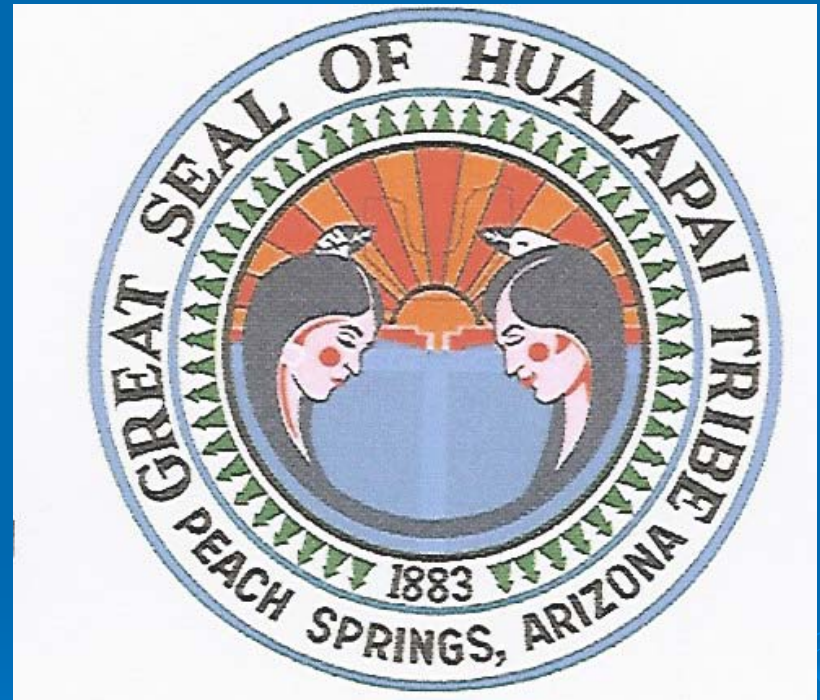# Hualapai
Tribal Utility Project

DOE First Steps Program

Jack Ehrhardt -

Hualapai Planning Director

WHO WE ARE

- ~1 MILLION ACRES IN NW ARIZONA
- 108 MILES OF THE GRAND CANYON
- 2500 Members
- Peach Springs Community
- ~240 electric customers

GREAT SEAL OF HUALAPAI TRIBE
PEACH SPRINGS, ARIZONA
1883

ECONOMIC SITUATION

- Very Rural- Little opportunity for commercial development
- Route 66 passes through Peach Springs
- River Runners Tourism Enterprise
- Hualapai Lodge
- Grand Canyon West Tourism Enterprise
- Hunting and Fishing
- Timber

Energy Situation

➢ Mohave Electric Serves Hualapai

➢ 75-mile Powerline to Havasupai - BIA

➢ No Power at Grand Canyon West

➢ No Power to most of Reservation

➢ WAPA Allocation Sold to NTUA

➢ Electric Load ~ 800 kilowatts

➢ Energy Resources:

- Solar
- Wind

Energy Projects

➢ Earthship - Natural Resources Office
  - Passive Solar
  - Photovoltaics
  - Water Conservation

Solar Water Pipeline

- Water for Grand Canyon West
- 26 Miles
- Upgrade Underway

Guano Point

➤ 2.5 kilowatts for lights, appliances, and evap cooling

Energy Projects

- USDA-RUS High Energy Cost Rural Communities
  - Grand Canyon West Power Project
- BIA Mineral Assessment Program
  - Wind Assessment
- DOE First Steps Toward Renewables Development on Tribal Lands
  - Tribal Utility Feasibility Study

GCW Power Project

- $2 Million Grant - Rural Utilities Service
- 12 kV underground power distribution system
- Solar Hybrid Power Plant
  - Photovoltaics or Thermal
  - Bio-diesel Backup
  - Wind
- RFP for Design-Build is out - due 10-25

BIA Wind Assessment

- DOE 20-meter tower at Peach Springs
  - Community Power Project
  - Low Class 3
- BIA 50-meter assessments
  - Peach Springs - Community Power - 2-5 MW
  - Blue Mountain - Wind Farm 5-10 MW
  - Grand Canyon West - Integration with Solar Hybrid system
  - Wind Energy Marketing to Arizona Power Authority, State Facilities, WAPA, APS, Others

