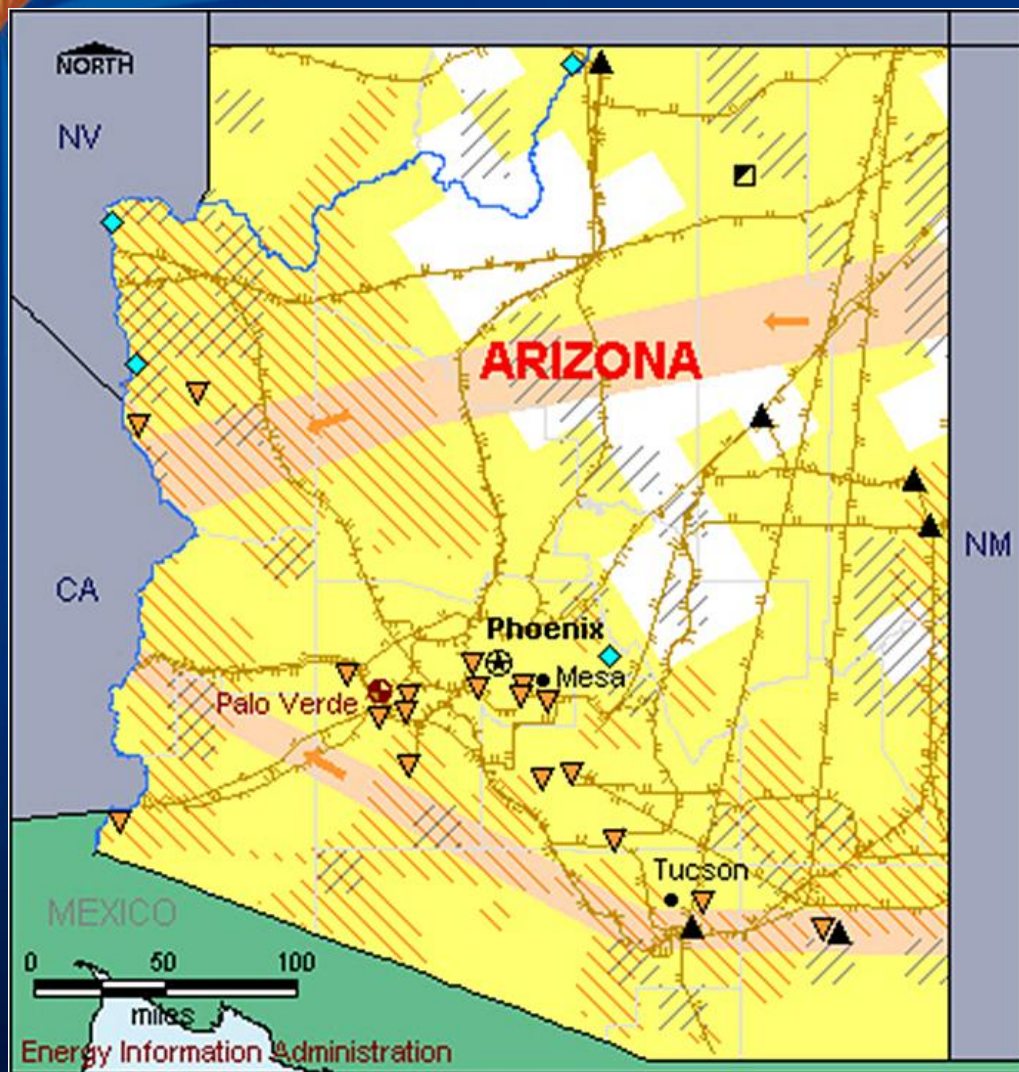


Governor's Office of Energy Policy



**WRP Energy Committee Webinar
May 30, 2013**



MAP LEGEND

- ▣ Coal Mine, Surface
- ▣ Coal Mine, Underground
- ★ Natural Gas Hub
- ▣ Petroleum Refinery
- ◆ Oil Import Site
- ⚓ Oil Seaport
- Electricity Transmission Line (>= 345 kV)
- Natural Gas Flow (1 mile band width = 100 million cubic feet/day)
- ▨ Oil and Gas Active Leases

MAJOR ELECTRIC POWER PLANTS (>=100 MW)

