



**Arizona
Environmental
Strategic
Alliance**

A Partnership to Protect and Enhance Arizona's Environment...

PO Box 67076, Phoenix, Arizona 85082-7076 Telephone and Fax: 480-422-7392 www.azalliance.org

Annual Report for Year 2011

PRESENTING YOUR
ENVIRONMENTAL MANAGEMENT CREDENTIALS

THE ROAD TO EXCELLENCE

PINNACLE WEST and subsidiary
ARIZONA PUBLIC SERVICE

Directions:

The following pages list some of the leadership characteristics practiced by leading environmentally conscious organizations across the country. Progressive organizations and regulatory agencies identified these characteristics and expectations when the Alliance was formed.

For Member Organizations with >100 Employees:

Please select at least two leadership characteristics for each of the first three categories and respond to the elements of category number four. Provide examples explaining how your organization excels in that area.

For Member Organizations with < 100 Employees:

Please select at least one leadership characteristic for each of the first three categories and respond to the elements of category number four. Provide examples explaining how your organization excels in that area.

PLEASE NOTE:

- The fewer the examples reported, the more compelling they should be.
- Information provided needs to be applicable to reporting year labeled above.
- Make all attempts to **quantify** and **qualify** your information so that it can be fully appreciated by the reader.
- Define and describe any references to additional or attached information.
- Members may include information or documents prepared for other purposes as a means to accomplish the Alliance report. However, if this approach is used, please provide clear cross-references between the specific leadership characteristic reported on and the page or section of the document relied on.
- Provide examples of reported improvements or new initiatives.



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This 2011 Pinnacle West / APS AESA annual reports provides examples of the programs our company has in place which illustrate our commitment to the AESA Principles. These examples are drawn from our Pinnacle West 2011 Corporate Responsibility Report (CRR) which is available to the public at www.pinnaclewest.com/cr. Readers of the AESA annual report should also review the CRR in order to obtain a more complete understanding of our overall environmental and sustainability efforts.

1. A: LEADERSHIP CHARACTERISTIC: Conservation and Pollution Prevention

Trip reduction program participation and innovation;

Pinnacle West Response:

Employee 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 particulate matter and eight-hour ozone standard. 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 costs for vanpooling, bus fares and carpool parking. We accommodate compressed work weeks, telecommuting and videoconferencing. We also offer assistance to employees in finding carpool partners, and in setting up carpools. The Travel Reduction Program also has a reward program for employees participating in travel reduction on High Pollution Advisory days.

APS maintains a fleet of vans that operate daily for employees commuting between Palo Verde Nuclear Generating Station (PVNGS) and the Phoenix area. APS began operating this program in 1994 and about 60 percent of the permanent APS employees at PVNGS participate. This program has significantly contributed to the site achieving a single occupant vehicle (SOV) rate well below the 60-percent target. The fleet approaches five million commuting miles annually. The commuting miles eliminated with this outstanding program is more than 32.7 million annually, resulting in a pollution savings of approximately 442 tons each year.

Pinnacle West provides travel reduction incentives for employees including:

- \$50 monthly subsidy toward vanpool expense for employees who commute in any local Valley Metro vans. The employee monthly costs are payroll deducted
- A 100 percent subsidy of the monthly accrued bus and light rail fares up to \$68 to employee work commutes.
- Employees carpooling do not pay the monthly \$46 for parking at company headquarters



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1. B: LEADERSHIP CHARACTERISTIC: Conservation and Pollution Prevention

Programs to reduce water consumption and manage water resources;

Pinnacle West Response:

APS is recognized as an industry leader in the responsible use of water resources in arid environments. With a focus on operational excellence and environmental responsibility, APS has set a standard for other utilities in similar arid environments.

The APS Water Resource Management team is tasked with managing present water resources and planning for a reliable, economic and sustainable future. Creating a strategy to support those goals requires balancing the need for reliability with the goal of using renewable and reclaimed supplies wherever possible. The challenge is to ensure operations are reliable and economical, while striving to protect finite natural resources. We believe that finding an appropriate balance is critical to the interests of our customers and the communities we serve.

Accomplishing these goals is complex, requiring monitoring of developments in water treatment and cooling technology, and encouraging the development of those technologies where appropriate. It requires interacting with Arizona's water community to work toward a more sustainable future. But most importantly, it requires re-thinking what water means to our operations. Water must be managed as a critical resource that enables efficient generation for the long term. By treating water as a critical resource, it is possible to use the Supply Chain Management approach to provide the tools to meet established goals.

Water resources must be managed over longer terms than are traditionally considered in the power industry, and in the context of other competitive water uses. Doing so allows us to plan water use in our operations and environment, while focusing on cost and efficiency that helps to protect the interests of our shareholders and customers. This balance helps drive decision making and planning to find the best solution, which may not always be the least expensive, easiest or most obvious choice.

