



STEWARDSHIP OF NATURAL RESOURCES

Our Environmental, Health and Safety Policy outlines our vision for pollution prevention and conservation of natural resources. We target virtually every aspect of conservation including:

- Reduced consumption of virgin materials through product or process redesign
- Water conservation
- Energy conservation
- Habitat conservation
- Risk reduction
- Procurement of reused goods
- Procurement of goods with recycled content
- Recycling of solid waste
- Recycling of hazardous waste and toxic materials

Our facilities work with supply chain and design staff to make environmentally sensitive purchasing decisions and to encourage reuse and recycling efforts. We use a number of integrated computer programs that help manage purchasing, chemical use and reuse of company equipment. Additionally, we have a chemical review team consisting of representatives from nearly every operating area. The Chemical Review Team is charged with examining and approving chemical purchases.

Our purchasing and inventory system, called Materials Logistics Information System (MLIS), allows us to better manage purchasing and inventory activities and increases employee awareness of purchasing practices. We also use our electronic Material Safety Data Sheet (MSDS) system in conjunction with the MLIS program to facilitate tracking and reporting of the types and quantities of chemicals purchased and stored. The integration of the MLIS and MSDS systems allows us to create baselines to more effectively plan and set goals.

CHEMICAL USE REDUCTION

We track chemicals from purchase through disposal. We also track chemical use at both the corporate and facility levels and require employees to follow specific practices when purchasing hazardous chemicals. These practices ensure worker safety and compliance with hazardous chemical communication regulations. Although we track chemical use in compliance with regulations, we also seek programs that will result in cost control, pollution prevention and, in some cases, revenue generation.

Reducing the number of approved hazardous chemicals has been one of our environmental priority targets since 1998 and we have successfully reduced the number and types of chemicals in our inventories consistently every year. In 2000, we had a total of 4,288 chemicals listed in our MSDS database, compared with 5,024 in 1999 and 6,881 in 1997.

SHARING MATERIALS

To facilitate equipment trading and sharing among employees, we developed a computer-based in-house procurement system called Materials Exchange. Materials Exchange provides a marketplace for employees and managers to post and shop for surplus materials rather than procuring new goods. Our employees completed a total of 92 exchanges in 2000, representing more than \$90,000 in savings.



2000 AWARDS

ARIZONA CLEAN & BEAUTIFUL GOVERNOR'S PRIDE IN ARIZONA, ENVIRONMENTAL LEADERSHIP:

Childs-Irving power plant decommissioning

INPO "1"

The Institute for Nuclear Power Operations (INPO) awards the Palo Verde Power Plant its highest rating, the INPO "1," for the fourth consecutive year.

NATIONAL ARBOR DAY FOUNDATION; TREE LINE USA AWARD:

Vegetation Management Program for the fourth consecutive year.

NUCLEAR ENERGY INSTITUTE, TOP INDUSTRY PRACTICE AWARD:

Palo Verde Power Plant for its patent on the "Silent Defender" penetration-resistant security door.

INNOVEST STRATEGIC ADVISORS, "AAA" RATING:

Pinnacle West Capital Corporation and APS environmental, health and safety management.

UTILITY PHOTOVOLTAIC GROUP, MILLION SOLAR ROOFTOPS CHALLENGE:

APS solar program.



The APS transformer shop serves as a company model of EHS excellence.

FACILITY-BASED CONSERVATION

Our decentralized EHS management structure encourages our operating areas to create conservation practices and procurement methods that address their individual and sometimes diverse needs.

OUR FACILITIES HAVE IMPLEMENTED A VARIETY OF ENERGY EFFICIENT MEASURES

- Operating air conditioning systems with energy efficiency software that manages duty-cycling and set-backs
- Replacing outdated air conditioning with high-efficiency equipment as needed
- Writing all new construction specifications with energy efficiency in mind
- Specifying energy efficient Energy Star computers whenever new computer equipment is needed

Our transformer shop is a shining example of our commitment to environmental, health and safety excellence. A small but skilled team consisting of a subforeman, six journeymen, a forklift operator and an assistant, operates the transformer shop and have implemented a number of environmental principles that have saved the company nearly \$2.5 million per year. The shop's environmental practices begin with refurbishing electrical equipment and end with raising racks and pallets above ground to catch any oil that may drip from transformers awaiting repair. The shop also uses recirculated water for cleaning equipment, and setting up containment systems for oil tanks. When we combine the environmental

benefits with the avoided cost of purchasing new equipment, the transformer shop is a good example of the value of a holistic management approach.

