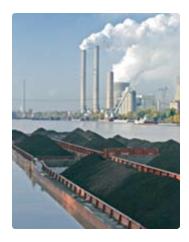


# Working Together for a Brighter Future









AMERICAN ELECTRIC POWER

2006 Corporate Responsibility Report

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The AEP Board of Directors has reviewed, discussed and approved this report. We believe it provides a clear, balanced and reasonable presentation of the company's plans and performance and their environmental, social and economic impacts. The Report focuses on seven issues that are of strategic importance to the company. It sets forth specific actions that the company is taking towards the goal of sustainable development, which when implemented will advance shareholder value.

Although much has been accomplished, the Board recognizes that there is still much to be done. The Board has tasked management with executing the company's strategic plan to meet shareholder expectations and the commitments in this report, while being sensitive to the broader interests of the communities within which we work, thus attaining even higher levels of performance.

Lester A. Hudson, Jr.

Presiding Director of the AEP Board of Directors

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April 2007

# Leadership, Management & Strategy



### Dear Friend,

American Electric Power has operated with a strong sense of purpose and responsibility since its founding more than 100 years ago. Electricity has become a fundamental necessity of life. It drives our economy, heats our homes, enables a vast and safe water and food supply, and empowers advances in medicine, science, technology, education and the arts. In short, electricity provides the current that enables economic, intellectual and spiritual growth.

As one of the largest electric utilities in the United States, we have enormous economic, environmental and social impacts. Most of them are positive, some of them are not. This report underscores our commitment to hold ourselves accountable for improvement. Like many businesses, we are just beginning to understand how stakeholders want us to measure, manage and account for the full range of our impacts on society.

The best way to ensure our financial success going forward is

to expand the overlap between our business interests and the interests of society. Transparency and accountability, along with a close working relationship with our stakeholders, will grow our business, serve our shareholders' interests and create a better world for our children and grandchildren. That is what sustainability means to AEP.

This report therefore reflects our growing commitment to work with labor, business partners, government agencies and our environmental and community stakeholders. We are beginning to engage with a much broader range of constituencies than ever before. This report has been shaped by that engagement and is an invitation to further it.

We worked with Ceres to facilitate a formal review of this report by 17 investor, social and environmental advocacy and labor organizations. They were very candid with us as we were with them. We agreed on some points and disagreed on others. In the process, we learned what's on the minds of many of our important constituents and about their perceptions of AEP. It's clear we need to speak with them more often, and we look forward to continuing that dialogue.

Climate change is a significant issue for society, and certainly for AEP, as we are one of the largest consumers of coal in the United States. We feel a growing imperative to reduce greenhouse gas emissions and to support a reasonable approach to carbon controls. It is

critical that such controls are consistent with our obligation to provide reliable, reasonably priced electricity to support the economic well-being of our service territory and our country. Climate change is a global issue and we will continue to work with our international partners, including the Asia-Pacific Partnership, to encourage the participation of developing countries such as China and India. The United States is in a position to lead change and bring other nations into the process, and we will work with our representatives to do so.

Any legislation to reduce greenhouse gases should assure both private and public funding to deploy technology, recognize early actions taken to mitigate greenhouse gas emissions and allow for greenhouse gas offsets. New technologies must be a large part of any solution to climate change. AEP has a proven track record of innovation and a willingness to bring new technologies into large-scale commercial use, which is what is needed right now. We are making good progress: AEP was the first to announce plans to build commercial-scale Integrated Gasification Combined Cycle (IGCC) plants and will be the first to employ ultra supercritical technology in the United States, assuming timely regulatory approval.

We recently announced our intention to bring carbon capture and storage technologies from the research and pilot stages into largescale commercial application.

The effort to apply these new technologies commercially and a willingness to take on the challenges and risks involved are major parts of our commitment to sustainability. We have responsibilities to our shareholders and to society and we are willing to lead and to take prudent risks in order to meet them. Our 100-year track record of successful innovation and leadership gives me confidence that we can find ways to address climate change that pay important dividends in the future for our customers, shareholders and society.

Even with all we are doing, our plan to build new power plants will increase our carbon emissions, despite our early reduction efforts. Our Board of Directors has responded by approving new strategies to reduce, offset or avoid those emissions between 2010 and 2020.

We are also leading the way with proposals to expand and connect the nation's transmission systems so we can further mitigate environmental impacts, bring more renewable energy to market and provide better access to new technology and cost-effective power.

We must work cooperatively with policymakers and regulators if we are to advance technology, strengthen the electric grid, accelerate the development of cost-effective energy efficiency programs and manage consumers' demand for electricity. We have to work with our stakeholders if we are to make significant progress.

Another important challenge

is the health, safety and well-being of our employees, which is AEP's most important priority. Our efforts to reduce work force injuries and the severity of injuries overall began to make a difference in 2006, resulting in fewer recordable injuries and lower severity rates, but that is still not good enough. We want to be "best in class" within our industry on safety and health by 2010 and we are working hard to reach this goal.

However, 2006 cannot be counted as a good year for us. One of our employees died on the job doing what should have been a routine task, and a contract worker died in a fire at a construction site. It is a terrible tragedy for the families and our hearts and prayers go out to them. This is completely unacceptable to me, to our company and to our employees.

We continue to intensify our focus on safety and health, and we are resolute in our determination to improve. Our humanity is at the core of this determination: we are focused not on numbers, but on the human aspects of health and safety—the spouse who is left a widow, the children who lose a parent or the employee who is recovering from an injury.

At its core, safety is a personal obligation, and we won't stop trying to get that message across because the loss of a single life is completely unacceptable to us.

An aging work force represents a formidable challenge for AEP and for the entire electric industry. We have a work force planning strategy to identify our needs and find and employ new talent as more of our employees approach retirement age. We are making inroads through partnerships with colleges and technical schools, enhancements to our benefits and compensation plans and efforts to groom our future leaders from within our own ranks. We have a long way to go before we can claim success.

Our current and future successes require a well-educated, skilled and diverse work force, especially as new technologies emerge. I am extremely proud of the men and women of AEP; their dedication to our customers, their creativity in developing innovative solutions, and their loyalty are unsurpassed and fundamental to our sustainability.

The future of this company is limited only by our vision of what we can accomplish. The challenges may be new, but our core values haven't changed and will continue to guide us. Part of that vision includes an evolving view of ourselves and how we do business. Sustainability is a journey, not a destination, and ours has just begun.

Michael G. Morris

Chairman, President and Chief Executive Officer



### Dear Stakeholder,

Sustainability requires commitment, collaboration, action and results. It also involves a willingness to lead and to take prudent risks on behalf of shareholders and society. For more than 100 years, AEP has been willing to lead, to advance technology, to be a good employer and to be a responsible corporate citizen. We have taken risks and we have succeeded more often than not. With many new challenges before us, we are ready to face the next century and lead the way again.

We are working rapidly to accelerate carbon capture technologies from the lab to commercial-scale deployment. We recently announced that we will significantly accelerate the commercialization of post-combustion carbon capture technology using chilled ammonia. We will install the technology, which is being tested on a 5-megawatt (MW) facility, as a 30-MW validation project at our large Mountaineer plant in New Haven, W.Va., where up to 100,000

metric tons of carbon dioxide (CO<sub>2</sub>) will be captured annually and stored in deep saline aquifers.

Following completion, we plan to install the technology at one 450-MW unit at Northeastern Station in Oologah, Okla., where it is expected to capture up to 1.5 million metric tons of CO<sub>2</sub> a year to be used for enhanced oil recovery. Chilled ammonia technology has demonstrated the potential to capture up to 90 percent of emissions from new and existing coal-fired plants at a much lower cost.

We also plan to commercialize the use of oxy-coal technology that uses pure oxygen to burn coal and leaves a carbon stream behind which can be more easily captured and stored. Our first-in-the-nation commercialization of IGCC and ultra supercritical clean-coal technologies provide added reason for cautious optimism.

We have accelerated our strategy to reduce, avoid and offset our emissions beyond 2010, when our current commitment to the Chicago Climate Exchange ends. In addition to our bold plans for new technology, we plan to add 1,000 MW of new wind generation, other renewable sources, domestic offsets, power plant efficiency improvements and customer-oriented energy conservation and demand side management programs.

We will work closely with federal regulators, state public utility commissions, legislators and all other constituencies, as well as with our customers, shareholders and labor leaders, to advance this important agenda.

To achieve our goals, we will build upon our strong track record of community outreach and collaboration and we will make it better. One of the things I have learned as we worked on this report is that it taught us much about our company and how we can improve. We will continue this process and work with other companies and other countries. We will seek new alliances to ensure we achieve the best climate change solutions. We value our growing relationship with the Ceres coalition and other environmental and social advocacy groups and our local environmental, community and labor partners, and we are committed to continue working closely together in the future.

I welcome your comments and your participation with us as we undertake this journey toward sustainability.

**Dennis E. Welch** Senior Vice President, Environment, Safety & Health

Steller.

### **About This Report**

Our corporate vision is to maintain our leadership as the largest generation and transmission company in the United States, as the largest electric distribution business throughout the regions we serve and to maintain our leadership in technical innovation of power systems, environmental technology, transmission systems and customer service.

### OUR VISION FOR SUSTAINABILITY— THE REASON FOR THIS REPORT

American Electric Power enters its second century

committed to operating responsibly, efficiently and profitably for customers, shareholders, employees and communities. We will safely provide reliable, affordable electric power while actively working to protect people and the environment. We will engage stakeholders and continue our role in making people's lives better today and for generations to come.

### **MATERIALITY**

This is American Electric Power's first Corporate Responsibility Report, containing information about the company's economic, environmental and social policies and performance. It is a comprehensive report that identifies the seven areas of material focus that we believe to be the most important to AEP's sustainability. This report also offers frank discussions about these issues, backed by substantive information on the challenges, risks and opportunities the company faces.

To determine which issues are of material importance, management and our Board of Directors considered issues that might (1) have a significant impact on the finances or operation of the company; (2) have significant impact on the environment or society now and in the future; and (3) substantially influence the assessments and decisions of stakeholders. We worked with internal and external stakeholders to identify and prioritize these issues.

The seven material issues we have identified are:

- Leadership, Management & Strategy: Our sustainability requires a strong and visionary leadership team willing to take prudent risks to maintain AEP's role as an industry leader, meet the needs of our customers and deliver value to our shareholders.
- Public Policy Strategy: We must actively engage policymakers, community leaders and other external stakeholders to ensure that laws and regulations allow us to continue to be financially stable in order to invest in our vision for sustainability while provid-

ing customers and shareholders with what they need.

- Climate Change: We are one of the largest greenhouse gas emitters in the western hemisphere; our sustainability and financial stability and the economic well-being of the areas we serve are at risk if we are not able to prosper with the expected passage of a U.S. climate policy.
- Environmental Performance:
   Environmental laws and regulations are complex and change frequently.

Our investments to comply are significant. Our greatest challenge is to achieve compliance at all times as a large consumer of coal, and to continually reduce risks to the environment and the health of our communities.

- Energy Security, Reliability & Growth: A modern, reliable electric delivery system that can keep pace with customer demand and relies on a diverse fuel supply requires collaboration with regulators, legislators and other stakeholders to ensure timely regulatory cost recovery.
- Work Force Issues: Protecting our employees' safety and health and ensuring that we have a skilled, diverse work force to build, operate and maintain new generation, transmission and distribution technologies will challenge our ability to remain an industry leader.
- Stakeholder Engagement: We need to listen to and as often as we can try to satisfy our numerous stakeholders, such as investors, customers, employees,



regulators and policymakers. To be a good corporate citizen requires us to be transparent, willing to listen to all points of view and to hold ourselves accountable for our impacts on society.

### PEER & STAKEHOLDER REVIEW

American Electric Power worked with Ceres—a national network of investors, environmental organizations and other public interest groups that work with companies on sustainability issues—to review our report and provide comments. Representatives from 17 environmental, social and investor organizations and organized labor participated in this process and met with our senior management, including the CEO and CFO, to provide feedback. We also held an employee focus group to review our report, and we sought peer review from a comparably sized electric utility in Europe (a member company of the e8).