Use of Treated Effluent

A primary potable water conservation method is the reuse of treated effluent for power generation at the Palo Verde Nuclear Generating Station and at the Redhawk Power Plant. APS is one of the largest users of treated effluent for power generation in the United States and Palo Verde is the only nuclear facility in the world to use treated effluent as its primary water source. Using effluent significantly reduces the amount of potable surface and groundwater that would otherwise be required to support generation.

Each year, Palo Verde's water reclamation facility processes about 23 billion gallons of treated effluent for power plant use, preserving enough potable water to serve approximately 400,000 people. Another way in which APS conserves water is through extensive treatment and careful management of water chemistry. This allows a high degree of water recycling in our electricity-generation process. Reuse of water supplies is maximized to the extent possible, reducing the volume that must eventually be discharged (this is called "blowdown water") to control the salinity and maintain proper chemistry of the water used in the power plant processes.



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Other Water Conservation Efforts and Voluntary Water Reduction Metric

APS has a voluntary internal water reduction goal and metric for our owner-occupied, non-generation facilities to reduce the number of gallons of water used annually by at least 3 percent per year each year through 2013. We exceeded that goal in 2011, reducing our total metered water use by 13 percent over 2010. The 2010 total annual facilities' usage was 33,134,686 gallons while 2011 was 28,600,067 gallons. This was achieved through ongoing efforts including:

- Implementing desert/xeriscape landscaping.
- Installing efficient water fixtures including waterless urinals at some facilities.
- Implementing cooling tower improvements.
- Increasing employee awareness of water efficiency opportunities.
- Eliminating reverse osmosis filter systems.

APS also incorporates water conservation and use ideas into facility building and maintenance as part of our voluntary participation in the LEED program, discussed further in the Materials & Supply Chain section of this report.

1. C: LEADERSHIP CHARACTERISTIC: Conservation and Pollution Prevention

Programs to reduce air emissions.

APS Announces Landmark Accord for Four Corners Power Plant

APS has entered into an agreement to purchase Southern California Edison's ownership in Units 4 and 5 of the Four Corners Power Plant near Farmington, N.M. If the transaction gains approval from state and federal regulators and other closing conditions are met, APS will close the plant's older, less efficient Units 1, 2 and 3 and install additional emission controls on the remaining units.

Closing the three smaller, less-efficient units and fitting the cleaner, more-efficient Units 4 and 5 with new controls would dramatically reduce the carbon footprint in the region, eliminating about 5 million tons of CO₂ emissions per year, and would enable the plant to remain compliant with state and federal environmental standards. Capacity at the coal-fired station, one of the nation's largest, will be reduced by 560 megawatts from 2,100 MW to 1,540 MW. Emissions of NO_x would decline by 86 percent, mercury by 61 percent, particulates by 43 percent, CO₂ by 30 percent and SO₂ by 24 percent.

Continued operation of Units 4 and 5 is expected to provide more than \$6.3 billion in economic value to the region over the next 30 years, at least 70 percent of which will benefit the Navajo Nation and its citizens. There will be no layoffs at the plant, which employs 549 workers (74 percent of whom are Navajo). The plant and the supporting mining operations have a \$225 million annual impact on the Farmington and Navajo economies and pay more than \$100 million per year in taxes, fees and royalties to the Navajo Nation and state, local and federal entities.



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1. C: LEADERSHIP CHARACTERISTIC: Conservation and Pollution Prevention

Programs to reduce energy consumption, e.g., Energy Star, Green Lights;

Pinnacle West Response:

Energy Efficiency

Helping our customers use electricity more efficiently is a critical component of our company's sustainability efforts. It's also important to our customers, our communities and our environment. By taking steps to conserve energy, customers can reduce their costs and also provide significant benefits to the environment. APS offers a wide variety of demand side management (DSM) and energy efficiency programs to our residential and business customers. These include rebates and incentives for installing energy efficient equipment, as well as training and energy information services to help customers improve operating efficiency and reduce demand. These can be viewed in more detail at our company website at: <http://www.aps.com/main/services/default.html>

APS customer energy efficiency programs resulted in a projected 441,334 MWh of electricity saved in 2011, enough electricity to power about 32,000 APS customer homes for one year. For the third consecutive year in 2011, Arizona Public Service has earned the U.S. Environmental Protection Agency's highest honor — The ENERGY STAR Sustained Excellence Award — for continued leadership in protecting the environment through energy efficiency. The award recognizes the APS ENERGY STAR Homes Program and the APS Home Performance with ENERGY STAR Program for promoting energy efficiency and reducing greenhouse gas emissions.

Conserving energy means less power needs to be generated to meet customer needs, which results in fewer emissions impacting the environment and fewer resources being consumed to produce that energy. Looking to the future, energy efficiency also allows APS to defer the construction of new generation to meet the demand for electricity. As shown in the graph on the following page, by 2020 APS's energy efficiency programs will accumulate electricity savings equal to the output of eleven 100-megawatt gas-fired peaking units.



