



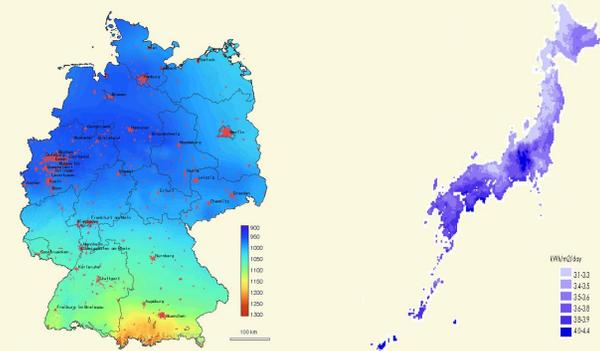
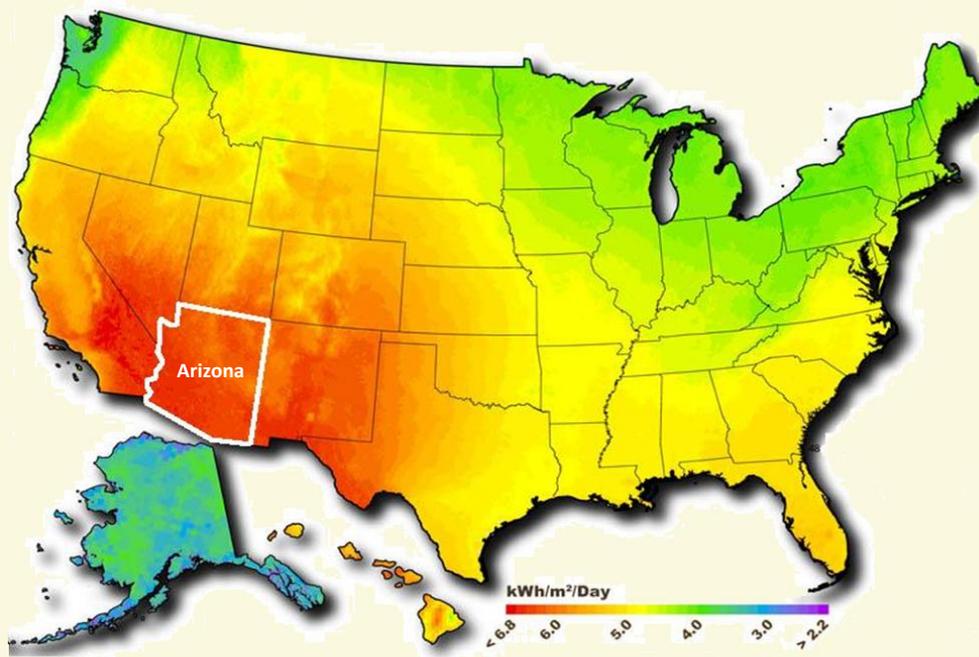
RENEWABLE ENERGY RISES WITH THE SUN

**Sanford C. Bernstein & Co.
Renewables Conference
September 23, 2013**

**Barbara D. Lockwood, P.E.
General Manager, Energy Innovation**

RENEWABLE ENERGY RISES WITH THE SUN

We are helping Arizona become the “Solar Capital of the World”



Germany and Japan are among countries with highest installed solar capacity, yet have solar conditions far inferior to Arizona

ARIZONA'S RENEWABLE RESOURCE AND ENERGY EFFICIENCY STANDARDS

Our programs address Arizona's aggressive renewable energy standard

Renewable Energy (RES) Minimum Requirements

Portion of retail sales to be supplied by renewable resources

- 5% by 2015
- 15% by 2025

Distributed energy component

- 30% of total requirement by 2012

APS on track to approximately double 2015 requirement

- Pursuant to 2009 regulatory settlement

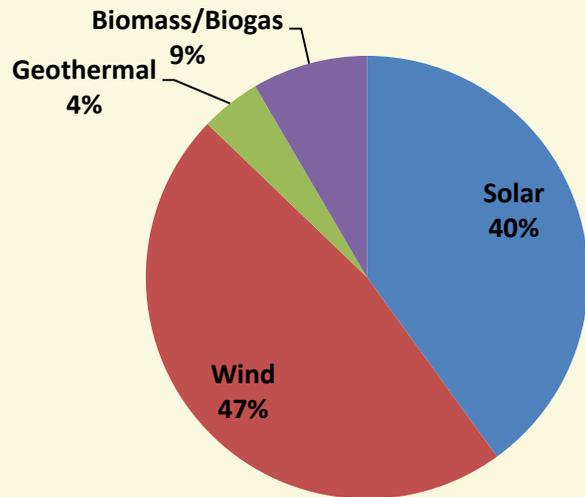


APS ranked 4th nationally for solar installations in 2012

Solar Electric Power Association

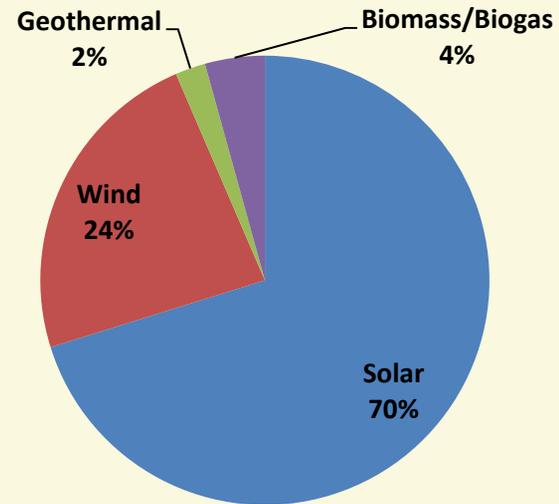
RENEWABLE GENERATION MIX

We are making good progress; our renewable resources will be predominantly solar



2012

5.3% of retail sales



2015

12% of retail sales (projected)

