

2003 Pinnacle West Environmental Health and Safety Report

Report Introduction

At Pinnacle West and its family of companies, we understand and embrace the importance of sustainability.

Good corporate governance is the overriding philosophy upon which we base our business practices, and is the foundation our companies will continue to share in the future. Environmental stewardship, corporate citizenship and safety are the tenets we value, and upon which this report is based.

Thank you for your interest in the 2003 Pinnacle West Environmental, Health and Safety Report.

Message from Pinnacle West President Jack E. Davis

At Pinnacle West and APS, we look at shareholder value through a wide-angle lens.

Shareholder value is more than earnings and stock performance — though those elements get a lot of our attention. We create shareholder value through our environmental focus, by being an employer people want to work for, by working safely, by being an integral part of the communities we serve and by holding ourselves up to a high standard of integrity.

As you'll see in this report, these are areas we quantify and scrutinize as much as any other aspect of our business. Their impact is felt by our customers, our employees and our state, and also by Wall Street. We are pleased that our focus has been recognized in the business community as well.

Pinnacle West recently received a rating of AAA from Innovest Strategic Value Advisors, an internationally recognized investment research and advisory firm specializing in analyzing companies' performance on environmental, social and strategic governance issues. Pinnacle West also earned the AAA rating in Innovest's previous two studies, in 2002 and 2000.

Ultimately, our strength as a company lies in the collective character of our employees and their desire to produce safe and reliable energy while keeping the needs of the community and the environment at the forefront of everything they do. It is on that commitment to excellence that we plan for the future.

We encourage and look forward to your comments about this report and our progress in achieving our goals.

Sincerely,
Jack E. Davis
President
Pinnacle West Capital Corporation

Fueling Tomorrow's Economy

To paraphrase Shakespeare, "tomorrow and tomorrow and tomorrow... creeps in from day to day."

And for those who believe the environment is in a crisis and that renewable energy is part of the answer, it must feel like tomorrow does come at a creeping pace. While we might differ on the issue of crisis and how long it will take for the future to materialize, we don't disagree that environmental improvements can and should be made to the existing infrastructure. Nor do we disagree that renewable technology is part of a cleaner energy future.

The energy future visualized at APS, however, is not just about the environment. At APS, the energy future is sustainable, cost-effective and reliable. The energy sources and systems will be transparent to the end user and will power a 24-hour economy.

Accomplishing these goals is a daunting task and will not happen overnight. However, renewable technology is beginning to emerge today and will become reality in the next 20 to 50 years. Clearly this isn't a quick fix, but our company has been doing business for 117 years, and focusing on long-term solutions is a major component of our success.

Presently, Arizona produces the most solar energy per capita in the U.S., and the Arizona Corporation Commission's aggressive environmental portfolio standard has played an important role in our progress. As noted in this report, APS' solar portfolio is a major part of this success.

However, the future success of our renewable technology portfolio must be broader than just a set number of kilowatts. We must seek a workable, renewable future. We won't realize this future by simply putting up solar panels wherever and whenever possible. This would help meet some immediate goals, but would do little to advance and develop the emerging technologies that promise to be cost competitive with other energy sources.

Our goals for the future are inextricably tied to the communities we serve and to the environment in which we live and work. Our customers rely on us for their economic livelihood and comfort. They expect that we will work to protect the environment. This means working with manufacturers to deploy technology that is more than a niche tied to quotas or mandates or political agendas. While solar will be key to Arizona's renewable future, it is only one aspect. We are also exploring other renewable technologies including biomass, landfill gas, biogas, geothermal and wind; as well as clean-burning fuels such as hydrogen and compressed natural gas.

As the future unfolds, we are dedicated to managing our system with an emphasis on environmental stewardship and continuous improvement. This environmental focus is consistent with a corporate-wide philosophy of doing things the right way. As the President of our company, Jack Davis, states in his message, areas such as environmental performance, charitable giving, safety and business ethics are more than just good corporate citizenship. Combined with financial performance, they equal shareholder value. Today, tomorrow, 20 years from now, this focus will not change.

Thank you for your interest in Pinnacle West and our Environmental, Health and Safety Report.

Sincerely,

Edward Z. Fox
Vice President
Environmental Health and Safety

Company Profile

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Dun & Bradstreet Number: 131155400
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Corporate Tax ID Number: 86-001170

This summary report provides information on our company's performance across three areas of sustainability - namely economic, environmental and social issues.

Our report was prepared in accordance with guidelines set by the Coalition for Environmentally Responsible Economies (CERES) and to the extent possible, Global Reporting Initiative (GRI). These guidelines were established to develop globally applicable standards for sustainability reporting.

Company Information

For more than a century, Pinnacle West and our affiliates have provided energy and energy-related products to people and businesses throughout Arizona. Based in Phoenix, Pinnacle West has consolidated assets of \$9.5 billion and annual revenues of \$2.8 billion.

Our largest affiliate, Arizona Public Service (APS), generates, sells and delivers electricity and energy-related products and services. APS serves more than 900,000 customers in 11 of Arizona's 15 counties, and is the operator and co-owner of the Palo Verde Nuclear Generating Station – a primary source of electricity for the Southwest.

Our other affiliates include SunCor Development Company, a developer of residential, commercial and industrial real estate; APS Energy Services, a retail energy service provider; Pinnacle West Energy, a competitive generation company; and El Dorado Investment Company, a venture capital and investment firm.

** SunCor and El Dorado environmental, health, safety and social performance are not included in this report.*

Pinnacle West...

- is a Fortune 500 company
- is in Standard and Poor's 500 index and is traded on the New York Stock Exchange under the symbol: PNW
- is headquartered in Phoenix, Arizona – one of the fastest growing regions in the United States
- assets include approximately 6,000 megawatts of plant generation capacity
- ranks number one industry-wide in dividend growth over the last decade
- subsidiary APS is a leader in the development of solar technology
- employees donated more than 127,000 hours of their free time volunteering for non-profit organizations and events in 2003

APS... is a Company of Firsts

- First utility to adopt CERES principles (1994)
- APS established Arizona's first Environmental Strategic Alliance (with EPA and ADEQ)
- APS built Arizona's first commercial solar photovoltaic power plant to harvest our most abundant resource, the sun
- The first utility to create customer solar program, "APS Solar Partners"
- We developed the state's first biomass-to-energy plant to help with Arizona's forest waste issues
- We were the first to purchase energy from what will be Arizona's first commercial wind farm
- And we built Arizona's first hydrogen fueling station

APS Employees and Customers	2003	2002	2001	2000	1999
Total Employees*(year-end)	4,475	4,407	4,568	4,303	4,125
Total Customers (year-end)	953,317	902,096	874,603	843,480	810,339
Customer/Employee Ratio	213	205	191	195	196

**Number of APS employees adjusted based on ownership percentage of power plants.*

Peak Load (kW)	2003	2002	2001	2000	1999	1998
Actual	6,332,000	5,803,000	5,687,200	5,478,500	4,934,700	5,072,000
Weather-adjusted	6,142,000	5,828,000	5,504,000	5,661,900	5,089,000	4,903,000
Actual	9.1%	2.0%	3.8%	11%	(2.7)%	10.1%
Weather-adjusted	5.4%	5.4%	(0.9)%	10.1%	4.3%	4.1%

Employees assigned to Environmental, Health and Safety

In 2003, 91 employees were assigned to the EHS team.

Conversion Factors

Throughout this report, information is presented in United States measurement units. Conversions to international figures are:

1 pound = 0.454 kilograms
1 ton = 907.185 kilograms
1 gallon = 3.785 liters
1 mile = 1.609 kilometers
1 kilowatt = 3,600,000 joules
1 megawatt = 3,600 joules

Key Indicators

While we're focused on fueling tomorrow's economy, we continue to provide reliable energy services coupled with our commitment to being a good neighbor in the community. We cover issues facing our industry and company in depth in our [Pinnacle West Annual Report](#). Our environmental, health and safety reporting provides concise and effective information that can be used in judging our company's performance and in comparing us to others in our industry.

We believe the following indicators offer an appropriate perspective of our company in the community:

Historic Environmental Risk

We have a proactive manufactured gas plant (MGP) remediation program and have completed the initial investigation and characterization at all eight sites. After characterization, sites were prioritized for remediation through the Arizona Department of Environmental Quality (ADEQ) Voluntary Remediation Program. We have completed remediation at three sites, and have completed an interim remediation project at one site.

Superfund Sites

In the fall of 2003, we were listed as a Potentially Responsible Party (PRP) at the EPA Superfund site known as "Motorola 52nd Street, Operable Unit 3." We are currently responding to information requests by EPA as they continue to investigate the Superfund site. Also in the fall of 2003, APS completed all work and settled with EPA in the amount of \$2.72 million.

Environment-Related Fines

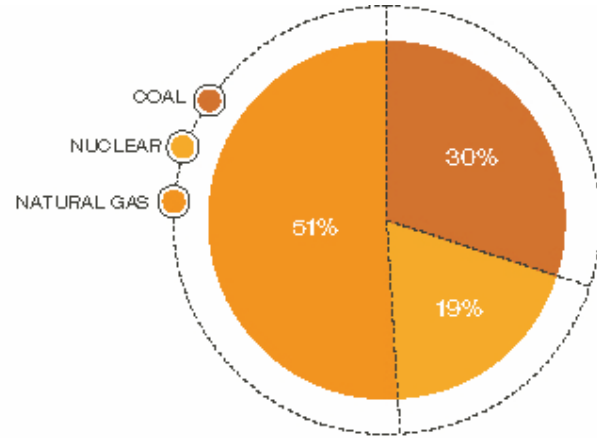
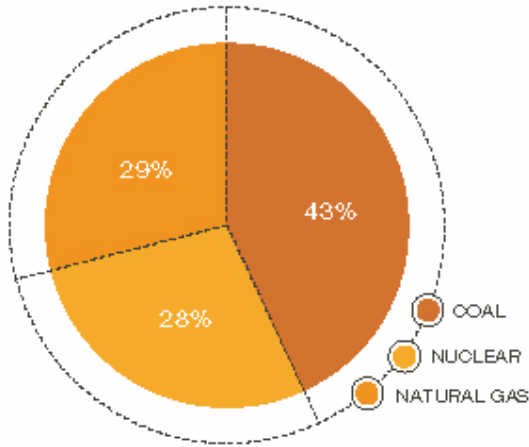
No violations with penalties were recorded in 2003. In 2001, however, the Arizona Department of Environmental Quality (ADEQ) issued two Notices of Violations (NOVs) to APS, alleging, among other things, the burning of unauthorized materials and storage of hazardous waste without a permit at the Cholla Power Plant. APS, the attorney general for the state of Arizona and ADEQ have reached an agreement (in the form of a Consent Judgment) to settle this matter. The Consent Judgment (No. CV2004-000731) was entered on January 26, 2004, and on February 2, 2004, pursuant to its terms, APS paid a \$200,000 penalty to the state of Arizona.

Concentration of High-Risk Products in the Product Portfolio

By 2004, our estimated generation mix will consist of roughly 44 percent coal, 33 percent

nuclear and 23 percent natural gas. This diversity will allow us to continue effectively managing risk in the face of changing wholesale markets and fuel prices. The following pie charts show the generation mix of the parent company Pinnacle West Capital Corporation (which includes APS and Pinnacle West Energy Corporation) and APS.

APS-Owned Generation



Pinnacle West Capital Corporation-Owned Generation

From Individual Plant Sites

All of our power plants, except for the Palo Verde Nuclear Generating Station operate under Title V air permit requirements. Palo Verde has filed an application for a non-Title V permit. System-wide, we maintain emissions in pounds per megawatt-hour that are below industry averages. (See Air Emissions Table)

Environmental Management Capability

Environmental management responsibility is placed at the facility level to ensure maximum accountability while the corporate EHS and Law departments provide technical and regulatory assistance.

Environmental Audit Capacity, Frequency and Transparency

We have an internal EHS audit group which functions independently of the environmental, health and safety department. We use the results of audits to improve performance but maintain the confidentiality of individual audit reports.