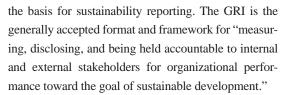
We believe the stakeholders of this report are:

- Shareholders and prospective investors
- Customers
- AEP employees and retirees
- Labor unions
- Local communities
- Policymakers (federal, state and local legislators and regulators)
- Prospective employees
- Suppliers and others doing business with the company
- Non-governmental organizations (NGOs)
- Professionals from industry, government, labor and academia

### SUSTAINABILITY REPORTING GUIDELINES

This printed Corporate Responsibility Report, along with additional information available on American Electric Power's web site, www.AEP.com/cr, is compiled and presented based on the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines Version 3.0 (G3) and meets the content requirements of Application Level B.

The GRI guidelines provide a voluntary reporting framework used by organizations around the world as



We are using the new G3 standards, as well as some indicators being developed as part of the GRI Electric Utility Sector Supplement. GRI has not reviewed this report but has checked the GRI elements contained within it and agrees with our Self Declared Application Level B.

### REPORTING PERIOD & DEVELOPMENT

This report is based on performance and information for calendar year 2006, but also provides available data for 2004 and 2005 to establish a baseline against which current performance can be compared. AEP's web site (www.AEP.com/cr) contains additional information from our generation, transmission and distribution business units. Financial performance is covered in AEP's 2006 Annual Report to Shareholders, which can be found at www.AEP.com/investors.

The company established a Steering Committee for Sustainable Development, co-chaired by the Chief Financial Officer and the Senior Vice President of Environment, Safety & Health, to develop this report and to guide the company's sustainable development going forward. The Committee of Directors and Corporate Governance of AEP's Board of Directors reviewed the report and its content.

### CHANGES IN REPORTING

We have published environmental reports since the early 1990s; the last one on our 2001-2002 performance followed the Ceres reporting framework. An independent committee of AEP's Board of Directors issued a landmark report in 2004 called *An Assessment of AEP's Actions to Mitigate the Economic Impacts of Emissions Policies*, the first of its kind in the United States. It evaluated the economic risks to the company posed by emissions policies. This report picks up where that one left off. We will report annu-



ally on the actions we are taking to manage our risks in today's environment.

### COMPLETENESS, RELIABILITY & ACCURACY OF REPORTING

American Electric Power does not yet have a formal information collection system for the GRI process. Each business unit collected and verified data for which it was responsible. Some of the data presented here are required to be filed with other entities (e.g., Chicago Climate Exchange) and are verified accordingly. We plan to develop a more complete information management system as part of our sustainable development initiative.

### REPORTING PRINCIPLES & GUIDANCE

We have reviewed GRI's G3 Reporting Principles in an effort to provide a balanced and reasonable representation of AEP's sustainability performance. These principles are materiality, stakeholder inclusiveness, sustainability context, completeness, comparability, accuracy, timeliness, clarity, reliability and boundary setting.

### CONTACT FOR QUESTIONS ABOUT THIS REPORT

For additional information about this report, the GRI information on AEP's web site or the company's sustainability initiative, please contact Sandy Nessing at *smnessing@aep.com*.

### Strategy & Management

### **OUR STRATEGY FOR SUSTAINABILITY**

Our corporate Vision, Mission, Strategy & Values statement outlines the principles that guide our business (www.AEP.com/about/mission). Our effort to integrate corporate responsibility with our business strategy and daily decision-making has prompted us to take a wider view of what a sustainable future looks like for AEP.

We strive to put people first—the health and safe-

ty of our employees and the communities where we operate are our top priorities. We elevated oversight of environment, safety and health to a senior executive level in 2005 and intensified our focus on preventing injuries. Consequently, we are making significant progress in reducing both recordable and severity incident rates. But we failed to achieve our most fundamental goal when an AEP employee and a contract worker died on the job last year.

Our customers consider electricity to be a necessity, and they rely on us to meet their energy needs in ways that improve their quality of life and protect the environment today and for future generations. Our challenge is to keep electricity reasonably priced at a time when energy prices are increasing and expensive environmental controls and infrastructure enhancements are creating additional costs. At the same time, we have a responsibility to our shareholders to obtain adequate and timely recovery of AEP's costs, including the opportunity to earn a reasonable return on the investments we make.

### **OUR CHALLENGES & OUR OPPORTUNITIES**

Our ability to address climate change will require new technology; support for economic energy efficiency programs and initiatives to help our customers manage their demand; expansion of the transmission grid to facilitate renewable energy growth; continued availability of greenhouse gas offsets; and additional plant efficiencies. These solutions come at a cost, and we will seek the support of policymakers and regulators to ensure we can recover our costs from these investments while meeting new mandates.

### MANAGING OUR RISK

AEP uses an enterprisewide approach for risk management. Risks are managed throughout the company, subject to the overarching Enterprise Risk Management (ERM) Policy, whose overall objectives are to review the company's total risk profile and to assure accountability for the identification, measurement, evaluation and mitigation of risk. The ERM Policy

establishes the following five key risk factors: Financial Performance; Utility Business; Power Production; Work Force, Safety and Security; and Legal, Compliance and Other. The policy also establishes a Risk Executive Committee whose role is to approve and monitor these key risk factors of the company. The committee determines which risks require an independent assessment and those factors that are best measured through functional unit reporting.

### CORPORATE GOVERNANCE— ETHICS & COMPLIANCE

AEP believes that ethical conduct is doing the right thing, at the right time, all the time. We want a culture that supports ethically sound behavior and instills a sense of shared accountability among employees. All employees, including our Chief Executive Officer, Chief Financial Officer and Principal Accounting Officer, are expected to abide by our *Principles of Business Conduct* to ensure we consistently conduct our business and ourselves in a legal and ethical manner. Our *Principles of Business Conduct* are approved by the Board of Directors and employees are required to read and certify that

they understand them. The Ethics & Compliance group also provides employees with a toll-free, anonymous Concerns Line that is available 24/7 to allow employees to report and receive help in addressing ethics issues.

We actively ensure compliance with all laws and regulations. We regularly conduct internal audits to ensure that we are in compliance with Sarbanes-Oxley (SOX) requirements, internal financial policies and regulatory code of conduct mandates. We also conduct frequent environmental audits and make constant adjustments to programs and activities to ensure that we stay in compliance with environmental laws and regulations.

AEP's nuclear program has its own unique regulatory requirements. We recognize the distinctive challenges and rules that accompany our nuclear activities, and our Cook Nuclear Plant has its own compliance program, complete with a separate 24-hour hotline. This provides our employees at Cook with a ready outlet for addressing their concerns and takes into account the unique work in which they are involved.

More information about AEP's ethics and compliance program and the *Principles of Business Conduct* can be found at <a href="https://www.AEP.com/investors">www.AEP.com/investors</a>.

### Standard Disclosures

Report Application Level	С	C+	В	B+	Α	A+
G3 Profile nd the Disclosures	Report on: 1.1 2.1 – 2.10 3.1 – 3.8, 3.10 – 3.12 4.1 – 4.4, 4.14 – 4.15	ıred	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 – 4.13, 4.16 – 4.17	ıred	Same as requirement for Level B	red
G3 Management Approach Disclosures	Not Required	port Externally Assu	Management Approach Disclosures for each Indicator Category	port Externally Assu	Management Approach Disclosures for each Indicator Category	port Externally Assu
G3 Performance Indicators & Table Sector Supplement Performance Indicators	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.	Rel	Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human Rights, Labor, Society, Product Responsibility.	Re	Report on each core G3 and Sector Supplement* Indicator with due regard to the Materiality Principle by either: (a) reporting on the Indicator or (b) explaining the reason for its omission.	Re

<sup>\*</sup>Sector supplement in final version.

"We must be bold, looking for new, innovative and creative ways to tackle our nation's and Commonwealth's energy issues. And I know AEP, just as it has been for the last 100 years, will be right there in the middle of those discussions, helping us figure out ways to be even better going forward."

Gov. Tim Kaine, Virginia, May 8, 2006

# Public Policy Strategy



Desert Sky Wind Farm, Iraan, Texas

AEP's public policy strategy is simple—we want to work as partners with regulators, legislators, community leaders and other stakeholders on issues of mutual interest in ways that create shared value. We seek to influence public policy, legislation and administrative proceedings to ensure that we can continue to provide our customers with safe, reliable, reasonably priced electricity in ways that protect the environment, while ensuring AEP's financial stability.

Unlike most industries and corporations, electric companies such as AEP are not operating in a free market. The rates that we can charge our customers, and the rate of return that we can provide to our investors, are determined by federal and state regulators. If we spend money that the regulators will not allow us to recover in rates, our investors lose. We can be deeply motivated by sustainability and a desire to "do the right thing" and think it makes good business sense. But we simply cannot spend money toward those goals if regulators will not allow us to recover those expenditures.

We need laws and regulations that allow us to invest in more sustainable ways of doing business while providing our customers and investors with what they need. This will take the cooperative efforts and combined energy of our company, our industry and our stakeholders working together with legislators and regulators.

To foster stronger relationships with our local communities and their leaders, we reestablished our operating company model in 2004 to bring business decision-making closer to our customers and stakeholders. We wanted more local presence to create the opportunity to work collaboratively for the best solutions for our customers and the economic growth of the states we serve.

We have identified seven public policy objectives that are critical to AEP's sustainability:

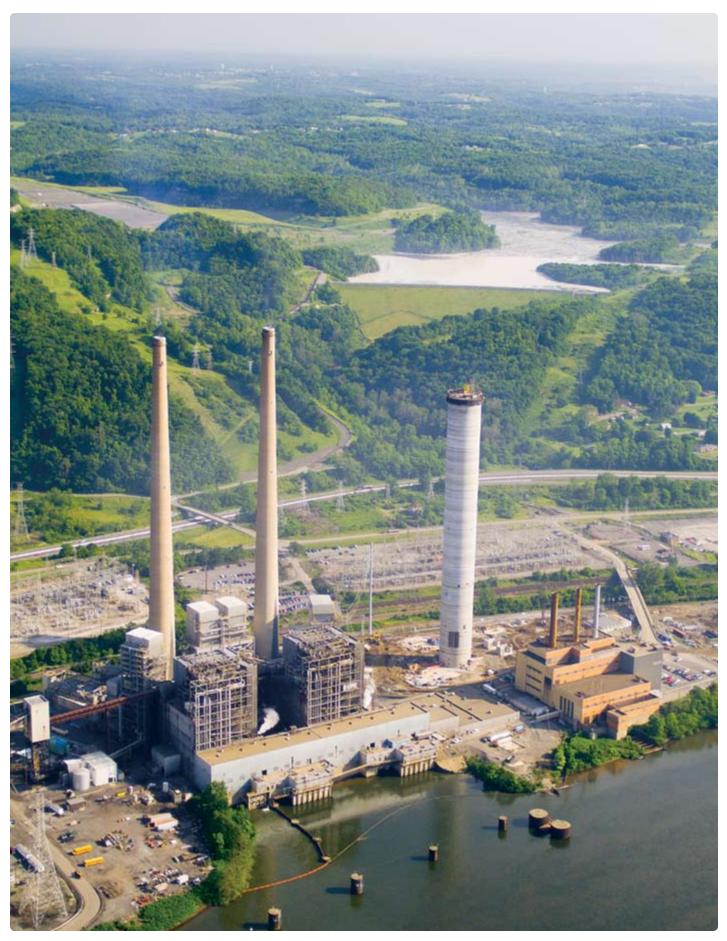
Produce electricity safely, reliably and at a reasonable price;

- Expand and reinforce the transmission infrastructure to create a grid that can reduce congestion, line losses and, thereby, energy costs;
- Meet the growing demand for electricity;
- Help our customers manage their consumption through energy efficiency programs as a means to balance the impact of rising costs of fuel, environmental compliance and infrastructure needs;
- Increase environmental protection through reasonable and voluntary efforts;
- Ensure regulatory cost recovery for generation, transmission and distribution investments as well as environmental compliance; and
- Provide a reasonable rate of return for shareholders, helping to ensure financial stability required to meet the above goals.

### **CHALLENGES**

The changing political landscape presents an enormous challenge for AEP and all electric companies. The 2006 elections brought many new federal and state legislators to Washington and the state capitals, and new regulators to our service territory. We have begun to reach out and work with them to address the following considerations as they affect AEP and our customers:

- We believe that coal must continue to be a key part of our baseload generation. Otherwise, our customers' electricity will be more expensive, businesses in our service territory will lose their competitive advantage and future economic growth will be adversely impacted.
- We must upgrade and expand the transmission grid in a timely manner. Otherwise, the potential exists for rolling brownouts and blackouts during peak demand periods. National security and economic vitality would be affected.
- We will continue to deal with an aging distribution infrastructure and promote the investment in technologies that create a better-performing grid. Failure to succeed could result in recurring outages.



