

Pascua Yaqui Tribe Renewable Energy Development and Deployment Feasibility Study 2012



Pascua Yaqui Tribe



- The Pascua Yaqui Tribe has a total enrollment of approximately 18,000.
- A small reservation with 4,000 residents is located in SW Tucson, Arizona. Many members reside in several recognized communities in the Tucson and Phoenix area.

History

Ancestral Yaquis resided in Sonora, Mexico. Hundreds of years of transmigration established permanent communities throughout Southern Arizona.



History

- In 1964 the Pascua Yaqui Tribe received a deed for 202 acres from the Federal government.



History

- In 1978, the Pascua Yaqui Tribe of Arizona became federally recognized and in 1994 the designation was finally converted to that of a historical tribe. Today, Pascua Pueblo consists of 1,820 acres of trust land with an additional 436.18 acres of fee land surrounding the reservation.
- The Tribe also owns Tortuga Ranch, fee land of 6,455.59 acres west of Tucson.

Location

The Pascua Yaqui Reservation is located on the outskirts of Tucson in Southern Arizona.



Vicinity Map



Tribal Lands



Facilities

- Residential
- Government offices
- Casino del Sol: 2 casinos, a hotel, amphitheater & conference center
- Gas Station/mini mart
- A golf course is under construction.

Enterprises

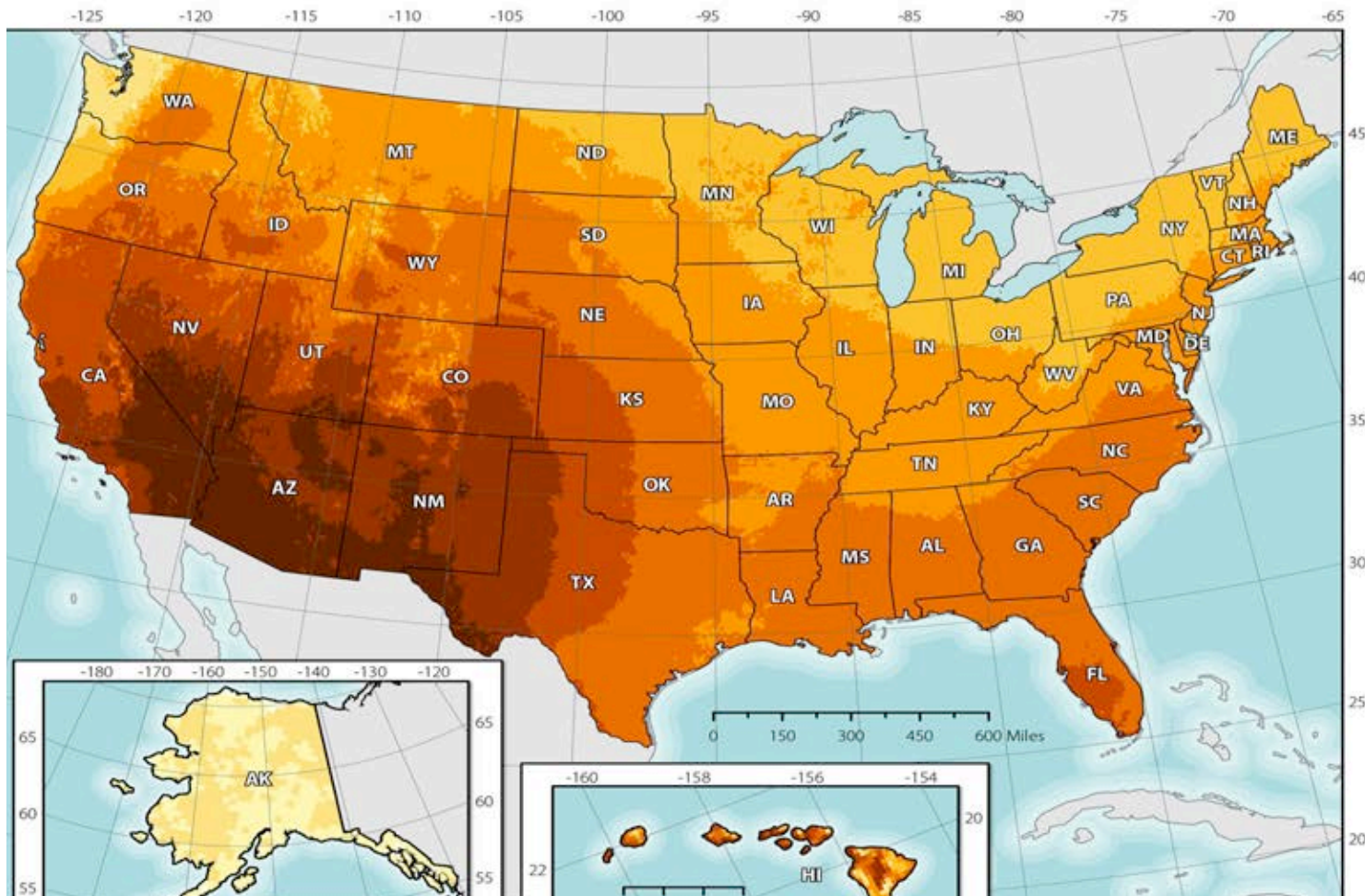


Enterprises

Sewailo Golf Course
under construction



Photovoltaic Solar Resource of the United States



Solar Potential

- Solar data indicates that PYT tribal lands are located within an area of very high solar insolation levels.
- Solar maps show outstanding potential for photovoltaic (PV) and concentrating solar power.