Staff Training on Environmental, Health and Safety

Employees annually participate in two or more environmental, health and safety training courses. Field employees average more than nine training courses each year.

Policies, Organization and Management Systems

Policies

At APS, effective EHS management is a social obligation and a business strategy. APS is committed to complying with all EHS laws and regulations, and actively seeking out and implementing sound business opportunities that go beyond regulatory requirements.

The cornerstone of our EHS programs is our Environmental, Health and Safety Policy, which outlines our concern about the environment in which we live and our commitment to the health and safety of our employees and community. This document also emphasizes our adherence to the Coalition for Environmentally Responsible Economies (CERES) principles.

Issues Directly Addressed by APS Policies and Procedures

Environmental

- Water Quality
- Air Quality
- Energy Conservation Opportunities
- Solid/Hazardous Waste
- Storage Tanks
- Chemical Releases
- Spill Prevention/Leak Detection
- Site Remediation
- Chemical Inventory Reporting
- Resource Use
- Incident Investigation
- Risk Management

Health & Safety

- Emergency Planning
- Personal Safety
- Transportation Safety
- Materials/Equipment Safety
- Industrial Health/Hygiene
- Occupational Medicine
- Public Safety
- Fire Protection and Prevention
- Incident Investigation
- Risk Management
- Substance Abuse

Social

- Diversity
- Organized Labor
- Contract Labor
- Nuclear Safety
- Confidentiality
- Insider Trading
- Political Participation
- Antitrust
- Foreign and Corrupt Practices

Organization

As a community leader, APS understands the importance of being committed to the health of the environment and to the safety of our employees and the community. That commitment is the basis of our environmental, health and safety efforts.

Edward Z. Fox, vice president of Communications, Environment and Safety, leads a team of experienced professionals responsible for implementing the company's EHS programs. He also provides information about the company's EHS goals and activities to executive management and the Board of Directors.

The EHS management team consists of two committees: the Environmental Advisory Team and the Safety and Health Advisory Team. These committees develop strategies and manage and implement environmental, health and safety programs and projects. See also Management Systems.

Frontline EHS professionals handle issues that arise in the field and at company facilities. These professionals provide daily, on-the-spot attention to EHS issues. They are the backbone of the company's EHS program and work hard to keep things operating smoothly and safely.

At the corporate level, the EHS Department consults on environmental, health and safety issues. These experts assist on complex technical and regulatory matters, develop strategies and monitor market and technological trends.

Pinnacle West's team of EHS professionals — including a team of nurses — strives to keep the company in compliance with all regulations and on the leading edge of the best environmental, health and safety practices.

Organizational Changes

To reflect changes in the current regulatory environment and to create operating efficiencies, in 2003, APS and parent company, Pinnacle West, made a number of organizational changes that affected the structure of both companies.

Jack E. Davis, president and chief executive officer of APS and president of Pinnacle West, assumed the additional title and responsibilities of chief operating officer of Pinnacle West. Davis continues to report to Pinnacle West Chairman and CEO William J. Post.

Steve M. Wheeler, senior vice president of Regulation System Planning and Operations at APS was named executive vice president of Customer Service and Regulation for APS. He assumes the added responsibility of Customer Service.

Donald E. Brandt, senior vice president and chief financial officer for Pinnacle West and APS was named executive vice president and CFO for APS and its parent. He assumes the added responsibilities of the Controller's office and financial planning. Don Robinson, vice president of Finance & Planning, was named vice president of Planning for APS. He will be responsible for corporate planning.

Additionally, Corporate Business Services, reporting to Executive Vice President Armando Flores, were moved from Pinnacle West to APS.

Departments within Corporate Business Services include:

- Information Services
- Human Resources Services
- Corporate Environmental, Health & Safety
- Corporate Communications
- Community Development
- Corporate Security
- Real Estate/Facility Management

Real Estate/Facility Management and Corporate Security now report to Edward Z. Fox vice president Communications, Environmental and Safety.

Industry Participation

APS maintains membership in the Edison Electric Institute and the Electric Power Research Institute. Many of our employees participate in professional and business associations covering every function of our business, including accounting; purchasing; environmental, health and safety; human resources; public relations; engineering and electrical trades.

Technical Research

Looking to the future is fundamental to the health of our company and to the vitality of our state. That is why we strive to further our expertise in technical areas. From conducting research on renewable technologies to finding innovative ways to work more efficiently, we consistently seek ways to incorporate the cleanest and most cost-effective technology into our processes. We also support and sponsor a variety of research activities devoted to leading-edge technologies at educational institutions and company facilities.

This is most evident at the APS Solar Test and Research Center (STAR), which houses much of the world's most-advanced solar technologies. At STAR, APS tests and evaluates the effectiveness of new technologies, while fine-tuning and developing its own proprietary designs. By supporting industry efforts, APS aims to help develop technology that can make an impact on our energy future. We also partner with Arizona State University and Northern Arizona University to collect performance data from our solar generating facilities.

The company continues to explore the use of hydrogen as fuel in combustion engines. APS' hydrogen and compressed natural gas fueling station in downtown Phoenix is used by employees and contracted companies, and offers hydrogen, compressed natural gas and a compressed natural gas-hydrogen blend. Tests of the Compressed Natural Gas/Hydrogen (CNG/H) fuel have shown improved vehicle performance with lower air emissions.

In 2003, APS' Hydrogen/Compressed Natural Gas fueling station received Valley Forward's Crescordia Environmental Excellence Award. APS was the sole recipient in the Environmental Technologies "Private Sector" category

With these actions, the company is positioning itself to be a leader in developing cost-effective, clean energy sources for the future. Our Renewable Energy and Technologies section offers more information on our companies' sustainability efforts.

Other Technologies

Biomass

We believe in finding innovative ways to solve complex problems. For example, APS recently helped bring on line a three-megawatt biomass-fueled electric-generating plant which helps reduce forest waste plaguing our northeastern Arizona communities.

Built in partnership with Western Renewable Energy (WRE), the Arizona plant turns forest waste from our state's bark beetle infestations, forest fire prevention initiatives and

other vegetation waste into clean electricity. This biomass plant will not only generate energy from a renewable source, it will help APS reduce its greenhouse gas emissions while reducing future forest fire threats.

This power plant and additional biomass plants planned for other northern Arizona locations are just one aspect of APS' efforts to meet the Environmental Portfolio Standard (EPS) established by the Arizona Corporation Commission. The EPS requires 1.1 percent of the company's retail energy to be derived from renewable sources by 2007.

In addition to cleaner air and healthier forests, these biomass plants are creating jobs in northern Arizona. To increase awareness of the biomass project among school-aged children, APS and WRE sponsored a poster and essay contest in the area schools.

Solar Trough Technology

APS is building a one-megawatt solar trough technology plant at its Saguaro Generating Station near Tucson. Once completed, the \$6 million project will be the first solar trough technology plant to be built in the United States since 1988 and the first to combine solar thermal parabolic trough technology with a power block technology usually associated with geothermal installations.

Solar thermal parabolic trough technology uses long parabolic or trough-shaped mirrors to concentrate the sun's energy 30 to 60 times its normal intensity on a mineral oil-filled receiver pipe that runs the length of each trough.

The build-out costs on this project are expected to be comparable to a photovoltaic plant of the same size. APS plans to operate the plant remotely, thus minimizing operating costs. Our goal is to run the plant at \$.03 per kilowatt hour. The Saguaro solar plant is expected to be completed early in 2005 and will help APS meet its Environmental Portfolio Standard.

Wind Power

After months mapping the state's wind resources, APS and Western Wind Energy Corp. (WND) have partnered to build a 15-megawatt wind turbine generating facility approximately 200 miles northeast of Phoenix, near St. John's.

WND will construct and operate the Eastern Arizona Wind Energy Center on 400 acres of land it owns. APS will purchase the power - enough for up to 3,000 average-size homes, and acquire the associated green credits. Construction of the plant is scheduled to begin in late 2004.

The Eastern Arizona Wind Energy Center will be located atop a mesa approximately 800 feet higher than the surrounding lands. The wind farm will consist of ten 1.5-megawatt machines.

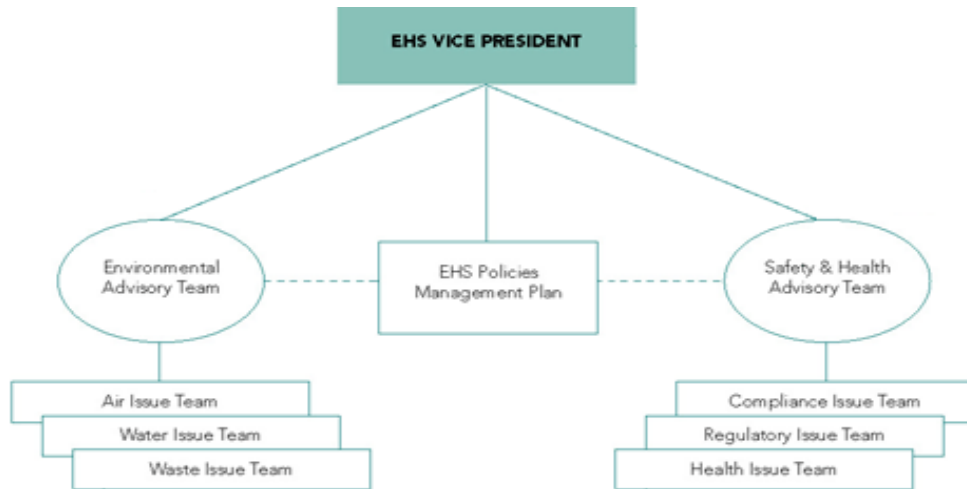
Management Systems

Another critical internal document, the APS EHS Management Plan, augments the EHS policy and outlines our EHS organization and responsibilities for meeting federal, state, local and environmental, health and safety laws and regulations under which we operate.

We use all these documents to reinforce sound, ethical and profitable business practices, service to the community and fairness to employees. The relationship of the EHS Policy and Management Plan to our Advisory and Issues Team is illustrated below.

Maintaining day-to-day compliance with all applicable environmental, health and safety laws and regulations is the overriding objective of APS' EHS management systems. APS strives to go beyond basic compliance, where activities are consistent with sound business practices and goals. All of our employees, from the officer level to the frontline, are responsible for compliance and have an obligation to bring issues and concerns forward for resolution.

Our EHS program is decentralized, with primary responsibility for complying with EHS requirements resting with the leaders and frontline employees at APS facilities. Managing compliance and continual improvement at each facility is the cornerstone of APS' EHS philosophy. Support groups, such as our Corporate EHS Department and the Corporate Law Department are available to assist and support the operating areas with technical, strategic, regulatory and legal EHS issues. To strengthen our compliance management systems we have an aggressive EHS audit program. They establish a four-tier assessment process and outline management expectations relative to routine and periodic compliance assessments, reporting, corrective actions, roles and responsibilities.



Environmental, Health and Safety Policy

APS is committed to a clean, safe and healthy workplace and environment. All aspects of our business will be managed in a safe and environmentally responsible manner in accordance with the principles set forth in this policy. We believe these actions benefit our customers, shareholders, employees and the public, both now and for the future, while improving the quality of the environment in which we live. This policy reaffirms our commitment to environmental stewardship and protecting the well-being of our customers, employees and the public.

Management Commitment

All levels of APS management are committed to, and accountable for, implementing, maintaining, measuring and improving the environmental, health and safety programs of the company. Self-assessments of our performance in these areas will be routinely conducted. We will measure performance and hold all employees accountable through performance enhancement processes.

Culture

We will foster a culture that encourages safe, healthy and environmentally responsible behavior by clearly defining the responsibilities of all employees. We will encourage proactive employee involvement in these efforts. Incentives for extraordinary performance will be provided.

Health & Safety

Safety is the overriding value of all aspects of our business. We will continually provide a safe and healthy environment for our employees, our customers and the community. We demand safe work behavior, practices, design and systems.

Pollution Prevention

Pollution prevention is an operating objective. We strive to prevent or reduce the generation of waste at the source. Our impact on the environment is minimized through good engineering practices. Where waste cannot be eliminated, it will be managed in compliance with all applicable requirements.