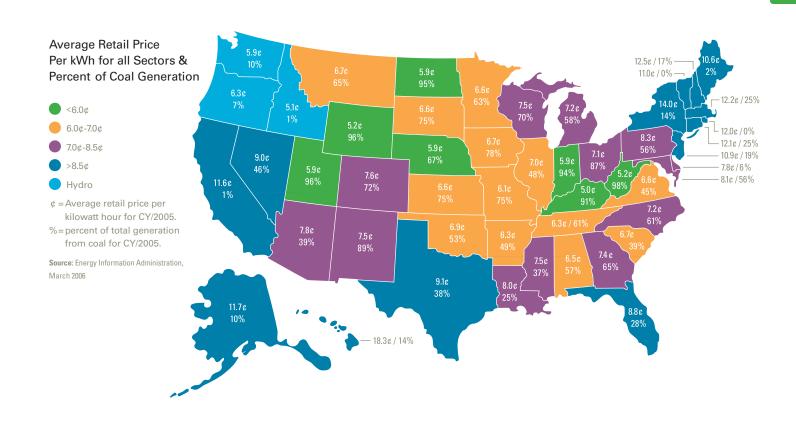
 $Many\ AEP\ power\ plants\ are\ being\ retrofitted\ with\ emission\ control\ systems,\ such\ as\ these\ Cardinal\ units\ in\ Brilliant,\ Ohio.$ 

- We need to secure cost recovery for our clean energy initiatives, which include the latest, most environmentally friendly technologies and protocols (e.g., IGCC, ultra supercritical, carbon capture and storage, wind, biomass, demand side management and energy efficiency programs). Otherwise, we may have to forgo these advances and resort to current pulverized coal technologies. If we cannot recover our costs, we cannot make these investments in a cleaner environment.
- AEP will play an active role in the policy debate as the United States moves toward carbon controls for greenhouse gas (GHG) emissions.

We will make any necessary adjustments to our current strategy and the voluntary reduction targets we have already committed to with the Chicago Climate Exchange (CCX).

### ADVOCACY ACTIONS TO ACHIEVE AEP'S OBJECTIVES

AEP plans to achieve these public policy objectives by working with federal and state lawmakers and regulatory commissions and, where appropriate, utilizing stakeholder coalitions to enhance these efforts. We believe this strategy will best yield progressive public policies that serve the public interest and meet our corporate goals.



"Our company has been advancing technology for the electric utility industry for more than 100 years. Our plan to advance the commercial application of carbon capture and storage technology reflects that heritage. Technology development needs are often cited as an excuse for inaction. We see these needs as an opportunity for action."

AEP Chairman, President and CEO Michael G. Morris

# Climate Change

As one of the nation's largest consumers of coal—a source of carbon dioxide, a greenhouse gas (GHG)—AEP has carefully considered various solutions for reducing GHG emissions, both voluntary and mandated, and the potential impact of each on our company and our stakeholders. We support a reasonable approach to carbon controls in the United States.

We have already acted to curtail our own GHG emissions, and we have a comprehensive strategy in place to reduce, avoid or offset our future GHG emissions. The cornerstone of our plan draws upon our experience as a technology leader; we plan to install carbon capture on two existing coal-fired power plants—the first commercial use of this technology. Our plan also includes wind generation and other renewables; domestic GHG offsets through agriculture, forestry and other projects; power plant efficiency improvements; and energy efficiency programs with our customers.

Throughout our 100-year history, we have led our industry in advancing technology. We believe the time is right, with climate legislation on the horizon, to advance carbon capture technology to a commercial scale. In March 2007 we signed memorandums of understanding with world-renowned technology providers for carbon capture and storage. The "commercial validation" project will be conducted at our Mountaineer Plant in West Virginia. The first-of-its-kind commercial carbon capture project will begin operating at Northeastern Station in Oklahoma.

These projects will employ a chilled ammonia carbon capture technology. Laboratory testing has shown that this process has the potential to capture more than 90 percent of CO<sub>2</sub> at a lower cost than other technologies that could be retrofitted at pulverized coal power plants. A vendor-sponsored project to demonstrate the technology will be completed on a 5-megawatt (MW) (thermal) slipstream from a Wisconsin plant in 2007.

We will then install the technology on AEP's 1,300-MW Mountaineer Plant as a 30-MW product validation in mid-2008. It is designed to capture up to 100,000 metric tons of CO<sub>2</sub> per year, which will be stored underground in deep saline aquifers. Battelle Memorial Institute will serve as our consultant on geological storage.

Once it is proven to be successful at Mountaineer, we will install the technology on one of the 450-MW coal-fired units at Northeastern Station in Oklahoma in late 2011. When in service, it is expected to capture about 1.5 million metric tons of CO<sub>2</sub> per year, which will be used for enhanced oil recovery. This post-combustion carbon capture system is suitable for both existing plants and new plants and uses less energy to capture CO<sub>2</sub> than other technologies currently being tested.

A second carbon capture technology we plan to bring to commercial operation involves oxy-coal combustion. This technology uses pure oxygen for the combustion of coal. Current generation technologies use air, which contains nitrogen that is not used in the combustion process and is emitted with the flue gas. By eliminating the nitrogen, this process leaves a flue gas that is a relatively pure stream of CO<sub>2</sub> that is ready for storage. At commercial scale, the CO<sub>2</sub> likely would be stored in deep geologic formations.

Our vendor will complete a pilot demonstration this summer followed by a retrofit feasibility study. Once satisfied that the technology is viable, we will select an existing power plant for commercial-scale oxy-fire installation. We expect this technology to be in service on an AEP plant between 2012 and 2015. Learn more about these projects at www.AEP.com.

The viability of storing carbon dioxide underground has been the focus of a \$4.2 million carbon storage research project, led by Battelle Memorial Institute, at our Mountaineer Plant. The study site will be transformed into storage when  $CO_2$  is captured from the chilled ammo-





New technology is central to AEP's climate policy. Our employees have the knowledge to make it happen.

nia capture process on Mountaineer once it is in service. The 18-month study of the potential of geologic storage of CO<sub>2</sub> has been taking place in the heart of the largest concentration of fossil fuel-fired power plants in the United States. Results of this study have already enhanced the understanding of geology along the Ohio-West Virginia corridor and surrounding areas of the Midwest, where deep, thick saline sandstone formations will provide secure underground storage for captured CO<sub>2</sub>.

The investments we make to bring these technologies to commercial scale for use on existing coal-fired power plants will ensure the long-term viability of our existing generation and will augment already announced investments in clean-coal technologies, as well as other strategies to reduce GHG emissions.

We will seek funding support from the U.S. Department of Energy to advance these technologies for commercial use. We will also work with our utility commissions, environmental regulators and other key constituencies in states that have jurisdiction over the plants selected for these technology retrofits to determine appropriate cost recovery and the impact to our customers.

Whereas AEP has championed voluntary efforts to curb GHG emissions, we also believe that we need a committed, consistent national policy. Such a program must not create trade imbalances that would damage the U.S. economy or impede our ability to provide reliable, reasonably priced electricity to our customers. We believe domestic GHG programs should be based upon the following criteria:

- Comprehensiveness: All GHGs and all sources of emissions and sectors of the economy must be included.
- Cost-effectiveness: Reductions should occur in a reasonable, achievable time frame. A longterm price signal for carbon that allows continued economic competitiveness for U.S. industry

and stimulates investments in zero- or low-carbon technologies or processes should be evident. The program should also provide regulatory preapproval for recovery of cost-effective energy efficiency and demand side management programs.

- Realistic emission control objectives: Recognizing that climate change reversal will require consistent efforts during this century, we need realistic goals and schedules that address the problem while minimizing economic costs and avoiding premature retirement of existing power plants. A national policy also should ensure compliance time lines that are consistent with the expected development and deployment of needed technologies.
- Monitoring, verification and adjustment mechanisms: Rigorous and credible monitoring and verification of GHG emissions and reductions will be necessary to build a foundation for market-based instruments.
- Technology development and deployment: The only way to stabilize atmospheric GHG concentration without limiting economic growth is to develop and deploy low-carbon technologies for the global production and consumption of energy. We need reliable and long-term public and private funding to support technological breakthroughs, including carbon capture and storage for new and existing plants and other clean-coal technologies.
- Adjustment provision: A legislative provision should be made for adjusting the U.S. commitment if the largest emitters in the developing world, who are manufacturing competitors with the United States, do not take comparable action to cap or reduce their emissions.

We took steps that resulted in GHG emissions offsets long before climate change was considered a problem. AEP began planting trees in the 1940s to restore farm acreage that was no longer viable for agriculture. That program was





AEP was a founder of CCX in 2003. CCX's CEO is Richard L. Sandor, who has been a member of AEP's Board of Directors since 2000. Because of the relationship between AEP and CCX, Mr. Sandor is not considered an independent director under New York Stock Exchange rules.

expanded to reclaim former coal fields, many of which were opened for public use, and AEP has since planted an estimated 62 million trees. In 1995 alone we initiated a five-year commitment to plant 15 million trees as part of the U.S. Department of Energy's Climate Challenge Project. We have invested in a number of major international and domestic forestry projects that are expected to store millions of tons of CO<sub>2</sub> emissions. To learn more about what the electric utility industry is doing to protect the environment, visit www.eei.org.

In 2003 AEP became a founding member of the Chicago Climate Exchange (CCX), the first voluntary GHG credit trading system in the United States. We committed to reduce or offset GHG emissions by 1 percent in 2003, 2 percent in 2004, 3 percent in 2005 and 4 percent in 2006 below baseline emission levels (an average of 1998-2001 annual emissions). These reductions are cumulative and are adjusted to account for divestitures, acquisitions or retirements of older power plants. In 2005, we announced we would extend our CCX commitment to achieve further reductions or offsets in emissions during 2007-2010, reaching an annual target of 6 percent by 2010. CCX allows for flexible, cost-effective compliance with these targets by facilitating emissions trading (buying and selling of emission allowances) and banking of emission reductions (i.e., saving excess reductions in one year to use in a later year). More information about the Chicago Climate Exchange is available at www.chicagoclimatex.com.

Today, AEP's adjusted carbon emissions baseline is 155 million metric tons. The total cumulative CO<sub>2</sub> equivalent reduction requirement to meet the CCX commitment is approximately 46 million metric tons by 2010. Through 2006 we have achieved approximately 31 million metric tons in reductions, so we are well on our way to reaching our target.

We monitor our CO<sub>2</sub> emissions through

Continuous Emission Monitors (CEMs) and report them to the U.S. Environmental Protection Agency. Under our participation in CCX, very detailed measurement protocols have been developed that ensure the veracity of the reductions and offsets. These emission reports are audited by the NASD, which is the auditor of CCX. Our emissions also are registered and monitored through our participation in the EPA's Climate Leaders program. We anticipate using similar protocols to monitor and verify offsets in the future.

To meet our CCX obligation, we have taken a variety of actions. These include:

- Improving the efficiency of existing power plants to reduce CO<sub>2</sub> emissions per net kilowatt hour;
- Adding wind generation to our system, focused on our western states, to displace the use of fossil fuel generation;
- Improving the availability and increasing generation from our Donald C. Cook nuclear power plant, which achieved record generation levels during 2004 and 2005;
- Retiring older and less efficient gas steam units in AEP's western region and two coal units in our eastern region;
- Substantially reducing the leakage rate of sulfur hexafluoride (SF6), a potent GHG, from transformers by approximately 90 percent; and
- Conserving trees and reforesting lands in the United States and internationally.

Despite these commitments through 2010, if no further actions are taken we project that our emissions will begin to increase by about 10 million to 15 million tons annually between 2011 and 2020 as we build four new power plants. In response to our new plant construction, and our vehicle and aircraft emissions, we will reduce approximately 5 million metric tons more of CO<sub>2</sub> per year through these offsets, including:

• Purchasing 1,000 MW of new wind power,



AEP's Cook CoalTerminal, Metropolis, Illinois

including the company's first wind energy in its eastern states, to offset 2 million metric tons of CO<sub>2</sub>:

- Investments in domestic offsets, such as methane capture and destruction from livestock manure or landfills, or other domestic projects, to offset 2 million metric tons of CO<sub>2</sub>;
- Tripling our investment in forestry projects to offset 500,000 tons; and
- Offsetting all of our emissions from our corporate automotive fleet and aircraft to achieve a 200,000-ton reduction.