- | | |
|-----------------|-------------------|
| ▲ Coal | ⬢ Petroleum |
| ⊙ Geothermal | ☀ Solar |
| ◆ Hydroelectric | ✕ Wind |
| ▽ Natural Gas | 🌳 Wood |
| ⊕ Nuclear | ● Other Renewable |

RENEWABLE ENERGY POTENTIAL

- | | |
|------------------------------------|-----------------------------|
| ▨ Biomass (>= 50 tons/sq km/yr) | ▨ Solar (>= 6.0 kWh/m2/day) |
| ▨ Geothermal (>= 80 milliwatts/m2) | ▨ Wind (>= 3 Power Class) |

🖱 Mouse over symbols for more details.

Energy Information Administration

Jobs are key

- **Since 2010, 12 companies have located or expanded**
- **1,937+ in jobs**
- **\$1.049 billion of capital investment**

Source: Arizona Commerce Authority





Arizona Corporation Commission

- 2006 - Commission approves Renewable Energy Standard and Tariff (REST).
- Requires regulated electric utilities must generate 15 percent of their energy from renewable resources by 2025.
- 30 percent is a “carve out” for distributed energy.
- Utilities on track to meet these goals.

Mesquite Solar – 150MW

Completed in January 2013

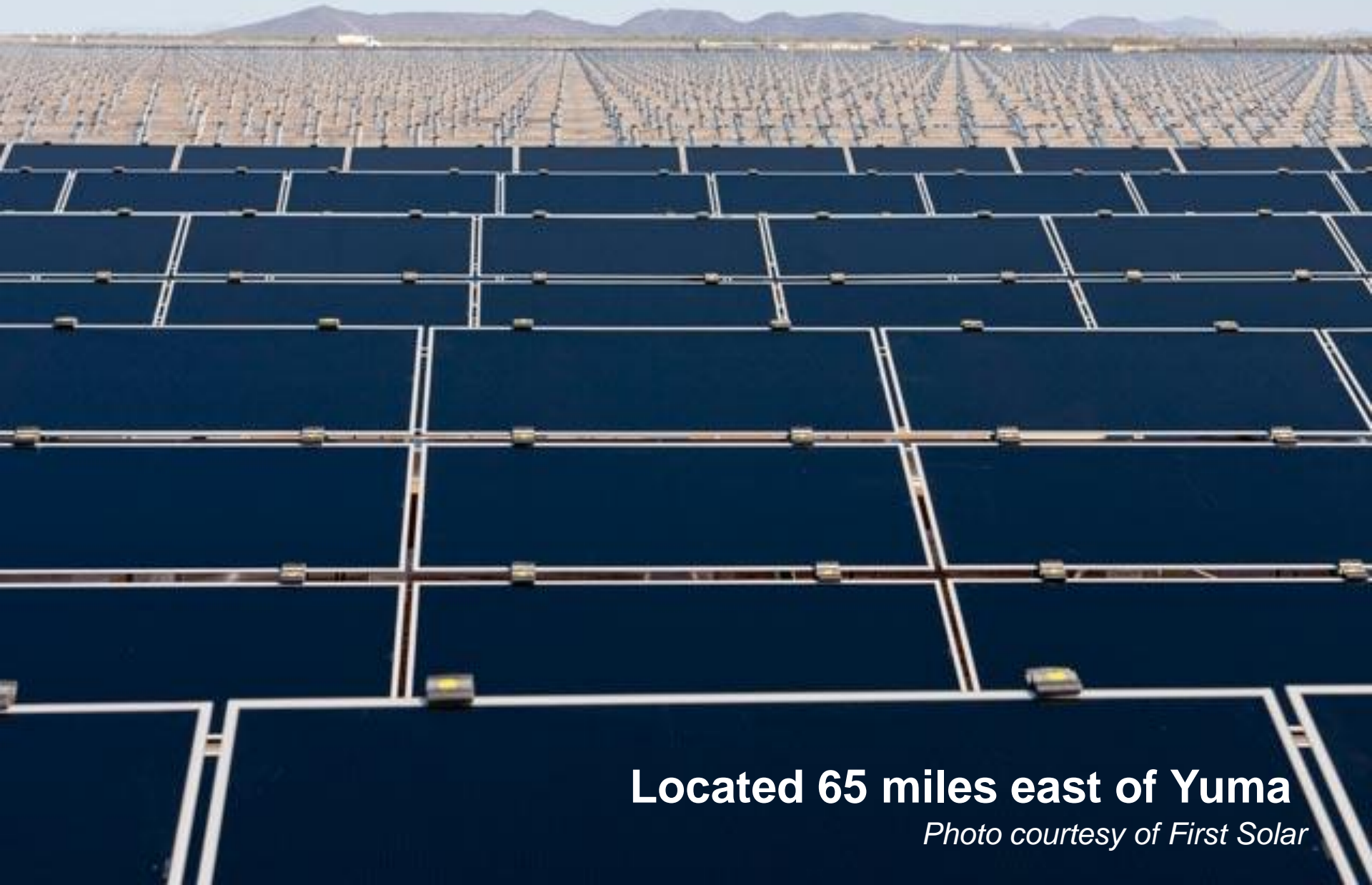


Located 60 miles southwest of Phoenix

Photo courtesy of Sempra Energy

Agua Caliente Generating Station – 290MW

Currently the world's largest operating PV power plant



Located 65 miles east of Yuma

Photo courtesy of First Solar

Solana Generating Station – 280 MW

One of the largest CSP projects in the world



Located 70 miles southwest of Phoenix

