



Southern Ute Community-Scale Solar Project

James Jensen

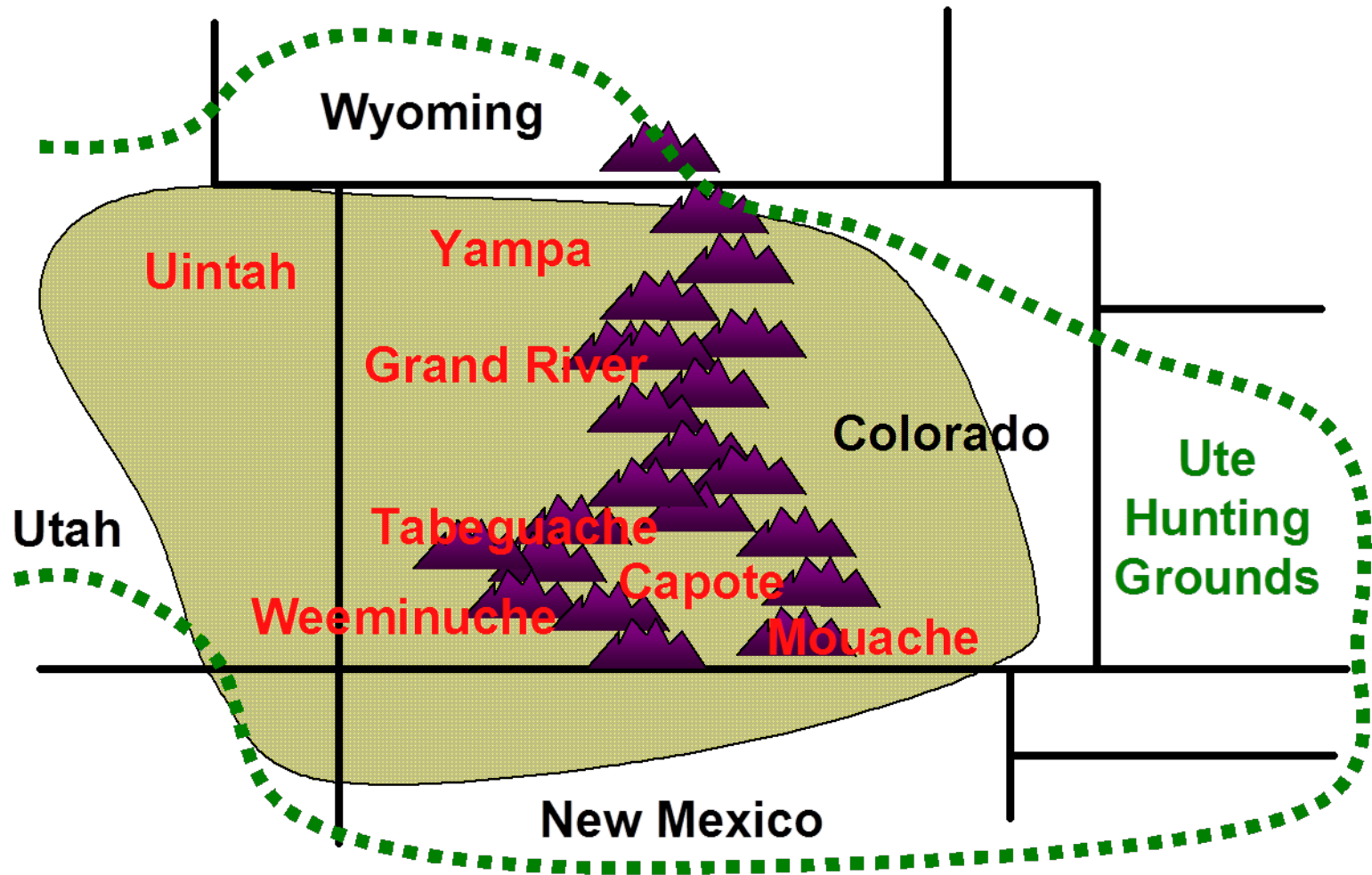
2014 Tribal Energy Program Review

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