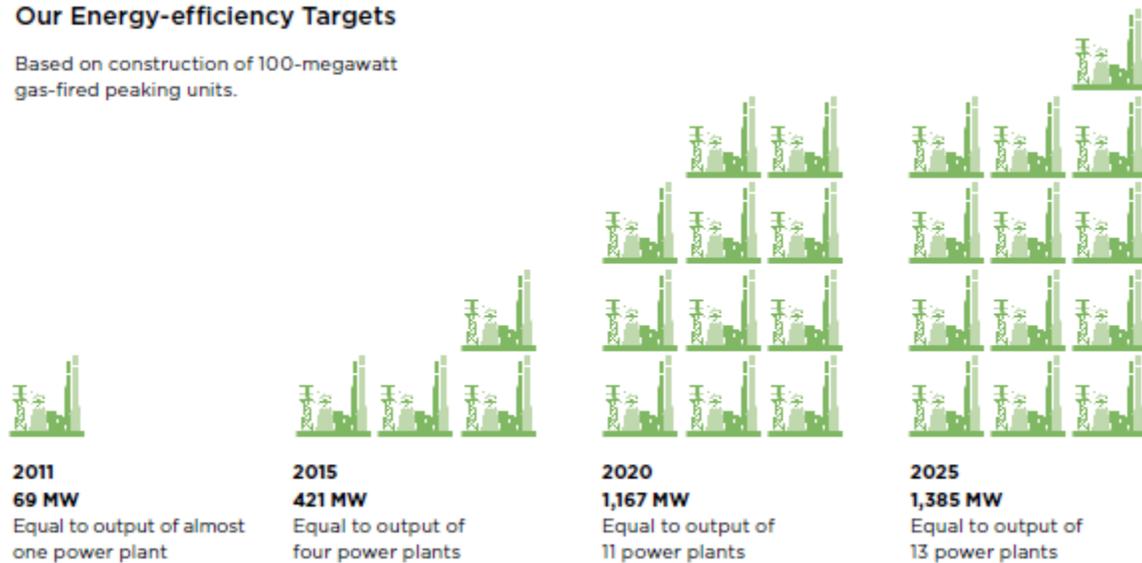
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Our Energy-efficiency Targets

Based on construction of 100-megawatt gas-fired peaking units.



Integrating Energy Efficiency with Resource Planning

Demand Side Management (DSM), which consists of both energy efficiency and peak demand management, is an increasingly important resource in the ability to meet customer demand for electricity in the next 15 years. DSM is closely integrated into the 2012 APS Integrated Resource Plan, which suggests a mix of resources to meet the future need for electricity. Energy efficiency is a major component of APS's plan. APS projects that its customer base will grow from approximately 1.1 million customers today to 1.7 million by 2027, translating into a 55 percent increase in energy requirements (prior to the impacts of energy efficiency and distributed energy). APS projects to comply with both the Renewable Energy Standard and the Energy Efficiency Standard, and approximately 65 percent of the forecasted energy growth will be met with these zero-emissions resources.

APS Facility Energy Management

As Arizona's largest energy provider, we believe that one of the most important things we can promote is energy efficiency; and our company has long been a leader in energy efficiency and energy conservation. Part of that leadership is participation in our own APS Power Partners program, which helps save energy on the hottest days of the year when demand is greatest and the system is most burdened. APS has established a voluntary internal energy use metric that measures our annual electric use at all metered facilities across our organization and sets a goal of a one- to three percent annual reduction in energy use each year between 2009 and 2013. This metric will allow us to monitor the effects of our various energy efficiency efforts at facilities across our company. Our 2011 metered electricity use was 36,791 MWh compared to 2010 use of 39,174 MWh.



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Significant fluctuations in weather, particularly summer heat in the valley and winter temperatures in the northern regions, have an effect on energy consumption. Constant changes in the number, size and occupancy of our facilities directly impact energy consumption, and can make a difficult metric to accurately measure and verify. We are currently working towards implementing the ENERGY STAR rating system at all of our metered facilities which will standardize the methodology in which the variables are normalized to provide consistent feedback on how efficiently our facilities are operated.

APS corporate headquarters has earned the ENERGY STAR designation for the past two years. In addition to managing our energy usage at existing facilities we have also committed to design, construct and operate our new and remodeled facilities to the ENERGY STAR and LEED Silver standards. 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. The conversion to Northwind eliminated the onsite requirement need for cooling towers and their associated air conditioning chillers, resulting in a significant reduction in water consumption in the cooling towers, and the elimination of CFC refrigerant R-11 from the chillers.

APS LEEDs by Example

APS is a registered member of the U.S. Green Building Council and has committed to a voluntary goal of incorporating Leadership in Energy and Environmental Design (LEED) principles in our new building design and ongoing building maintenance. APS now has four LEED-certified facilities. Our APS Learning Center and Wickenburg and Flagstaff Service Centers are certified Silver LEED buildings. Our Ocotillo Service Center is LEED certified. Also, many of the environmentally friendly and cost-efficient practices used in our LEED buildings have been extended to other buildings throughout the company. This includes standardizing equipment and lighting as well as design, procurement and maintenance processes to LEED specifications.

