

# SOLMATES

*A publication for APS Solar Partners  
Summer 2002, Volume 3, Number 3*



From the Desk of Ed Fox  
Arizona DEQ Hosts Solar Site  
Eager to Develop Biomass  
Celebrating Solar Energy  
You're Invited to an Open House!  
Prescott Solar Plant

## **DID YOU KNOW...**

It is estimated that there is enough dead, yet unburned wood biomass from the Rodeo-Chedeski fire to generate 30 megawatts of electricity for 30 years.

## FROM THE DESK OF ED FOX

Vice President of Communications,  
Environment and Safety

### Exploring Renewable Energy Options

APS has invested extensively in the development of solar energy in an effort to help make this renewable energy source more economically viable. Additionally, we are exploring other renewable energy technologies that I thought you, our Solar Partners, would find interesting.

An intriguing array of renewable electric generation is currently coming into its own. These renewable energy sources include hydrogen, fuel cells, biomass, wind power and landfill methane recovery.

Hydrogen is the cleanest-burning fuel we have and APS is demonstrating its ability to dramatically reduce pollution from conventional engines by adding it to natural gas for power generators and motor vehicles. We also are using "off-peak" electricity to make our own hydrogen from water through the electrolysis process. Additionally, we are testing the viability of fuel cells, which reverse the electrolysis process, combining hydrogen with oxygen to generate electricity.

Biomass technology converts vegetation waste such as forest and agricultural byproducts and even yard trimmings into clean fuel to power generators. APS is involved in a biomass project in northeastern Arizona that will help reduce future forest fire threats by converting the trees and other vegetation removed during forest thinning into electricity. Unfortunately, the project was not in operation in time to help with this year's tragic fire season, but it will be able to help with the clean up by using the vegetation killed by the Rodeo-Chedeski fire.

Windmills were among the earliest renewable energy generators, and recent technological advances have made wind power more cost effective. APS and other Arizona utilities have invested in the development of a new, highly-detailed wind map of Arizona that may reveal viable locations for wind farms.

Decomposing organic material in landfills produces methane gas, which is an excellent renewable fuel. APS is testing the potential of methane gas recovery using small, methane-powered generators at two central Arizona landfills.

Although solar continues as APS' most promising renewable energy source, we feel it is our responsibility to explore new technological advances and other renewable energy sources in an effort to produce cleaner, more cost effective electricity for our customers and the com-

**Know someone who would like to become a Solar Partner? APS customers can sign-up online at [aps.com](http://aps.com), or request a sign-up form by calling 602-216-0318 (metro Phoenix area), or 800-659-8148 (other areas).**

**Questions?**

**Contact Janet Crow by phone at 602-250-4990, or by e-mail at [janet.crow@aps.com](mailto:janet.crow@aps.com).**

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## CREATING A SOLAR FUTURE

### Customers and APS — Partners in Progress

#### Arizona DEQ Hosts Solar Site

The Arizona Department of Environmental Quality is providing the roof of the parking garage at its new office building as the site for a new commercial-sized APS Solar Partners solar generating system. Construction crews should complete the DEQ structures and the APS solar system just north of the capitol complex in downtown Phoenix this fall.

APS will own and operate the fixed, flat-plate system, and the 100 kilowatts of electricity the unit produces will be fed into the APS grid, providing enough electricity for 20 average-sized homes.

#### Eager to Develop Biomass

APS is partnering with Eagar, Arizona-based Environmental Forest Solutions to convert a defunct lumber mill into a biomass fueled generating plant. The plant will burn forest waste from the recent fires and from forest-thinning programs in the surrounding White Mountains, powering the plant with non-greenhouse gas producing fuel. The plant initially will produce three megawatts and 21,000 megawatt hours of electricity per year with the potential for greater production.



"While the project is part of APS efforts to comply with the state Environmental Portfolio Standard requirements to produce a portion of our electricity with renewable fuels, it also will be a boon to the people and environment of eastern Arizona," said APS Senior Engineer Tim McDonald. "The

plant will use local labor, help maintain the health of the forest and provide local generation of electricity."

#### Celebrating Solar Energy

Governor Jane Hull has proclaimed October as Solar Energy Month in Arizona. APS has a number of celebrations and activities planned including tours of our STAR Center and the dedication of the Prescott Solar plant. Check our Web site, [www.aps.com/my\\_community/solar\\_main.html](http://www.aps.com/my_community/solar_main.html) for more events.



#### Prescott Solar Plant

APS will be dedicating the first phase of its new Solar Partners plant in Prescott, October 30. Located on City of Prescott property adjacent to the Prescott Airport, the solar installation will be a multi-year project. The initial phase of the plant is expected to be completed by March 2003

and will provide 1.5 megawatts of electricity. APS will expand the facility to five megawatts over the next several years. Electricity from the Prescott plant will feed into the APS grid and ultimately provide enough power for approximately 1,000 Arizona homes.

#### You're Invited to an Open House! At the APS Solar Test And Research Center — STAR

**When:** 8 a.m. to noon, Saturday,  
October 5, 2002

**Where:** 1500 E. University Drive, Tempe  
(west of McClintock)

Advance reservations are required

**RSVP:** Janet Crow at 602-250-4990  
or e-mail [janet.crow@aps.com](mailto:janet.crow@aps.com).

**Note:** Please wear comfortable shoes,  
not sandals, as the grounds of  
STAR are covered in loose gravel.

#### Save a Tree — Subscribe Online

To receive this publication electronically rather than in hard copy, please e-mail Janet Crow at [janet.crow@aps.com](mailto:janet.crow@aps.com)

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