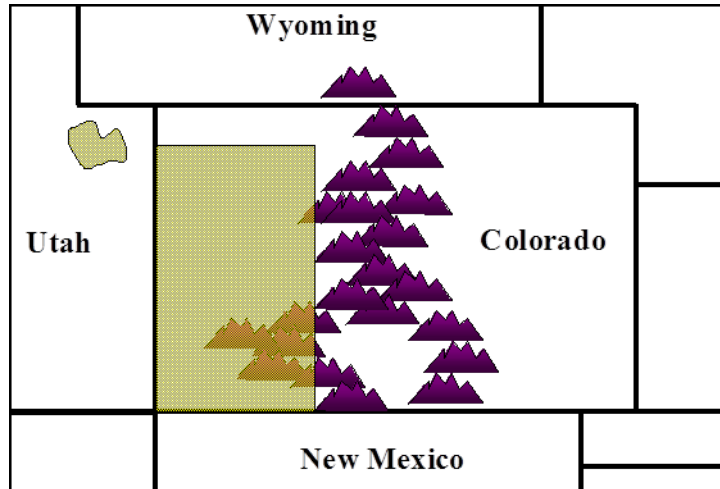
Ute History

Pre-1868 “Traditional Lands”

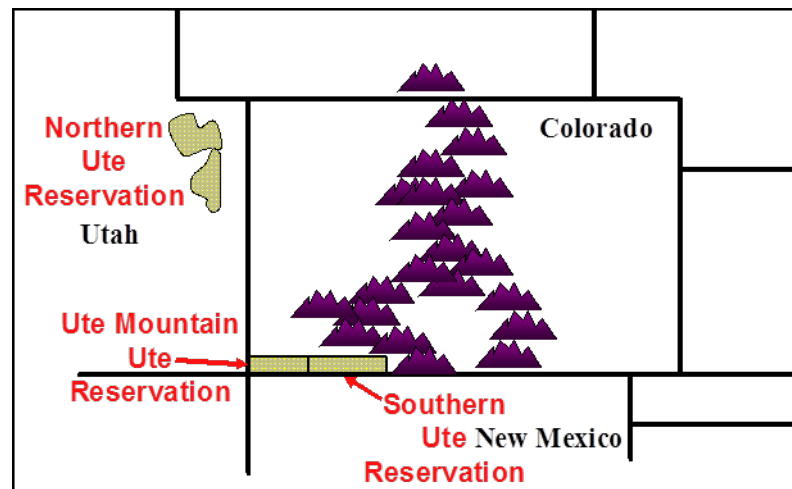
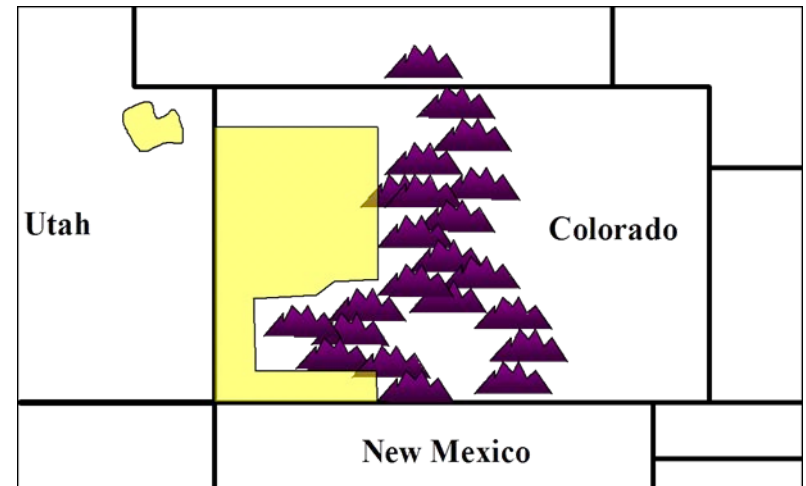


