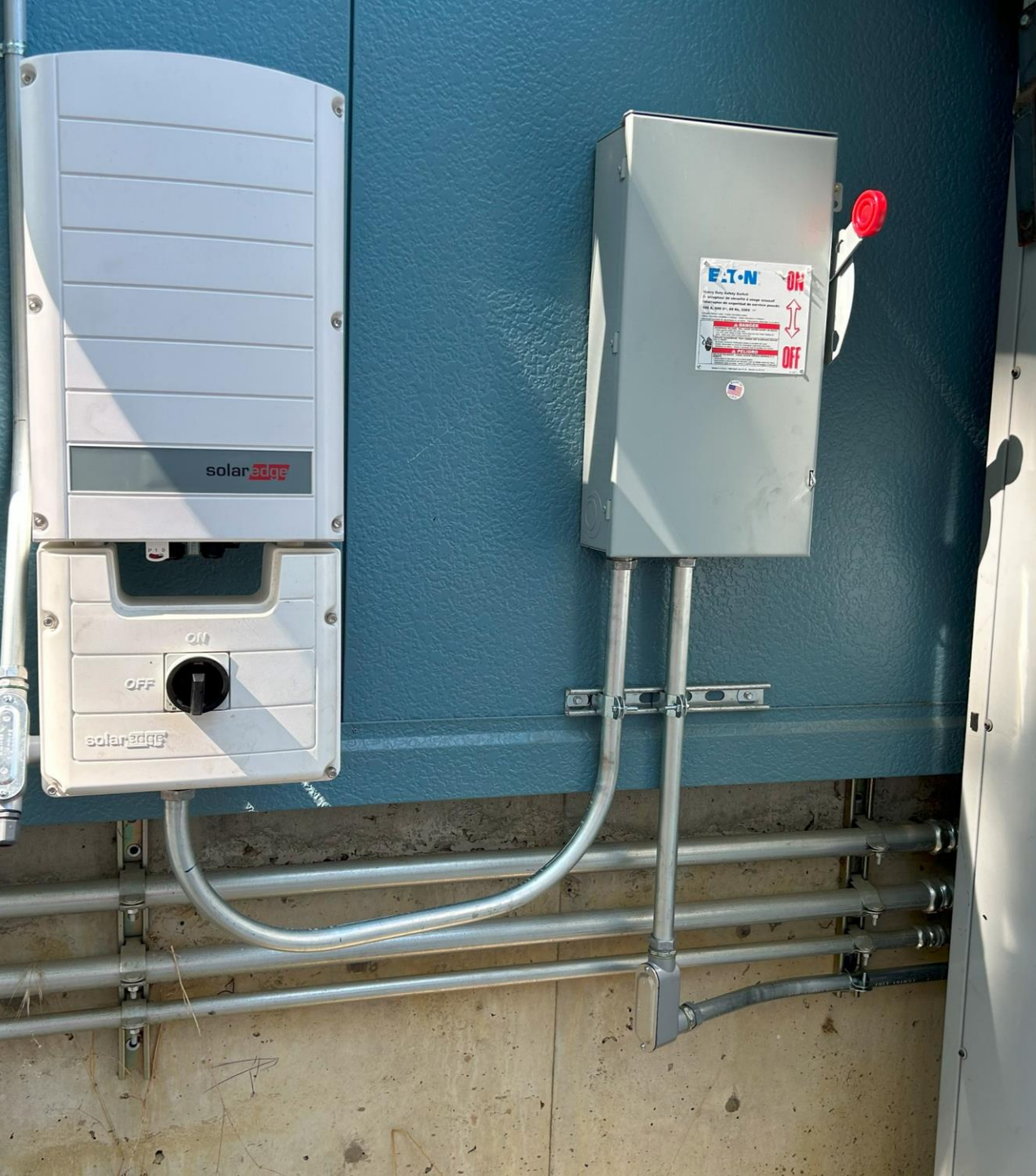
## Project Overview:

18 kW-DC  
48 Panels  
380 Watts/panel  
Roof Mounted

## Highlights:

26,130 Yr 1 Production  
\$3,503 Yr 1 Savings  
\$180,834 30 Yr Savings  
\$.134 Av. kWh Savings







# Installation Follow Up

## Goals:

2023 Casino 948kW

2023 Wellness 18kW

2023 Elder Homes  
(39) PV + ESS

## Challenges:

Timing / Equipment Lead times

Remote locations

Utility Process (utility studies)

Equipment upgrades



# Results

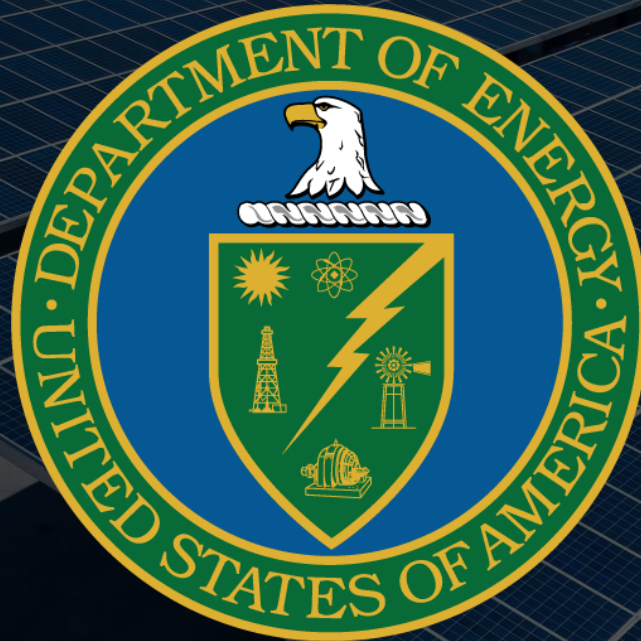
- Systems installed and approved 2023
- Wellness Center PTO & operation
- Casino system commissioned, inverters ready
  - PTO mid December
  - SolarEdge Beta Test Site for new Inverter size roll out
- Elder Homes completion
  - 10 PTO, balance pending utility inspection







# Thank you !!



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