Additional actions, including our carbon capture and storage program, will help offset the anticipated growth in AEP's carbon footprint.

We are also investing in other new cleancoal technologies, including Integrated Gasification Combined Cycle (IGCC) and ultra supercritical (USC). AEP filed plans with regulatory commissions in West Virginia and Ohio to build commercial-scale IGCC plants that will be capable of capturing and storing CO2. IGCC technology may enable AEP and the United States to use its vast supply of coal while limiting GHGs. Unlike a traditional pulverized coal plant that grinds coal to a fine powder and then burns it, IGCC converts coal to synthetic gas before it is burned. Emissions such as nitrogen oxide, sulfur dioxide and mercury are removed from the gas stream more efficiently and completely. The remaining gas is then burned to create electricity. IGCC can produce a two-fold climate benefit: more energy per pound of coal consumed than current pulverized coal technologies and a more efficient capture process for traditional emissions.

Once captured, CO<sub>2</sub> can be stored by injecting it into the ground or can be used in other ways, such as for enhanced oil recovery, replacing more energy intensive methods and further reducing GHGs.

AEP also filed plans to build two USC plants in our western service territory: the 600-MW

John W. Turk plant in Hempstead County, Ark., and the 950-MW Red Rock Generating Facility near Red Rock, Okla. These will be the first USC plants in the United States.

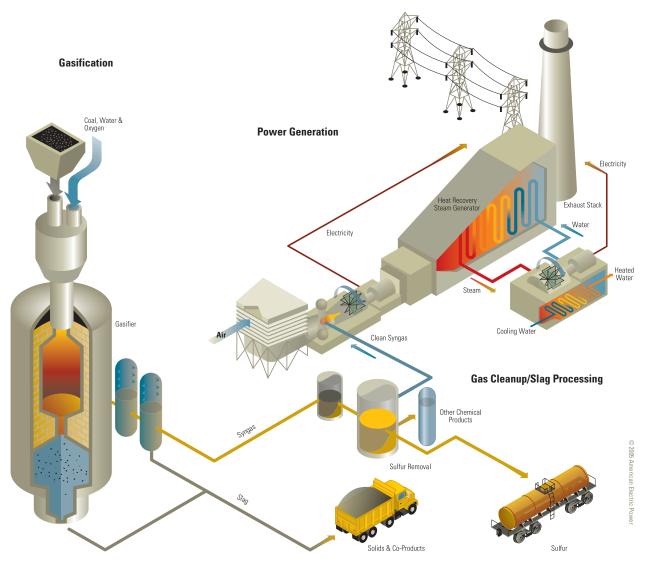
USC generation operates at higher temperatures than supercritical generation, yielding higher efficiencies and lower emissions than supercritical plants. The efficiency is similar to IGCC, but the carbon capture technology for USC has not been fully developed yet. We believe our investment in the chilled ammonia capture process will help to advance this. AEP selected USC technology in the Southwest, and not IGCC, because western coal requires a new type of IGCC gasifier technology that has not been demonstrated. To protect our customers and shareholders, we could not make this investment without performance guarantees from the manufacturer, which we could not obtain.

Our USC plants will be paired with state-of-the-art emission control technologies, such as selective catalytic reduction (SCR) systems for lower NOx emissions; dry flue gas desulfurization (FGD) systems for SO<sub>2</sub> reductions; and state-of-the-art baghouse technology for mercury and particulate emission reductions.

In addition to these plans, we continue to support the U.S. Department of Energy's Future-Gen project, in which AEP is a partner. FutureGen is a 275-MW project designed to demonstrate a near-zero-emissions coal power plant with an integrated gasifier using capture and storage. With IGCC technology, the FutureGen project expects to achieve 90 percent carbon emission reduction. More information about FutureGen is available at <a href="https://www.futuregenalliance.org">www.futuregenalliance.org</a>.

### Other Actions We're Taking

Improved power plant efficiency enables AEP to generate the same amount of power with less fuel

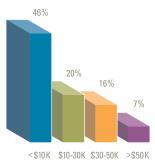


Integrated Gasification Combined Cycle technology converts coal into a gas before it is burned. Many of the pollutants, such as sulfur dioxide, nitrogen and mercury, are more efficiently and completely removed before combustion.

and correspondingly fewer emissions, including fewer GHGs. Although plant improvements are usually capital intensive and require significant lead time, they are attractive if they can displace building or acquiring generation. Our long-term goal is to achieve a reduction of one million metric tons of GHGs by improving power plant efficiency. Between 1990 (the baseline year) and 2005, AEP cumulatively reduced CO<sub>2</sub> emissions more than 15 million metric tons through power plant efficiency improvements.

The potential for wind and biomass are available throughout AEP's service area and can help slow the growth of our GHG emissions. We are seeking long-term power purchase agreements that will add 1,000 MW of wind by 2011. These agreements will enable us, for the first time, to serve customers of Indiana Michigan Power and Appalachian Power with wind energy. AEP currently owns two wind farms in Texas with a total capacity of 310 MW and has long-term agreements to purchase 467 MW of output from

### Household Energy Costs (%)



Total household energy expenditures for residential and transportation costs as a percent of aftertax family income.

**Source**: ABEC Household Energy Survey, 2006. (based on DOE/EIA data)

wind farms in Oklahoma and Texas. We support federal and state policies that reduce electricity production costs from these technologies, such as production tax credits and assurances from state regulators for recovery of investments. New hydroelectric and solar energy resources are generally not available in AEP states in sufficient quantity and quality.

Some residential customers would like electricity generated only from renewable energy resources. AEP and state regulatory commissions need to collaboratively design offerings to be attractive to consumers in all of our jurisdictions. Through these partnerships with commissions, increased operating costs for greener energy options should be preapproved for recovery to provide regulatory certainty for the company and increased value for AEP's shareholders.

### DEMAND SIDE MANAGEMENT & ENERGY EFFICIENCY

We seek to promote the wise and efficient use of our product. By doing so, we help to ensure that investments in plants are maximized and that future investments are based on true need. Using existing resources wisely and conserving energy are alternatives to building capacity. Demand side management (DSM) and energy efficiency programs also help us to reduce, offset or avoid GHG emissions and reach other environmental goals.

AEP customers historically have enjoyed some of the lowest electric rates in the nation, making DSM and energy efficiency program costs difficult for customers and regulators to accept. But as all energy costs increase, DSM and energy efficiency initiatives are expected to play an increasing role in reducing demand.

We review our DSM and energy efficiency policy constantly, and we are considering options to advance programs in our service territories. We believe strongly that results-driven and cost-effective efforts in this area are integral to AEP's sustainability. We will need our regulators' support if we are to take a significantly more aggressive approach to making DSM and energy efficiency programs viable in terms of cost recovery. Learn more about our programs in Texas and Kentucky at <a href="https://www.AEP.com/cr/DSM">www.AEP.com/cr/DSM</a>.

### **TRANSMISSION**

If we are able to build new, interconnected transmission in the United States as currently planned, we will lower market congestion costs to consumers, open new markets for renewable energy and allow for better use of rights-of-way where transmission is built. We also will enable new generating technology to replace older, less efficient plants. Learn more about our efforts in the *Energy Security, Reliability & Growth* section of this report.

Sulfur hexafluoride (SF6) is one of the most potent greenhouse gases used by electric utilities. Used as an insulator in electric transmission and distribution equipment, one pound of SF6 has the same global warming impact as 11 tons of CO<sub>2</sub>. As a charter member of the U.S. EPA's SF6 Emission Reduction Partnership since 1999, AEP has significantly reduced emissions, which occur primarily through leakages in circuit breakers. Our SF6 emissions rate has dropped from 10 percent in 1999 to less than 1 percent in 2005, and we continue to work to improve.

## DISTRIBUTION TRANSFORMER EFFICIENCIES

Distribution transformers reduce the voltage of electricity before it is delivered to customers. AEP supports higher efficiency standards recently proposed by the U.S. Department of Energy because they help us to improve efficiency and reduce line losses, making more power available for customers and reducing CO<sub>2</sub> emissions. We have already begun to implement these new standards (also known as TSL2) and we support a

### Catahoula Reforestation Project



The reforestation area is part of an 18,115-acre site just north of Catahoula Lake and the Catahoula National Wildlife Refuge about 35 miles northeast of Alexandria, La.

Engineers participating in the Asia-Pacific Partnership exchange program visit AEP's Muskingum River Plant in 2006.



move to even higher standards, starting in 2013. The relative scarcity and expense of materials needed to cost effectively build, operate and maintain transformers to these higher efficiency standards may be a challenge.

### Greenhouse Gas Offsets

#### FORESTRY PROJECTS

AEP has planted or is protecting trees in North America and South America. Among our major projects are the Noel Kempff Mercado Climate Action Project, Bolivia; Guaraquecaba Climate Action Project, Brazil; UtiliTree and PowerTree Carbon Companies and the Catahoula National Wildlife Refuge Project, United States. The AEP Foundation made a \$2 million contribution in 2006 to reforest areas of Guatemala that were devastated by hurricanes. Whereas AEP will not earn carbon credits for this particular project, it represents a significant additional investment in forestry. Our intent for the future is to place a greater emphasis on new forestry projects in the United States and to triple our annual investment in forestry. Learn more about these projects at www.AEP.com/cr/forestry.

### **VEHICLES & PLANES**

The 11,000 on- and off-road vehicles in the AEP

fleet used almost 5.5 million gallons of gasoline and 4.7 million gallons of diesel in 2005, the latest year for which numbers are available. We plan to reduce fuel consumption in 2007 and expand the number of hybrid and alternative fuel vehicles so that by 2008, 10 percent of our light-duty vehicle acquisitions will be hybrids or alternative fuel vehicles. We also will offset our vehicle fleet and corporate aircraft emissions by 200,000 metric tons annually.

At the same time, we are partnering with DriveNeutral, a grassroots, nonprofit organization that sells emission offsets, to encourage our employees to purchase credits to offset the emissions of their personal vehicles. DriveNeutral is a member of the Chicago Climate Exchange. More information about DriveNeutral is available at <a href="https://www.driveneutral.org">www.driveneutral.org</a>.

### METHANE CAPTURE

Methane is the second largest contributor to GHG emissions after carbon dioxide. Methane comes from landfills, coal mines, oil and gas operations, and from livestock, in the form of manure. Although lower in volume, methane is more than 20 times more potent than CO<sub>2</sub> in trapping heat in the atmosphere. Livestock waste contributes about 8 percent of the human-related methane created in the United States, according to the U.S. EPA. AEP is planning to develop offsystem projects such as the capture and destruction of methane from livestock or landfills. More information about methane is available at www.epa.gov/methane.

### OTHER PROGRAMS & PARTNERSHIPS

AEP participates in many programs and partnerships that address GHGs. Among them are the e8, the Asia-Pacific Partnership, Climate Leaders, Climate Resolve and the Carbon Capture Project. Learn more about these programs and partnerships at <a href="https://www.AEP.com/cr/partnerships">www.AEP.com/cr/partnerships</a>.

"The world is going to be using a lot of coal for a long, long time, so we better figure out a way to use that coal with less of an environmental burden."

U.S. Department of Energy Undersecretary David K. Garman, during a 2006 visit to AEP

### Environmental Performance

#### ISO 14001:

International Organization for Standardization; an environmental management system.

#### **OHSAS 18001:**

Occupational Health & Safety Assessment Specification; a health & safety management system.

**Opacity** is a measure of the appearance of the gas exiting the power plant stack and is a rough indicator of particulate emissions.



Hybrids, such as this line truck, will help AEP reduce emissions from our 11,000-vehicle fleet.



Protecting our natural resources is a constant and serious responsibility. Generating, transmitting and distributing electricity have environmental impacts. Our goal is to do our business with as few adverse environmental impacts as possible and in compliance with all local, state and federal laws and regulations. We also hope to enhance the environment when we can.

#### **OVERALL PERFORMANCE**

Whereas we had excellent overall environmental performance last year, we had mixed results meeting specific environmental targets established for internal performance tracking. We did well with our water discharge permit requirements, oil and chemical spills and opacity.