Community

We support and participate in the design, development and establishment of sound public policy and educational initiatives that protect human health and the environment. We will work with governments and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment. We will share with the communities our performance in environmental, health and safety areas.

Compliance

Compliance with all applicable environmental, health and safety laws and regulations is required. All of our employees, from the officer level to the front line, are responsible and accountable for compliance and have an obligation to bring issues and concerns forward for resolution. We will actively seek sound business opportunities to go beyond regulatory requirements.

Stewardship of Natural Resources

We will responsibly use natural resources, such as air, water, soils and forests, and we will help to conserve these natural resources through efficient use and careful planning. We will pursue an energy resource plan that emphasizes environmental protection, energy conservation and efficiency. We will responsibly address conditions that endanger health, safety or the environment.

The CERES Principles

APS endorses the CERES Principles detailed below. By endorsing the CERES Principles, companies not only formalize their dedication to environmental awareness and accountability, but also actively commit to an ongoing process of continuous improvement, dialogue and comprehensive, systematic public reporting. Endorsing companies have access to the diverse array of experts in our network, from investors to policy analysts, energy experts, scientists and others.

We will update our practices constantly in light of advances in technology and new understandings in health and environmental science. In collaboration with CERES, we will promote a dynamic process to ensure that the Principles are interpreted in a way that accommodates changing technologies and environmental realities. We intend to make consistent, measurable progress in implementing these Principles and to apply them to all aspects of our operations throughout the world.

Protection of the Biosphere

We will reduce and make continual progress toward eliminating the release of any substance that may cause environmental damage to the air, water, the Earth or its inhabitants. We will safeguard all habitats affected by our operations and will protect open spaces and wilderness, while preserving biodiversity.

Sustainable Use of Natural Resources

We will make sustainable use of renewable natural resources, such as water, soils and forests. We will conserve non-renewable natural resources through efficient use and careful planning.

Reduction and Disposal of Wastes

We will reduce and where possible eliminate waste through source reduction and recycling. All waste will be handled and disposed of through safe and responsible methods.

Energy Conservation

We will conserve energy and improve the energy efficiency of our internal operations and of the goods and services we sell. We will make every effort to use environmentally safe and sustainable energy sources.

Risk Reduction

We will strive to minimize the environmental, health and safety risks to our employees and the communities in which we operate through safe technologies, facilities and operating procedures, and by being prepared for emergencies.

Safe Products and Services

We will reduce and where possible eliminate the use, manufacture or sale of products and services that cause environmental damage or health or safety hazards. We will inform our customers of the environmental impacts of our products or services and try to correct unsafe use.

Environmental Restoration

We will promptly and responsibly correct conditions we have caused that endanger health, safety or the environment. To the extent feasible, we will redress injuries we have caused to persons or damage we have caused to the environment and will restore the environment.

Informing the Public

We will inform in a timely manner everyone who may be affected by conditions caused by our company that might endanger health, safety or the environment. We will regularly seek advice and counsel through dialogue with persons in communities near our facilities. We will not take any action against employees for reporting dangerous incidents or conditions to management or to appropriate authorities.

Management Commitment

We will implement these Principles and sustain a process that ensures the Board of Directors and Chief Executive Officer are fully informed about pertinent environmental issues and are fully responsible for environmental policy. In selecting our Board of Directors, we will consider demonstrated environmental commitment as a factor.

Audits and Reports

We will conduct an annual self-evaluation of our progress in implementing these Principles. We will support the timely creation of generally accepted environmental audit procedures. We will annually complete the CERES Report, which will be made available to the public.

These Principles establish an environmental ethic with criteria by which investors and others can assess the environmental performance of companies. Companies that endorse these Principles pledge to go voluntarily beyond the requirements of the law. The terms may and might in Principles one and eight are not meant to encompass every imaginable consequence, no matter how remote. Rather, these Principles obligate endorsers to behave as prudent persons who are not governed by conflicting interests and who possess a strong commitment to environmental excellence and to human health and safety.

These Principles are not intended to create new legal liabilities, expand existing rights or obligations, waive legal defenses, or otherwise affect the legal position of any endorsing company, and are not intended to be used against an endorser in any legal proceeding for any purpose.

**CERES can be contacted at 99 Chauncy Street, 6th Floor Boston, MA 02111 USA,
(617) 247-0700 Phone, (617) 267-5400 Fax,
www.ceres.org**

Audits

Highlights

We conduct risk-based audits throughout the company and ensure all criteria are current and applicable. Prior to an on-site audit, our auditors determine the scope of individual audits based on the facility's risk factors. Even if the scope of an audit is expected to be limited, auditors may, at their discretion, perform a more comprehensive audit once on site.

Our audits incorporate all regulatory requirements for air, water, waste, industrial hygiene, safety, Emergency Planning and Community Right to Know Act (EPCRA), Department of Transportation (DOT), pollution prevention and internal EHS policies, procedures and management practices.

Upon completion of an audit, our auditors meet with the facility's manager to discuss the results of the audit and note any areas of concern or accomplishments. Significant areas of concern are noted as audit exceptions, and reported in a formal audit report. The facility manager then must complete a corrective action plan within 30 days. The audit team then enters the findings into a database to track the facility's progress toward correction, as well as identifying companywide trends.

Results of EHS audit exceptions are reported quarterly to executive management and at least annually to the Board of Directors. Officers receive quarterly and annual reports on audit activities and trends in audit findings. Additionally, facility managers are provided with quarterly summary reports on EHS audit exceptions for incorporation into their Tier 1 EHS self-assessment activities.

In 2003, our audit team conducted audits of five service centers, three business offices, five power plants and three other facilities.

To identify areas for improvement and to ensure our EHS compliance audit program conforms to reference standards, APS contracts for periodic third-party reviews. Our last review was in 2002, and we will be contracting an independent third party for a review in 2005.

The EHS auditing program continues to incorporate expert guest auditors (from the various APS and Pinnacle West operations) to be a part of the EHS audit team. This program enhances the knowledge and skill set of EHS professionals throughout the organization.

We utilize an EHS self-assessment program, as part of the Tier 1 process, to augment our audit program. With the EHS self-assessment program, individual facilities review their EHS programs and identify strengths and weaknesses. In 2003, APS power plants completed 31 self-assessments.

APS monitors the environmental performance of suppliers in a variety of ways, including periodic audits of our vendors by the EHS audit group.

Of the 23 vendor audits completed in 2003, 74 percent were waste treatment, storage and disposal facilities; the remaining 26 percent were recycling firms. APS also conducted an additional 10 specific vendor audits. Finally, APS belongs to the Joint Utility Vendor Audit Consortium (JUVAC) and CHWMEG consortium. Seven audits were conducted by JUVAC and two contracted by CHWMEG.

Supplier Relationships

Fuels Suppliers

Three primary fuels power our electrical generators: nuclear, coal and natural gas. Each fuel is procured in a different way. Nuclear fuel contracts address uranium acquisition and fabrication of fuel assemblies. Coal contracts address mining, transportation and matching coal composition with the plant's operational needs. Natural gas, on the other hand, is a commodity managed by Pinnacle West Power Marketing. The Fuels Procurement group oversees natural gas transportation contracts with El Paso Natural Gas Company.

The Fuels Procurement department also monitors supplier activity and costs for coal reclamation, as well as health and safety practices to ensure work is cost effective and environmental criteria are met. Fuel contracts at the Four Corners Power Plant include mine reclamation costs.

All of our fuel suppliers are expected to maintain federal, state and local permits and adhere to environmental standards. Federal, state and local regulatory agencies also conduct inspections to ensure compliance with all requirements.

We work with fuel suppliers to develop environmentally preferable processes, materials and products. We assist with environmental studies and monitor efforts to improve the quality of air, ground water, vegetation and animal habitats.

Our fuel procurement policy emphasizes production of energy from natural resources in the most efficient and economic way. When feasible, energy is procured from local and regional fuel sources in order to limit the economic and environmental impacts of transportation. We purchase about 97 percent of our coal locally. The remaining three percent is procured regionally.

APS Academy for the Advancement of Small, Minority and Women-owned Enterprises

The company also created a program that supports minority- and women-owned businesses. Through the APS Academy for the Advancement of Small, Minority and Women-owned Enterprises, or AAAME, APS helps these business owners learn how to thrive and grow their companies. Launched in 1997, AAAME teaches small-business owners the skills necessary for their companies to succeed. These include training in strategic planning, finance, management/operations and marketing. Students then are partnered with advisers from both the non-profit and private sectors — including APS volunteers, business consultants and retired executives — who can provide lessons learned from their own experiences in the business world. APS does business with many

of the companies taking part in the program and in 2003, our company directly spent more than \$46 million with minority- and women-owned companies.

Pinnacle West Supplier Diversity Program

The Supplier Diversity and Development Program is an integral part of our Procurement organization and of our Corporation's business plan. Supply Chain Management's vision is to help Pinnacle West spend its money smarter, without compromising quality, safety or service. Without question Minority, Women, Veteran, Service-Disabled Veterans and HUBZone Enterprises have a role to play.

The Supplier Diversity & Development (SDD) Team is committed to facilitating and expanding competitive business opportunities with Minority, Women, Veteran, Service-Disabled Veterans and HUBZone Enterprises primarily in Arizona and the Southwest. Our efforts are driven by the diversity of the communities, in which we live and serve. We work with these diverse suppliers to provide greater value, innovative thinking and improve the availability of competitive goods and services to Pinnacle West. Our success is attributed to strategic relationships built on direct, honest and equitable communications.

Stakeholder Relationships

Community Participation and Accountability

APS and its employees devote a lot of time, energy and resources to helping make our community strong, healthy and vital.

That means we're there to sponsor community events, to support Getting Arizonans Involved in Neighborhoods (GAIN) projects, to lend a helping hand to underprivileged families, to build community ball fields and to foster health initiatives in schools.

For example, APS and Major League Baseball's Arizona Diamondbacks share a winning partnership. APS, which has been a principal sponsor of the hometown D-backs since the team's inception, has a special connection to the team. As such, APS and the Diamondbacks have teamed to build and dedicate nine lighted baseball fields in neighborhoods throughout Arizona. APS also partners with the International Brotherhood of Electric Workers (IBEW) to light the fields.

Thanks to the partnership with the Diamondbacks, APS has given away thousands of free tickets to Arizona youths and will again donate blocks of 40 or more tickets to deserving children for home games this season. The children are chosen from schools, YMCAs and Boys and Girls Clubs throughout the state.

We also support local charities, including the Valley of the Sun United Way. In 2003, APS and its employees exceeded previous company giving records, contributing \$2.3 million to the United Way. APS matches employee contributions by \$.50 cents on the dollar. Employees also contributed more than 127,000 hours to 300 community-based projects in 2003. The company also makes a donation when employees volunteer 25 hours or more.

Line Siting and Construction Projects

With Arizona's rapid growth, and to help prevent widespread outages like the one that crippled the entire east coast last summer, APS is proactively planning its transmission and distribution resources to accommodate the growth of the communities and multi-use developments dotting the landscape.

Arizona's projected growth rate is between three and four percent annually, more than three times the national average. To meet our customers' growing needs for reliable electricity and to prepare our company for future growth, APS initiated two power line and substation projects: the West Valley-North Facility Siting Project and the West Valley-South Facility Siting Project.

The West Valley-South Siting Project features three 230-kilovolt (kV), twelve 69-kV substations, and a network of power lines to connect these substations. The West Valley-North Project includes a new 230-kV power line and two new substations.

As part of the process, APS conducted environmental studies and extensive public outreach to identify sensitive areas with respect to the affected communities. APS also worked closely with local governments, individual developers and landowners on the final locations for these power lines and substations.

Late in 2003, the Arizona Corporation Commission (ACC) unanimously approved the West Valley-South project, granting the company a Certificate of Environmental Compatibility (CEC). The ACC approved the three new 230-kV substations and approximately 14 miles of new, double-circuit 230-kV power lines. Issuance of the CEC allows the company to proceed with construction activity. The process of conducting a siting study, gaining ACC approval, obtaining the necessary land rights and the actual construction of the facilities can take as long as five years to complete.