APS SOLAR OWNERSHIP PROGRAMS

We own both utility scale and distributed solar energy through 3 programs



Community Power Project 1.4 MW completed



Schools & Government 7 MW completed + 6 MW in progress



Arizona Sun 86 MW completed + 64 MW in progress + 50 MW proposed = 200 MW Total

SOLANA: A “SUNNY PLACE”

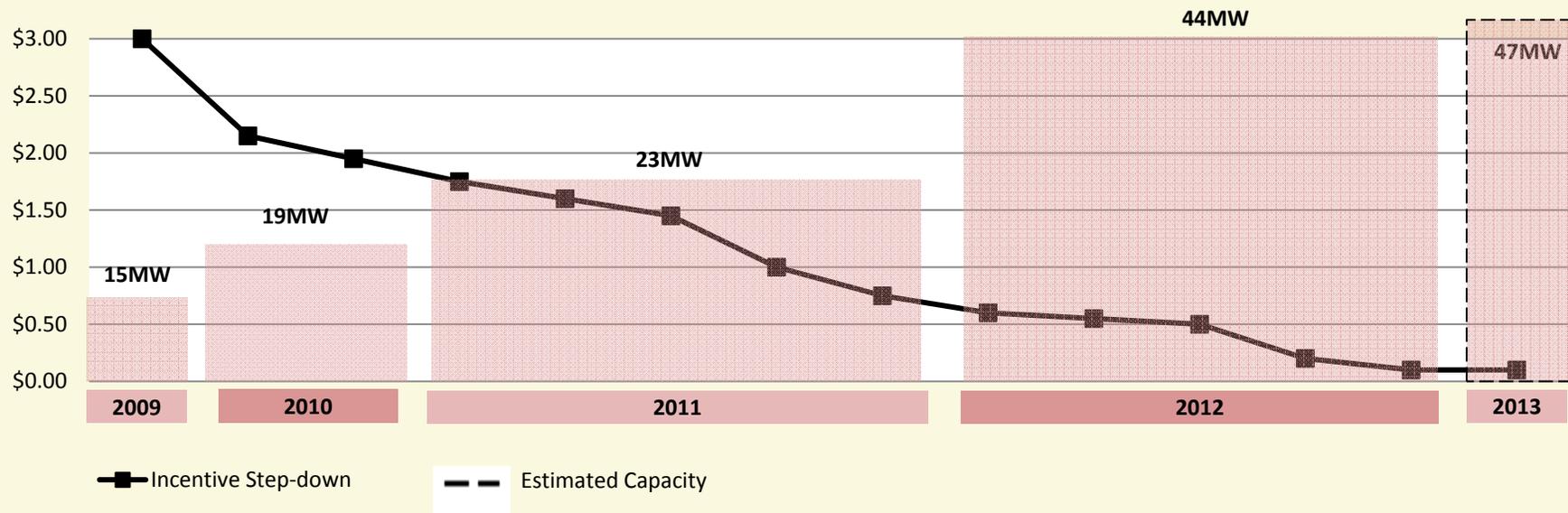
Solana will provide more than one-quarter of APS’s renewable energy target by 2015.



- **250-MW 30-year PPA for all output (~900 GWh/year)**
- **Concentrating solar trough facility 70 miles southwest of Phoenix**
- **On target for 2013 commercial operation**
- **90%+ on-peak capacity factor with use of thermal storage capability**
- **Expected to be first major U.S. solar trough plant with thermal energy storage**
- **Near existing transmission lines**
- **Built, owned and operated by Abengoa Solar**

ROOFTOP SOLAR INCENTIVES IN ARIZONA

Incentives for photovoltaic systems have come down dramatically over time



Distributed Solar Energy deployment has risen significantly in the last 5 years due to the following:

- **Reduction of installed costs**
- **Customer finance models**
- **Federal and state investment credits**
- **Utility net metering and cash incentives**

RATES THAT MATCH CUSTOMER CHOICE

Rates need updating to match current energy trends

What's Changing

Customers are producing and consuming energy in new and innovative ways



What's Needed

- **Safe and reliable power supply available to all customers when they need it**
- **Utility rates that recover the cost of infrastructure investments from customers based on services provided**
- **Modernized utility rate design that manages cost impacts to participant and non-participant customers**

LONG TERM OUTLOOK

- **Renewable energy will continue to increase over time and, in Arizona, it will predominately be solar**
- **Energy storage is not cost effective today - and is not likely to be in the near future**
- **Absent cost effective energy storage, flexible gas generation will be needed to accommodate increasing penetrations of renewable energy**
- **Current grid modernization efforts will be important to accommodate high levels of renewable generation**
- **Rates will need to be modernized to reflect the changing energy landscape**