Ute History

Original Ute Reservation
in 1868



The Ute Reservation after the
Brunot Cession in 1873

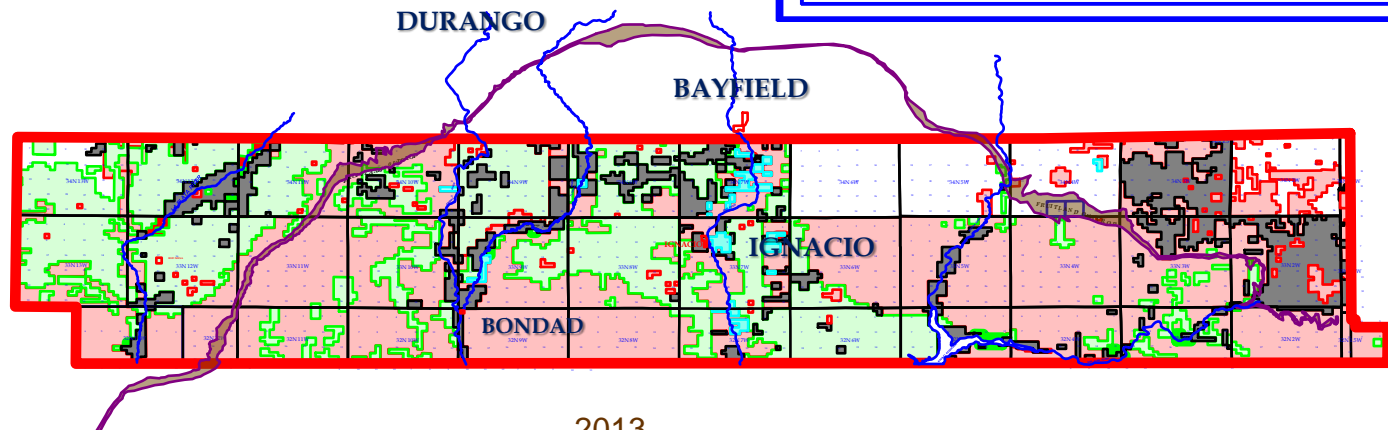
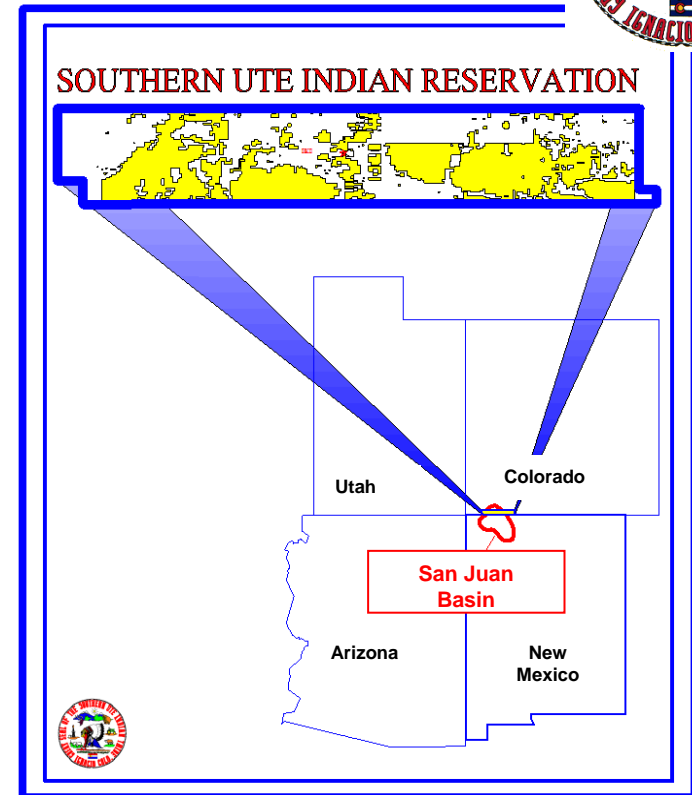