1. D: LEADERSHIP CHARACTERISTIC: Conservation and Pollution Prevention

Use of renewable energy technologies;

Pinnacle West Response:

APS continues to be a leader in the development and testing of renewable resources, particularly solar energy. We believe investing in renewable energy will result in environmental benefits, hedge the costs of potential climate legislation and the increasingly stringent environmental regulation of fossil-fueled generation, and provide an economic boost to our state.

In 2011 APS produced 1,098,815 megawatt hours of renewable generation, enough energy to power about 80,000 Arizona homes, and avoiding 493,917 metrics tons of CO₂ emissions compared to equivalent energy from natural gas generation.



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By the end of 2015, we expect renewable energy to supply about 10 percent of our retail customers' electricity needs. Renewable energy is a critical component of our long-range resource plan. APS projects that in 2025 the energy needs of our customers will be 50 percent higher than it is today. Accelerating the development of renewable energy is a linchpin in meeting this growth. By the end of 2011, APS's renewable generation and distributed energy portfolio was comprised of the following technologies and capacities:

APS Renewable Energy Portfolio (2011)

Source: 10K|page 16



Wind

190 MW with an additional
99 MW being developed



Solar

206 MW with an additional
421 MW being developed



Biomass

14 MW



Geothermal

10 MW



Biogas

3 MW with an additional
3 MW being developed

AZ Sun Program

With the AZ Sun Program, APS is investing in the development of 200 megawatts of photovoltaic solar projects in Arizona. The five-year program is expected to have at least eight solar facilities online by



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2015 and create more than 2,000 Arizona construction jobs. In the fall of last year, APS saw three AZ Sun facilities reach commercial operation. Currently, we have 50 megawatts of AZ Sun producing clean, renewable energy for customers — with more on the way.

Solana Generating Station

Last year, construction on the 250-MW Solana solar trough station began. The highly anticipated solar project — one of the largest in the world — is expected to be in service mid-2013 and produce enough energy to power 62,500 Arizona homes.

Perrin Ranch Wind Project

In 2011, the 99MW Perrin Ranch Wind Energy Center in Northern Arizona completed construction and began producing energy. This plant contains 62 wind turbine generators and is the largest wind project in Arizona with an anticipated yearly output of 282,000 megawatt hours, enough energy for 25,000 homes.

2. A: LEADERSHIP CHARACTERISTIC: Education and Mentoring

Providing to the public an annual report documenting environmental performance;

Pinnacle West Response:

Engaging our stakeholders is vital to the long term success of our company and fundamental to that engagement is transparency in our performance. We have produced an annual environmental, health and safety report each year since 1994 and the report was expanded to a Corporate Responsibility Report in 2004.

Our 2011 Pinnacle West Corporate Responsibility Report, as well as archived copies of previous year's reports, may be viewed at www.pinnaclewest.com/cr. APS uses international reporting guidelines from [Ceres](#) and the [Global Reporting Initiative](#) (GRI) in writing our Report. The [GRI Content](#) section of the Report offers links to data in our report that corresponds to GRI indicators. Additionally, in some instances, we go beyond these guidelines to provide information asked for by our external stakeholders, such as socially responsible investment research groups. In May 2009, The Roberts Environmental Center at Claremont McKenna College released an extensive analysis of the corporate environmental and social reporting of the world's largest companies. In its [Utilities, Gas and Electric Industry Report](#), Pinnacle West was ranked first among utilities in the United States for sustainability reporting.

APS has developed a Climate Change Management Plan, which is available for viewing by the public in the Climate Change section of our Corporate Responsibility Report. In addition to the annual Corporate Responsibility Report, APS provides a number of other education and mentoring information and



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opportunities to our customers, suppliers and other stakeholders. These can be viewed in our Corporate Responsibility Report as www.pinnaclewest.com/cr and on our APS Website at www.aps.com

2. B: LEADERSHIP CHARACTERISTIC: Education and Mentoring

Membership and active participation in voluntary federal, state, or local environmental protection or reinvention programs, e.g., Water Wise, Environmental Leadership Program, Project XL, or Partners for Pollution Prevention;

Pinnacle West Response:

Pinnacle West recognizes that participation in governmental and non-governmental organizations (NGO), and in industry and professional organizations can provide tremendous business advantages and help enhance our sustainability efforts. Many of our employees participate in professional and business associations related to every function of our business, including accounting, purchasing, environmental, health and safety, human resources, public relations, engineering and electrical trades. Our employees often take leadership roles in these organizations.