Solar Potential

A mosaic-style illustration of a man with a mustache, wearing a white patterned shirt and a purple dhoti, playing a stringed instrument. He is surrounded by a dense field of colorful flowers, including red, yellow, and pink roses, and a blue hummingbird is perched on a branch to the right. The background is a dark, textured mosaic.

- Average daily concentrating solar radiation is within a range of 6-8.3 kWh/m²/day and the average solar radiation for PV is within the range of 6-8 kWh/m²day.

Pascua Yaqui Strategic Economic Development Plan

“The Tribe will achieve economic self-sufficiency and financial prosperity through the diversification of their economy, which includes the pursuit of new business opportunities and partnerships...”



Solar Projects



Solar Projects

PASCUA YAQUI TRIBE HEADSTART PRESCHOOL

SOLAR POWERED SINCE AUGUST 2010

SYSTEM DONATED BY TRICO ELECTRIC COOPERATIVE

THROUGH ITS PV FOR SCHOOLS PROGRAM

SYSTEM INSTALLED BY SPG SOLAR

DOE Energy Efficiency

- Energy Efficiency ARRA grant
- Government buildings
- Currently in final phases



DOE START 2012

- This TA grant will assist the Tribe in evaluating the most advantageous way to proceed with installation of solar PV on the 4th floor of the Casino Parking lot.



Solar Projects

The background image shows a desert landscape. In the foreground, there is a large, green, flat-topped cactus. The middle ground is filled with various green trees and shrubs. In the background, a large, dark mountain range stretches across the horizon under a clear sky.

- 2009 Solar Feasibility Study identified potential for PV:
 - Tortuga Ranch
 - Government buildings