Ute Reservations Today

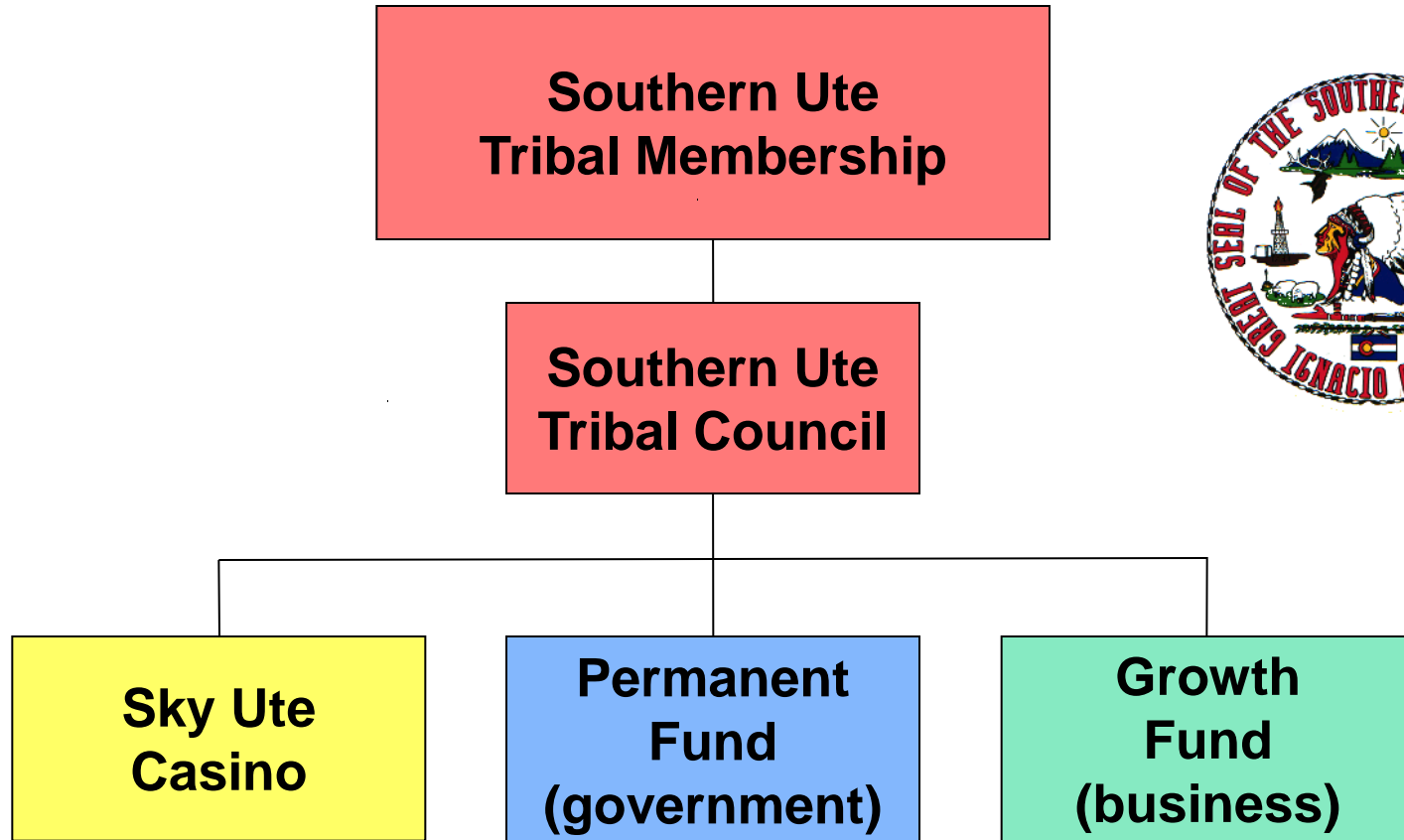
Southern Ute Statistics Today



- **Tribal Members:** 1,400+
- **Reservation:** 313,070 acres exterior: 681,306 acres
- **Unemployment:** 5-7%
- **Employment:** The Tribe is the largest employer in La Plata County with more than 1,300 employees.



Southern Ute Indian Tribe Organization



Growth Fund Companies

Energy

- Red Willow Production Co.
- Red Cedar Gathering Co.
- Aka Energy Group, LLC
- Southern Ute Alternative Energy, LLC

GF Real Estate Group

- Regional Division - Tierra Group, LLC
- National Division - GF Properties Group, LLC

Investment



- GF Private Equity Group, LLC

Tribal Departments

- Department of Energy
- Southern Ute Utilities Division
- Sky Ute Fairgrounds



Southern Ute Alternative Energy

- Southern Ute Alternative Energy is the Tribe's newest energy company. It was formed in early 2008 to invest in alternative and renewable energy.
 - Funds
 - Operating Companies
- Alternative Energy's objective is to focus on opportunities with
 - positive environmental impact
 - sound technologies
 - sound economics
- Primary areas of focus include:  Solar  Wind
- Alternative Energy is a for-profit business owned by the Tribe and designated to manage the DOE solar project for the Tribe.

