



# WHITE RIVER COMMUNITY SOLAR ON THE NORTHERN CHEYENNE RESERVATION



2021 DOE OFFICE OF INDIAN ENERGY ANNUAL PROGRAM REVIEW







# NORTHERN CHEYENNE

TSITSISTAS AND SOOTEO

THE NORTHERN CHEYENNE TRIBE CONSISTS OF TSITSISTAS AND SO'TEO' PEOPLE. THERE IS OVER 11,000 ENROLLED MEMBERS AND OVER 5,000 RESIDE WITHIN THE RESERVATION'S 5 DISTRICTS. OUR LAND BASE TOTALS 444,000 ACRES WITH 99% OWNED BY THE TRIBE ITSELF OR INDIVIDUAL TRIBAL MEMBERS.

THE NORTHERN CHEYENNE PEOPLE VALUE OUR CONNECTION WITH THE CREATOR AND ALL LIFE. THOUGH MANY SUFFER FROM EXTREME LEVELS OF POVERTY, OUR PEOPLE HAVE CONTINUOUSLY REFUSED TO SELL OUR RESOURCES THAT DEFORM AND POISON MOTHER EARTH.





# OVERALL PROJECT OBJECTIVES

- LOWER THE COST OF ELECTRICITY FOR AS MANY TRIBAL MEMBERS AS POSSIBLE
  - TRAINING AND JOBS FOR TRIBAL EMPLOYEES
  - CREATE REVENUE STREAM TO FUND FUTURE PROJECTS
- LEARN AND MANEUVER FEDERAL, STATE, AND TRIBAL ENERGY REGULATIONS
- DEVELOP CAPACITY TO PLAN, DEVELOP, AND MANAGE RENEWABLE ENERGY ASSETS





# DOE White River Community Solar PROJECT OVERVIEW

## **1 MW GROUND MOUNTED SOLAR ARRAY**

POWER SOLD BACK TO THE LOCAL UTILITY

REVENUE WILL BE USED TO SUPPORT O&M

## **1x 100kW AND (2) 25kW SOLAR ARRAYS BEHIND THE METER OF THREE TRIBAL BUILDINGS**

BUSBY TRIBAL SCHOOL - 100 kW

NORTHERN CHEYENNE HEAD START - 25 kW

BUSBY WATER PUMP HOUSE - 25 kW

PART OF SAVINGS DIRECTED TO O&M AND FUNDING NEW SYSTEMS

## **15 x 10 kW RESIDENTIAL SYSTEMS**

LAUNCHING CHEYENNE SOLAR PROGRAM BY TRIBE

THE FIRST FIFTEEN SOLAR SYSTEMS WILL GO TO NORTHERN CHEYENNE ELDERS

SHARED SAVINGS - 50% TO PROGRAM PARTICIPANT AND 50% DIRECTED TO O&M AND FUNDING NEW PROJECTS





# PROGRESS TO-DATE 2021

## ❖ PROJECT AMENDMENTS

- SOPO AND BUDGET MODIFICATIONS NEAR COMPLETE, ADDING TRAINING AND RESIDENTIAL SOLAR ASPECTS
  - ADDING 15+ GROUND MOUNT RESIDENTIAL PROJECTS BEHIND THE METER INCREASING BENEFIT TO THE COMMUNITY AND PROJECT REVENUES
  - REVENUE SHARING PROGRAM WILL SUPPORT O&M AND ALSO FUND FUTURE PROJECTS
  - NEW APPROACH DOES NOT REQUIRE OUTSIDE DEVELOPER OR FINANCING
- REVISED PROJECT TEAM TO INCLUDE INDIGENIZED ENERGY INITIATIVE

- ❖ WITH SEPARATE FUNDING, TRAINING PROGRAM DEVELOPED THROUGH PILOT PROJECT (JULY 2021) IN PARTNERSHIP WITH INDIGENIZED ENERGY INITIATIVE