Below are some of Pinnacle West's key affiliations and memberships relative to our sustainability efforts:

Government and NGO Partnerships and Organizations

- **Coalition of Environmentally Responsible Economies (CERES)**
Ceres is a national network of investors, environmental organizations and other public interest groups working with companies and investors to address sustainability challenges such as global climate change.
- **PowerTree Carbon Company**
PowerTree Carbon Company LLC is an initiative sponsored by 25 U.S. power companies to plant trees in critical habitats in the Lower Mississippi River Valley in order to manage carbon dioxide levels. The projects will restore bottomland and hardwoods on marginal agricultural lands, create habitats for birds and other wildlife, and provide other environmental benefits including improved water and soil quality.
- **The National Wild Turkey Foundation (NWTf) Energy for Wildlife**
The NWTf is a grassroots, non-profit organization with 545,000 members in 50 states, Canada, Mexico and 14 other foreign countries. It supports scientific wildlife management on public, private and corporate lands.
- **The Nature Conservancy**
The Nature Conservancy is the leading conservation organization working to protect the most ecologically important lands and waters around the world for nature and people. The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.



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- **EPA Coal Combustion Products Partnership (C2P2)**
The Coal Combustion Products Partnership (C²P²) program is a cooperative effort between the U.S. Environmental Protection Agency, American Coal Ash Association, Utility Solid Waste Activities Group, U.S. Department of Energy, and U.S. Federal Highway Administration to help promote the beneficial use of Coal Combustion Products (CCPs) and the environmental benefits that result from their use.
- **EPA Climate Leaders**
Climate Leaders is an Environmental Protection Agency (EPA) industry-government partnership that works with companies to develop long-term comprehensive climate change strategies. Partners set a corporate-wide greenhouse gas (GHG) reduction goal and inventory their emissions to measure progress. By reporting inventory data to the EPA, partners create a lasting record of their accomplishments. Partners also identify themselves as corporate environmental leaders and strategically position themselves as climate-change policy continues to unfold.
- **EPA SF6 Emission Reduction Partnership**
The SF6 Emission Reduction Partnership for Electric Power Systems is a collaborative effort between the EPA and the electric power industry to identify and implement cost-effective solutions to reduce sulfur hexafluoride (SF₆) emissions.
- **EPA WasteWise**
WasteWise is a voluntary EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes, beneficially affecting their bottom line and the environment. WasteWise is a flexible program that allows partners to design their own waste-reduction programs tailored to their needs.
- **EPA/DOA EnergyStar Program**
ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping consumers save money and protecting the environment through energy-efficient products and practices.

Industry Groups and Associations

- **Arizona Businesses Advancing Sustainability**
Founded by APS and Intel, AzBAS is a business association dedicated to improving economic, environmental and social business practices in Arizona.
- **American Council on Renewable Energy (ACORE)**
The ACORE is focused on accelerating the adoption of renewable energy technologies into the mainstream of American society. ACORE promotes all renewable energy options for the production of electricity, hydrogen, fuels and end-use energy including, solar, wind, geothermal, hydro/ocean, waste energy and fuels, biomass and biofuels.
- **American Wind Energy Association (AWEA)**
The AWEA is a national trade association that represents wind power plant developers, wind turbine manufacturers, utilities, consultants, insurers, financiers, researchers and others involved in the industry. AWEA provides up-to-date, accurate information about the domestic and international wind energy industry.



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- **Arizona Solar Energy Association (ASEA)**
The ASEA's mission is to educate the people of Arizona about solar energy, its applications and the benefits of utilizing solar technologies.
- **CEA Technologies Inc. (CEATI)**
CEATI brings electrical utility industry professionals together, through focused interest groups and collaborative projects, to identify and address technical issues that are critical to their organizations.
- **Common Ground Alliance (CGA)**
The Common Ground Alliance (CGA) is a member-driven association dedicated to ensuring public safety, environmental protection, and the integrity of services by promoting effective damage prevention practices.
- **Edison Electric Institute (EEI)**
EEI is a trade association for U.S. shareholder-owned electric companies. EEI advocates equitable policies in legislative and regulatory arenas and provides advocacy, authoritative analysis and critical industry data to its members, Congress, government agencies, the financial community and other opinion-leader audiences. It provides forums for member company representatives to discuss issues and strategies to advance the industry and to ensure a competitive position in a changing marketplace.
- **Electric Power Research Institute (EPRI)**
EPRI manages a broad public/private collaborative research program covering generation, environmental protection, power delivery, and retail use and power markets on behalf of the electric utility industry, the industry's customers and society at large.
- **Institute of Nuclear Power Operations (INPO)**
The nuclear electric utility industry created the Institute of Nuclear Power Operations (INPO) in 1979. INPO's mission is to promote the highest levels of safety and reliability – to promote excellence – in the operation of nuclear electric generating plants.
- **U.S. Green Building Council (USGBC)**
The USGBC is the nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work.
- **Utility Solid Waste Activities Group (USWAG)**
USWAG is responsible for addressing solid and hazardous waste regulatory issues on behalf of the utility industry and supports a balanced and reasonable approach to waste management that helps ensure cost-effective protection to the environment. Scott Davis, APS EHS Director, is the current Chairman for USWAG.
- **Utility Water Activities Group (UWAG)**
The UWAG deals with water-related regulatory issues of importance to electric utilities and supports a balanced and reasonable approach to water quality management that helps ensure cost-effective protection of the environment.
- **Utility Air Regulatory Group (UARG)**
The Utility Air Regulatory Group is a nonprofit, unincorporated organization of individual electric utilities and national trade associations.