Southern Ute Indian Tribe

2. Solar Project Overview

Solar Project Overview

- 800-1,000kW ground mount PV project
- Interconnection at an underutilized substation
- Electricity generated offsets consumption at Tribal Buildings (Similar to a Solar Garden)
- \$3M budget including \$1.5M award from TEP/EERE - Community-Scale Clean Energy Projects in Indian Country



Proposed Solar Project Location

Durango



Oxford Tract



Ignacio



SUIT Reservation Boundary



Proposed Solar Project Location



Solar Project Objectives

- Offset at least 15% of the fuel usage at the selected buildings
- Reduce energy costs for the Southern Ute Indian Tribe
- Increase Tribal energy security and build capacity of the Tribe to develop additional clean energy projects
- Improve sustainability and increase economic and environmental benefits to the Tribe through the development of a clean-energy operating business.



Solar Project Participants



- Southern Ute Indian Tribe
 - Southern Ute Growth Fund (Southern Ute Alternative Energy)
 - Lands Division
 - Environmental Programs
 - Water Resources
 - Facilities & others
- US Department of Energy
 - Tribal Energy Program
 - Office of Indian Energy-START
 - NREL
- La Plata Electric Association
- EPC Contractor and various Subcontractors (tbd)

Southern Ute Indian Tribe

3. Pre-Grant Development

Solar Feasibility Study

SUAE conducted a broad study of solar energy options on the Reservation (2012-2013)

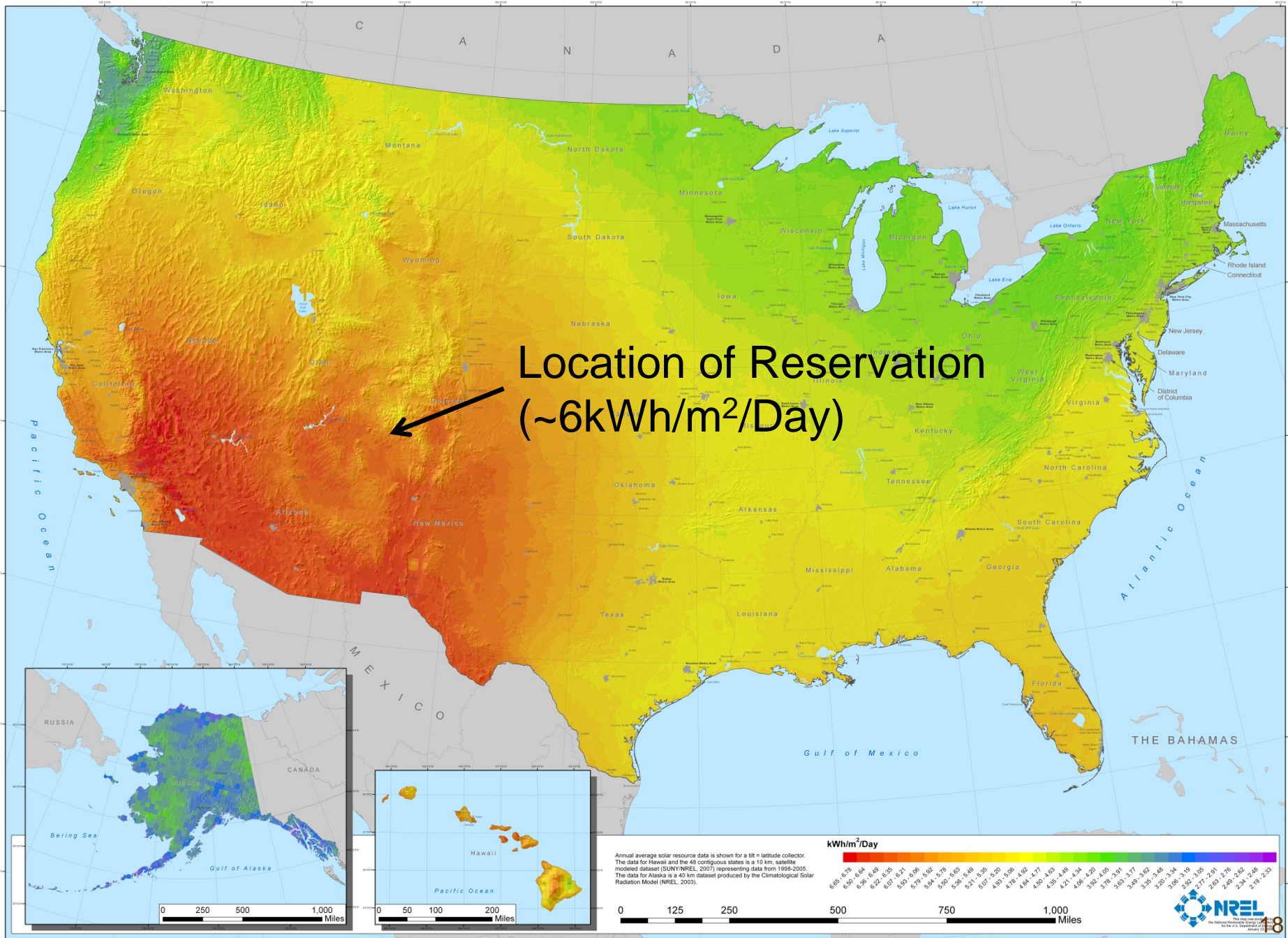
- **Goals**
 - Identify Lands and Buildings best suited for solar PV projects
 - Identify if Utility and/or Commercial scale solar is currently viable on the Reservation
 - Identify needed conditions for economically viable projects
- **High level analysis of solar energy opportunity within Reservation boundaries**
 - Utility Scale – wholesale energy, ground mount, greater than 1MW
 - Commercial Scale – net metered, roof mount, less than 1MW
- **Solar photovoltaic (PV) technology**
 - Low Technology Risk
 - Rapid Price Decline
 - Widely Deployed