However, we can do better. We received nine notices of violation for non-compliance in our generation and distribution businesses. The fines were approximately \$25,000 and corrective actions were taken. Our goal is zero notices of violation.

The results of our internal environmental audits are encouraging. In 2006, environmental programs at 16 facilities—power plants and operating company facilities—were audited and found to be in substantial compliance with regulations and company policies. Compared with 2005, the audit results indicate a reduction in the number of findings of issues to be addressed. Most findings were related to deficiencies in record keeping and training. Audit results are routinely reported to the Board of Directors. Our auditors are certified by the Board of Environmental Auditor Certifications and most have completed ISO 14001 Lead Auditor Training.

### MESH-ING FOR ENVIRONMENT, SAFETY & HEALTH EXCELLENCE

We made a serious commitment to improve our environmental performance when we launched MESH—Managing Environment, Safety and Health. MESH is designed to conform to the international standards ISO 14001 for environmental management systems, and OHSAS 18001 for safety and health management systems.

Conformance to these standards will establish a powerful, cost-effective way to improve our performance and go beyond what's necessary for compliance. The ISO 14001 system identifies significant environmental aspects associated with our operations and requires actions to eliminate or minimize their impacts. The system creates a continuous improvement cycle whereby we routinely assess our performance and take corrective and preventive actions to further reduce our environmental impacts.

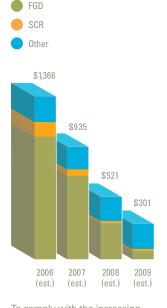
Because our power plants create our largest environmental impacts, we began MESH in four power plants in 2006, but the environmental management system is being designed for companywide implementation. Eight more power plants will begin implementation in 2007.

### COMMITTED TO CLEAN AIR

Air emissions are our biggest environmental challenge. Coal contains almost every chemical element and burning it creates emissions, including sulfur dioxide (SO<sub>2</sub>), which contributes to acid rain; nitrogen oxide (NOx), which contributes to smog; particulates, which contribute to haze; mercury (Hg); and carbon dioxide (CO<sub>2</sub>), a greenhouse gas.

We will invest \$3.6 billion by 2010 to meet the requirements of the Clean Air Act's acid rain program and the U.S. EPA's NOx State Implementation Plan rule, as well as the initial requirements of the Clean Air Interstate Rule and Clean Air Mercury Rule. Our investments include the design, construction and operation of emissions controls on existing power plants. Flue gas desulfurization (FGD) systems are in seven plants and under construction at six others. Selective catalytic reduction (SCR) systems are in eight

## Total Project Environmental Investment (\$ in millions)



To comply with the increasing number of environmental regulations, AEP has continued our investment in coal fleet environmental improvements in 2006. By 2010 we will have invested \$3.6 billion in projects to reduce emissions of sulfur dioxide, nitrogen oxide and mercury.

plants and in progress at two others.

Conversion to low-sulfur coal at one unit of our Tanners Creek Plant in Indiana was completed last year. More than 45 percent of our coal-fired power plant capacity will be equipped with SCRs and more than 48 percent will have FGDs. These actions are projected to reduce NOx emissions by 79 percent and SO<sub>2</sub> emissions by 65 percent from 1994 levels by 2010, while generating 17 percent more electricity annually. Mercury emissions will decline an additional 55 percent from current levels by 2010.

The improvement in SO<sub>2</sub> and NOx environmental performance at our coal plants was a trade-off. Pollution control systems consume additional energy and reduce plant efficiency per unit of electrical output. In addition, SO<sub>2</sub> scrubbers will increase CO<sub>2</sub> emissions as the limestone chemistry captures SO<sub>2</sub> but releases CO<sub>2</sub>.

Installing leading-edge technology can sometimes create unexpected consequences. This occurred at AEP's Gavin Plant, near Cheshire, Ohio, after SCR equipment was installed to reduce NOx emissions in 2002. The SCR equipment reduced the NOx emissions but also created bluish plumes (sulfur trioxide) that touched down in Cheshire and caused considerable community upset.

We took immediate steps to mitigate the blue plume and fixed the problem within months. We developed a process that we intend to use to control emissions at other power plants equipped with both FGDs and SCRs. The Gavin Plant experience was a painful and costly lesson, but resulted in a solution to prevent the same consequences at other plants. Learn more about this experience online at <a href="https://www.AEP.com/cr">www.AEP.com/cr</a>.

### Managing Waste

AEP has a comprehensive waste management system. However, we do not track the total weight

of the general refuse that is generated and disposed from our facilities; but we do track many special waste streams, including hazardous wastes and polychlorinated biphenyl (PCB) wastes. It is difficult to track or quantify when some waste streams were generated; thus it is not always possible to provide context around some of the waste management statistics we will report this year. Our Toxic Release Inventory (TRI) report is available on our web site. For a full waste management summary, visit www.AEP.com/cr/GRI.

### **PCB WASTES**

PCBs are mixtures of chlorinated hydrocarbons that have been used in industry since the 1930s. They were used in oil-filled electrical equipment until the manufacturing of PCBs was banned in 1979 as a known carcinogen. PCBs can be found in the insulating fluid of electrical equipment and in various other applications (e.g., hydraulic systems, heat transfer systems, paints, varnishes, plastics, adhesives and lubricants). The U.S. EPA considers all PCB mixtures to be toxic. The EPA stringently regulates the use, storage and disposal of PCBs.

Even though continued, non-leaking applications of PCBs are allowed, our internal policy goes beyond environmental compliance. We are making determined efforts to eliminate PCBs from our system through planned phase-outs and normal equipment retirement. We have voluntarily removed, disposed of and replaced more than 12,000 PCB and PCB-contaminated transformers and more than 4,500 PCB capacitors since 2000 and we plan to eliminate all PCB equipment in the power plants in the coming years.

We had 1,487 documented spills from electrical equipment in 2006. Only a fragment of these involved PCBs, and most were small spills due to downed equipment, largely caused by weather or vehicles. We made the proper notifications and cleaned all spills in a timely fashion.

We disposed of the following PCB-contaminated waste in 2006:

- 36,009 pieces of oil-filled electrical equipment
- 1,852 empty drums
- 1,961 drums of spill cleanup debris
- 20,270 gallons of nonbulk oil

(This list does not include large station/generation-size equipment decommissions.)

PCB-contaminated equipment was either decontaminated, separated into its components and recycled or drained of oil and properly disposed of in a licensed landfill. The collected oil was either detoxified and resold or incinerated.

### COAL ASH

AEP consumes approximately 75 million tons of coal per year, which also generates byproducts that have to be recycled or disposed of. In 2005 our power plants produced approximately 8.2 million tons of coal combustion products (CCP)—the solid byproducts of burning coal. We were able to reuse nearly 44 percent of CCPs in 2005 by selling them for use as concrete additives, structural fill, road beds, grit for ice control, abrasives and acid mine drainage neutralization and in wallboard production. CCPs from our power plants were used in projects ranging from the Dallas-Fort Worth airport's terminal expansion to highway construction projects in West Virginia and Indiana. Reuse of CCPs in 2005 resulted in approximately \$20 million in avoided costs that would otherwise have been incurred to operate and maintain permitted landfills for these byproducts. This cost savings varies annually.

The CCPs that cannot be reused are disposed of in licensed and permitted landfills or regulated wastewater pond systems. Pollution control is designed into these systems to keep them in compliance. We strongly support the Coal Combustion Products Partnership (C<sub>2</sub>P<sub>2</sub>), a federally sponsored program that promotes the beneficial use of CCPs. (2006 data were not available for this report but will be posted to www.AEP.com when they are.)

## TOTAL NUMBER & VOLUME OF SIGNIFICANT SPILLS

In a normal year, AEP experiences one or two equipment failures that result in the release of most of their oil. Because we have prepared oil spill countermeasure and containment plans for all large station transformers, the bulk of these spills are contained on site.

Additionally, AEP uses relays to protect transformers in a manner consistent with industry standards and manufacturers' recommendations to avoid tank ruptures. Unfortunately, some failures can still occur and may result in both an oil spill and a fire. These require a coordinated response, involving many groups within AEP, local fire departments and safety and health professionals.

In addition, we have about 1,300 mineral oil spills per year from electrical equipment damaged by weather or vehicle collisions and periodic chemical spills that are cleaned up immediately. If the amount of a spill meets or exceeds the associated reporting threshold, it is reported to the appropriate regulatory agencies.

AEP does not need or hold a Resource Conservation and Recovery Act (RCRA) Hazardous Waste permit as a Treater/Storer/Disposer of RCRA Hazardous Wastes. Certain wastes are treated or burned at our facilities as allowed under existing hazardous waste limits within the regulations. Typically our facilities are either Conditionally Exempt Small Quantity Generators of RCRA Hazardous Waste or a Small Quantity Generator.

Occasionally a facility will become a Large Quantity Generator of RCRA Hazardous Waste as a result of an episode, such as chemically cleaning the insides of the boiler tubes. In 2006 AEP generated and disposed of or recycled 251,352 pounds of RCRA Hazardous Waste, of which 51,000 pounds were consumed as fuel or evaporated. About 190,000 pounds were landfilled, and 22,076 pounds were recycled. For more detailed information, please visit <a href="https://www.AEP.com/cr/GRI">www.AEP.com/cr/GRI</a>.

### RECYCLING EFFORTS

Office waste recycling has long been common practice in corporate America. We have a recycling program but know we can do significantly



Nearly 10,000 acres of reclaimed surface-mined land in Ohio is home to The Wilds, a wildlife conservation center.



Donald C. Cook Nuclear Power Plant, Michigan

more to reduce our office waste stream. Last year we formed a team to review our practices and develop a plan to increase recycling and reduce the amount of office waste going to landfills. For detailed information about our 2006 recycling efforts, visit <a href="https://www.AEP.com/cr/GRI">www.AEP.com/cr/GRI</a>.

### **NUCLEAR WASTE**

AEP's Indiana Michigan Power Co. (I&M) operates the Donald C. Cook Nuclear Plant, a two-unit facility in southwest Michigan. It generates on average 225,000 pounds per year of low-level radioactive waste (LLRW), which is packaged at the plant and sent to contract waste processors in Tennessee. They minimize the volume and quantity of waste before shipping it to two licensed disposal facilities, the Barnwell Radwaste Disposal Facility in Barnwell, S.C., and the Envirocare Waste Disposal Facility in Clive, Utah.

South Carolina state law requires the Barnwell facility to close in 2008. The Cook Plant site includes a LLRW storage facility that has the capacity to hold approximately 10 years worth of LLRW.

The Cook Plant also generates high-level radioactive waste, primarily in the form of spent nuclear fuel. I&M signed a contract with the U.S. Department of Energy (DOE) in 1983 for the disposal of spent fuel. Under the contract, I&M customers have been paying into the Nuclear Waste Fund for power purchased since 1983. To date, I&M has paid \$246 million to the fund. In addition, customers have funded a separate external trust for this same purpose. As of December 31, 2006, the trust's balance was \$273 million.

In return, the DOE committed to begin accepting spent fuel for disposal in 1998. The DOE has not met its obligation under the contract, resulting in litigation within the nuclear industry. The DOE's proposed facility at Yucca Mountain in Nevada has met considerable opposition and is behind schedule. In the interim, the spent fuel

is stored in wet storage at Cook, where there is room in the spent fuel pool through 2013.

AEP is developing plans for on-site dry cask storage, with storage to begin in 2011. A decision is expected in 2007. More than half of the nuclear sites in the country also rely on on-site dry cask facilities until the permanent storage issue is resolved.

#### WATER USE

Water is critical to most power generating facilities for steam production and plant cooling. Power plants use, but do not consume, large amounts of water. The use of water for cooling can adversely affect aquatic organisms in the intake water as well as those in the receiving stream that are exposed to the thermal discharge (the water that is returned warmer after being used by the plant). The Clean Water Act regulates these discharges.

The average annual rate of cooling water withdrawal, for all AEP power plants, was approximately 10.5 billion gallons of water per day, most of which is "once-through" cooling water. In this case, the water is withdrawn for use at our plants, passed through the cooling system and almost immediately returned to the source in compliance with our wastewater discharge permits. These permits limit either the temperature of our discharges or the total amount of heat that can be released to the water. See the table in the full report at <a href="https://www.AEP.com/cr/water">www.AEP.com/cr/water</a>.