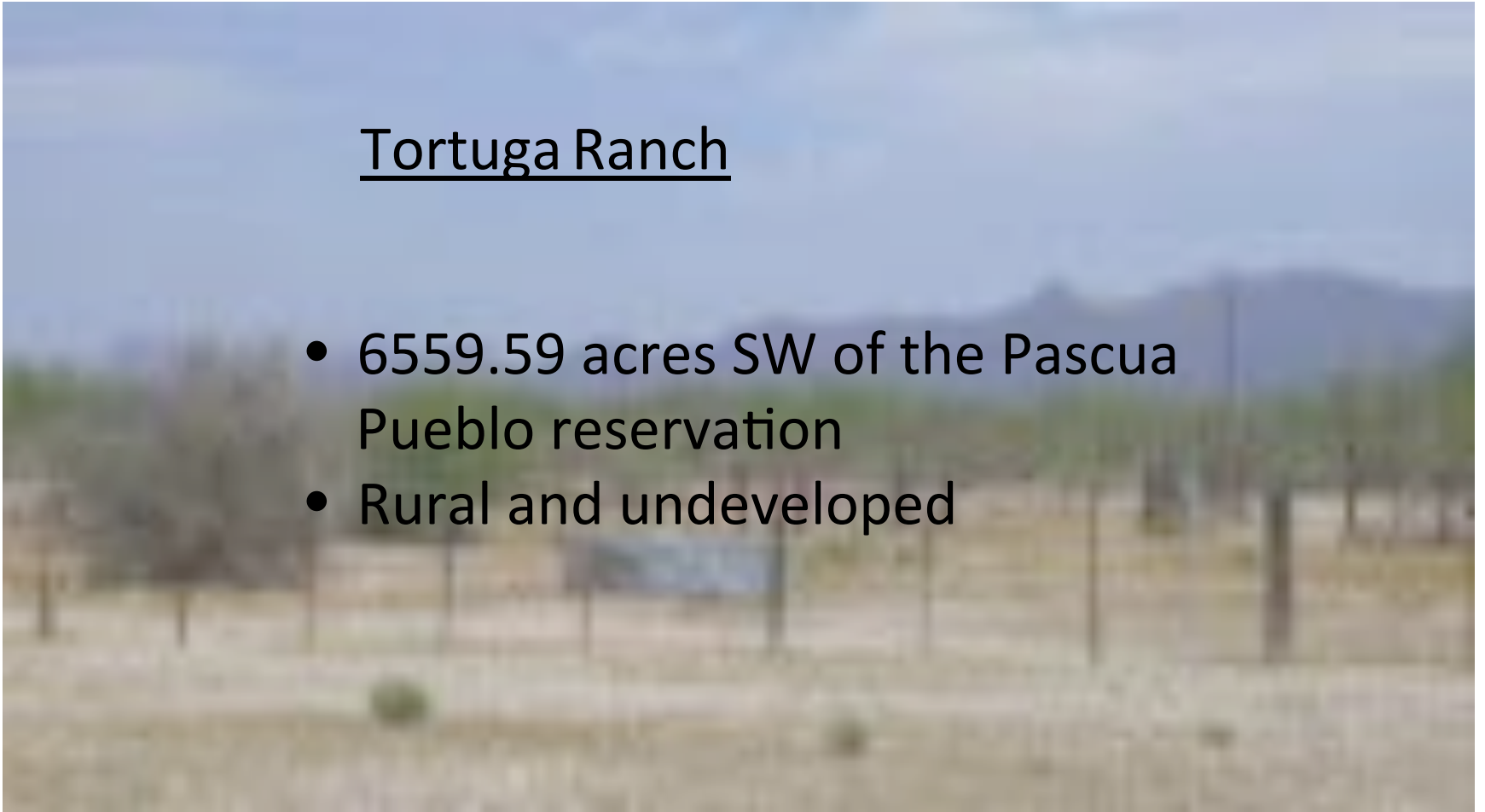
Solar Feasibility

- Southern Arizona provides over 300 days of sunshine every year.
- This Study will look at the potential for using solar energy to offset power usage and for selling back to local utility.

