

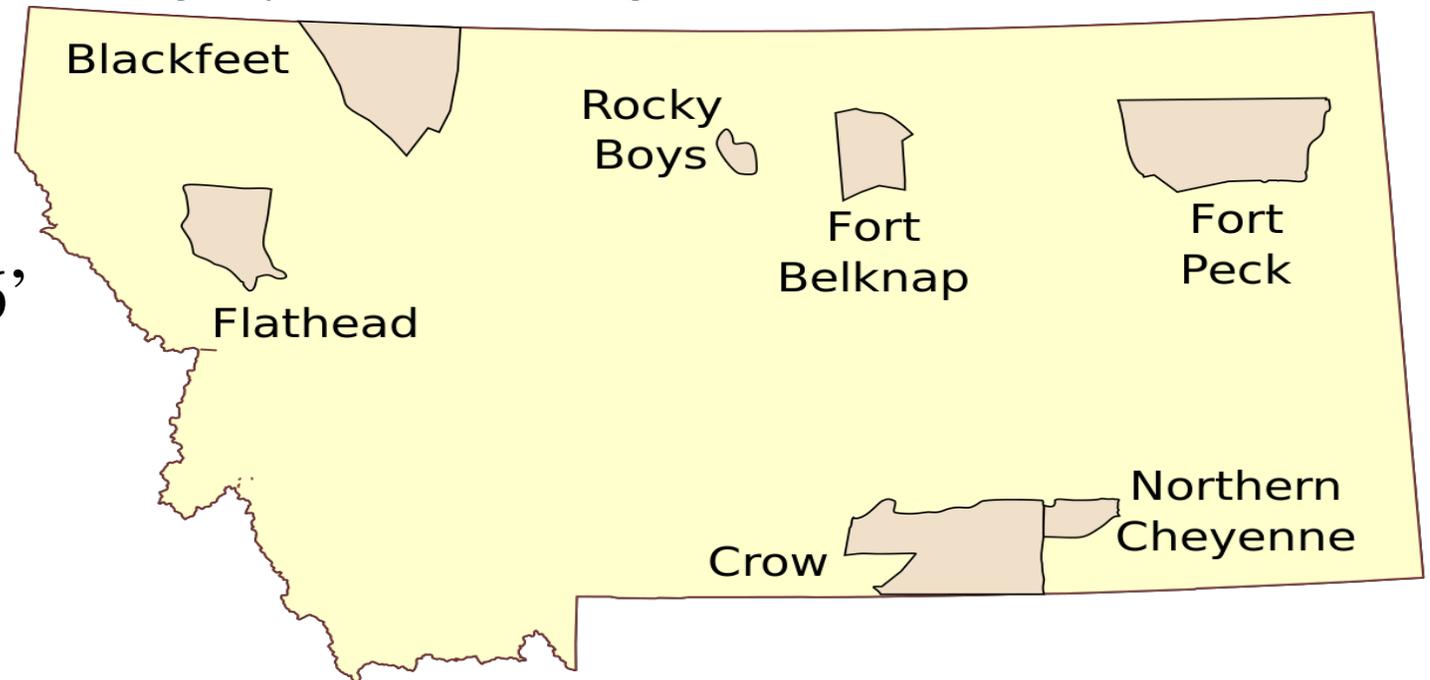
# Chippewa Cree Tribe of Rocky Boy, MT



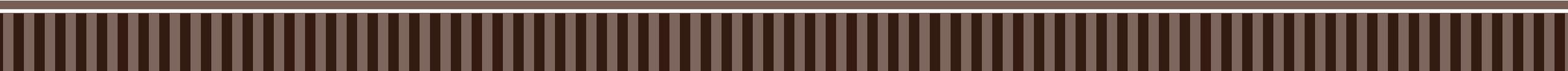
Residential Solar installation | Trevor Standing Rock

# Location

- 122K Acres of plains, hills, and mountains (Bear Paws)
- 6400 members with roughly 3800 living within the reservation boundaries
- Celebrated 100 Year in August 16'

