



ELECTRICITY CONVERSION, DISTRIBUTION AND SALES

In 2000, Pinnacle West Energy, APS' generation affiliate, obtained permits and began building nearly 2,800 MW of clean-burning combined-cycle natural gas-fired generation facilities to meet our customers' growing needs.

With the completion of the new gas-fired power plants, and the proposed transfer of our generation assets to the generation affiliate, our fuel portfolio will consist of roughly one-third coal, one-third nuclear and one-third natural gas. This diverse fuel mix will position us well for industry competition while minimizing our exposure to the environmental concerns associated with each fuel type. The transfer of generation assets to an independent company was negotiated with the Arizona Corporation Commission as part of our 1999 competition settlement agreement and is expected to be completed in 2001.

Water is a predominant component of virtually every electricity generation technology, and we work to minimize our impact on the fresh water supply.

At our Palo Verde nuclear plant, we use treated effluent, purchased from seven cities in the Phoenix metropolitan area as a cooling agent. We constructed a 35-mile pipeline that carries treated water from a City of Phoenix sewage treatment facility to Palo Verde, where we use an advanced water treatment process that is capable of preparing 90 million gallons of water each day for use in the plant. Palo Verde is the only U.S. nuclear plant to use treated effluent as a cooling water source.

In 2000, the Palo Verde plant's water reclamation facility received a total of 22.5 billion gallons of treated effluent, reducing the amount of effluent discharged from municipal wastewater treatment facilities into the lower Salt River and conserving high-quality water for other purposes.

Our coal- and natural gas-fired plants also use water as a cooling agent. Those plants use a variety of processes to reduce their reliance on fresh water.



SOLAR

We actively seek affordable renewable energy solutions to meet our future energy needs. We completed our fourth and fifth commercial solar power plants in 2000. One plant is located in Glendale, Ariz. while the other is atop a computer microchip manufacturer, ST Microelectronics, which has committed to purchasing all the power generated by the panels. The plants are funded by APS, the U.S. Department of Energy and APS Solar Partners.

Under the Solar Partner Program, our customers are invited to purchase 15 kilowatt-hour blocks of power generated by the solar power plant. The cost to customers is a \$2.64 per month premium. At year end, we had 2,138 Solar Partners and a total of 600 kW of installed solar.

We also offer our customers who live in remote areas not served by a power line the option to meet their electricity needs with renewable solar energy. This off-grid solar electric service provides customers with a photovoltaic system for a flat monthly fee that includes all service and maintenance. The cost of the service is similar to that of owning, operating and maintaining individual generators. In 2000, we maintained a total of 35 remote solar energy systems.

Our largest remote solar installation of 2000 was completed at the U.S. Army's Yuma Proving Grounds. The 105 kW generating facility supplies electricity for the Army's remote testing, cameras and instrumentation. We will continue to increase our solar portfolio in the coming years.

TRANSMISSION

We own high-voltage transmission lines that transfer power from our power plants to our customers throughout Arizona. By the end of 2000, we had 4,855 miles of overhead 69 kilovolt (KV) and above transmission lines and nearly 20 miles of 69 kV and above underground transmission.

DISTRIBUTION

Our distribution network takes power from high voltage transmission lines and delivers it to our customers. During 2000, we added 140 miles of overhead distribution and 620 miles of underground distribution. With the added distribution, we maintained 11,681 miles (51 percent) of above-ground local distribution and 11,331 circuit miles (49 percent) of below ground distribution as of Jan. 1, 2001.

CUSTOMER CONSERVATION

We offer residential customers three rate plans: the Standard Plan, the Time Advantage Plan and the Combined Advantage Plan. While each of the rates is charged based on consumption, the Standard Plan offers the lowest rates for the least consumption. As of Dec. 31, 2000, 54 percent of our customers – a total of 354,453 – were on the Standard Plan.

In addition to rate plans, we regularly produce a variety of brochures promoting energy efficiency and offer these brochures in our customer service offices. Topics include installing sunscreens, planting trees, information about electric heat pumps, and ways to reduce summer and winter electric bills. The brochures offer helpful hints for customers who are looking for ways to use less energy.

As an electric utility in a hot desert climate, we actively encourage our customers to conserve electricity during the heat of the day by doing a number of simple tasks that include turning the air conditioning up a degree or two and not running major appliances. During the Summer of 2001, we'll be ratcheting up our conservation efforts with the message, "Energy. Enough to use. Not enough to waste," to address the concerns of recent energy shortages in neighboring states. We also have posted a number of conservation tips and an energy survey on our Web site to help our customers find ways to lower their electric bills and save energy.

Pinnacle West's independent retail company, APS Energy Services Company, Inc., offers a variety of energy efficiency products to its customers. In 2000, APS Energy Services helped 80 large commercial customers save more than 3 million kWh per year through its energy efficiency and heating, ventilation and cooling upgrades and installations. We encourage architects and home builders to include energy conservation and environmental impacts in their design projects.

We maintain affiliate membership in the American Institutes of Architecture and sponsor the APS Energy Award to acknowledge architects who use energy efficiency and environmental principles in their designs.

In 2000, we donated the APS Environmental Showcase Home to Arizona State University, allowing the university to continue to research the home's environmental and efficiency technologies. The Environmental Showcase Home, constructed in 1996, highlights environmental and energy design elements that are widely available.

MANAGING OUR RIGHTS OF WAY

Proper maintenance of our transmission and distribution system is critical to our ability to deliver reliable power to our customers. Electric line maintenance involves more than identifying line faults; it includes pole selection, vegetation management and raptor and wildlife protection.

In 1998, we began replacing chemically preserved wooden poles with steel utility poles. We tested the steel poles in a variety of Arizona climates and locations to guarantee safety and maximum environmental and economic benefits. Additional research and life cycle analysis indicated that steel is the optimal material for our poles. Steel poles are less vulnerable to high winds and do not transfer any chemicals to the land.

Our vegetation management program is centered on integrated vegetation management (IVM) techniques that incorporate proper trimming and minimized pesticide use. We follow industry tree trimming standards to limit damage and improve overall tree health. We also follow the Edison Electric Institute's (EEI) strategy on pesticide use. A variety of industry and environmental groups have recognized us for our practices and commitment to arborist education. In 2000, we received our fourth consecutive Tree Line USA Award from the National Arbor Day Foundation.

During 2000, the vegetation management team worked with natural resources groups and the U.S. Forest Service to develop standards for maintaining the vegetation under

our power lines. The team also conducted line clearance awareness seminars and trained and certified arborists and tree workers in Arizona.

Preventing birds of prey and other wildlife from contacting electric lines is another reliability program. Our wildlife protection program takes a three-pronged approach of prevention, training and partnerships to protect wildlife. We use a variety of tools to prevent wildlife and raptor contact with electricity. We design power poles to ensure adequate clearance between conductors. Where adequate clearance is not possible, we install wildlife protection or perching diversion devices to avoid electrical contact.

We provide installation training for all employees who work with raptor protection devices and offer resources for call center employees who are fielding calls from concerned customers. We also form partnerships with other utilities and public and private wildlife protection organizations to foster an open dialogue and a mutually beneficial learning environment.

Additionally, in 2001, we are building relationships with a number of non-profit wildlife rehabilitation organizations to improve our wildlife protection program.





Our award-winning vegetation management program focuses on approved tree trimming standards and minimized pesticide use.