The line siting process takes into account many environmental factors, including existing and planned land uses, visual impacts, scenic views, historic and archaeological sites and biological resources.

Public Participation

At APS, we believe good corporate citizenship requires public participation.

We support our employees holding elected office in their communities and participating in forming sound public policy at local, state, national and international levels. APS employees are involved in policy discussions in many areas, including education, healthcare and the economy.

APS representatives also work to strengthen business alliances throughout the Phoenix metropolitan area, including the Greater Phoenix Economic Council (GPEC), Greater Phoenix Leadership (GPL), WESTMARC and the East Valley Partnership. In addition, we are involved in the Valley Business Council, which consists of representatives from all the Phoenix-area chambers of commerce.

The Greater Phoenix Business Leadership Coalition, was formed in November 2001 as a collaborative effort among the region's business leadership to build and sustain a robust economy, a healthy environment and a quality lifestyle for the region and the state. The group promotes economic development, travel and tourism, transportation, education, federal economic policy, and tax and fiscal policy. APS is an active participant in this coalition.

Our vice presidents of Government and Federal Affairs give APS and Pinnacle West a voice in the law-making process at all levels, focusing on areas such as air quality, education, energy and transportation. APS supports climate change policies which ensure energy and economic vitality while transitioning to less carbon intensive fuels. Examples of the company's efforts to address this issue are discussed in the Climate Change section of this report.

Pinnacle West Public Affairs is active in alliances with governors, legislative leaders, trade groups and associations in the West, which focus on western-specific issues. Examples include West Connect, West Associates, Western Business Roundtable and the Western Regional Air Partnership.

Corporate Citizenship

Our company takes pride in its commitment to the community. Throughout Arizona, our company is recognized as a leader in the communities we serve.

In a 2003, APS-sponsored survey of 757 community leaders, APS was the first company mentioned by 60 percent of those surveyed as the one company that comes to mind first as a good community citizen. According to the survey, our active participation in the communities we serve established us as a good citizen in the minds of these leaders. We are recognized for our involvement in community development, state and local programs, and for our support of economic development activities.

We support the arts and education not just because it's the right thing to do, but because today's youth are our employees, consumers and leaders of tomorrow and we need an educated society to move us forward in the 21st Century. We assist educators through professional development opportunities such as:

- Generation's Summer Teachers' Workshop, which provides new and exciting ways to teach about energy while providing real-world experiences about the electric industry from people who work in it every day.
- APS' PASS (Partners Advancing Student Success) program in which we partner with Motorola and Communities in Schools to help educators integrate the Arizona Academic Workplace Skills Standards into their lesson plans while giving them actual business experience to help them understand the relevance of what their students are learning in the classroom.
- Through sponsorships of arts and culture we provide opportunities for "at-risk" schools to visit and take part in programs offered by local museums and theaters.
- Our five-year commitment with Arizona Department of Education's Character Education Initiative to bring character education to all schools statewide.

- Our continued support of Kids Voting Arizona to help our youth understand their obligations as citizens to participate in local and national elections.
- In partnership with the Phoenix Suns, we offer up to \$50,000 in energy and environmental mini-grants to schools within the APS service territory. We provide scholarships to ASU, ASU West and the Maricopa Community Colleges.
- Our employees routinely volunteer at local schools through Junior Achievement programs.

Customer Satisfaction

Focusing on the needs of customers has resulted in steadily improving customer satisfaction scores as measured by the J.D. Power and Associates Electric Utility Residential Customer Satisfaction Study. In 2003, APS ranked second among electric utilities in the West, and earned the highest score among investor-owned utilities in the region. APS improved its scores in all five of the survey's factors, which measure customer attitudes about power quality and reliability, company image, price and value, billing and payment and customer service.

In addition to third-party customer surveys, the company conducts its own surveys to determine customer satisfaction. For the Customer Satisfaction Tracking Survey, residential and small-to-midsize business customers are surveyed twice each year regarding their level of satisfaction with APS' performance. Participants are randomly selected regardless of whether they have had any recent company contact. Large commercial and industrial customers participate in the survey once per year.

Emergency Response

APS employs and trains fire and emergency response teams at the Palo Verde Nuclear Generating Station plant and the Four Corners and Cholla coal plants. Emergency response plans at each facility detail the roles of APS employees in responding to emergencies. We actively participate in local emergency planning committees and provide emergency planning and on-site chemical storage and hazard information to state and local agencies through SARA (Superfund Reauthorization Act of 1986) Tier I and Tier II reports.

The Palo Verde Nuclear Generating Station annually provides neighbors with information on plant operations, emergency planning zone maps, emergency classifications, important telephone numbers, procedures, locations of care centers and suggested protective actions. Palo Verde also conducts joint emergency planning drills with local, state and federal emergency response agencies at least twice per year.

The APS Energy Delivery and Sales division also maintains an emergency response plan that helps the organization quickly respond to disasters, both natural and man-made. Periodic reviews and drills help the division improve its emergency response procedures for use during potentially dangerous emergency outages.

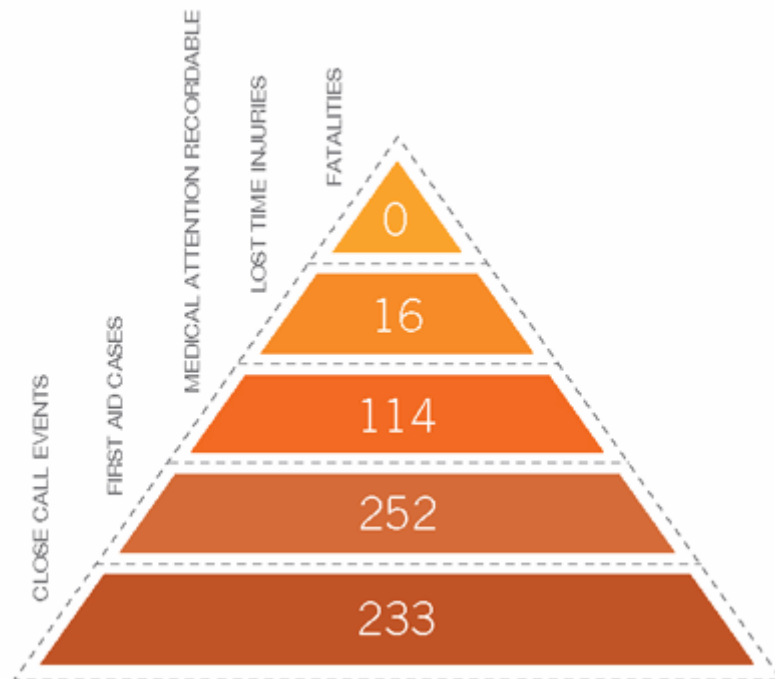
Employee Safety

Accountability for Safety 2003

Safety performance is a core value at our company. It is a deep-seeded value that can not be compromised. We recognize that only through a commitment to safety can we achieve our long-standing goal of accomplishing our daily jobs with zero preventable recordable injuries. Unfortunately, although our preventable recordable injuries declined in 2003, our total recordable injuries increased. This increase, which adds 16 additional cases, was the result of new criteria implemented by the Occupational Safety and Health Administration (OSHA) concerning employee hearing loss. Additionally, the APS Severity Incident Rate dramatically increased as the result of two employee injuries requiring a collective 305 days away from work to rehabilitate. In 2003, 130 employees sustained an OSHA recordable injury.

Accidents occur for a variety of reasons, some preventable and some non-preventable. However, accidents are not inevitable. The Pinnacle West/APS Safety and Health Advisory Team has evaluated the adverse 2003 trend using a modified Hiendrich Safety Pyramid model of reporting employee events.

The Safety Pyramid for 2003 helps us to understand that the reporting of close call events is disproportionate to injuries reported. The team has determined that the best way to reduce the number of injury accidents and their severity is to place a greater emphasis on close call reporting and trending. Based on developing close-call trends, appropriate action can be taken to prevent injuries.



Our commitment to “Accountability For Safety” showed a distinct relationship between the severity of injuries and close call events. As a result, we promote employee reporting of close call events for the purpose of sharing the information with all employees. It is

believed that by publicizing this relationship in daily statistical reports, we will be able to decrease the number of errors resulting in injuries.

Human Resources

APS values employees' expertise and opinions. We are a company that offers competitive compensation and rewards for outstanding performance. We involve employees in management and decision-making processes.

We're committed to offering competitive salaries, comprehensive benefits and a sound work environment. And it shows. Job candidates come from far and wide in response to opportunities posted on the company's Web site. Of job candidates offered employment, 95 percent accept positions with APS and Pinnacle West, indicating that the company is an employer of choice. Once employed, we keep our employees, as evidenced by our turnover rate in 2003 of only 1.3 percent.

APS and parent Pinnacle West enjoy a positive and productive relationship with organized labor including the International Brotherhood of Electrical Workers (IBEW), the largest union representing employees within the company. Through this partnership with IBEW, several initiatives have been implemented, including a multi-skill-training program, a process to hire supplemental workers, a drug-free program, an apprenticeship program, a driver qualification program and numerous safety projects.

Attracting Employees

APS is committed to being an equal opportunity and affirmative action employer and strives to create a work environment that draws upon unique backgrounds influences and differences. At APS, our employees are our most important assets in the rapidly evolving and competitive energy industry. Our employees enjoy challenging work, competitive compensation and benefits packages, a safe environment, open communication and an atmosphere of continuous learning.

APS offers a wide array of internships and career opportunities in technical and administrative positions as well as union and non-union positions. Our company's Web site also connects potential job seekers with employment opportunities as well as information about our companies.

We offer school-to-work and scholarship opportunities as well as an extensive internship program that introduces students to virtually every part of our business. Specific programs target students seeking education in finance, accounting, engineering, mathematics and electrical trades.

In 2003, APS conducted a targeted recruitment of "line worker" students for the APS/IBEW Intern Program. The company hired 10 interns of which four entered into our apprentice program. The remaining interns were retained in our supplemental workforce. This is the first time in our company's history that we have had interns complete a line-worker school. Also in 2003, 79 student interns participated in our school-to-work program.

Workplace Diversity

We continue to develop and retain the best employees. We actively seek to hire a diverse workforce. Diversity is based on the fundamental belief that every human being is of equal worth, entitled to the same privileges and opportunities without regard to race, gender, disability or age. This concept is at the core of our business and our corporation's culture.

Internally, as part of our diversity initiatives, we've created a three-week training program aimed at women and minority employees who express interest in becoming managers. Sponsored by the individual employee's supervisor, the program offers these employees the opportunity for advancement while establishing a feeder system from which the company can choose its leaders.

Externally, we also created a program that supports minority- and women-owned businesses. Through the APS Academy for the Advancement of Small, Minority and Women-owned Enterprises, or AAAME, APS helps these business owners learn how to thrive and grow their companies. Launched in 1997, AAAME teaches small-business owners the skills necessary for their companies to succeed. These include training in strategic planning, finance, management/operations and marketing. Students then are partnered with advisers from both the non-profit and private sectors — including APS volunteers, business consultants and retired executives — who can provide lessons learned from their own experiences in the business world.

APS does business with many of the companies taking part in the program and in 2003, our company directly spent more than \$46 million with minority- and women-owned companies.

You can visit our company Web site for a listing of our officers and board of directors.

EHS Employee Training

At APS, we understand the value of continuous education, and employee training is an integral part of our successful EHS programs. Our employees have an active EHS training system that employs a variety of training media, including internal classes, pre-job safety meetings, external seminars and certification, computer-based instruction, hands-on training and video presentations.

In 2003, our employees completed training on 292 EHS-related courses. More than 55,000 training sessions were completed for the year, for an average of nine training courses per employee. Employees with high-risk jobs participated in additional training. The corporate EHS department maintains a computer-based system called TrainKing which tracks progress and notifies supervisors when training is necessary.

In addition to environmental, health and safety training, we encourage employee continuing education through external course offerings and internally through our Pinnacle West University. Pinnacle West University offers more than 750 online courses covering popular business topics. Courses are available to employees with Internet access from the office or home.