Photo courtesy of Abengoa



Thermal Storage Tanks

New kid on the block – AV Solar – 125 MW



Governor Jan Brewer, Kevin Walsh of GE EFS, Paul Segal, of LS Power, Matt McSorely of Fluor and Jim Avery of San Diego Gas & Electric

Note: Historical and forecasted installation figures by state and by market segment, as well as state-by-state market analysis, are available in the full report.

Figure 2.2 Top States by Annual PV Installations

State	Rank (2012)	Rank (2011)	Installations (2012)	Installations (2011)
California	1	1	1,033	577
Arizona	2	3	710	273
New Jersey	3	2	415	313
Nevada	4	10	198	44
North Carolina	5	8	132	55
Massachusetts	6	12	129	31
Hawaii	7	11	109	40
Maryland	8	13	74	22
Texas	9	9	64	44
New York	10	7	60	60
Pennsylvania	11	6	COMPLETE DATASET, INCLUDING BREAKDOWN BY MARKET SEGMENT, AVAILABLE IN FULL REPORT	
Colorado	12	5		
Illinois	13	24		
Tennessee	14	16		
Oregon	15	17		
Ohio	16	14		
Florida	17	18		
New Mexico	18	4		
Delaware	19	15		
Vermont	20	20		
Connecticut	21	23		
Georgia	22	19		
Missouri	23	25		
Washington	24	21		
Washington DC	25	25		
Wisconsin	26	22		
Total			3,313	1,887

• **First time Arizona ranks 2nd in U.S.**

• **2012 – 710 MW in solar installations**

• **Installed More Utility-Scale Solar than Any Other State in 2012**

Source: Solar Energy Industries Association

Arizona Military Bases

Solar
installation at
Davis
Monthan Air
Force Base in
Tucson from
Lend Lease
and SolarCity