Water in closed-cycle cooling systems is routed through cooling towers, reducing the heat in the water, and then recycled into the plant. The EPA has estimated that closed-cycle cooling systems require only 5 percent of the water that once-through cooling systems need (U.S. EPA, 1982). About fifty-eight percent of AEP's generating capacity comes from plants equipped with "closed" cooling water systems.

Water is also recycled at many of our western power plants that have dedicated cooling water reservoirs (4,561 MW). These reservoirs were built specifically to be both the source and receiving water body for the plant cooling water. Because these are typically large, open bodies of water, many provide public access for fishing and recreational boating.

We also use water to remove coal ash from the power plants, which is purified to make steam or used to cool motors and other equipment. It is returned to its source after treatment to meet effluent limits specified in National Pollutant Discharge Elimination System (NPDES) permits. Our NPDES permits include self-monitoring requirements to ensure compliance with industrywide limitations as well as compliance with state water quality standards. Monitoring results are submitted to regulators monthly.

More information about AEP's water use, including hydroelectric generating plants, withdrawals, wetland mitigation, aquatic habitats, biodiversity, treatment and discharges, is available at www.AEP.com/cr/GRI.

#### **AVIAN PROTECTION**

4.37

SO<sub>2</sub> & NO<sub>x</sub>

**Emissions** 

 $SO_2$ 

NOx

Pounds Per Million BTU

Sulfur dioxide and

decreased dramatically since 1970.

The U.S. EPA proj-

ects that emissions from new coal

plants will decline

Source: Energy Information Administration

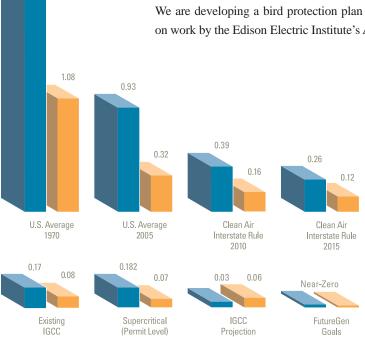
even further.

(Permit Level)

nitrogen oxide

emissions have

We are developing a bird protection plan based on work by the Edison Electric Institute's Avian



Power Line Interaction Committee (APLIC)/ U.S. Fish and Wildlife Service (USFWS). The plan is in a draft form and is scheduled to be phased in later in 2007.

### LAND MANAGEMENT, REMEDIATION & "UPSTREAM" IMPACTS OF COAL MINING

Following a period of very heavy rain in 2006, runoff carrying soil and fly ash from AEP's Amos power plant, and soil from our Mountaineer plant, both in West Virginia, flowed into nearby waterways and onto neighboring properties. The runoff was caused by a combination of weather, design flaws and construction issues associated with the development of landfills and pollution control systems. We worked closely with regulators and residents to clean up the damage and put measures in place to guard against a recurrence. Both incidents resulted in enforcement actions by the West Virginia Department of Environmental Protection.

During the preparation of this report, some stakeholders expressed serious concerns about the "upstream" impacts of coal, including the effects of mining on the environment, people and communities. They urged us to use our influence as one of the largest purchasers and users of coal to enhance the practices of coal suppliers and to encourage them to reduce these impacts. We recognize this concern and will review opportunities and actions we may take to ensure that our suppliers are using responsible practices. We will report about our progress in future reports.

### **ECOLOGICAL STEWARDSHIP**

AEP works with government agencies and advocacy groups in voluntary activities that yield benefits to the flora and fauna and their habitats in AEP states and elsewhere. Some of these activities received recognition by our partners, such as the Wildlife Habitat Council. Learn more at www.AEP.com/cr/ecological.

"A reliable supply of electricity is essential to our nation's economy and our way of life."

Federal Energy Regulatory Commission Chairman Joseph Kelliher at the Wyoming-Jacksons Ferry 765 kV transmission line dedication, May 8, 2006, Wytheville, Va.

# Energy Security, Reliability & Growth



Vegetation management is a critical part of service reliability.

Electricity has become a basic human need vital to our national security, our society and our economy. We cannot imagine life without it. But if we are to keep pace with our needs, we must modernize and improve the reliability of the electricity delivery system with better technology and infrastructure, while increasing fuel diversity and managing demand.

## DISTRIBUTION—DELIVERING POWER TO OUR CUSTOMERS

Electricity travels at the rate of 186,300 miles per second—the equivalent of eight trips around the earth in the time it takes to turn on a light. When electricity stops because of an outage, everyone notices.

AEP works hard to keep the frequency and length of service interruptions to a minimum. Our customers understand that not all outages can be prevented, but we are aware that any service interruption, whether momentary or sustained, can be a nuisance or worse.

Customers have grown more sensitive to service interruptions for two reasons: (1) A dramatic increase in household consumption of electricity. The more customers rely on electricity, the more sensitive they become to service interruptions. (2) The pervasive presence of digital technology. Because digital technology depends on a constant stream of electricity, even momentary service interruptions can be problematic.

Customer satisfaction with AEP's reliability continues to be above national industry averages. Our 2006 customer survey data for our operating companies show that 79.7 to 89.7 percent of our customers are satisfied with our reliability performance. However, our aging distribution infrastructure presents us with a reliability challenge. Whereas we have reduced outages caused by vegetation, we are seeing these gains erode due to increased equipment failures. Equipment-related outages have increased by more than 4 percent

per year during the past four years.

Tree contact on distribution lines also is a leading cause of service interruptions on AEP's system and vegetation management is a critical factor in improving reliability. The company employs a variety of practices to control vegetation, such as aerial sawing, mechanized trimming, manual trimming (roping, hand climbing) and environmentally approved herbicide applications. These practices are conducted in accordance with standards established by the American National Standards Institute (ANSI), the Occupational Safety and Health Administration (OSHA) and the National Electrical Safety Code (NESC), as they relate to pruning and removal of trees, safety and worker protection, work clearances and training requirements, and safety clearance guidelines.

To identify the programs and actions necessary to maintain and/or improve our customers' electric service experience, we continue to develop long-term reliability strategies to address those factors with the greatest negative service reliability impact today, as well as into the future. Each reliability strategy is intended to be adjustable as circumstances warrant. If new problems arise, new technologies are developed or new distribution standards are established. Each operating unit will evaluate what changes should be made to reflect such developments.

### DISTRIBUTION TECHNOLOGY ADVANCES

Technology improvements have enabled us to increase engineering efficiencies, improve outage management efforts, dispatch crews to restore service more effectively and improve communication with our customers.

We continue to make strides in areas that hold great promise. AEP has initiated the use of Electromagnetic Interference (EMI) devices and Spectrum Analyzers, for example. These devices



Employees of Public Service Company of Oklahoma help communities plant trees in the right places to avoid outages.



The NAS battery helps ensure reliability for customers of Appalachian Power.

help us to identify and repair broken insulators and blown lightning arresters that cannot be seen with the naked eye during basic assessments before they can create an outage.

In 2006, Appalachian Power commissioned the first megawatt-class sodium sulfur (NAS) battery to be used in North America. This advanced energy storage technology can supply 7.2 megawatt-hours of energy, which helps ensure reliability for customers in and around Charleston, W.Va. This technology allows Appalachian Power to defer a larger, more expensive upgrade.

## TRANSMISSION ENABLES NEW GENERATION & RENEWABLES

The nation's transmission system is at a critical crossroads. The United States continues to experience transmission bottlenecks that force excessive use of older, less efficient power plants. Better transmission is required to ensure a fair, open market that gives us the flexibility to bring economic and environmentally friendly energy to consumers.

We believe the nation's transmission system must be developed as an interstate system, much

AEP operates more 765kV high-voltage transmission than all other utilities in North America combined.





like the nation's highways, to connect regions, states and communities. Our highly efficient and reliable 765 kilovolt (kV) network provides a strong foundation for this system because it is the most efficient, proven transmission technology available. And we have the experience and expertise to build this type of transmission as an interstate network.

Public health concerns have been raised related to transmission lines. Scientific studies during the past several decades have explored the possibility of health effects from electromagnetic fields (EMF). While a number of studies have indicated some statistical associations between EMF and certain health effects, the majority of research has found no such association. Significantly, laboratory research has not shown any causal relationship between EMF exposure and cancer, or any other adverse health effects.

Because this issue involves questions of public and employee health, we remain committed to participating in the analysis of EMF on a national and worldwide level and to serving as a resource to customers and employees regarding the EMF issue.

### 765kV Line Footprint For long distance transmission (longer than 100 miles), one 765kV line on a 200-foot-wide right-of-way can carry the same amount of energy as 500kV lines on three 200-foot-wide rights-of-way, having a combined width of 600 feet. Approximate relationship based on Surge Impedance Loading (i.e. reactive power balance point) 500kV single circuit tower lines with three conductors per phase compared to 765kV single circuit lines with six conductors ner phase. 600 ft. 200 ft.

### I-765 Project & PJM

AEP announced the first leg of this 765kV interstate system, dubbed I-765, in January 2006. This proposed 550-mile line from West Virginia to New Jersey will enable us to increase the transfer of energy from the Midwest to the Mid-Atlantic states by 5,000 MW; reduce peak system losses by 280 MW; and reduce congestion within PJM Interconnection. PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states, including the District of Columbia. When losses and congestion are reduced, less fuel is burned to generate electricity, resulting in fewer emissions.

Whereas the energy that would be transmitted likely would be generated mostly by coal, we believe that high-voltage transmission is one of the best solutions to the Mid-Atlantic region's energy needs.

The Atlantic coastal area (from metropolitan New York City southward through northern Virginia) was identified by the U.S. Department of Energy as a Critical Congestion area; consumers paid more than \$2 billion in 2005 in higher energy costs because of transmission bottlenecks. We are asking the federal government to assign a high priority to our project as a National Interest Electric Transmission Corridor under the Energy Policy Act of 2005. See <a href="https://www.AEP.com/about/i765project">www.AEP.com/about/i765project</a> for more detailed information about this project.

## WHY 765kV TRANSMISSION? BETTER USE OF LAND, MORE EFFICIENT

Transmission systems designed for 765kV operation are inherently more reliable than those operating at lower voltages. They also require less land than separate systems moving a comparable amount of power (see diagram). On August 14, 2003, a large segment of the interconnected grid in eastern Canada and the northeastern United

States collapsed in a cascade that affected service to approximately 50 million people. The cascade was effectively stopped at the "doorstep" of AEP's 765kV transmission system.

### TRANSMISSION KEY TO RENEWABLE ENERGY

When it comes to wind power, Texas rules. Nearly a third of all wind generation installed in 2006 was in Texas, making the Lone Star State the largest wind energy producer in the United States. Wind energy growth is projected to increase an additional 27 percent in 2007. As consumers look for "greener" energy options, transmission becomes the critical link between a vast resource of renewable energy and the ability to deliver it to market.

AEP, which operates two wind farms in West Texas, has a plan that uses the most efficient technology; is cost-effective; is mindful of society's desire for a smaller transmission infrastructure footprint; and provides for future electric energy needs. With our partner—MidAmerican Energy Holdings Company—we propose to build approximately 1,000 miles of transmission lines in Texas to support the state's development of its Competitive Renewable Energy Zones (CREZ).

In 2007, we filed a proposal with the Public Utilities Commission of Texas to develop this high-voltage, high-capacity transmission backbone that will allow the state to capture the long-term value of wind energy resources located in remote areas of the state and interconnect those renewable resources with customers in the south, central and north-central parts of the state. For more information about this project, visit www.AEP.com.

### IMPROVING EXISTING PLANTS

Like most electric companies, AEP has many old power plants, some of which are more than 40 years old. We must upgrade our generation, which requires maintenance and capital investments in both old and new plants.

We have initiatives under way to address these issues as well as to provide our employees with the knowledge and skills to operate more modern technology. We are improving our outage planning and implementation, the efficiency and reliability of each unit and the skills and knowledge of those who run and maintain the plants, all of which improve the quality of operations.

We have ongoing construction of emission controls at several plants to meet environmental compliance for NOx, SO<sub>2</sub> and mercury, and we are also improving thermal performance through operating efficiencies. Whereas most of the efficiency improvements had been focused on our 1,300-megawatt (MW) units, we are beginning to work on our mid-sized (800- and 600-MW) units.

