

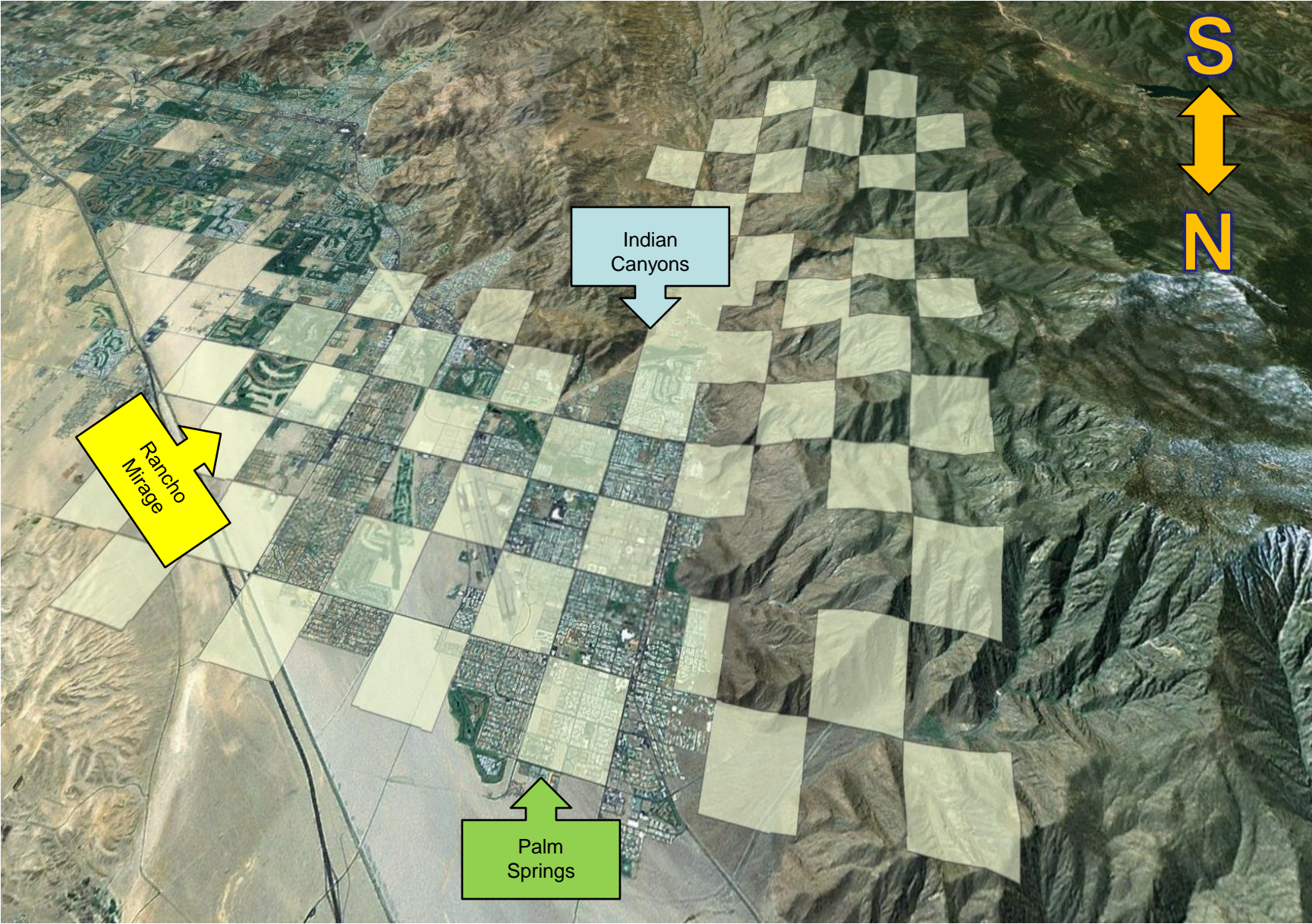


Solar/Wind Feasibility Study at Whitewater Ranch

Agua Caliente Band of Cahuilla Indians

- Tribal ancestors resided in the area surrounding the San Jacinto Mountains in the Southern California region for centuries.
- The Agua Caliente Reservation (approximately 32,000 acres) was deeded in trust by Federal Order in 1876 to the Agua Caliente Tribe.
- The Tribe was deeded the even numbered sections as the odd numbered sections were deeded to Southern Pacific Railroad in 1860; Creating a checkerboard reservation configuration.
- Portions of the cities of Palm Springs, Cathedral City and Rancho Mirage lie within the Agua Caliente Indian Reservation.