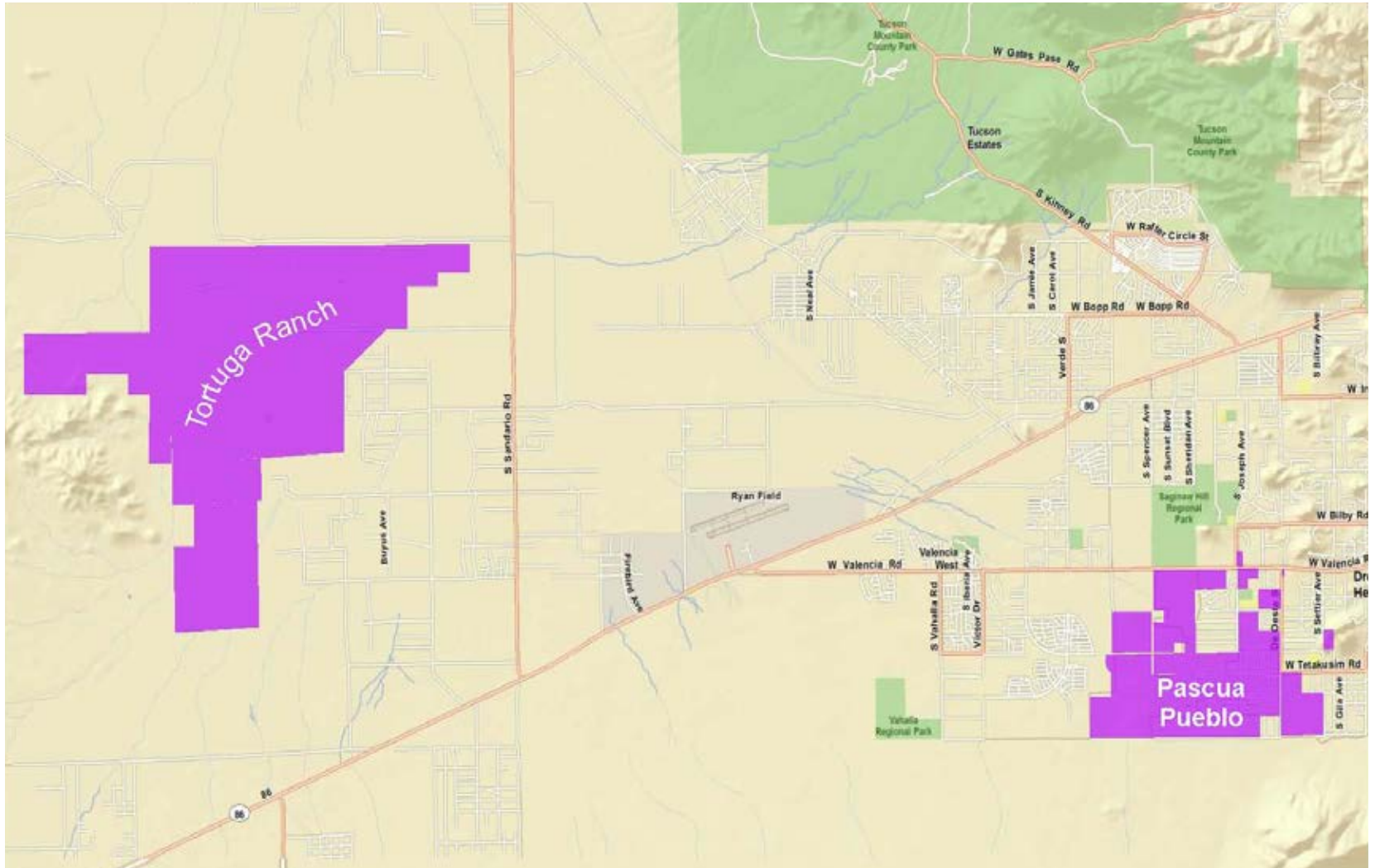
Potential projects

Tortuga Ranch

- 6559.59 acres SW of the Pascua Pueblo reservation
- Rural and undeveloped



Tortuga Ranch



Government Buildings

- Potential for installation on site



Problems or Questions

- What will be the best physical location to utilize the energy?
- What will be the most financially advantageous route to construct the facility, (collaboration, tribally financed, leased)?
- What would be the best use of the energy produced? (selling back to the utility service or using to offset energy costs).

Progress to Date

- We have issued an RFP and are currently receiving proposals. We are seeking a consulting agency to proceed with our solar feasibility study.



Next Steps

- Initiation and completion of Development and Deployment Feasibility Study
- Partnerships
- Funding: grants or tribal resources