EHS Brownbags

In 2003, the company continued to offer employees informal educational opportunities through its EHS brownbag meetings — luncheon seminars on environmental, health, safety and new technology issues to educate and motivate employees. The lunch seminars are open to all employees. In 2003, 171 employees attended six seminars.

EHS Excellence Awards

APS rewards outstanding individual environmental, health and safety performance and initiatives through the Environmental, Health and Safety Excellence Awards program. In 2003, 111 EHS Excellence Awards were given for a variety of accomplishments. The honored employees were also recognized in our internal company communications.

Public Safety

Our Public Safety Department is responsible for keeping our customers and the public safe and informed about the possible dangers of electricity.

Together, our Customer Service and Public Safety departments ensure our customers have access to accurate, relevant information on the proper use and handling of electricity. Each year, our Public Safety employees target students throughout Arizona with an educational outreach program. The department also has reached hundreds of maintenance workers, city employees, firefighters and arborists with targeted electrical safety presentations. To support the outreach efforts, the department launched a safety billboard campaign that encouraged people to be cautious of activities around electric lines and equipment.

Our Construction department maintains three electrical safety demonstration trailers that show the dramatic impact of electrical current on living tissue. To ensure the highest level of safety, only trained, experienced personnel operate the trailer. In 2003, we conducted nearly 75 presentations reaching more than 3,000 people.

Environmental Performance

Stewardship of Natural Resources

APS adheres to a specific and focused vision for recycling, source reduction and conservation of natural resources, including:

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

Our employees strive to incorporate this thinking into every aspect of operations, from making environmentally sensitive purchasing decisions to promoting reuse and recycling efforts. Our systems are being integrated to help manage purchasing, chemical use and

reuse of company equipment. Our in-house chemical review team is responsible for 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 increase 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 the types and quantities of chemicals purchased and stored. These two systems allow us to create baselines to more effectively plan and set goals.

In 2003, APS joined two EPA partnerships programs - WasteWise and Coal Combustion Products Partnerships (C2P2). Wastewise is a voluntary EPS program through which organizations work to minimize solid waste. C2P2 is a cooperative efforts between the EPA and the industry to help promote the beneficial use of C2P2 and the environmental benefits which can result.

Chemical Use Reduction

Under our company programs, every chemical used is tracked, from purchase through disposal. Our company requires employees to follow specific practices when purchasing hazardous chemicals. Although we track chemical use in compliance with regulations, we also seek programs that will result in cost control, pollution prevention and revenue generation.

APS continually tries to reduce the number of approved hazardous chemicals the company uses. In 1997, we had a total of 6,881 chemicals listed in our MSDS database system. In 2003, we had 4,706 chemicals listed in our MSDS database, compared with 4,162 in 2002 and 4,234 in 2001. This slight increase was due to the opening of our new Redhawk and Silverhawk power plants.

Material Re-use

Our materials exchange computer program provides a “marketplace” for employees and managers to post and shop for surplus materials rather than procuring new goods. Our employees completed exchanges that resulted in more than \$45,500 in savings in 2003.

EHS Targets

The following table lists EHS targets for our major operating units. Although our safety goal is always 52 weeks without an injury, we also take pride in our ability to increase the number of weeks without an injury.

EHS TARGETS				
Area	Goal 2002	2002 Results	Goal 2003	2003 Results
Fossil Generation				
# of weeks without injury	52	28	52	25
Safety & Environmental Self-Assessments	14	27	14	22
Nuclear Generation				
# of weeks without injury	52	42	52	43
Safety & Environmental Self-Assessments	1	4	1	3
Energy Delivery & Sales				
# of weeks without injury	52	26	52	25
Safety & Environmental Self-Assessments	2	2	3	3
Shared Services				
Preventable Recordable Injuries	0	3	0	2
Safety & Environmental Self-Assessments	2	2	3	3

Facility Energy Conservation

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

In 2003, our corporate headquarters in downtown Phoenix was converted to the Northwind Cooling system which uses an industrial grade, ice-based chiller that manufactures three million pounds of ice each night when utility loads and rates are lowest. During peak periods, the ice is melted and 34-degree water is distributed through an extensive network of underground pipes to provide state-of-the-art cooling to buildings throughout the area.

The result of the conversion to Northwind eliminated the on-site requirement need for cooling towers and their associated air-conditioning chillers. Results were a drastic reduction in water consumption and the elimination of CFC refrigerant R-11

Our facilities implement a variety of energy efficiency measures including:

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

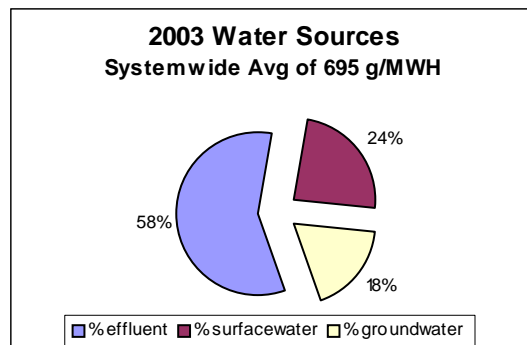
More than 97 percent of our facility space is equipped with energy-efficient fixtures. We estimate energy savings of more than 13 million kilowatt-hours (kWh) per year from the use of energy-efficient products.

Water is one of our most precious resources and APS employees 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 as well as other recycling where feasible.

Water is a requirement for most traditional generation sources and we work to minimize our impact on the fresh water supply. At the Palo Verde Nuclear Generating Station, we use treated effluent, purchased from seven cities in the Phoenix-metropolitan area for cooling. A 35-mile pipeline carries treated waste water from a City of Phoenix sewage treatment facility to Palo Verde, where we use an advanced waste water treatment process capable of preparing 90 million gallons of water each day for use in the plant. The adjacent Redhawk, natural gas-powered facility uses treated effluent from the Palo Verde treatment plant to meet its cooling needs as well.

In 2003, the Palo Verde plant's water reclamation facility processed a total of about 20 billion gallons of treated effluent for power plant use, preserving enough potable water for about 75,000 homes.

The Silverhawk power plant currently being built about 30 miles northeast of Las Vegas is an air-cooled combined-cycle plant. It will use about 200 to 250 acre feet of water per year at full capacity, compared to 3,300 acre feet per year for a similar water-cooled plant.



Travel Reduction 2003 Clean Air Campaign

Our company and two of our employees were recognized and received awards for participation in the 2003 Clean Air Campaign. The company was lauded for its Trip Reduction Program and the Palo Verde Nuclear Generating Station Vanpool. Two employees were recognized for use of Alternate Modes of Transportation.

Travel reduction is an important part of our EHS programs, particularly in the Phoenix area — a U.S. Environmental Protection Agency (EPA) non-attainment area for ozone and particulate matter. We encourage employee travel reduction activity and offer subsidies to further persuade our employees to use alternative means of transportation. Our subsidies cover a portion of the cost for vanpool, bus fares and carpool parking. We accommodate compressed work weeks, alternative work schedules, telecommuting and videoconferencing.

In 2003, we conducted an annual travel reduction program survey of 4,686 employees at seven of our sites. Our participation in 2003 was 2,022 employees.

Land Use and Biodiversity

Trees For The Rim is a Special Committee dedicated to securing resources for replanting trees on residential, commercial and community lands damaged by Arizona’s Rodeo-Chedeki Fire in June, 2002. APS donated \$25,000 and has transported trees, provided volunteers, dug holes for new trees and will provide other needed services as the project unfolds.

Also in 2003, the Arizona Quality Alliance honored APS for environmental stewardship. The company’s Wildlife Protection Program was chosen as a winner of the first annual Showcase in Excellence Award. This first-year award represents a high level of achievement in performance excellence and a commitment to quality. Our program centers on preventing birds of prey and other wildlife from contacting electric lines and focuses on three areas: prevention, training and partnerships. Prevention activities include line construction standards and installation of raptor protection devices. We also train key personnel in raptor protection issues. Finally, APS partners with non-profit wildlife rehabilitation organizations, such as Liberty Wildlife and U.S. Fish and Game, which handle specific issues and help keep our wildlife protection programs up-to-date and effective.

APS builds and maintains more than 18,000 miles of electric lines in Arizona — lines, which run through the natural habitats of several species of indigenous birds of prey, or raptors including eagles, hawks, falcons, owls, and carrion-eating vultures and condors. Raptors are an important and valued biological resource and have long been recognized for helping maintain ecological balance and are sensitive indicators as to the health of the environment.

For more information, see our Managing Rights of Way section.

FLEET FUEL CONSUMPTION					
Vehicle Fuel (gallons)	2003	2002	2001	2000	1999
Gasoline	1,742,686	1,738,575	1,712,593	1,712,594	659,537
Diesel	1,338,797	1,311,557	1,306,491	1,277,177	639,692
Biodiesel	62,209	53,718	27,335	12,460	N/A
Electric (gge)	499				

Hydrogen (gge)	33				
CNG (gge)	3,597				
H/CNG (gge)	2,378				
* gge = gasoline gallon equivalent					
* In 2003, we maintained 51 electric vehicles, (6 battery highway, 40 LSV battery and 5 battery carts) in our fleet. Overall electric vehicle mileage is lower due to two less highway battery electric vehicles (EVI) in our fleet.					
FLEET STATISTICS					
	2003	2002	2001	2000	1999
Average miles per gallon for gas/diesel fleet	7.5	2.2	4.9	4.9	4.6
Total miles traveled for gas/diesel fleet	23,683,993	15,860,688	15,033,828	14,635,736	13,185,348
Total miles traveled for electric fleet*	93,804	963,714	58,687	61,355	59,254
* In 2003, we maintained 28 electric vehicles in our fleet. Overall electric vehicle mileage is lower due to two less electric vehicles in our fleet.					

Renewable Energy Technologies

As an environmentally conscious company, we are committed to developing clean, renewable energy sources today that will fuel tomorrow's economy.

APS has long been a leader in the development of renewable technology. With solar installations across the state and with the operation of the APS Solar Test and Research (STAR) Center, APS is one of the industry leaders in solar technology. Recently the company has begun exploring other renewable technologies that we hope to develop into mainstream energy sources that can power a 24-hour future. APS now owns and operates approximately 4.9 megawatts of photovoltaic solar generation around the state. Besides solar, we are active partners in the development and testing of energy such as solar trough, biomass, hydrogen and wind.

Here is a summary of several key projects started in 2003:

- Located at the company's Saguaro Power Plant in Red Rock, about 30 miles north of Tucson, the APS Solar Trough Generating Station will have a one-megawatt generating capacity, enough to provide for the energy needs of approximately 200 average-size homes. The plant is expected to come on line in April 2005. Solar-trough technology uses parabolic mirrors to concentrate the sun's rays to heat mineral oil between 250 and 550 degrees. The fluid is then passed through a heat exchanger to vaporize a secondary working fluid. The vapor is used to spin a turbine, making electricity, then is condensed back into a liquid before being vaporized once again.

- In 2003, we entered into an agreement with Western Wind Energy (WND) Corp., to construct a 15-megawatt wind turbine facility in eastern Arizona. The facility, the first of its kind in Arizona, will produce enough energy to power up to 3,000 average-sized homes.
- APS is a proud participant in the development of a newly-opened biomass plant in northeastern Arizona. This three-megawatt biomass plant addresses two major needs in that it helps ease the fire danger from forest waste in northeastern Arizona and provides renewable energy.
- In an effort to further encourage its customers to use solar energy, APS doubled its current credit purchase in 2003 to customers buying and installing solar systems under the Environmental Portfolio Standard. Under the program, APS pays customers who install solar systems for the EPS credits generated by these systems and helps offset the cost of installing solar on their home or business. APS will pay \$4 per watt – up from \$2 per watt – for solar systems that are tied to APS' electric grid, for up to 50 percent of the system's cost. In addition, APS will make a one-time \$700 purchase credit to customers who install solar water heating systems, up from \$350. The goal of this program is to increase demand for alternative energy sources, thus leading to systems that become more affordable for everyday consumers.

