# Santo Domingo Tribe's Solar PV System

- Cynthia Naha & Steven Pajarito
- Natural Resources & Tribal Utility Departments
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# Project Overview: PV Solar Power for the Tribe's Water Pump and Treatment Facility

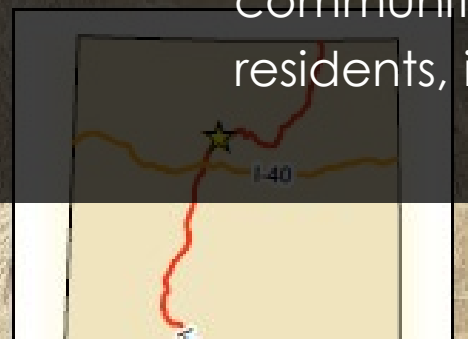
- Awarded DOE implementation grant to for a solar photo voltaic project
- Reduction in largest energy cost of the Tribe's - community water pump and treatment facility (WPT)
- The WPT facility provide potable water to the Pueblo community and its residents
- Connect the OV Solar System to the Public Service of New Mexico (PNM) electrical grid
- Reduce the Tribe's reliance on fossil fuel energy and associated environmental impacts
- Reduce the Tribe's energy costs
- 1-year of monitoring before the grant ends

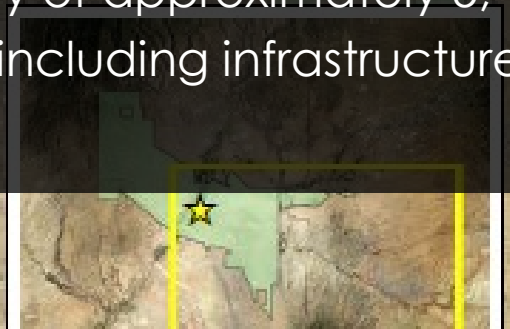
# Leading the way through renewable energy

As the Tribe's first renewable energy project, we hope to serve as an example of what these projects can look like for Pueblos and Tribes in New Mexico, including seeking additional opportunities for our own community.

# Project location

- The Water Pump and Treatment Facility (WPT) is located on Tribal lands near the southwest corner of the intersection of US Interstate 25 and County Road 75A.
- The WPT is one of the Tribe's largest electrical demands
- Selected to demonstrate the feasibility of renewable energy project and how they will benefit the Tribe
- The WPT provides potable water to the Pueblo community of approximately 5, 136 Tribal members and residents, including infrastructure



# Project participants

- Santo Domingo Tribe – Principal Investor (provided a 50% match)
  - Natural Resources Department has served as the program manager for the DOE Grant
  - Tribal Utility Authority has assisted with the installation of the solar panels and will be assisting with the monitoring of the system over the next calendar year.
- Environmental International –
- Affordable Solar – Contractor selected through competitive procurement
- U.S. Department of Energy Office of Indian Energy – granter
- AlsoEnergy – Power Track

# Project Objectives: Goals and Tasks

- Goal of Project:  Awarded in FY2015:
  - Design and install a photovoltaic power (PV) system for the community water pump and treatment facility
  - Reduce the Tribe's consumption of fossil fuel energy and substantially reduce the electricity costs
- Tasks:
  - Contractor selection for design and installation
  - Project design
  - Utility Application and Approval: interconnection, net metering, and Renewable Energy Certificate (REC) program approvals
  - Equipment procurement (modification made to allow contractor to procure)
  - Operation, Maintenance, Verification
  - Go/No Decision