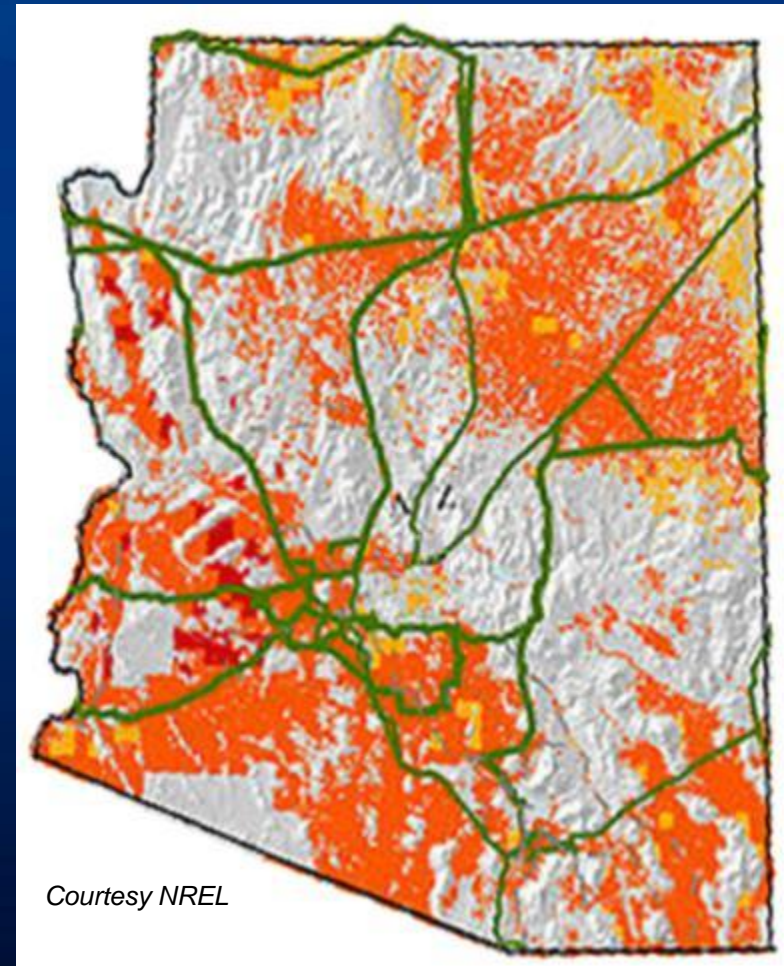
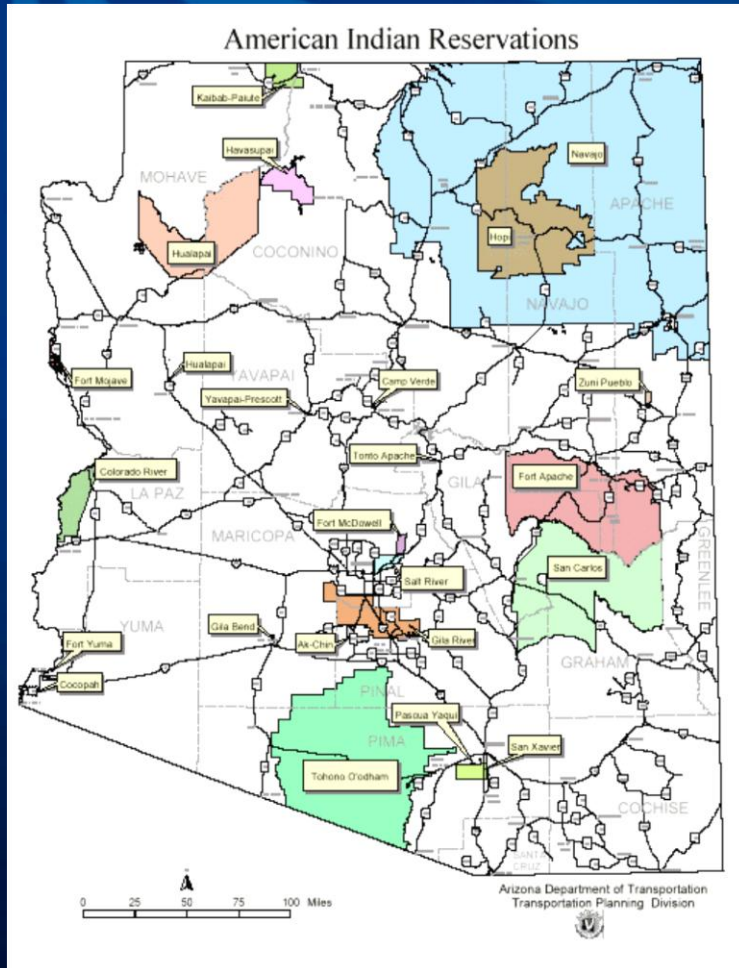


Luke Air Force Base, west of Phoenix
(15 MW)