In addition to the solar, wind and biomass plants, APS is the only utility in Arizona, and one of only a handful in the United States, to build and operate a facility that produces and stores hydrogen and compressed natural gas. Built with an \$800,000 grant from the U.S. Department of Energy, our downtown Phoenix facility houses a hydrogen-powered generator capable of powering 50 homes. With this plant, APS developed a hydrogen/compressed natural gas fueling station, where about a dozen APS vehicles use the fueling station to fill up.

As our record demonstrates, the company is committed to the exploration of alternative means of producing energy and fuel our future.

Electricity Conversion, Distribution and Sales

Generation

In 2003, our Pinnacle West Energy affiliate completed 1,593 megawatts of new, clean-burning natural gas-fired generating capacity to help address population growth in Arizona. Our goal is to offer a diverse fuel mix of nuclear, coal and natural gas generation to better serve our customers reliably and flexibly.

In 2003, we realized a year-end baseload capacity factor of 81 percent, which is better than the industry average. The Palo Verde Nuclear Generating Station led the U.S. in production for the 12th consecutive year by generating 28,586,227 MW of electricity at an 87.4-percent capacity factor, which included an extended maintenance and refueling outage to replace steam generators in Unit 2.

The company's fossil plants also recorded outstanding service records in 2003. The gas plants at Ocotillo, Saguaro, West Phoenix, Yucca and Douglas for the second consecutive year combined for an availability of about 90 percent. Again, this is above the industry

average. All five Four Corners units achieved a capacity factor of 84.5 percent, placing the site in the top quartile of coal plants in the nation.

Transmission

In 2003, the company met the challenge of the highest customer demand in APS history by adding new generation and substantially upgrading its transmission and distribution system. On average, a new substation was completed every seven-and-a-half weeks, throughout the year. Our transmission team also completed major rebuilds of a 230-kilovolt (kV) substation in Phoenix and a 345-kV substation serving the Payson area and made additions and upgrades at approximately 50 other substations.

Of particular importance was the siting and approval of a 500-kV transmission line in the southwest Phoenix area. The line, activated in 2003, brings essential transmission capacity to the growing region and, in particular, opens key areas to economic development.

Distribution

Our distribution network takes power from high-voltage transmission lines and delivers it to our customers. During 2002, we added 131 miles of overhead distribution and 518 miles of underground distribution. With the added distribution, we maintained 24,371 miles of above-ground local distribution and 12,352 circuit miles of below-ground distribution.

Side Management Programs and Energy Conservation

At APS, we routinely offer assistance to our customers to help use energy wisely. Here are some components of APS' Demand Side Management programs:

Performance Built Homes — To help builders promote the value of energy efficiency, APS works with building materials vendors to provide buyers with a heating and cooling guarantee. Builders who meet program specifications are able to offer their homebuyers a two-year guarantee that the monthly costs to heat and cool their homes will be less than a specified amount. The participating insulation product vendor provides the guarantee. In addition, APS' support for the guarantee concept has been instrumental in influencing construction practices throughout the Phoenix metro area.

Online Energy Audit — APS provides online energy analysis software on aps.com. The feature allows current and prospective customers to analyze home and business energy use and identify energy efficient measures.

Bill Analysis — A recent innovation to aid customers in analyzing their energy use is the "bill download" feature on aps.com. Registered aps.com users can download their bill history online and compare current usage to past usage.

Energy Cost Brochures — APS provides energy information to homebuilders and customers. Most new-home subdivisions are provided with a brochure that shows the APS estimate of the energy cost for each model. In addition, the APS salespeople are provided with charts showing the impact on energy use of various building components.

These have been effective in convincing builders to switch to more energy-efficient components. The software is also used to provide builders and homeowners with estimates of costs used in resolving complaints such as when insulation is left out of an attic. It is used to provide builders with energy cost estimates needed to qualify for some building grants, and helps them to see the energy impact on component choices.

Northwind Cooling

The Northwind Phoenix District Cooling System serves 10 businesses in downtown Phoenix, with two additional business customers beginning service in 2004. Conceived in 2000 and completed in 2001, the plant provides 20,000 tons of cooling from two 2,500-ton screw chillers and 36,000-ton-hours of ice storage that integrates 8,000-ton chillers at Bank One Ballpark. The system uses an industrial grade, ice-based chiller that manufactures three million pounds of ice each night when utility loads and rates are lowest. During peak periods, the ice is melted and 34-degree water is distributed through an extensive network of underground pipes to provide state-of-the-art cooling to buildings throughout the area.

The underground piping portion of the project consists of a network of pipe buried below downtown Phoenix. This network of pipes is approximately 14,000 linear feet and has pipe diameters ranging from 30 inches to 18 inches. Northwind is licensed to serve buildings encompassing approximately 140 square blocks in downtown Phoenix.

Benefits:

- customers experience faster cool down of buildings due to lower water temperatures
- increased reliability with Northwind engineers continuously monitoring individual building performance around the clock
- district cooling service allows each customer to focus on its core business without the distraction of maintenance programs and unpredictable repair costs

Northwind has a co-generation facility in Tucson (Tucson District Energy) that includes a 1.6 MW natural gas-fired generator with heat recovery and 500 tons of absorption chilling to supplement three 1,250-ton centrifugal chillers. This system supplies 2,000 tons of cooling and 21 mm/BTU/hr of heating on a continuous basis to city facilities. Tucson District Energy also exports and sells electricity to the local electric utility.

Managing 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.

The APS Forestry and Special Programs and Transmission and Distribution Engineering and Standards Departments can identify areas of concern and both departments perform audits to determine compliance with the law. On new substation installation, wildlife protective covering is also installed. APS Substation Maintenance has committed to

retrofit four substations each year in our northern divisions and 120 units each year in our southern divisions.

Our Vegetation Management program follows industry tree trimming standards to limit damage and improve overall tree health. We follow the Edison Electric Institute's (EEI) strategy on minimizing pesticide use. Many industry and environmental groups have recognized us for our practices and commitment to arborist education.

In 2003, we received our seventh consecutive Tree Line USA Award from the National Arbor Day Foundation.

Emissions and Waste

We have policies to conserve natural resources and minimize emissions of environmentally harmful substances such as:

- Greenhouse gases (GHG)
- Ozone-depleting substances (ODSs) as defined by the Montreal Protocol
- Key air pollutants including carbon monoxide, lead, volatile organic compounds, nitrogen oxides (NOx), particulate matter (PM-10) and sulfur oxides (SOx)

We maintain air emissions in pounds per megawatt-hour at or below industry averages. We achieve this record through a combination of nuclear power, emissions control technology, improved power plant efficiency and a cleaner fuel mix.

All of our power plants, except for the Palo Verde Nuclear Generating Station operate under Title V air permit requirements. Palo Verde has filed an application for a non-Title V permit.

In September 1999, EPA Region IX proposed a Federal Implementation Plan (FIP) which set air quality standards for our Four Corners Power Plant. The power plant, located on the Navajo Nation, is under a long-term lease agreement. The EPA has not yet finalized the FIP for Four Corners; however, Four Corners does operate pursuant to a Title V permit issued by the EPA.

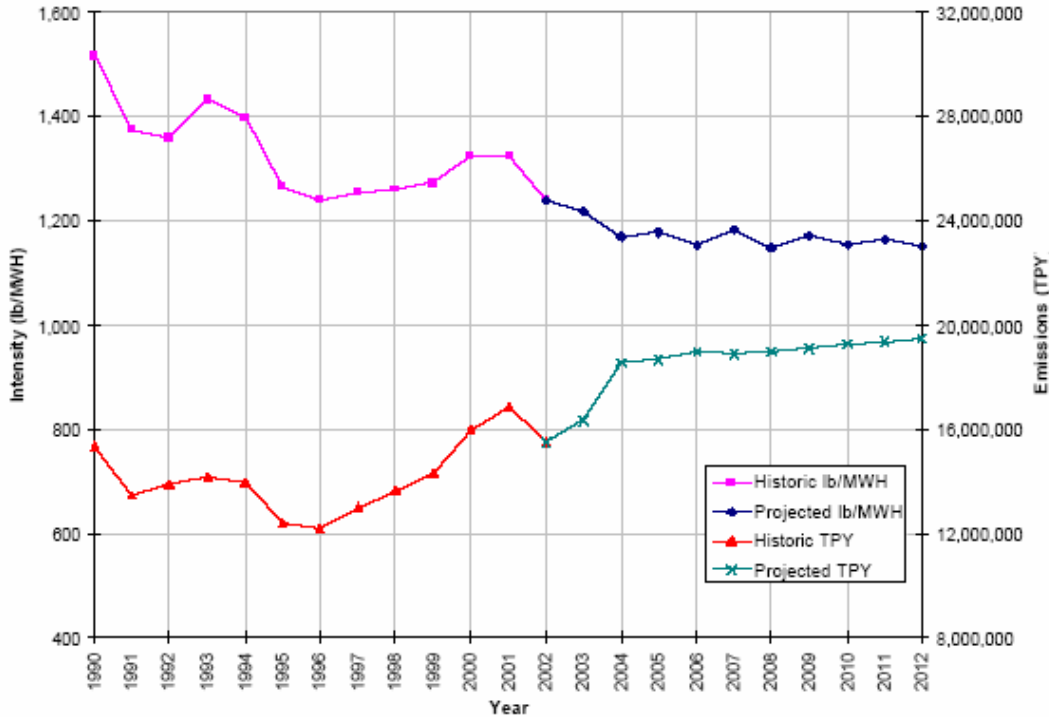
Climate Change

APS was one of the first electric utilities to sign the Climate Challenge Participation Accord to reduce greenhouse gas emissions to 1990 levels. APS met its year 2000 commitment.

The APS service territory, however, has experienced tremendous growth over the past decade as illustrated in the electric customer table included in this report. Meeting this growth and its associated electricity demand has required APS to augment its existing energy generation capacity. This demand has been met through more efficient use of existing sources, such as the up-rating of the Palo Verde Nuclear Generating Station, improving the availability of existing fossil plants and the addition of state-of-the-art gas-fired generators. Over time, the net effect of this demand has been an increase in the

overall company CO₂ emissions, but with a corresponding reduction in CO₂ intensity in (lbs/MWH).

APS Historic/Projected CO₂ Emissions



Note that this trend is projected to continue through 2012. APS’ strategy is to provide a diverse mix of energy sources to ensure reliable and stable cost energy to its customers while meeting their growing demand. In addition, APS is actively involved in several leading-edge projects and research into other potential energy options for the future. See also Renewable Technologies Section.

Here are a few of our greenhouse gas offset projects:

Solar

With a natural abundant resource in the sun, Arizona produces the most solar power per capita in the U.S. For more than 30 years, APS has been a leader in solar energy and research. APS operates or supports numerous solar electric facilities across the state, with a total installed capacity of 4.9 megawatts. Use of our current solar plants generated 6.6 million megawatt hours and avoided the emission of more than 5,365 tons of greenhouse gas in 2003.

Ash Sales

Coal combustion fly ash is a powdery material that is a byproduct of burning coal at electric utility plants. U.S. power plants produce millions of tons of coal fly ash annually. APS is using its fly ash to help reduce greenhouse gases while adding to its bottom line. APS sells much of its fly ash to Phoenix Cement for use in concrete production. This

offsets energy used for cement production and reduces greenhouse gas emissions. The company sells bottom ash and cenospheres in addition to fly ash.

Fly Ash:

Total sales = 317,9394 tons of CO₂ reduced

APS Share = 99,855 tons of CO₂ reduced

Bottom Ash:

Total = 1,142 tons of CO₂ reduced

APS Share = 787 tons of CO₂ reduced

Cenospheres:

Total = 143,767 tons of CO₂ reduced

APS Share = 143,767 tons of CO₂ reduced

New Fuels

In 2002, APS opened its hydrogen/compressed natural gas fueling station at one of its downtown facilities. The fueling station, originally constructed in 1920 for the City of Phoenix to illuminate its streetlights, has been reconfigured to supply hydrogen, compressed natural gas or a combination of the two for vehicles capable of operating on such fuels.

This station will enable APS to gain experience handling these fuels on a small scale, before seeking larger applications. In the meantime, company vehicles that use hydrogen have a place to refuel, and they emit nothing but water vapor from the exhaust.