# Project status

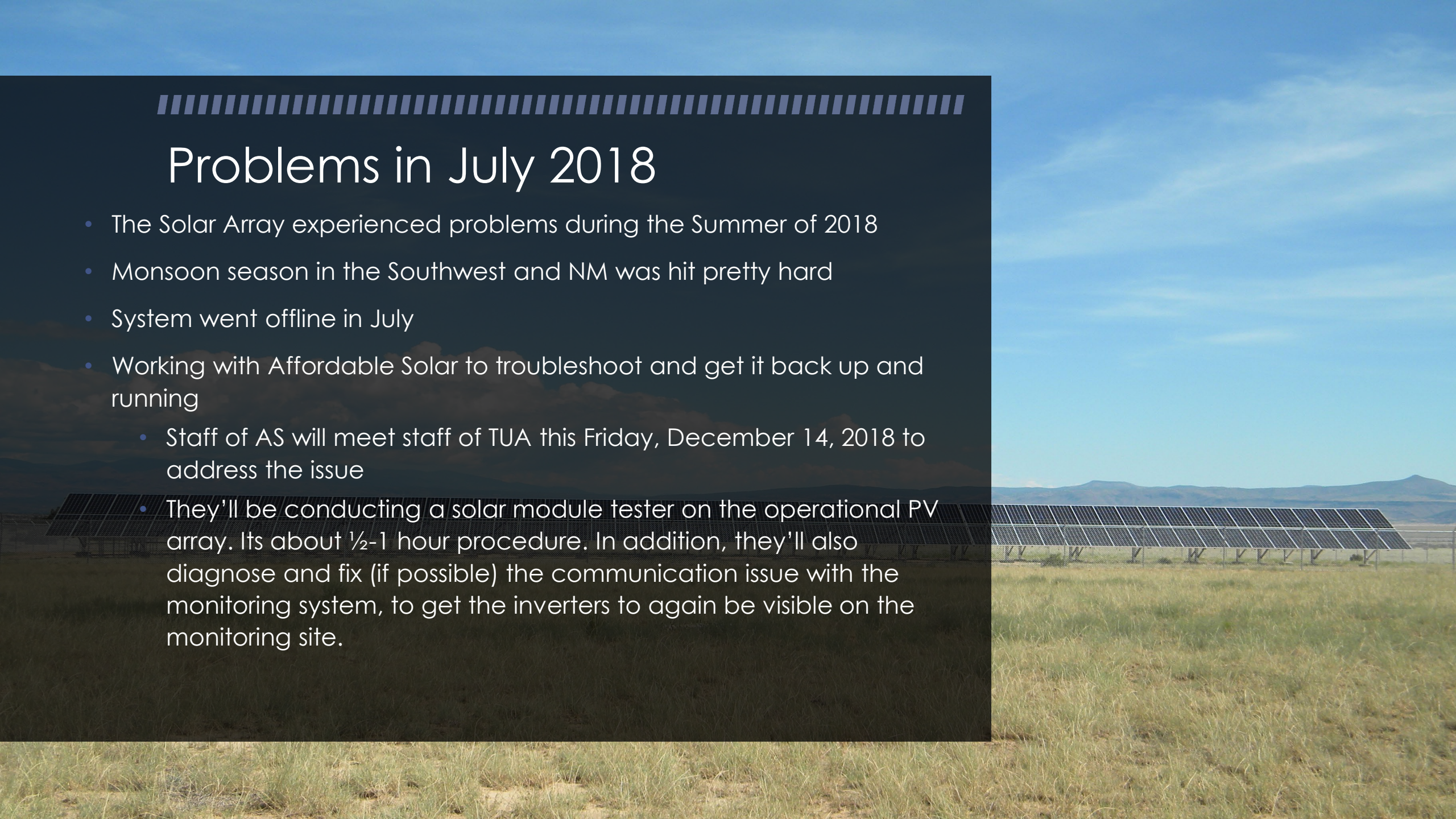
Design and installation of the PV Solar System completed in 2017.

The PV Solar System went online in September 2017.

TUA oversees the WTP and Pump House and has assisted with the monitoring the system to ensure its operational and functioning correctly.

# Problems in July 2018

- The Solar Array experienced problems during the Summer of 2018
- Monsoon season in the Southwest and NM was hit pretty hard
- System went offline in July
- Working with Affordable Solar to troubleshoot and get it back up and running
  - Staff of AS will meet staff of TUA this Friday, December 14, 2018 to address the issue
  - They'll be conducting a solar module tester on the operational PV array. Its about ½-1 hour procedure. In addition, they'll also diagnose and fix (if possible) the communication issue with the monitoring system, to get the inverters to again be visible on the monitoring site.



# Future plan

As the Tribe begins to monitor the PV Solar System, we will begin to collect data that will be crucial in determining future projects and the potential they may have with renewable energy options.

# Thank you to the U.S. DOE Office of Indian Energy Program

## Questions?


Cynthia Naha
Director of Natural Resources
505-465-0055
cnaha@kewa-nsn.us