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- **Water Reuse Association, Arizona Chapter**
The mission of the Water Reuse Association is to advance the beneficial and efficient use of water resources through education, sound science, and technology using reclamation, recycling, reuse, and desalination for the benefit of members, the public, and the environment.
- **WEST Associates**
WEST Associates is a group of 17 public and private electric utility companies that serve 15 million consumers in the rapidly growing 11 Western states and North Dakota. WEST Associates has played a constructive role on energy and environmental issues in the West since 1964. C.V. Mathai, APS Manager for Environmental Policy, is the current President of WEST Associates.
- **Western Business Roundtable (WBRT)**
The WBRT is a non-profit business trade association comprised of CEOs and senior executives of organizations doing business in the Western United States. WBRT advocates economic development, environmental protection, regulatory reform, energy policy, public lands use, waste management and air and water quality.
- **AMR Sustainability Peer Forum**
The Sustainability Peer Forum brings together environmental and sustainability leaders from across industries to share and discuss best practices, lessons learned, and how to create industry-leading companies with innovative products and service.
- **The Product Development and Management Association (PDMA)**
PDMA is global advocate for product development and management professionals. Our mission is to improve the effectiveness of individuals and organizations in product development and management. This is accomplished by providing resources for professional development, information, collaboration and promotion of new product development and management.

3. A: LEADERSHIP CHARACTERISTIC: Organizational Environmental Policies

Implementing a policy requiring vendors to meet the member's environmental requirements;

Pinnacle West Response:

At APS, our goal is to acquire goods and services from suppliers who share our commitment to social, environmental and economic sustainability goals. We want to do business with companies who wish to contribute to a sustainable energy future. To help identify suppliers who share our goals, our sourcing events for goods and services include questions related to sustainability and environmental performance. Supplier responses are evaluated during the selection process. Our suppliers' ongoing performance and improvements on sustainability matters are discussed during regularly held supplier performance review meetings. Supply Chain Management maintains extensive relationships with our suppliers, engaging them in value enhancing partnerships. We work with our suppliers to mutually align our goals and measure performance using agreed upon Key Performance Indicator (KPI) scorecards. We have mutual respect for each other's expertise and ideas as we jointly seek to create sustainability. When working at



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APS facilities, our contractors are required to follow the same environmental and safety policies and practices as our employees.

Contractor Safety Program

Pinnacle West also employs a contractor safety program which communicates the minimal requirements we expect of our contractors in terms of environmental compliance and employee safety. This program is available to the public online at <https://extranet.pinnaclewest.com/choices.aspx>.

Electric Utility Industry Sustainable Supply Chain Alliance

In 2008, APS joined the Electric Utility Industry Sustainable Supply Chain Alliance, a group of U.S. investor-owned electric companies that was formed to improve the environmental performance in the electric utility industry supply chains. The Alliance seeks to do this by developing voluntary consensus standards for the creation of a supply chain that is environmentally responsible, efficient, cost effective, and positively impacts communities. Methods for this include:

- Minimizing the impacts on the environment of our supply chain operations and the products and services we source.
- Continuing to emphasize supplier diversity, protecting the health and safety of our employees and contributing to the well being of the communities we serve.
- Utilizing lifecycle economics and efficient supply chain operations while ensuring the reliable delivery of products and services.

The Alliance's first annual Sustainability Forum was held in November, bringing together over 170 participants including suppliers to the electric utility industry, supporters of the Alliance and other interested parties. Participants learned about sustainability assistance tools (like Green Suppliers Network reviews) and heard about successes utilities and manufacturers have had in the implementation of internal sustainability programs and processes. They were also provided information on Alliance methodologies and deliverables and interacted with fellow sustainable-minded attendees.

The overarching goal of the Alliance is to reduce energy consumption and associated Green House Gas (GHG) emissions by focusing on the following two strategic goals that have been adapted by member utilities:

- By the end of 2012, a majority of the participating surveyed suppliers of Alliance Members will measure GHG emission and will have established voluntary GHG emission reduction goals.
- By the year 2015, Alliance Members will reduce aggregate supply chain operations energy use by 10 percent from a 2008 baseline. Further information on the Alliance can be found at the Alliance website: <http://www.euissca.org/default.aspx>



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3. B: LEADERSHIP CHARACTERISTIC: Organizational Environmental Policies

An environmental management system and audit program;

Pinnacle West Response:

Our Environmental Policy applies to all Pinnacle West and APS operations. In 1994, APS joined Ceres, a national network of investors, environmental organizations and other public interest groups working with companies and investors to address environmental stewardship and sustainability challenges. We adopted the Ceres principals for environmental stewardship and protection into our corporate environmental policy. Our Environmental Policy and our organization have continued to evolve in response to changing issues, trends and regulations.