Solar Feasibility Study

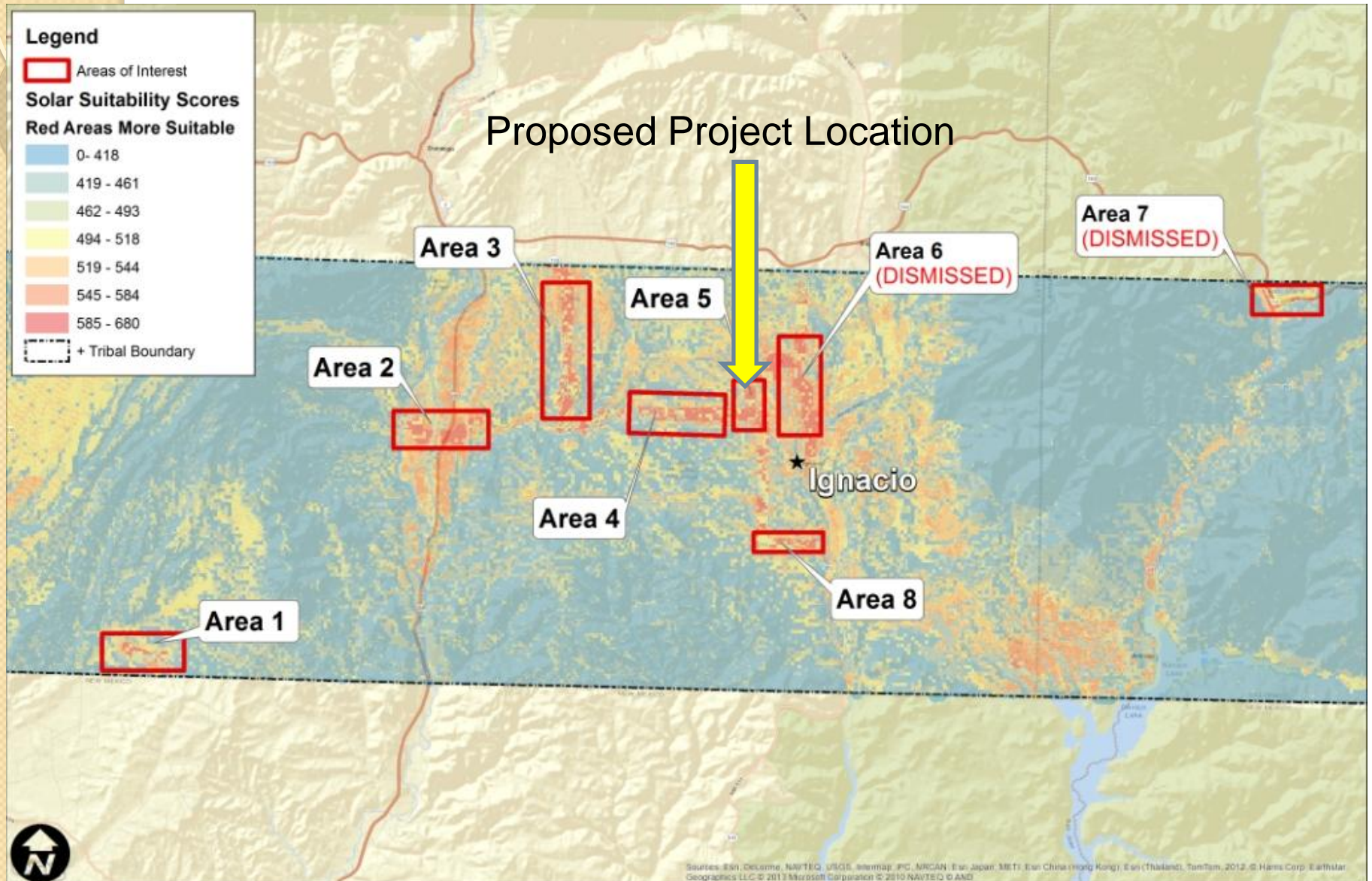
Identified most suitable areas for utility scale solar