Wind

In 2003, APS and Western Wind Energy Corp. (WND) agreed to build a 15-megawatt wind turbine generating facility to be constructed approximately 200 miles northeast of Phoenix, near St. John's. Construction of the plant is scheduled to begin in late 2004, and is expect to offset 34,525 tons of CO₂ annually.

Biomass

APS is involved in a biomass project in northeastern Arizona that, in addition to reducing the amount of forest waste and providing jobs, will provide electricity, reduce future forest fire threats and greenhouse gases by approximately 15,000 tons annually.

Other projects:

- **Trip reduction:** Company employees voluntarily telecommute, carpool and use other means to travel to and from work. In 2003, more than 8,236 tons of greenhouse gas was reduced through these means.
- **Algae:** APS is supporting efforts to grow algae in ponds, which is fed with an enriched source of carbon dioxide emitted from APS' plants. The algae is grown in ponds, then is used as a nutrient for plants as well as other applications.
- **Off-grid solar:** Customers who live off the grid use APS-maintained solar energy as their primary energy source. In 2003, this resulted in a reduction of more than 779 tons of greenhouse gas.

- **PowerTree:** To achieve additional CO₂ reductions, APS joined 24 other electric utilities in the PowerTree Carbon Company, which plants trees in ecologically sensitive areas of the lower Mississippi Valley in cooperation with local and national, governmental and conservation organizations. Planting began in 2003 and 2.0 million tons of CO₂ are expected to be sequestered over the 100-year life of the project.
- APS also joined **Trees for the Rim**, an organization dedicated to replanting trees on residential, commercial and community lands damaged by the Rodeo-Chedeski fires of June, 2002. APS donated \$25,000 and transported trees, provided volunteers, dug holes for the trees and will continue to be involved as the project unfolds. This benefits both the environment and the community.

Changes to Generation Mix

In addition to our other greenhouse gas-reducing projects, changes to APS' generation mix have helped reduce the intensity of CO₂ emissions measured in pounds per megawatt hour of energy. From 1999 to 2001, APS reduced CO₂/MWh by more than 12.7 percent. Based on energy demand and dispatch projections, this intensity will continue to decline. Through 2012, cumulative reductions of more than 24 percent are expected.

The addition of natural gas capacity and the continual improvements at the Palo Verde Nuclear Power Plant have been key to these reductions. Each year since 1990, Palo Verde has avoided more than 20 million tons of CO₂ emissions annually (more than six million tons of that attributed to APS' ownership share of Palo Verde) and efficiency improvements have raised this amount to nearly 30 million tons per year since 1997.

Air Emissions

ROUTINE EMISSIONS BASED ON APS OPERATIONS

		2003	2002	2001	2000	1999
GREENHOUSE GASES						
CO₂	Total (tons)	26,634,689	24,369,548	27,378,942	25,594,386	24,565,372
	Normalized (lb./MWh)	938	877	984	928	908
	Industry average (lb./MWh)*	N/A	1,940	1,881	1,666	1,486
KEY AIR POLLUTANTS						
VOCs	Total (tons)	412	398	653	585	483
	Normalized (lb./MWh)	0.015	0.014	0.053	0.02	0.02
NO_x	Total (tons)	58,664	55,710	66,339	64,405	61,008
	Normalized	2.067	2.005	2.385	2.34	2.26

	Industry average	N/A	N/A	3.71	3.52	3.51
Particulate Matter (PM10)	Total (tons)	3,061	2,921	3,388	3,173	3,022
	Normalized (lb./MWh)	0.108	0.105	0.122	0.12	0.11
	Industry average (lb./MWh)*	N/A	N/A	0.5	0.45	0.16
So_x	Total (tons)	52,323	53,624	61,151	56,421	61,599
	Normalized (lb./MWh)	1.844	1.93	2.199	2.05	2.28
	Industry average (lb./MWh)*	N/A	N/A	8.22	7.55	7.76
Mercury	Total (tons)	0.459	0.452	0.434	0.42	0.41
	Normalized (lb./GWh)	0.016	0.016	0.016	0.02	0.02
Carbon Monoxide	Total (tons)	3,469	3,332	5,042	4,564	3,957
	Normalized (lb./MWh)	0.122	0.12	0.181	0.17	0.15
Lead	Total (tons)	0.285	0.267	0.299	0.28	0.27
	Normalized (lb./GWh)	0.01	0.01	0.011	0.01	0.0101

APS operates several jointly owned facilities - Four Corners Power Plant, Cholla coal plants and the Palo Verde Nuclear Generating Station.

* The Industry and APS emissions in pounds per megawatt-hour include nuclear generation. The industry average emission data for SO₂, NO_x, CO₂, PM10, and VOC for the period 1999 to 2001 was obtained from emission trend summaries located on the EPA emission inventory Web site at: www.epa.gov/ttn/chief/trends/index.html. The 2002 average emission data is scheduled for release from EPA in May 2004.

The industry CO₂ emission data was obtained from "Emissions of Greenhouse Gases in the United States, 2001," DOE/EIA-0573 Dec, 2002. The report can be downloaded at: www.eia.doe.gov/oiaf/1605ggrpt/index.html. The annual industry generation data was obtained from Electric Power Monthly, December 2003, DOE/EIA-0226(2003/01).

ROUTINE EMISSIONS BASED ON APS/PWEC OWNERSHIP

		2003	2002	2001	2000	1999
GREENHOUSE GASES						

CO₂	Total (tons)	15,386,366	15,498,001	16,899,576	15,974,666	14,323,343
	Normalized (lb./MWh)	1,202	1,238	1,324	1,324	1,274
KEY AIR POLLUTANTS						
VOCs	Total (tons)	222	245	486	432	321
	Normalized (lb./MWh)	0.017	0.02	0.038	0.04	0.03
NO_x	Total (tons)	31,842	34,747	40,904	39,070	34,294
	Normalized	2.488	2.775	3.208	3.24	3.41
Particulate Matter (PM10)	Total (tons)	1,931	2,052	2,348	2,241	2,005
	Normalized (lb./MWh)	0.151	0.164	0.184	0.19	0.18
So_x	Total (tons)	20,558	25,889	29,439	26,881	28,488
	Normalized (lb./MWh)	1.609	2.068	2.309	2.23	2.53
Mercury	Total (tons)	0.313	0.336	0.226	0.223	0.21
	Normalized (lb./GWh)	0.024	0.027	0.018	0.05	0.02
Carbon Monoxide	Total (tons)	1,910	2,081	3,582	3,234	2,532
	Normalized (lb./MWh)	0.149	0.166	0.281	0.27	0.03
Lead	Total (tons)	0.219	0.228	0.248	0.24	0.22
	Normalized (lb./GWh)	0.017	0.018	0.019	0.02	0.02

Emissions based on Pinnacle West Capital Corporation-owned generation (APS and Pinnacle West Energy).

Waste Reporting

Used Nuclear Material

The Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) stringently control and oversee the management of nuclear fuels and their radioactive byproducts per specific requirements.

Palo Verde and other nuclear power plants produce two forms of radioactive waste: high-level waste and low-level waste. High-level waste consists of relatively small amounts of spent uranium fuel. This spent fuel is highly radioactive for many years, but can be safely isolated in above- or below-ground storage.

We have existing fuel storage pools at Palo Verde and have recently constructed a new facility for on-site dry storage of used fuel, while we are awaiting the completion of the Nuclear Waste Storage facility in Nevada. DOE has announced the repository cannot be completed before 2010 and it does not intend to begin accepting spent nuclear fuel prior to that date.

With the existing storage pools and the addition of the new facility, we believe spent fuel storage methods will be available for use by Palo Verde to allow continued safe operation through the term of the operating license for each of Palo Verde's three units. On average, Palo Verde replaces 200 fuel assemblies annually.

Some low-level waste has been stored on-site in a low-level waste facility. APS is currently shipping low-level waste to off-site facilities. APS believes interim, low level waste storage methods are or will be available for use by Palo Verde to allow its continued use and to safely store low-level waste until a permanent disposal facility is available. Low-level waste includes used protective clothing, resins, filters, etc.

Hazardous Waste

We have specific programs in place to reduce and minimize hazardous waste. In addition, we track our hazardous waste shipped offsite through regulatorily required waste manifests.

APS Hazardous Waste Generation	
Year	Tons
2003	193 ^(a)
2002	105 ^(b)
2001	242 ^(c)
2000	78 ^(d)
1999	24

(a) In 2003, hazardous waste numbers are higher because of two specific events. Our Yucca Power Plant performed a boiler cleaning and the waste was determined to be hazardous, and our Cholla Power Plant generated large amounts of anti-freeze from decommissioning of some plant equipment.

(b) In 2001 and in 2002 baseline numbers were higher because:

- *Universal waste was not previously included in our hazardous waste totals.*
- *Batteries were not previously included as hazardous waste.*

(c) The increase in the amount of hazardous waste generated in 2001 resulted from separate incidents at our Cholla Power Plant that required a one-time cleanup. In last year's EHS Report, 2001 hazardous waste numbers were estimated at 180.4 tons.

(d) Waste figures for 2000 include 55.4 tons of soil removed during remediation of the Prescott Manufactured Gas Plant.

Non-Hazardous Waste

Our facilities employ a wide variety of pollution prevention activities based on their individual and diverse needs. The Deer Valley Service Center is charged with managing the waste and recycling for our service centers. Through a centralized facility, we are able to implement a variety of reuse and recycling activities.

WASTE FROM APS OPERATIONS NON-HAZARDOUS WASTE					
Waste Stream	Volume Generated 2003 (tons)	Volume Generated 2002 (tons)	Volume Generated 2001 (tons)	Volume Generated 2000(tons)	Volume Generated 1999 (tons)
Solid	23,061	52,546 ^(a)	12,053	6,988	127,398
Vegetative	8,160	28,000	13,800	10,800	N/A
Coal Combustion Waste	2,670,924	2,138,135	2,586,017	2,158,500	2,524,748
Other Electricity Manufacturing Waste	48,126	--	--	--	--
Total	2,750,271	2,166,135	2,611,870	2,176,288	2,652,146^(b)

(a)MGP solid waste was not previously counted.

(b) Includes 120,851 tons of metal recycled at our Deer Valley Service Center.

Reporting Toxic Releases

The EPA requires us to track all chemicals listed by the EPA as Toxic Release Inventory (TRI) substances at all our fossil fuel-fired power plants. Most of the chemicals we report are captured by pollution control equipment or are contained in ash that is stored in ash ponds on site, sold for reuse or sent to the coal mine for reclamation.

In July 1999, we issued our first TRI report to the EPA under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). Previously, the EPA only required companies classified as manufacturing industries to file annual TRI reports. The EPA expanded that list to include electric utilities and six other industry groups.

While TRI quantities reported by APS and other utilities are large, the majority is contained within coal ash used to restore the mine or managed on site.

Coal ash has many beneficial uses and we are working to use much of that ash for use in concrete or related products. When ash is added to concrete products, it enhances the strength and quality of the product. Continued commitment to ash sales will help

decrease some of our TRI numbers while providing a useful ingredient for other industries.

APS Reportable Releases - APS Operations

	Lbs. Released to water	Lbs. Released to air	Lbs. Released to land	Total lbs. Released
Barium	0	1,634	2,780,060	2,781,694
Beryllium	88	25	27,320	27,433
Benzo(ghi)perylene	0	0.34	0	0.34
Chromium	0	558	157,073	157,631
Cobalt	0	111	40,598	40,709
Copper	2,384	597	210,250	213,231
Dioxin	0	1.65	0	1.65
Hydrochloric Acid	0	203,735	0	203,735
Hydrofluoric Acid	0	351,079	0	351,079
Lead	3	554	184,501	185,085
Manganese	0	1,278	455,779	457,057
Mercury	0	958	549	1,507
Nickel	1	535	9,1564	9,2100
PACs	0	9.73	0	9.73
Selenium	0	3,874	2,6636	3,0510
Sulfuric Acid	0	116,413	0	116,413
Vandium	0	597	397,308	397,905
Zinc	763	2,366	173,833	176,962
2003 Total	3,239	684,328	4,545,471*	5,233,039
2002 Total	7,405	658,932	4,014,728	4,681,065
2001 Total	8,698	805,123	4,194,285	5,008,106
2000 Total	8,138	638,674	4,439,800	5,086,612
1999 Total	8,434	709,497	4,195,890	4,913,812

* The increase in 2003 can be attributed to two factors: Our company utilized more coal last year and the Cholla Power Plant changed its coal source to a new coal that has more ash in its composition.