Courtesy NREL

And Arizona's Tribal Solar Potential



Solar and Renewable Energy Workshop

18th Annual Indian Nations and Tribes Legislative Day

Arizona State Capitol – Tuesday, February 5th, 2013

AGENDA

- 8:30 – 1:00 Registration and Exhibitor Fair
- 11:00 – 12:00 Joint Protocol Session – Senate
- Posting of Colors – Yavapai Apache Nation Color Guard
 - Pledge of Allegiance – Ms. Devanie Duwyenie, Miss Indian Arizona
 - Invocation
 - Opening Remarks
 - Senator Andy Biggs – Senate President
 - Representative Andy Tobin – Speaker of the House
 - Featured Speakers
 - Chairman Terry Rambler, San Carlos Apache Tribe
 - Vice-Chairman Tim Hinton, White Mountain Apache Tribe
 - Chairman, LeRoy Shingoitewa, Hopi Tribe
- 12:00 – 1:00 Luncheon – Senate Lawn
- 1:30 – 3:30 Afternoon Workshop Topic: Solar and Renewable Energy – Capitol Museum, Old Senate Room (3rd Floor)
Moderator: Leisa Brug, Governor's Office of Energy Policy
- Ken Duncan, Jr. – San Carlos Apache
 - Ivan Gamble – Navajo Nation
 - Raymond Maxx – Navajo Nation
 - Sheila Shedd – AZ Commerce Authority
 - Debby Tewa – Central Arizona College



Arizona Tribal Energy Programs

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**Governor's Office
of
Energy Policy**

AZ.GOV
Arizona's Official Web Site

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- Policy
- Residential
- Weatherization Program
- Gas Prices
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Tribal Energy Programs

The Governor's Office of Energy Policy (OEP) provides technical assistance and information for tribal communities, ranging from off-grid photovoltaic systems to commercial-scaled renewable energy technologies.

February 16, 2012 - Tribal Clean Energy Projects Awarded \$6.5 Million from U.S. Energy Department

Of the 19 tribal projects awarded, four Arizona tribal communities received funding totaling \$875,987.

Applicant	Location	Requested DOE Funds	Project Summary
Navajo Hopi Land Commission (NHLCO), Navajo Nation	Window Rock, AZ	\$347,090	This project will conduct a feasibility study to explore potential renewable energy development on the 22,000-acre Paragon-Bisti lands in northwestern New Mexico. The study will examine the viability of developing up to 4,000 MW of solar power and the potential to deploy other forms of renewable energy at the site.
San Carlos Apache Tribe	San Carlos, AZ	\$212,922	This project will conduct a comprehensive feasibility study to develop a solar energy generation facility on tribal trust lands within the Tribe's reservation.
Gila River Indian Community	Sacaton, AZ	\$210,000	This project will evaluate the feasibility of installing solar energy systems on local facilities and developing commercial-scale solar and biomass projects to export electricity.
Pascua Yaqui Tribe	Tucson, AZ	\$105,975	This project will assess the viability of 1 MW of commercial and community-scale solar development on Tortuga Ranch. It will also examine the potential to install solar photovoltaic and hot water systems on tribal buildings to

More Information

- [US Department of Energy Tribal Energy Program](#)
- [State of Arizona Tribal Liaisons](#)
- [Arizona Tribal Leadership List](#)
- [Arizona's Native American Tribes \(Overview & map\)](#)

Contact

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Internet
100%

Arizona's Master Energy Plan

- Four Work Groups composed of key energy industry leaders are in progress.
- Work Groups are hosted by the four areas in Arizona State government that have input in energy policy in Arizona.

Group Host: Governor's Office of Energy Policy

Work Group: Environment, Natural Resources & Land Use

Group Host: Arizona Corporation Commission

Work Group: Business Development, Regulation & Workforce

Group Host: Arizona State Senate/House of Representatives

Work Group: Transportation, Fuels & Infrastructure Planning

Group Host: Arizona Commerce Authority

Work Group: Technology Development

Timeline –

2012

2013

Aug – Sep Nov Dec

Jan – Feb

Mar – Apr

May – Aug

Sep – Nov

Dec

Meet with group
hosts & leaders

Official
announcement

Meetings
begin

First
Drafts
due

Final
Draft
approved
by Task
Force

May – Jul
2012

- Conduct 8-state policy analysis
- Partner with ASU
- Series of meetings

Stakeholder
Meetings
Additional
input

MEP
Put
Forward
Dec.
20,
2013



**“Arizona
was made
for solar
energy.”**

**Governor
Jan Brewer**

March 27, 2013

For more information:

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