In the early 1990s, we began retrofitting our facilities with T8 lamps and electronic ballasts, more efficient fixtures, compact fluorescent lamps and occupancy sensors. More than 97 percent of facility space is equipped with energy efficient fixtures. Energy savings from these efficiency improvements are estimated at more than 13 million kWh per year. We continue to use energy-efficient lighting to minimize energy use and seek innovative ways for greater efficiency improvements.

In 2000, we consumed 59,755,589 kWh of electricity to operate our facilities (excluding generation). This constituted a 13.57 percent reduction in energy use from our 1999 usage of 69,138,642 kWh.

Water is one of the Southwest's most precious resources and APS facilities are sensitive to the need to minimize water usage. Examples of water conservation activities include recycling water in power plant cooling towers several times before discharging, adapting evaporative coolers to reduce blow-down at large facilities and capturing car wash water and recycling where feasible.

TRAVEL REDUCTION

Travel reduction is an important part of our EHS program, particularly in the Phoenix area – a U.S. Environmental Protection Agency (EPA) non-attainment area for ozone, carbon monoxide and particulate matter. We encourage any employee travel reduction activity and offer subsidies to further persuade our employees of the value of travel reduction. Our subsidies include discounts on vanpool and public and private bus fares, as well as reduced parking charges for carpools. We accommodate compressed work-weeks, alternative work schedules, telecommuting and videoconferencing. In 2000, 4,004 out of 4,594 employees, living in the Phoenix metropolitan area, participated in our trip reduction program.

LAND USE / BIODIVERSITY

Our power plant operations consume a total of 14,575 acres of land. Our plant cooling lakes often become habitats for migratory birds. Our Four Corners Power Plant, with the San Juan Bird Club, has catalogued nearly 200 bird species. Morgan Lake, Four Corners' cooling lake, has become an attractive water source for birds because it is a large, warm, body of water in an otherwise dry area.

In 1999, we announced plans to close and decommission our two small hydroelectric power plants, Childs and Irving, and restore the 14 miles of a stream that was diverted in 1908 to power the plants. The stream that powers the plants, Fossil Creek, is a unique Arizona water source that originates deep in the mountains north of the plants. Fossil Creek is rare for two reasons: one, it supplies a constant flow of 43 cubic feet per second; and two, its high mineral content fosters the development of mineral formations (called travertine) that offer shelter for native, endangered fish. While the plants contribute 4.2 megawatts to our system, we believe the environmental benefits of restoring this special place to its original state outweighed the business impact of the plants' closure.

We also work to protect our lines from wildlife contact. The wildlife protection program is covered in greater detail on page 40.





The Four Corners power plant's Morgan Lake has become home to more than 200 species of birds.

FLEET FUEL CONSUMPTION

	2000	1999	1998	1997	1996
VEHICLE FUEL					
• Gasoline (gallons)	1,712,594	1,679,473	1,646,617	1,696,015	1,729,935
• Diesel (gallons)	1,277,177	1,182,976	1,154,855	1,177,952	1,189,732
• Biodiesel (gallons)	12,460	8,350	N/A	N/A	N/A
FLEET STATISTICS					
• Average miles per gallon for gas/diesel fleet	4.9	4.6	N/A	N/A	N/A
• Total miles traveled for gas/diesel fleet	14,635,736	13,185,348	N/A	N/A	N/A
• Total miles traveled for electric vehicle fleet*	61,355	59,254	N/A	N/A	N/A

* In 2000, we maintained 30 electric vehicles in our fleet.

As an electric utility serving a wide and diverse territory, we work to keep our vehicles running at top performance and replace vehicles when necessary. Accordingly, we have noticed improvements in our usage of vehicle fuel.

	Amount Used	MWh Generated	% of Total Generation
APS FUEL CONSUMPTION			
• Coal	12,933,801 tons	23,343,741	66.20
• Natural Gas/Diesel	33,885,540 mcf	3,018,024	8.62
• Nuclear	Not Applicable	8,840,745	25.09
• Hydro	Not Applicable	32,871	0.09
• Solar	Not Applicable	883	0.003
• Total	Not Applicable	35,236,264	100