# Project Progress 2021

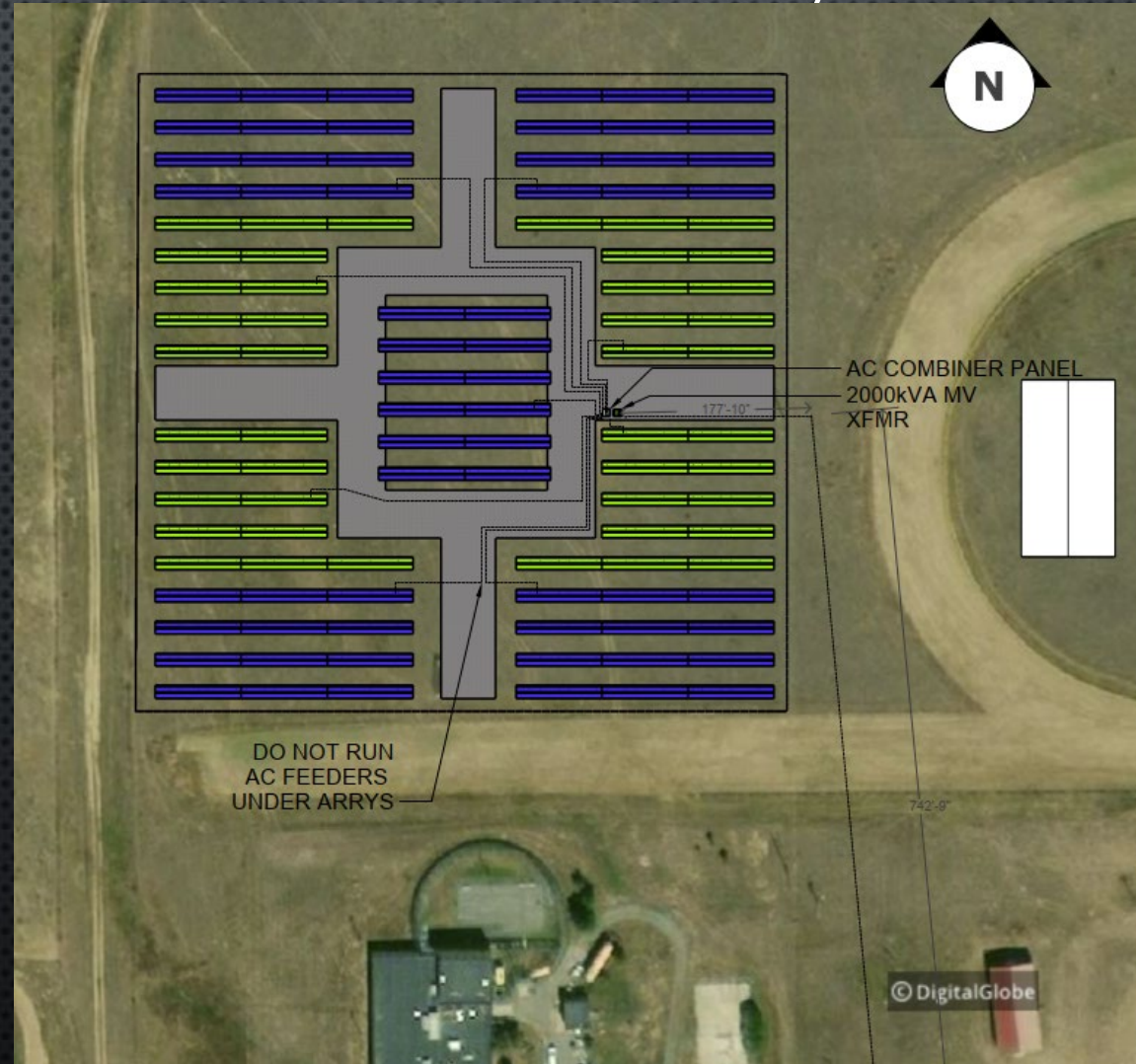
- 1 MW PREVIOUSLY 2.5 MW
  - INTERCONNECTION AGREEMENT SUBMITTED
    - STUDY RETURNED WITH A REQUIREMENT TO PAY FOR \$500,000 IN DISTRIBUTION SYSTEM UPGRADES IF WE WANT TO DO THE WHITE RIVER COMMUNITY SOLAR PROJECT
  - PPA AT \$26.5/MWh OFFERED BY BASIN
  - RE-DESIGNED TO FORM MORNINGSTAR
- 3 BEHIND THE METER PROJECTS (NC TRIBE FACILITIES)
  - SIZED TO BE UNDER TRECO 100 kW LIMIT FOR SMALL GENERATION / OR FOR NO-BACK FEED
  - PROPOSING SHARED SAVINGS BY TRIBE
  - SYSTEMS DESIGNED FOR COST ESTIMATING AND BIDDING
- 10 kW RESIDENTIAL
  - SOLAR PROGRAM LAUNCH AND SHARED SAVINGS - PRESENTED TO AND SUPPORTED BY TRIBAL COUNCIL
  - WILL USE TRECO RESIDENTIAL NET-METERING POLICY
  - PILOT PROJECT COMPLETED THROUGH SEPARATE FUNDING
  - PROGRAM TO IDENTIFY PARTICIPANTS DESIGNED AND RUNNING (67 APPLICATIONS)
  - SPE FORMATION (INDIGENOUS POWER AND LIGHT) IN PROGRESS TO MANAGE SYSTEM REVENUE, O&M, AND FUND FUTURE PROJECTS





# Proposed Layout

## BUSBY A.K.A. WHITE RIVER - 1 MW Ground Mounted Solar Array







# PROPOSED LAYOUT

## 3 BEHIND THE METER OF THREE TRIBAL BUILDINGS







# Typical Residential System

10kW TO MAX OUT TRECO NET-METER PROGRAM







# Building a Solar Workforce

## INTEGRATED TRAINING PROGRAM

- WILL USE RESIDENTIAL PROJECTS AS APPRENTICESHIP OPPORTUNITY
- CLASSROOM TRAINING WILL FOLLOW FOR SELECTED TRAINEES
- LARGER PROJECTS WILL FOLLOW AS WORKFORCE BUILDS
- MORNINGSTAR ARRAY WILL INCLUDE WORKERS FROM OTHER TRIBES IN REGION







# PROJECT PARTICIPANTS

TRIBAL PRESIDENT

TRIBAL COUNCIL

SUSTAINABLE ENERGY COMMITTEE

RENEWABLE ENERGY MANAGER

NCT ATTORNEYS

INDIGENIZED ENERGY INITIATIVE

PROTOGEN

KILONEWTON – RENEWABLE ENERGY CONSULTANT

ECO CHEYENNE

CHIEF DULL KNIFE COLLEGE





# THE FUTURE

WIND AND SOLAR TRAINING

WEATHERIZATION

MICROGRID

COMMUNITY/RESIDENTIAL/UTILITY SCALE PROJECTS

TRIBAL UTILITY FORMATION

ENERGY INDEPENDENCE





# CONTACT INFORMATION

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