PINAL PARTNERSHIP

Uniting the Vision for Pinal County

Renewable Energy Committee Presentation 2025

Why here in Pinal County?

- County Growing Quickly: 4% annual growth estimated in Casa Grande alone…load increasing requires more energy
- Pinal is home to key energy infrastructure

Why so much solar and battery storage right now?

- SRP and other utilities in Arizona are forecasting tremendous growth in the next few decades.
  - To meet increasing demand, SRP will need to double or triple power resource capacity using a variety of technologies over the next 10 years.
- Factors driving this surge in power demand include hotter summers, business expansion, and population growth.
- Least expensive form of power
- Free and abundant fuel (the sun!)

What are the benefits of solar and battery energy storage?

- Tax revenue to schools, county, cities, and special districts
- Low water use alternative for farmers during drought
- Maintains rural character of area (no traffic, no noise, no new residents)
- Only an interim use of land, supporting landowners with new, stable income source to maintain land in the family

What is the truth about solar?

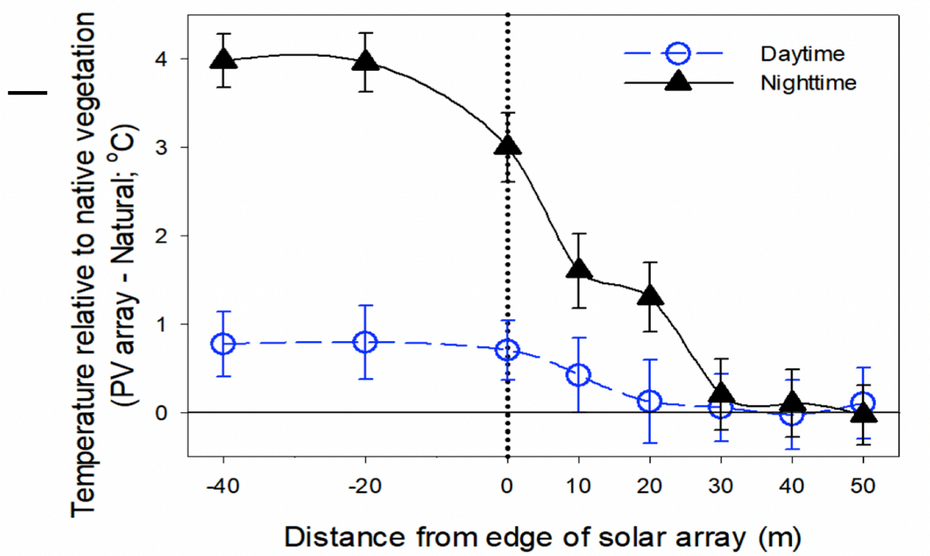
- Does not increase nearby temperatures
- Solar energy generated in Pinal is sold to Arizona utilities
- Solar contributes significant tax revenues
- Solar uses very little water
- Solar does not contaminate the soils

Solar does NOT increase nearby temperatures

University of Arizona has studied this exact question

- *Professor Greg Baron-Gafford: School of Geography, Development & Environment*
- *Director of Food, Energy and Water Resilience Solutions, Biosphere 2*
- *No increase in temperature measurable 30 meters (100 feet) from edge of panels*

Locations of additional measures of air temperature are marked with yellow triangles. Stations were placed inside the array at 20m and 40m in from the edge of the array, at the edge of the array (0m), and outside the array at 10, 20, 30, 40, and 50m out from the edge of the array to quantify the spatial extent of the PVHI effect.



Measures of air temperature within (negative values on the X-axis) andoutside of the PV array (positive values on the X-axis) were used to quantify the spatial extent of the PVHI effect. The dotted line represents the edge of the PV array. The solid line at 0 on the Y-axis illustrates when there is no difference between a measurement along the transect and ambient air temperatures over native vegetation. At night, the PVHI effect of 3-4°C directly above the solar panels is reduced to 1.5 °C at 10m and to 0°C at 30m. There is a lesser PVHI effect by day.

Panels and Batteries are NOT a toxic fire risk

- New battery projects comply with updated fire codes, go through permit process and are required to provide first responder training.
- Solar panels are made of materials like glass, aluminum, copper, and semiconductors commonly found in household appliances and technology.
- In the U.S., the two most used solar cells—Crystalline Silicon (c-Si) at 62% of current installations, with Thin Film Cadmium Telluride (CdTe) making up the majority of the remaining market—do not pose a danger to human health or the environment.
- Testing shows that both c-Si and CdTe panels are safe in worst-case conditions of abandonment or damage in a disaster.

Source Link: Solar Source

Solar produced in Arizona is sold to Arizona Utilities

Reality:

- Solar and battery storage projects in Arizona serve local energy needs, reduce greenhouse gas emissions, and improve grid reliability.
- These projects are vital for all Arizona utilities, supplying essential energy generation capacity.
- They help manage increasing energy demand and ensure grid stability.
- Due to significant growth in Pinal and Maricopa Counties, more resources are required.
- Utility-scale solar and battery storage play a critical role in meeting customer demand and preventing outages in Arizona.

Click Here for more information

Solar and Water Use

Reality:

- Solar facilities typically require little water during construction or operations, as rainfall is generally sufficient to settle dust and clean the panels.
- Solar energy saves approximately 60 billion gallons of water a year when compared to other power plants because they do not require water for cooling.
- For regions where water access and supply are limited, converting farmland to solar generation for a period of time reduces irrigation needs and saves the community an important resource during operation.
- The vegetation underneath a solar facility can also help retain stormwater and manage runoff.

Source Links:

PBS - Fact Check: How Much Water Does Solar Power Really Use?

SEIA – Water Use Management

American Clean Power - Solar Energy & Farmland – FAQ

Solar panels do not leach contaminants into the ground

Reality:

- Solar panels are made of materials like glass, aluminum, copper, and semiconductors commonly found in household appliances and technology. Solar panels do not contain sufficient hazardous materials to pose a danger to the environment and human health.
- Solar panels are designed and manufactured to withstand harsh environmental conditions and extreme weather events. These hardened structures protect the solar cells from the elements and support plans to keep the facilities operating for up to 40 years.
- Extended-stress testing and leaching tests reflective of real-world conditions show that solar panels pose little risk of leaching during operation, removal and disposal, including in the event of a natural disaster.

Source Links:

American Clean Power - Solar Panels are Safe for Your Community

Solar Energy and Tax Generation

- Solar and Energy Storage Projects pay property taxes for the life of the project.
- There is no exemption for property taxes under Arizona Law for solar or energy storage property.
- Equipment is assessed by the Arizona Department of Revenue (ADOR)
- Land is assessed by the county assessor's office
- Both equipment and land taxes are paid to the county where the project is located
- There also could be a Special District Tax – depending on the area

Additional Resources:A.R.S. §42-11001(6)
A.R.S. §42-14155