Nuclear generation will remain an important part of AEP's and the nation's fuel mix. We have no current plan to build nuclear plants, but we strongly support those companies who are pursuing this option. (See the *Environmental Performance* section of this report for more information about AEP's Donald C. Cook nuclear power plant.)

The Smith Mountain 600-MW pumped stor-

AEP's Current

Transmission System

**AEP Service Territory** 

765kV Transmission Lines

345kV Transmission Lines
Interconnection (Ameren Line)

New 765kV Development

& Proposed



Smith Mountain hydro facility, Virginia

age hydro generating project in Virginia is preparing for federal re-licensing in 2010. Water quality, the status of the endangered Roanoke logperch, drought management and the socioeconomic impacts of Smith Mountain Lake on the area are of greatest interest to regulators, legislators and local communities. We expect these issues to generate some lively discussions during the proceedings. We are also working on the federal relicensing of Appalachian Power's 75-MW Claytor Lake hydroelectric plant in nearby Pulaski County, Va. We hope to have a new license for Claytor Lake in 2011.

### **NEW GENERATION**

Our forecasts indicate that the electric needs of customers in our seven eastern states will exceed the capacity of our existing power plants by 2011 after taking into consideration planned retirements of older, less efficient plants. We plan to construct and acquire plants to meet this demand.

Actual and announced acquisitions of natural gas-fired power plants in West Virginia, Ohio and Indiana will help us to increase fuel diversity and meet the expected 2 percent annual growth in peak demand in our eastern service area and will help us to maintain the 15 percent reserve margin required by PJM Interconnection to ensure reliability.

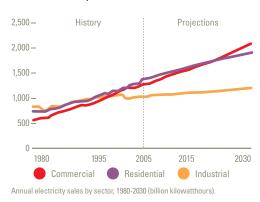
We will still need to build base load power plants to meet demand. We are proposing the construction of IGCC plants in West Virginia and Ohio and ultra supercritical (USC) pulverized coal plants in Oklahoma and Arkansas. IGCC is better suited to eastern coal, whereas USC is currently AEP's best technology option in the west.

USC will first be used at the John W. Turk Power Plant to be built in Arkansas, within AEP's Southwestern Electric Power Co. service territory. Site preparation for the plant will begin in 2007. The second USC plant will be a joint venture between AEP's Public Service Company of Oklahoma, Oklahoma Gas & Electric and the Oklahoma Municipal Power Authority. We have begun seeking approvals for these two projects.

"What SWEPCO and AEP are doing and the coal-fired industry is doing is trying to get the technology where it needs to be, where coal is not a net negative on the environment, but it's a net positive for the U.S. economy." Sen. Mark Pryor, D-Ark., at the Aug. 9, 2006, announcement of the site selection for a new ultra supercritical pulverized coal plant in southwest Arkansas.

AEP generates 310 MW of wind power in West Texas and purchases an additional 373 MW in other parts of Texas and Oklahoma. In 2007, we will purchase an additional 94.5 MW of wind for our customers in Oklahoma from the newly constructed Sleeping Bear wind farm. For the first time, we will buy wind power to serve the eastern portion of our service area. In addition, we have begun to lease several sites in eastern Indiana to test the economic and technological feasibility of wind generation there. New transmission will be required to bring some of this new wind power to market. Our intent is to add 1,000 MW of wind generation to our system between 2008 and 2011.

### U.S. Electricity Demand Growth



TRENT

Trent Wind Farm Trent Texas

"There is no greater investment than that which we make in our employees."

AEP Chairman, President and CEO Michael G. Morris

### Work Force Issues

At AEP working safely means doing your own job safely and taking responsibility to see that others do their jobs safely as well. Safety is our primary consideration for employees, customers and the general public. We recently strengthened our philosophy and policy to reflect a greater emphasis on safety, health and the environment:

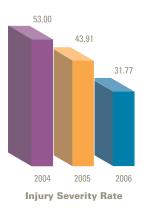
No aspect of operations is more important than the health and safety of people. Our customers' needs are met in harmony with environmental protection.

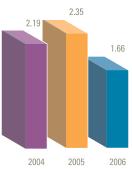
> Our goals are simple—zero worker fatalities, fewer injuries and less severe injuries when they do occur. We also want to ensure that when an incident happens, we learn how to prevent it from happening again and take action to ensure that it doesn't.

> When an employee was seriously burned last year after a piece of equipment failed, spraying him with hot oil, we took action throughout the company to prevent it from happening again, anywhere. We created a team to identify potentially defective equipment and remove it from service, and we implemented an operating procedure to increase the distance between employees and this type of equipment to reduce the

"We must move safety and health from our minds to our hearts. Many incidents are caused by behaviors, not conditions. If a job changes, you should stop and re-evaluate the new job from a safety standpoint. Safety

How We Performed





**Recordable Injury Rate** 

chance of injury in the event of another failure. and health have to be personal."

Ken Frazier, vice president, Safety & Health

We measure safety in many ways. Severity rate (see table) measures days away from work or restricted duty resulting from on-the-job injuries. Lowering this rate is important because when employees can't work, quality of life for the affected employees is lost or declines, productivity is lost, morale is affected when workloads shift, and workers' compensation costs increase. Slips, trips and falls (from poles, platforms, etc.) continue to cause the most serious injuries. We had 2,229 fewer severity days in 2006 than in 2005 as we achieved our best safety performance in recent history. Our safety and health performance for 2004-2006 is documented in the Challenges, Goals, Progress for 2006 section of this report.

Our efforts to reduce the number of workplace injuries improved significantly last year. Because we know that slips, trips and falls account for most severe injuries, we continue to focus on identifying and removing the hazards that cause them. We also emphasize the proper and consistent use of fall protection. Quality Job Hazard Analyses and Job Safety Assessments now include worksite conditions that may pose a hazard, such as wet and uneven surfaces, to raise worker awareness of potential hazards. Our goal is to lower the recordable and severity rates by one-third by 2010, and to be a top-quartile performer in our industry.

The only way to reach this ambitious goal is focus and action. We have expanded our analysis of near misses, and we do a better job of communicating within the company about what happened and how to prevent it from happening again. We prefer taking preventive action rather than corrective action. We work hard to prevent accidents through quality job site observations and job hazard analyses, along with frequent, meaningful safety discussions. Our philosophy is that we don't begin a job without first holding a safety and health briefing specific to that job.

AEP's generation business unit took im-



Posters and fliers promote safety and health throughout AEP.

mediate and thorough corrective action last year to find and fix the causes of an external boiler tube rupture that injured an AEP employee and two contract employees at the Kammer Plant in West Virginia.

We removed approximately 3,000 MW of generation from service—affecting 18 units—to undertake a comprehensive series of inspections to find out what went wrong and how to fix it. The investigation found corrosion fatigue was a primary factor. We checked an average of 670 pipe joints and an average of 837 tubes per unit for additional corrosion fatigue and the necessary repairs were made.

For the first time last year, our Audit Services group began to develop a formal safety and health audit program, including hiring the qualified staff needed to execute the program. We conducted five safety and health audits in our generation and distribution business units. The initial findings indicated deficiencies such as lack of understanding of policies, overdue inspections and maintenance of some equipment, and inadequate record keeping practices. Corrective action has been taken. In 2007, audits of selected safety and health programs are scheduled for 12 power plants and selected transmission and distribution service centers.

We failed as individuals and as a company in 2006 when an AEP employee and a contractor lost their lives. A contract worker died in a construction fire at the Mitchell Plant in West Virginia. Although the investigating team could not determine the cause with certainty, it identified a number of fuel sources present or possibly present at the time of the fire, potential fire ignition sources and a number of lessons to be learned. An OSHA investigation found no violations by AEP, but the contracting company was cited and fined more than \$100,000.

In December 2006, an AEP maintenance mechanic working for our Regional Service Or-

ganization in West Virginia died on the job when he was crushed by a portable crane. We immediately banned the type of portable crane involved from all jobs across AEP and required all business units to check overhead cranes for proper markings, such as rated load limits. OSHA issued two citations to AEP related to this incident, resulting in fines of \$2,125.

OSHA Citations (Resulting in Fines)

	Number of Citations	Fine
2006	3	\$5,500
2005	1	\$85,000
2004	6	\$83,100

#### HEALTH IMPACTS CAN BE LONG TERM

Our operations pose many potential hazards and health risks, from hearing loss and falling (from poles, platforms, etc.) to chemical and coal dust exposure. We expanded our Industrial Hygiene (IH) team in 2006, adding six professional employees to focus on our western plants, and started a comprehensive IH database that will be easily accessible and centralized. Our IH department has been made a part of the design team for our IGCC plants to anticipate and present issues related to chemicals and chemical processes involved with that technology. In 2007, we are conducting a comprehensive welding study to identify potential occupational health issues associated with these critical maintenance activities.

### INCREASING EMPHASIS ON WELLNESS

Preventing illness is the best way to ensure healthier employees and we are investing in tools to help our employees make healthy lifestyle choices. We are developing a plan for a universal wellness program for all of AEP. This is in the early development stages, but we expect it will grow into an important approach to



The first graduates of a new power plant technology program at West Virginia State Community and Technical College that helps develop a pool of qualified entry-level employees for AEP and other utility companies.

managing healthcare costs, for the company and our employees.

#### COPPER THEFT A TOP PUBLIC SAFETY CONCERN

As prices for certain metals increased, actual and attempted thefts of copper wires and components from AEP facilities resulted in non-employee fatalities in Kentucky, Texas, Virginia and West Virginia in 2006. We are working with state legislatures for tougher laws regulating the sale of scrap metal and for harsher penalties to deter theft and help save lives. We also have created public safety awareness messages on this issue and we have made physical modifications to numerous facilities as a preventive measure. There were a total of seven public fatalities on AEP's system last year related to copper theft and live wire contacts.

#### Our Work Force Development Partnerships

#### School

Zane State College Ashland Community College West Virginia State & Community Tech College University of Rio Grande Jefferson Community College Belmont Technical College Scioto County Joint Vocational School ITT Technical Institute (2 Locations) Ivv Tech Community College (2 Locations) Mideast Career Center Columbus State Community College Delaware Career Center Eastland Career Center Pickaway/Ross Vocational School New River Career Center

#### MESH-ING FOR SAFETY & HEALTH

We have embarked on an ambitious effort to conform to international standards for environmental, safety and health management systems—ISO 14001 and OHSAS 18001, respectively. We have named this initiative MESH—an acronym for "Managing Environment, Safety and Health." MESH will enhance our capacity to protect people and the environment. We are using a tool to identify hazards, rank them according to risk and implement operational controls to eliminate or minimize the risk. MESH incorporates a continuous improvement cycle that will result in safer facilities and greater employee awareness of environmental, safety and health issues.

We are implementing MESH at our existing and new generating stations first and will share management system tools with other business units as they are developed.

# Preparing for Tomorrow's Work Force Today

"We will do the necessary planning and take the necessary action to make sure that we have the right people, with the right skills, where we need them—when we need them."

Gen Tuchow, vice president, Human Resources

Nearly 18 percent of AEP's employees are expected to retire during the next five years. With a steady decline in engineering graduates from American colleges during the last 15 years and the long lead time required to be trained as a line mechanic or power plant operator, the electric utility industry is facing an aging work force and a shortfall of critical skills. We have developed a plan with two objectives: hire the best



A diverse, skilled work force is essential to our future success.

new employees and keep our existing work force enthusiastic and engaged. In 2006, we hired more than 2,000 employees; at the same time, 1,246 employees left AEP, giving us a net gain of about 700 employees. These new employees also are helping to lower the average age of our work force, from 48 in 2005 to 46 today.

#### **OUR PLAN**

Our rolling five-year staffing plan is designed to transfer knowledge and develop skills for the next generation of employees. The plan incorporates our anticipated retirement rates and forces us to look at better ways of working that might affect the skills and number of employees we will need. We are pursuing or considering:

- How to fill "hot spots"—areas of operation that are most at risk of skill set shortages;
- Stepped-up recruitment from the military;
- Systematic knowledge transfer programs;
- Encouraging retirement-eligible employees to continue to work for AEP on a part-time basis, rather than retire completely, to allow a smooth transfer of knowledge. We offer participants benefits at the full-time employee rate vs. the

higher rate paid by other part-time employees;

- Increased partnerships with colleges, universities and technical schools, as well as new approaches to training employees;
- Leadership succession and development for future AEP leaders, including succession planning to prepare candidates for key leadership roles and early identification and preparation of emerging leaders. The chairman reviews senior level succession planning annually with the Human Resources Committee of the Board of Directors.

