

# Arizona Western College Solar Installation

## Solar with a Purpose: Innovation, Education, Generation



AWC has partnered with Arizona Public Service, Main Street Power and PPA Partners to install a 5 MW solar installation second to none in the United States on the main campus of Arizona Western College. Primarily designed as a testing and educational installation, this project will allow AWC to harness the area's climatologically unique features to generate approximately 100% of its daytime electricity needs.

AWC is poised to become a leader in renewable energy technology and education, with support from corporate partners and Arizona Public Service.

### AWC Solar Installation

- Five 1-megawatt arrays of different technologies make this educational and research project unique in the world, and the third largest solar installation on a community college campus.
  - 4.995 megawatts—new installation
  - 105.6 kilowatts—existing rooftop array at AWC
- Will test 5 distinct solar technologies
- Single and dual tracking deployment
- No water consumption requirement
- Most participating technologies boast small cradle to grave footprint with 97% recyclable components
- Most participating technologies use existing materials (no toxic or rare items) making manufacture economically sustainable
- 3rd party data monitoring by Also Energy will control consistent data feed

### Clean Renewable Energy

- Will cover approximately 100% of the college's daytime electricity needs, reducing district costs

### State-of-the-Art Workforce Development and Curriculum

- Student and faculty access to cutting-edge technologies
- Rich, real-time teaching tools monitoring solar array available online for educators around the world
- Curriculum in development, including occupational certificate, workforce training, A.S. degree, and university partnerships for articulated Bachelor, Master's degrees
- First Solar Installer Class graduated Spring 2011

### Powerful Partnerships Nationally and Globally

- Financial incentives from the Arizona Public Service (APS) Renewable Energy Incentive Program defray nearly half the cost of the system
- Main Street Power, solar financier, will own and operate the system, with backing from MS Solar Solutions Corp., a wholly-owned subsidiary of Morgan Stanley
- PPA Partners, Inc is co-developer and originator of the project with AWC
- 5 1-MW solar arrays technologies supplied by leaders in global solar innovation:
  - GreenVolts Inc. (CPV) • SolFocus (CPV) • Sharp (Thin Film)
  - SolarWorld (Monocrystalline) • Suntech (Polycrystalline)

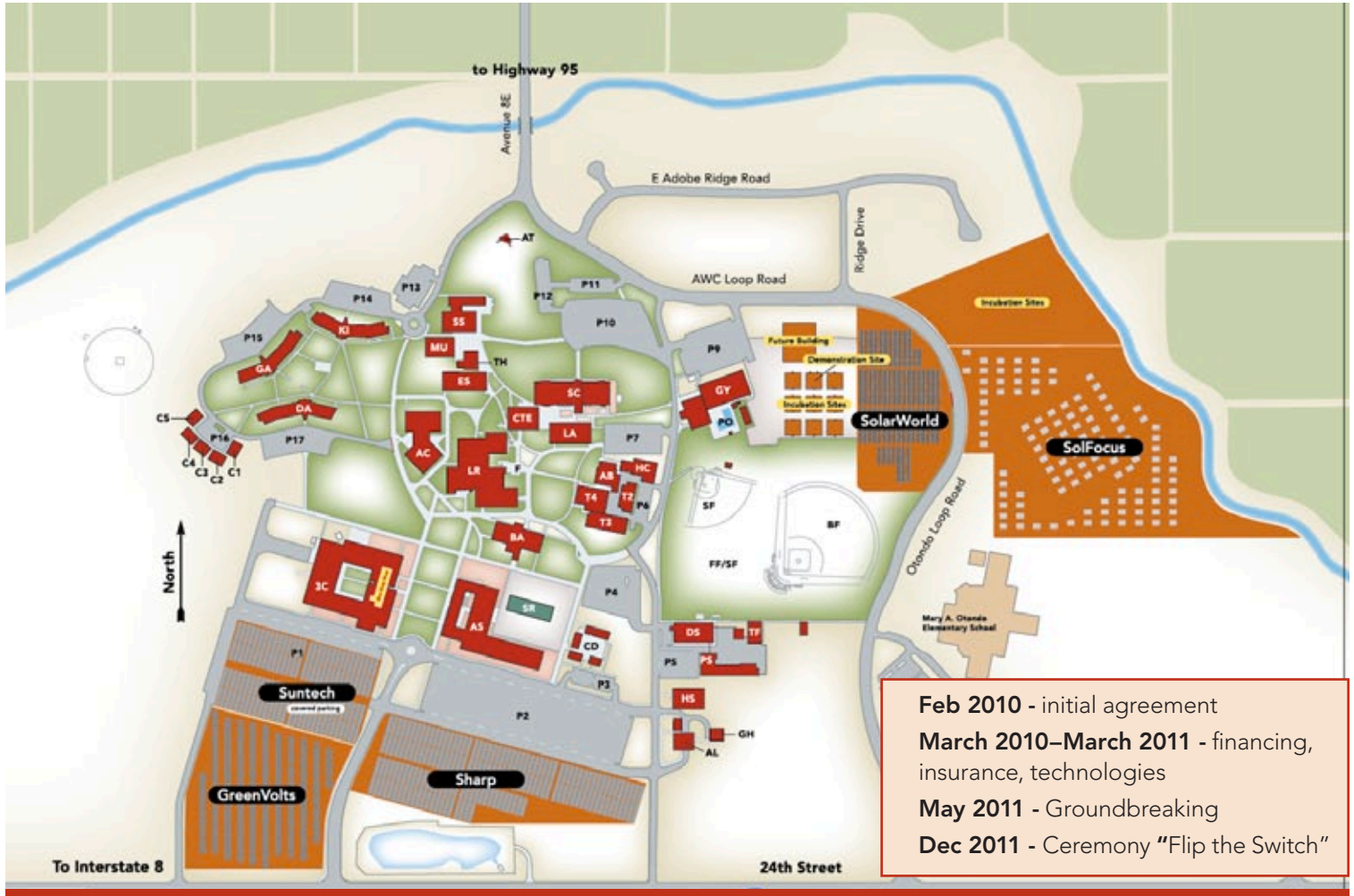
### Additional Technologies

- SatCon Technology Corporation • SunEdison (Tracking)
- Also Energy (Data Monitoring Service)



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Morgan Stanley



### Puts Yuma on the Map

- Yuma offers the most beneficial Solar Days in the world (354 generating days a year)
- Guinness Book of World Records names Yuma, Arizona the sunniest city on earth
- Yuma's access to west coast, transportation and ample land make AWC a superior site for solar development
- Creates world-class site for research and testing for corporate and government applications

### By the Numbers

- AWC will save \$3.5M in 10 years, \$15.4M in 20 years, and the project could be worth \$62M over 30 years.
- Anticipated annual energy output for 5 MW: 10,500,000 kilowatt hours
- Each year, the 5 MW solar system will offset CO2 emissions equal to (one of the following):
  - 811,643 gallons of gasoline consumed
  - 16,837 barrels of oil consumed
  - the energy use of 615 homes for 1 year
  - the electricity uses of 879 homes for 1 year
- The 5 MW output is equivalent to the amount of carbon sequestered annually by 71.7 acres of forest preserved from deforestation