Tribal Utility

➢ DOE First Steps

- Feasibility of Tribal utility to operate power system at Grand Canyon West

- Feasibility of tribal take-over of Reservation utility system

Grand Canyon West

- Currently 150,00 tourists annually
- 9000 acre development
- No Overnight accommodations
- Diesel Gensets

GCW Power Project

- 5 miles of 12kV Underground Distribution Mini-grid

- Solar Hybrid Power System
  - PV or Thermal
  - Wind
  - Bio Diesel
  - Hydrogen

GRAND CANYON WEST 70   MASTER PLAN
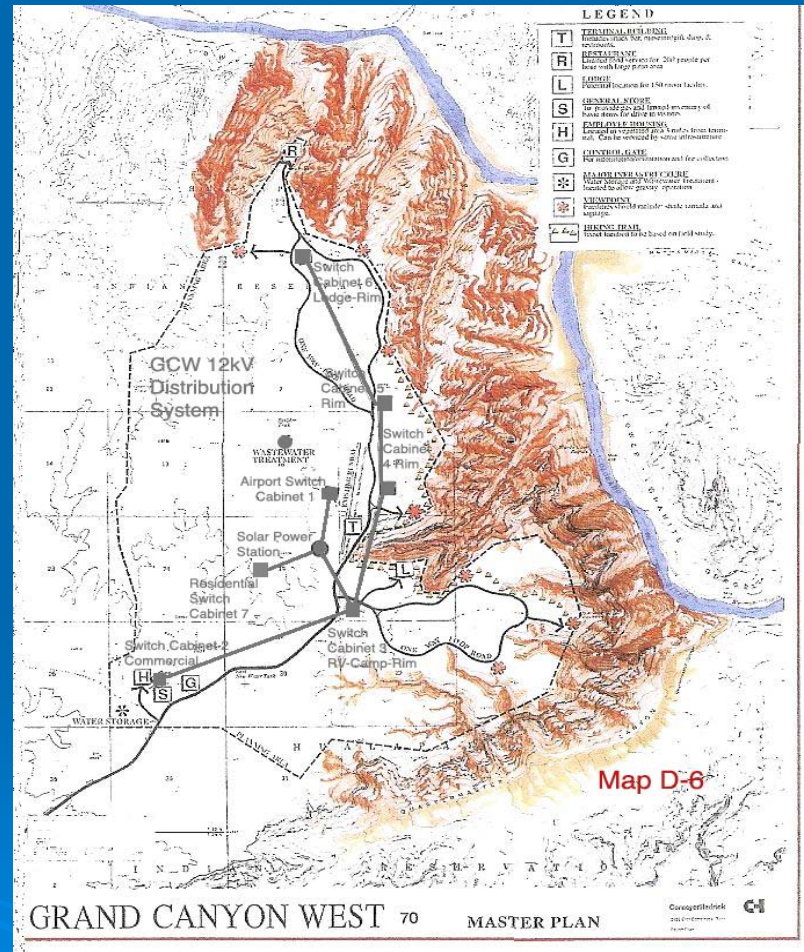
Tribal Utility GCW

- Feasibility Study
  - Organizational Options
  - Operate and Maintain GCW Power System
  - Sell Power to Grand Canyon Resort Corporation
  - Provide expansion
  - Showcase advanced renewables technology in a pristine international setting
- Implementation Plan

System Takeover

➢ Feasibility study for take over of Reservation electric service
- System condition and value study
  - Relation to Havasupai
- Power Resources
  - WAPA Allocation
  - Purchase Power
  - Wind
- Organizational Options
- Rates and Policies
- Implementation Plan

Project Team

➢ Jack Ehrhardt - Infrastructure planning

➢ Leonard Gold - Utility Options and Rates

➢ Ken Saline - Local Utility Interface

➢ Dean Suagee - Culture and Sustainability

➢ Mark Randall - GCW Coordination

➢ Tribal Environmental Review Commission - Oversight