Agua Caliente Indian Reservation



Project Overview

- With prior DOE support the Tribe developed a Strategic Energy Plan in 2006; assessed the feasibility of solar energy at various locations on the reservation in 2009; which has led to the current feasibility study to combine wind and solar for a proposed 10 MW project at Whitewater Ranch
- The Whitewater Ranch property possesses both strong insolation and excellent wind class resources, making the property an ideal location for a combined solar/wind project.

Project Location

- Whitewater Ranch is an ideal location for a combined wind/solar project.
- The 217 acre property is the western gateway of the Coachella Valley
- The San Geronio pass is already a prime location for wind turbines



Project Objectives

A scenic landscape featuring a river flowing through a valley. In the background, there are rolling hills and mountains under a clear sky. A dam is visible in the distance, with water cascading over it. The foreground is dominated by tall, golden-brown grasses and some rocky patches.

- Thoroughly assess the wind/solar potential at the site with the intention of completing a 10 MW project.
- Based upon site assessment; determine the pertinent technology options.
- Select the optimal wind/solar technologies and develop viable project options.
- Develop detailed economic models for the projects identified with a goal of creating project-ready plans for wind/solar renewable financing and implementation.

Project Partners

- Tribal staff worked with Red Mountain Energy Partners throughout the prior solar feasibility study and has continued work with Red Mountain throughout the current solar/wind feasibility process.



Project Status

MET Tower Install

- Karbon Zero installed the 60 meter NRG XHD MET tower on August 23rd, 2013.
- As expected, the site has excellent wind resource based on the MET tower data.
- Third party developers have shown renewed interest in negotiations for development of wind resources.



Project Status

- During study period, two groups have engaged the Tribe regarding interconnection analysis through SCE Re-Mat program.
- Growth of the renewable market/industry in the Coachella Valley improves opportunities with local agencies.
- Robust solar resources adds value and strengthens the Tribes opportunity to develop uses on-site
- Transmission/Interconnection at the site is a concern, but we continue to seek out solutions through various local utility programs in addition to PPA options within our immediate vicinity.

Solar Technology



Heritage Plaza Project

Tribal Transportation Funds for the project will cover reconstruction of the parking lot including:

- All parking area landscaping will be removed and replaced with desert friendly, low-water use plants
- A combination of Blue Palo Verde and Honey Mesquite trees, Washingtonia filifera and carport shade structures will replace the Ficus trees and their large, pavement damaging root systems
- New water efficient landscape irrigation and lighting systems
- New energy efficient parking lot lighting



Heritage Plaza Project

The DOE grant allows the Tribe to:

- Install a 76.9kW solar system on the two southern carport shade structures being installed as part of the Project.
- The solar system will offset 99% of the energy used by Tribal Education Services and Tribal Programs, reducing the combined electric bill for these uses from approximately \$22,000 annually to about \$200.
- Payback on the solar system would occur in as little as five years, and is expected to save the Tribe an additional \$500,000 over the remaining 15 years of the 20-year minimum lifespan of the system.
- Construction will begin this summer.



Other Project Activities

- **Western Area Power Administration (WAPA)** – The Tribe currently receives a 1MW annual allocation of power from the Parker/Davis Hydroelectric Dams. As part of the agreement with WAPA, the Tribe will receive this power allocation for the next 14 years. The Tribe recently received notification of an additional 1MW allocation from the Bolder Canyon Project.
- **Water and Energy Resource Authority (WERA)** - The goal of this entity is to manage ongoing water and energy resources in a more efficient manner. WERA has proven to be a useful coordinating entity for all Tribal energy and water related issues.
- **Desert Cities Energy Partnership (DCEP)** – The Agua Caliente Tribe continues to play a vital role in energy efficiency, conservation and renewable energy development within the Coachella Valley.

A member of the WERA committee represents the Tribe on DCEP, a partnership representing the Tribe and other local municipalities, which guides policy on energy efficiency throughout the Coachella Valley.

QUESTIONS?

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