In 2011, APS re-organized its environmental organizational structure, centralizing its environmental programs in order to improve efficiencies and help ensure consistency across the organization. All environmental staff, except for Palo Verde, now report to the Corporate Environmental Director, who reports to the Chief Sustainability Officer.

We have an Environmental Management System consistent with the International Organization for Standards (ISO) 14001 Environmental Standards. In 2011, APS achieved ISO 14001 certification at our natural gas power plants, including the Ocotillo, West Phoenix, Redhawk, Yucca and Sundance Power Plants. In early 2012, we achieved ISO 14001 certification at our Cholla coal-fired power plant. We anticipate completing ISO 14001 certification at our Four Corners coal-fired power plant in 2012, at which point the company will have achieved ISO 14001 certification for all of our fossil generation power plants.

ISO 14001 certification is an important step in our continuous improvement goals. Per the International Organization for Standards and EMS, meeting the requirements of ISO 14001 is a management tool enabling an organization of any size or type to:

- Identify and control the environmental impact of its activities, products or services, and to
- Improve its environmental performance continually, and to
- Implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved

Compliance Assurance (Audit)Program

Our Compliance Assurance program establishes assessments and audits, reports results to management, establishes corrective and preventive actions, tracks the status of open items, ensures the confidentiality of information, is responsible for record retention and establishes roles and responsibilities.

Summaries of the completed compliance audits from selected EHS programs and facilities are provided to the Audit Committee of Pinnacle West's board of directors. In addition, the results from the



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compliance audits are reported to facility management, the vice president and chief sustainability officer, the responsible officer, and the CEO and president.

In order to ensure every effort is made to maintain compliance in our company's complex and diverse operations, our compliance assurance program follows a four-tier approach which includes:

- Ongoing self-assessments of EHS programs by the operating facilities.
- Focused self-assessments conducted by company EHS professionals.
- Formal EHS audits conducted by a dedicated EHS Audit Team which reports to the Pinnacle West Director of Audit Services.
- Periodic compliance reviews, in which the company conducts a detailed review of the compliance status of EHS programs.

3. C: LEADERSHIP CHARACTERISTIC: Organizational Environmental Policies

Implementation of sustainability practices.

Pinnacle West Response:

Sustainability at Pinnacle West: An Integrated Business Model

“Arizona Public Service will make decisions with the goal of creating long-term corporate value. In doing so; we will always consider our societal, economic and environmental impact, now and for generations to come. That is how you get to be a company that is 125 years old. That is how we will achieve our corporate vision of creating a sustainable energy future for Arizona.

That statement was recently made by APS Chairman and CEO Don Brandt during his keynote address at the International Corporate Citizenship Conference, presented by the Center for Corporate Citizenship at the Boston College Carroll School of Management.

We strive to continuously improve and develop our sustainability efforts. To us, sustainability is a business practice, rather than an initiative or “green” program. We take a long-term strategic approach to our decisions and their economic, environmental, and social implications. To help achieve this, we’ve built the sustainability concept into our corporate strategic framework, shown on the following page. Supporting our strategic framework, we incorporate key sustainability issues into our business planning efforts, establishing business goals and associated metrics in key business areas. We are developing an expanded approach to goals planning in the form of Tiered Metrics. Through the lens of our tiered metrics, key performance goals will be aligned and integrated into our overall business planning, providing a more disciplined way of defining and integrating objectives and tracking our performance.



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Strategic Framework



We believe it will also promote continuous improvement and allow us to more effectively recognize and reward outstanding efforts.

Our key business goals and metrics are then further incorporated into specific business unit plans and employee individual performance plans. This moves “sustainability” deep into the organization so that our employees have a clear idea of our key issues, goals and targets, which focuses work on a daily basis to achieve our sustainability vision. We also have a formal sustainability organizational structure which communicates our goals, policies, direction and performance up and down our organization from the Board of Directors to the Front Line. An officer policy group provides executive-level oversight for our sustainability efforts. The policy group establishes sustainability policy and monitors performance.



- Tier 1**
Corporate Metrics
- Tier 2**
Business Unit/
Corporate Resource Functions
- Tier 3**
Department Metrics
- Tier 4**
Supporting Department Metrics



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The Chief Sustainability Officer periodically updates the Board on sustainability direction and performance. Under the officer policy group is the Sustainability Working Group (SWG). This cross-departmental team of key managers and leaders has worked to improve sustainability coordination among the company's various departments. This team historically has tracked and evaluated new issues and opportunities in sustainable business practices to help ingrain those practices and philosophies in their business units throughout the company. This team also helped develop and track sustainability performance, including appropriate metrics. The SWG forms initiatives teams from employees across the company, as needed, to work on specific sustainability projects. The mission of this team is currently being evaluated by a SWG subcommittee to further their efforts in tandem with the tiered metrics.