Managing Historic Properties

From the early 1800s to about 1950, more than 1,500 Manufactured Gas Plants (MGPs) operated throughout the United States. The plants made synthetic gas for domestic heating and lighting purposes. Several predecessors of APS operated plants in Arizona communities including Phoenix, Globe, Miami, Prescott, Douglas and Yuma. The manufactured gas process created by-products including lampblack, tar and oils, some of which remained at the sites after operations ceased.

We began evaluating each site in 1993 to address any remaining material that may have been generated by MGP activities. We began remediating the sites in 1996. We continue to monitor the remediation sites in Phoenix, Prescott and Yuma. APS completed the remediation project in Yuma in December 2002 and completed the site restoration phase of the project in 2003.

Also in 2003, APS completed an interim remedial action on the Phoenix Grant Street MGP site. The Grant Street Apartments are located above the MGP site that was owned by a corporate predecessor of APS. From approximately 1917 to sometime in the 1930s the site contained settling basins that received MGP by-products generated at the nearby 502 South Second Ave. manufactured gas plant. After MGP operations ceased, the site was used for various purposes, including a utility pole storage area.

In 2003, APS submitted an interim Remedial Action Plan (RAP) to the Arizona Department of Environmental Quality to place an engineered cap over the exposed soil within the interior courtyard. In addition, utilities beneath the courtyard were either relocated to the roof or isolated to prevent any requirement to excavate the soils in the courtyard.

APS successfully installed the cap on the courtyard in 2003. The cap consists of a colored concrete plaza on half of the courtyard, and grass and playground on the other half. The landscaped courtyard also included large planters, seat walls, a ramada, barbecue grills and picnic tables for the residents. The playground has a canopy cover and child-safe rubberized surface.

2003 Spill Summary

Oil Spills

- In April, a large PCB capacitor in the Show Low Substation ruptured and released approximately three gallons of PCB mineral oil onto the station's gravel bed. The contaminated soil and gravel was excavated and disposed of, and PCB contamination removed.
- In July, a PCB contaminated transformer caught fire and exploded in Phoenix. About 10 gallons of contaminated oil spread over three residential properties due to high winds and water sprayed on the burning equipment by the local fire department. The properties were cleaned up and all visible oil removed.
- In Phoenix, a PCB contaminated transformer failed during a summer monsoon storm in July. Approximately 10 gallons of oil was released and was washed by rainwater into a nearby dry well. In addition, oil also ran onto the adjacent

property contaminating electronic equipment located on that site. All contaminated soil/asphalt and sludge in the drywell was removed.

- In November, approximately 20 gallons of hydraulic oil were released into a City of Peoria street from a leaking hydraulic line on a Company service truck. The oil was carried into a storm drain by runoff from a sprinkler system watering nearby landscaping.
- An estimated one gallon of PCB was released in September onto the gravel bed at the APS Navajo switchyard when two high voltage capacitors ruptured. The contaminated soil and gravel was excavated and disposed of, and all PCB contamination removed.
- In November, about 100 gallons of non-PCB containing mineral oil was released from two transformers damaged in Payson when an excavation contractor accidentally dug into a buried electrical conduit line. The material was cleaned up and all visible oil removed.

Chemical Spills

- Approximately 50 to 60 gallons of EDTA boiler cleaning solution leaked into a drain at the Four Corners Power Plant in April. The material flowed under the cover of the drain and into the combined waste water treatment pond.
- In August, approximately 1,300 gallons of sulfuric acid were released from ruptured acid transfer line at the Saguaro Power Plant. The acid ran into the plant's storm drain system and into an unlined permitted surface impoundment. The acid spill was neutralized and storm drain system flushed to remove residual pockets of acid. The pH in the surface impoundment was closely monitored and returned to normal levels once the acid was neutralized.
- During a chemical cleaning process at the Four Corners Power Plant in November, a flange on the chemical cleaning discharge line leaked. Approximately three gallons of spent ammoniated EDTA solution was released into the Plant's condenser cooling water canal.
- In December, a 69kV bushing containing an estimated two gallons of PCB compound failed at the Prescott City Substation. The resulting explosion caused fragments of the PCB compound to be dispersed over a 100-foot area within the substation. All of the PCB compound material was cleaned up and soil within the immediate vicinity of the ruptured bushing was removed and disposed.

Other Releases

- A siphon water vacuum-vent valve on the Cholla Power Plant bottom ash pipeline failed after it froze and released approximately 9,000 gallons of water into the nearby Tanner Wash in December. The water soaked into the soil and no response action was necessary.
- Approximately 120,000 gallons of bottom ash sluice water was accidentally released from a hydro-bin at the Four Corners Power Plant in January. The water/ash mixture flowed into a storm-water containment area. The compacted earthen berm subsequently failed and allowed the water to flow into the plant's cooling water inlet canal.

- As the cooling towers at the Palo Verde Nuclear Generating Station were taken out of service in March 2003, there was a release of approximately 50,000 gallons of cooling-tower water to the ground. About 50 gallons of this overflow entered the Sedimentation Basin 1 unlined ditch.

Spill History

	Oil Spills		Chemical Spills		Other Releases (please specify)	
	Number	Gallons	Number	Gallons	Number	Gallons
2003						
Released to land	6	144	1	1300	2	50,002
Released to water	0	0	2	63	2	129,000
Released to air	0	0	0	0	0	0
2002						
Released to land	1	58	0	0	4 ^(a)	133,500
Released to water	2	3	0	0	1 ^(b)	50
Released to air	0	0	0	0	0	0
2001						
Released to land	1	50	0	0	3(c)	349,400
Released to water	3	5	1	100	5(d)	60,000
Released to air	0	0	0	0	0	0
2000						
Released to land	1	50	2 ^(e)	37,525	3 ^(f)	208,545
Released to water	2	30	0	0	0	0
Released to air	0	0	0	0	0	0
1999						
Released to land	6 ^e	3	0	0	2 ^(f)	38,300
Released to water	1 ^g	25	0	0	2 ^(h)	400
Released to air	0	0	0	0	0	0

(a) 57,000 gallons overflowed from cooling tower flowed into unlined ditch at Palo Verde Plant. 4,000 gallons overflowed the cooling towers and released to the sedimentation basin at Palo Verde Plant. Less than 500 gallons of reverse osmosis product water was released on-site to the unlined ditch at Palo Verde Plant. 72,000 gallons of overflow from a cooling tower reached the sedimentation basin and unlined dirt storm drains at Palo Verde Plant.

(b) 50 gallons of sewage discharged into Morgan Lake at Four Corners Power Plant.

(c) In separate incidents, 340,000 gallons of water from a cooling tower spilled into an unlined retention basin at Palo Verde. Approximately 500 gallons of effluent was released accidentally into the Palo Verde storm drain system. The West Phoenix Power Plant released about 8,900 gallons of cooling water into a nearby unlined retention basin.

(d) A circulating cooling water line at the Cholla Power Plant cracked and leaked approximately 60,000 gallons of Cholla Lake water into the Little Colorado River. The water soaked into the dry streambed.

(e) 25 gallons of sulfuric acid discharged into a sump at the Four Corners Power Plant. About 37,500 gallons of chlorinated secondary treated effluent water was released to a sedimentation basin.

(f) 200 gallons of water containing slurried bottom ash were released into a dry streambed at the Cholla Power Plant when a bottom ash pipeline ruptured. About 500 gallons of water containing ash were released when a discharge pipe ruptured. A blowdown reuse pipe was damaged and 8,045 gallons of water was released at the Palo Verde Plant, 4,000 gallons were recovered.

(g) 7,300 gallons of non-radioactive water were released to an unlined storm water drain. About 31,000 gallons of water from a HVAC cooling tower were released into and unlined storm water ditch.

(h) 280 gallons of water was released from a spray pond filter at Palo Verde. Three separate discharges at Four Corners, two of 100 gallons each and one of unknown quantity.

Compliance

Compliance is our minimum standard of performance and we strive to perform beyond compliance in all areas of our business. All our managers and employees are required to uphold regulatory compliance as part of their daily activities and business planning. When non-compliance issues do arise, we take appropriate steps to address those issues and prevent them from happening again.

As an energy supplier and producer, we are subject to environmental, health and safety regulations on the federal, state, county and local levels. In addition, the Four Corners Power Plant, located on the Navajo Nation near Farmington, New Mexico, works with the Navajo Nation Environmental Protection Agency to address environmental issues.

We maintain a goal of zero notices of violation (NOVs) resulting in fines or penalties. Success in meeting this target is reflected in individual employee performance evaluations and compensation. In 2003, we received no NOVs with penalties.

Notices of Violation Resulting in Fines or Penalties

	2003	2002	2001	2000	1999
Environmental					
Clean Air Act (CAA), State, County and City Regulations	0	0	1 ^(c) (\$200,000)	0	0
Clean Water Act (CWA) and State Water Regulations	0	0	0	1 ^(d) (\$15,000)	0
Resource Conservation and Recovery Act (RCRA) and State Waste Regulations	0	0	1 ^(c)	0	0
Superfund Amendments and Reauthorization Act (SARA)	0	0	0	0	0
Toxic Substances Control Act (TSCA)	0	0	0	0	0
Local Statutes/Regulations	0	1 ^(a) (\$350)	0	1 ^(e) (\$2,500)	1 ^(g) (\$600)
Safety					
Occupational Safety and Health Act (OSHA) and State OSHA Regulations	0	1 ^(b)	0	1 ^(f) (\$13,750)	0
Nuclear					
Atomic Energy Act	0	0	0	0	0

(a) Violation of the Federal Migratory Bird Act for removal of a raven's nest from a pole. \$350 fine.

(b) NOV from Arizona Department of Occupational Safety and Health (ADOSH) for violation of electric safety rules. This action is currently being negotiated with ADOSH.

(c) These incidents at the Cholla Plant occurred in Sept. 2001 and Oct. 2001 and while we have not admitted guilt, we settled this matter. The Consent Judgment (No. CV2004-000731) was entered on January 26, 2004, and on February 2, 2004 pursuant to its terms, APS paid a \$200,000 penalty to the state of Arizona.

(d) Release of slurried bottom ash into a dry stream bed at the Cholla Power Plant.

(e) Fine for raptor electrocution in Winslow, Arizona.

(f) Arizona Department of Occupational Safety and Health for safety training violations at the Cholla Power Plant.

(g) Arizona Revised Statute 41-2123, Area A; gasoline at West Phoenix Power Plant found to be below oxygen requirements (\$300). Arizona Revised Statute 41-2123, Area A; gasoline at Deer Valley facility found to be below oxygen requirement (\$300).

GRI Content Table		
(Cross-referencing Pinnacle West and the GRI)		
Section #	GRI Section	Pinnacle West Report Reference
1.1	Vision & Strategy	<u>Introduction & Strategy</u>
1.2	CEO Statement	<u>CEO Statement</u>
2.1-2.9	Organizational Profile	<u>Organizational Profile</u>
2.10-2.13	Report Scope	Report Scope
2.17-2.2	Report Profile	Report Profile
3.1-3.8	Structure & Governance	<u>Corporate Governance</u>
3.9-3.12	Stakeholder Engagement	<u>Stakeholder Relationships</u>
3.13-3.20	Overarching Policies & Management Systems	<u>Ethical Business Practices</u>
4.1	GRI Content Index	GRI Content Table
	Performance Scoreboard	2002 Performance Scorecard <u>2003 Goals & Targets</u>
5.0	Economic Performance Indicators	Economic Performance Indicators
5.0	Environmental Performance Indicators	<u>Environment, Health & Safety</u>
5.0	Social Performance Indicators	Social Programs & Performance