- Utilized site based parameters that impact energy generation, development cost and/or development risk
 - Proximity to transmission infrastructure
 - Proximity to roads
 - Topography (slope, aspect and flood plains)
 - Solar resource
 - Land Ownership
 - Habitat for threatened and/or endangered species
 - Others
- Utilized GIS data and developed parameter weighted scoring methodology to compare sites (Solar Suitability Score)
- Collected data and mapped all Reservation lands
- Selected 8 most promising areas

United States Photovoltaic Solar Resource : Flat Plate Tilted at Latitude



GIS Based Solar Suitability



Solar Feasibility Study Results

- Reservation has good locations and resource for utility-scale projects
 - Oxford Tract is the highest rated
- Utility-scale solar is not currently viable if energy sold locally
 - Tri-State offered \$52/MWh in 2013 for solar energy from Bodo Canyon project
- Continue to evaluate options to sell energy
 - Distant markets (Phoenix, Las Vegas) have higher prices but not viable due to other issues
 - Potential projects closer than our location
 - Transmission capacities and costs to distant markets are unknown
 - “Solar Garden” model a hybrid of utility and commercial models

Southern Ute Indian Tribe

5. Post-Award Progress & Next Steps

Progress-Post Award Notification

- Ongoing Negotiation of Grant (Received a Pre-Award Cost Letter)
- DOE has made the NEPA determination (Categorical Exclusion)
- Ongoing finalization of site location
 - Coordinating with neighboring facilities
 - Started preparation for biological assessment and archeological survey (Tribal Requirements)
 - Communicated with nearby land owners
- Finalized selection of buildings to receive energy



Next Steps

- Finalize Grant Agreement (soon)
- Complete Tribal Land Dedication (Early Summer 2014)
- Issue RFP for EPC (Summer 2014)
- Select EPC (Fall 2014)
- Complete Interconnection Agreement (Spring 2015)
- Finalize Design (Late Spring 2015)
- Construction (Summer 2015)
- Commercial Operation (Late Summer 2015)
 - O&M contracted initially, then transitioning to Tribal Operation

Southern Ute Indian Tribe

Questions?

James Jensen
jjensen@sugf.com
(970) 764-6704