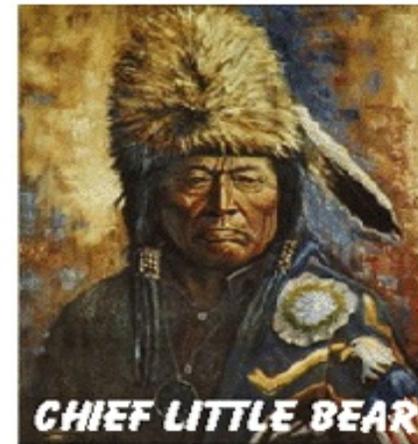
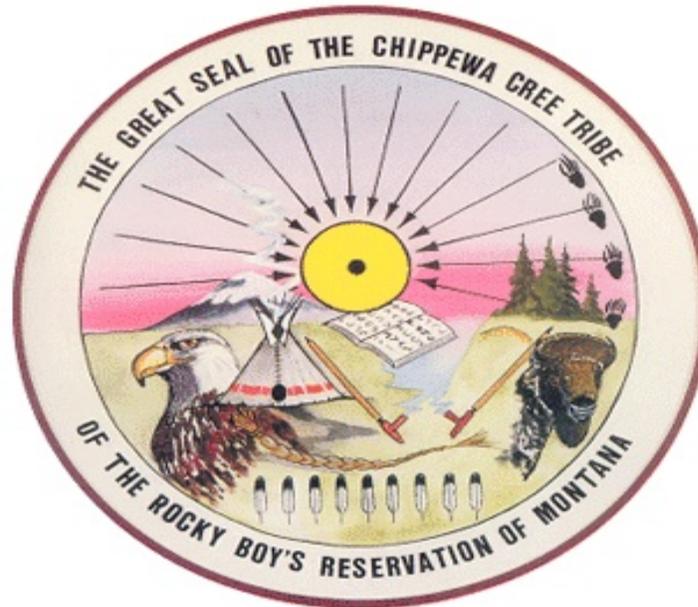
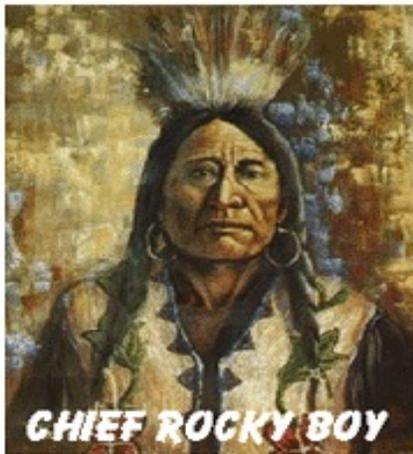






## Project Goals

- Introduce Solar PV as a viable means of sustainable energy development on the Rocky Boy Reservation
- Kick-off our commitment to long term strategic energy plan



# Chippewa Cree Tribe Deployment of Clean Energy Solar PV Project CHIPPEWA CREE/GRID ALTERNATIVES

## Project Summary

Through the Chippewa Cree Tribe Deployment of Clean Energy Solar PV Project, the Chippewa Cree will partner with non-profit solar installer GRID Alternatives to introduce a scalable model of solar PV to its reservation. The installation of the six solar PV systems on the Rocky Boy's Indian Reservation, will help fulfill the Chippewa Cree's strategic goals of long term sustainable development of its energy resources.



*Introducing Solar PV as a viable means of sustainable energy development on the Rocky Boy Reservation.*

## Key Personnel/Organizations

- Chippewa Cree Energy Corporation
- Stone Child College
- Chippewa Cree Housing Authority
- GRID Alternatives

## Budget and Timeline

Federal funds: \$63,435 Cost-share: \$ 63,436 Total: \$126,871

## Key Milestones & Deliverables

Year 1:	Install six 3.5 kW solar PV systems on three of the tribe's recently constructed duplexes.
Year 2:	Verify energy output and savings to use as justification for future renewable energy projects.

## Project Outcomes

Install six 3.5 kW grid-tied residential solar PV systems—21kW total—on three of the tribe's recently built duplexes constructed from highly energy efficient SIPs panels. It is estimated the project will produce 26,541 kWh/year or 283,988 kBtus/year and offset 27.3% of the current aggregate electrical usage, from 972,272 kWh/year. 10 Job Trainees will gain up to 80 hours of hands on, real world job experience in the solar PV field.

## Procedures

- Construction was in an area that had pre-existing Environmental Assessments and Cultural clearance
- Work with local utility company to be in compliance with their requirements.
- Ours was a net metering system
- Ran into difficulty with utility in the form of a 3K fee

## Description

- Installed six solar PV systems on income qualified residential units
- Houses also chosen based on existing energy efficiency
- Completed in October 16'

### Key Milestones & Deliverables

year 1:	Install six 3.5 kW solar PV systems on three of the tribe's recently constructed duplexes.
Year 2:	Verify energy output and savings to use as justification for future renewable energy projects.

## Monitoring Results

PV Watts Results for Box Elder, MT

*4.402 kWh/year*

*October 323 kWh*

Enphase Monitoring

Approximately 5kWh/year

October 317 kWh

Energy: Custom Range

Oct 1, 2017 - Oct 31, 2017



Energy Produced

Maximum Produced  
19.9 kWh

Total Produced  
317 kWh

13 Microinverters  
 1 Envoy Cellular  
 Big Sandy, MT  
 37°F  
 System Normal

Full System

Energy Status

Today  
**0 Wh**  
 Latest: 0 W

Past 7 Days  
**40.7 kWh**

Month To Date  
**46.5 kWh**

Lifetime  
**5.08 MWh**

Feedback



## Key personnel/Organization

- Chippewa Cree Tribe
- Grid Alternatives
- Chippewa Cree Housing Authority
- Stone Child College



**GRID**  
**ALTERNATIVES**



22 Tribal Members  
Trained

Cumulative 459 hours

7 Days of training  
provided totaling 50  
hours

## Budget/Costs

- **\$126,872 total award amount**
- **50% matching contribution for total of \$63,436**
- **Shared between Chippewa Cree Tribe and GRID Alternatives in form of equipment, in-kind, and cash contributions**
- **Tribe is looking at 8yr. ROI with a 25yr life of panels**











## Project Outcomes

- Reduce utility bills for income qualified residents
- Currently paying around \$2K per year with an anticipated \$500 yearly savings
- Provided training for local community members
- Stimulated community interest in renewables