Pinnacle West's sustainability performance has been recognized nationally in 2011, including:

- Pinnacle West was listed in the 2011 Dow Jones North America Sustainability Index for the seventh year in a row.
- Pinnacle West ranked 15th overall in Corporate Responsibility Magazine's 2011 annual list of "100 Best Corporate Citizens" and first among all utilities.
- The company was recognized by PR Week as one of America's top three most prestigious rankings for public companies, the "100 Best Corporate Citizens" list is based on an analysis of 320 areas of corporate disclosure, including environment, climate change, employee relations, human rights, governance, finance and philanthropy.
- APS was ranked sixth in the nation in the 2011 Target Rock Advisors Sustainability Index and was listed in the Target Rock High Sustainability Index.

4. A: LEADERSHIP CHARACTERISTIC: Other Topics to Report

Include any other innovation or environmental leadership activities not covered earlier that support the Alliance Principles.

Pinnacle West Response:

Pinnacle West and its subsidiaries have a number of innovative, leadership environmental programs in place, which are discussed in more detail in our Pinnacle West 2011 Corporate Responsibility Report (www.pinnaclewest.com/cr). These programs include technology innovation, reduction of air emissions, climate protection, and wildlife and vegetative management.



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4. B. LEADERSHIP CHARACTERISTIC: Include any potentially adverse matters concerning your environmental performance.

Pinnacle West Response:

Compliance with all applicable laws and regulations is a minimum performance standard at Pinnacle West and all our managers and employees are required to uphold regulatory compliance as part of their daily activities and business planning. We consider regulatory compliance the foundation of our sustainability efforts, with our focus being "beyond compliance" in that we look for innovation in our business practices to achieve the best sustainable practices and results.

As a major energy producer and distributor with hundreds of company sites across Arizona, we are subject to numerous 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 certain environmental issues. Our corporate goal is zero Notices Of Violation (NOVs) resulting in fines or penalties. Success in meeting this target is reflected in individual employee performance evaluations and compensation.

The company continued to have an excellent environmental and safety compliance history in 2011. The company did not receive any OSHA citations during 2011. The company received two minor environmental NOVs during 2011, which included:

- West Phoenix Power Plant NOV from Maricopa County for excess emissions on start-up. APS has taken steps to help prevent future excess emissions on start-up.
- The Palo Verde Nuclear Generating Station received an NOV during a site-wide County Air Quality inspection. The NOV was for a one-liter container with approximately eight ounces of paint that was not being used and was not covered. The NOV closed with signing an Order of Abatement by Consent and APS paid a penalty of \$1,266.



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ALLIANCE PRINCIPLES

- **Management Commitment** - Alliance members implement these Principles and make evident their commitment to environmental responsibility. They demonstrate environmental leadership and implement management processes that ensure public accountability and are consistent with their own environmental policy.
- **Protection of the Ecosphere** - Alliance members continually strive to reduce and eliminate releases of substances that may cause environmental damage to the air, water, earth or its inhabitants.
- **Sustainable Use of Natural Resources** - Alliance members promote the responsibility for resource stewardship and sustainability through planning and wise management by prudent use of natural resources, conserving nonrenewable natural resources, and promoting the development and use of renewable resources.
- **Environmental Restoration and Community Relations** - Alliance members act promptly and responsibly to correct conditions that endanger health, safety, or the environment and to restore the environment where opportunities within their means exist. They inform the community of conditions that may affect public health and welfare. They strive to communicate effectively by providing both comprehensive and comprehensible information, and tailor their communications to ensure appropriateness for various audiences. Alliance members seek advice and counsel through dialogue with community members and respond to community concerns about facility operations.
- **Energy Conservation** - Alliance members conserve energy and improve the energy efficiency of their internal operations used in producing their goods/services. Alliance members promote travel efficiency and strive to reduce transportation impacts to the ecosystem.
- **Risk Management and Reduction** - Alliance members strive to reduce the environmental health and safety risks to employees and communities, and endorse environmentally-responsible management practices. Members also inform customers about the environmental impacts and costs of consumer choices and provide information about practices that can result in an improved environment.
- **Environmental Education and Monitoring** - Alliance members educate peers, customers, employees, and communities about the importance of maintaining regulatory compliance and integrating environmental performance into business management practices. They seek opportunities to mentor other organizations and offer information about environmentally-responsible actions, lifestyle choices, behavior practices, and decision-making.
- **Pollution Prevention and Source Reduction** - Alliance members regard pollution prevention as an important component of sustainable development. They actively employ source reduction and recycling to minimize waste, while handling and disposing waste materials in a safe and responsible manner.
- **Environmental Performance and Integrity** - Alliance members demonstrate their commitment to these Principles by maintaining compliance with all applicable environmental regulations. They support and adopt environmental audit procedures and conduct annual self-evaluations of their progress in implementing these Principles. They retain their membership status by conducting their business operations in a manner consistent with performance standards as established by these Principles.
- **Public Responsibility and Reporting** - Alliance members believe that the public and other members deserve, and hold the right, to review performance of activities conducted by the Alliance as a whole, as well as those Alliance activities conducted by individual members. Through disclosure of Alliance activity performance reports and open decision-making, the Alliance and its members are committed to promoting the highest standards of organizational integrity and public responsibility.