#### THE POWER OF DIVERSITY

We are making progress in creating and supporting a more diverse work force. See the employment data that were included in the 2005 and 2006 EEO-1 Reports submitted to the Joint Reporting Commission.

We reported slight increases in female and minority employment, which we attribute to our commitment to develop and advance women and minorities; to expanded outreach initiatives; to partnerships with organizations, schools, colleges and universities with high minority enroll-

#### 2006 Employment Data-EEO-1

	Employees	Females (%)	Minorities (%)
Total Employment	20,541	3,892 (18.9%)	2,868 (14.0%)
Officials & Managers	3,239	307 (9.5%)	255 (7.9%)
Professionals	5,144	1,308 (25.4%)	647 (12.6%)

#### 2005 Employment Data—EEO-1

	<b>Employees</b>	Females (%)	Minorities (%)
Total Employment	19,998	3,807 (19%)	2,715 (13.6%)
Officials & Managers	3,290	303 (9.2%)	251 (7.6%)
Professionals	4,917	1,237 (25.2%)	581 (11.8%)

For more detailed EEO-1 information, please visit www.AEP.com/cr/GRI

ment; and to our policies, programs and culture that support an inclusive environment.

We strive for diversity in our suppliers as well as our work force. The Supply Chain Procurement Policy about diverse suppliers is:

"AEP shall consider, and utilize as appropriate, a diversified range of providers in accordance with AEP corporate diversity expectations. All effort should be given to include opportunities for diversity suppliers. All employees who facilitate sourcing or procurement activities, including request for proposals (RFP) or request for quotations (RFQ), shall be familiar with AEP's diversity suppliers and their qualifications to perform requested services."

In 2006, AEP spent \$853 million doing business with small business suppliers. These included minority- and women-owned businesses, veteran-owned businesses, small disadvantaged businesses, HUBzone and Service-disabled businesses.

#### LABOR/MANAGEMENT RELATIONS

We value our relationship with our unionized employees and seek a labor-management relationship that is based on mutual trust, openness and collaboration. Nearly 6,000 employees, or 30 percent of our total work force, are represented by unions.

We partner with labor on many important business and community outreach initiatives.

For example, unionized employees are an integral part of Safety & Health Action Councils and Committees within our business units. We also partner with the IBEW every year for AEP's United Way campaign. And when we were rethinking our climate strategy this year, we worked closely with labor leaders to include them in the process.

#### Organized Labor at AEP

Labor Union	Number of Employees	
International Brotherhood		
of Electrical Workers	3,600	
<b>Utility Workers Union</b>	of America 1,300	
<b>United Mine Workers</b>	of America 500	
United Steelworkers of	of America 400	

American Rights at Work recognized AEP in its 2006 Labor Day List of Partnerships That Work. American Rights at Work is a leading labor policy and advocacy organization that recognizes successful partnerships between employers and employee labor unions. AEP was recognized for accomplishments in:

- Protecting worker safety and health;
- Collaborating as equal partners with workers and their unions to craft innovative strategies on compensation, performance and productivity to meet business goals and address challenges;
- Fostering diversity and inclusion in the work force; and
- Offering training and professional development opportunities.

"We are a citizen of each community we serve and take an active part in its affairs. Like any other citizen, we want our neighbors to think well of us. Besides, it makes good business sense. We prosper only as the community prospers; so we help it thrive in every way we can."

AEP President George Tidd, 1934

# Stakeholder Engagement



First responders receive a tour and training from the staff of AEP's Pirkey Plant in Hallsville, Texas.

We work with stakeholders of all kinds and with many interests to improve our performance, build trust and develop strong relationships. To AEP, stakeholder engagement is more than periodically touching base with our elected officials, neighbors or community leaders. Rather, we systematically establish common ground with others. We want to build on our solid record of community outreach and philanthropy and will invest the time and effort to develop better and deeper relationships. In the end this will create value for our shareholders.

### OUTREACH—AN ONGOING PROCESS & LEARNING EXPERIENCE

Stakeholder engagement can sometimes break down when competing interests have difficulty finding common ground; it's happened to us and we've learned from those experiences. When we first announced what became the Wyoming-Jacksons Ferry 765kV project in 1990—a 90-mile transmission line traversing Virginia and West Virginia—we worked for 13 years to obtain the needed permits. Competing interests between government, regulatory agencies, environmental groups and communities presented challenges that took a long time to resolve.

By listening to and working with each constituency, we were able to identify their concerns and reach agreeable solutions. We engaged a team of professors from Virginia Polytechnic Institute and State University and West Virginia University (with expertise in biology, cultural and natural resources and landscape architecture) to independently develop the project route with the least impact. Ultimately, only five homes were within the final 200-foot-wide right-of-way, only six eminent domain proceedings were held out of 164 landowners and only 11 miles of federal lands were impacted. When the line was dedicated last year, some of those who originally opposed the project came together in support.

In planning one of the biggest construction programs in our history to retrofit several coal-fired power plants with emission controls, we reached out to our neighbors to learn about and discuss their concerns. We met with township officials to develop initial construction truck routes, hosted site tours, held public meetings and met as needed with local officials and neighbors to resolve concerns about truck traffic to the site. These actions typify the efforts we are making at all of our plants.

As we prepared to announce construction of coal-fired generation in the West last year, we reached out to Ceres to help us arrange a conference call with financial, environmental and social advocates to explain our decision and give them an opportunity to ask questions. Most of our senior management team, including our chairman, participated in the call. Twenty social, environmental and financial advocates were invited and most participated. We were asked why we did not choose IGCC technology in the West. We explained why that was not an option in this case (see Climate Change section). We also used the opportunity to explain the advantages of ultra supercritical clean-coal technology. The discussion was straightforward, and we pledged to keep the group informed as we move forward.

"We must be committed to continuing discussions with all of our various stakeholders, listening to their concerns and addressing them openly and honestly. If we can't, we have to be honest about it. This is the right thing to do—for our company, for our stakeholders and for the communities we serve."

Dennis Welch, senior vice president, Environment, Safety & Health

### TRANSMISSION GROWTH & OUTREACH GO HAND IN HAND

When we announced our proposed 550-mile I-765 transmission project, we immediately began to meet with those who might be affected, most of whom were outside of our existing service territory. We knew that the project would raise concerns about the effects on tourism, historic sites, federal forests, local neighborhoods and, of course, electric rates. We went to Pennsylvania to listen to the concerns of John Hanger of PennFuture, the leader of one of that state's leading environmental advocacy groups, who strongly opposed the project. We met with utility commissioners, consumers' counsel, political leaders at the federal, state and local levels and environmental protection agencies in five states. We made a special trip to York County, Pa., where we met with the York County Citizens' Group around the kitchen table in the home of the group's main organizer.

We still don't know the exact route of the project, or whether it will be approved, but we do know that it will be a better proposal as a result of these discussions.

#### CONNECTING WITH EMPLOYEES

Keeping our employees informed and listening to their ideas and concerns are important to us and we have a comprehensive communication strategy to help ensure this happens. Our biggest challenge is that nearly a third of our work force does not have easy access to e-mail or the company's Intranet site. To reach employees who are not connected to the Internet or who don't have easy access at work, a monthly employee newsletter is mailed to the homes of all employees and retirees. In addition, non-management employees are invited to join a select panel that meets regularly and privately with the CEO, called "Open Mike"; this group rotates annually to expand access to top management.



CEO Mike Morris meets regularly with employees across AEP.

To hear what employees thought of this report, we conducted a small focus group that represented a cross-section of our company, from frontline field workers to customer service and billing to managers. During the discussion employees were skeptical about the intent and the audience for this report. Some called it a "reinvented attempt to go green." However, they also acknowledged having a better understanding of the company and applauded us for being open and honest about our challenges, failures and strategies. They were especially complimentary of the improved communications within the company and credited CEO Mike Morris for setting this expectation.

The employee group told us they would like to see more focus on customers in the report, which echoed the sentiment we heard from the Ceres stakeholder group. They also believe the report will be a good educational tool to help others understand the challenges and complexities of our company and our industry.

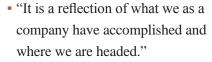
Here is what some of our employees said about this report:

#### "Did the report hold your interest?"

- "Yes, because I am interested in making our company one of the best in the business for years to come."
- "What were the strengths and weaknesses of this report?"
- "It seemed genuine; provides good vision and direction."
- "Too detailed; should be condensed."
- "Needs more information about stakeholders."



AEP employees volunteered alongside Louisiana Gov. Kathleen Blanco in building Habitat for Humanity homes in New Orleans following Hurricane Katrina.



- "The metrics section is a strong feature."
- "Why hasn't AEP provided this type of report before?"

#### AEP IN THE COMMUNITY

AEP's employees are our best community ambassadors. Just ask the leadership team at the Muskingum River Plant in Beverly, Ohio. Similar to how our community leadership evolves and thrives at many other locations around the AEP system, the Muskingum River Plant wanted to get better connected with the local community and started with a visit to a morning Rotary meeting. That visit led to helping revive a struggling Chamber of Commerce, with plant employees taking leadership roles in business and civic groups.



Dan Kohler, Director of Outage and Maintenance Planning and former Muskingum River Plant general manager, Beverly, Ohio

When the local community recognizes AEP as a good neighbor, and AEP employees know that their community activities will be supported by their managers and supervisors, the payback multiplies, according to Dan Kohler, former Muskingum River Plant manager. Community involvement becomes more than just part of the plant's business plan. The struggling chamber

that Kohler eventually joined not only survived, but also donated \$16,000 to charities last year, including Hurricane Katrina recovery efforts.

Kohler sees it as a "win-win for all of us. The community sees us as having a good plant environment. At the same time, these activities bring those influencers here and let us interact. Plant employees also get involved. There's really no downside."

### COMMUNITY INVESTMENT & CORPORATE GIVING

We invested more than \$10.5 million through contributions and operational programs in 2006 to support our communities and teach electrical safety, improve education and enhance quality of life. Our corporate contributions policy emphasizes improving lives through education from early childhood through college. It also focuses on protecting the environment, providing basic human services in the areas of hunger, housing, health and safety, and enriching the quality of life through art, music and cultural heritage. In addition, our employees contributed more than \$2 million to United Way and similar community funds. AEP matched their generosity with another \$1 million.

### AMERICAN ELECTRIC POWER FOUNDATION

The American Electric Power Foundation was created in December 2005. It provides a permanent, ongoing resource to address charitable initiatives involving higher dollar values and multi-year commitments in the communities we serve and initiatives outside of our 11-state service area. In 2006, the Foundation contributed \$3.18 million to 28 local, regional, national or international organizations. These donations are separate from other corporate giving programs.

For more information about the energy and environmental programs supported by AEP's



AEP employees at the Welsh Plant in Pittsburg, Texas, worked with the Texas Parks and Wildlife Department to recycle Christmas trees for a fish habitat at the plant's lake.

corporate giving and the AEP Foundation, please visit www.AEP.com/cr/philanthropy.

#### POLITICAL INVOLVEMENT

As an energy company operating in many states, we are affected every day by the decisions of federal, state and local officials. Our Board of Directors has adopted a policy that encourages our company to be an active participant in the political process so that our perspectives are heard and so that we develop strong working relationships with government decision makers. We also encourage our employees to become informed about issues and participate in the political process. Our policy has a procedure for approving any corporate political contributions, and it requires that we publish and make available to shareholders and other stakeholders a report about our corporate political contributions. The Committee of Directors and Corporate Governance of our Board of Directors reviews the report annually.

We sponsor one federal political action committee (PAC), the American Electric Power Com-

AEP CEO Mike Morris and Virginia Gov.Tim Kaine at the dedication of the new Wyoming-Jacksons Ferry 765kV transmission line.



mittee for Responsible Government, and state PACs in Michigan, Ohio, Texas and Virginia to which our eligible employees can make voluntary contributions. The PACs are employee-controlled and are not affiliated with any political party or with any specific candidate for public office. An operating committee drawn from participating employees exercises full control over each PAC, with the assistance of one full-time administrator who is an employee of AEP. Neither corporate officers nor members of our government affairs staffs may serve on the PACs' operating committees. Details of our PACs' contributions may be found at <a href="https://www.fec.gov">www.fec.gov</a>.

AEP belongs to many trade associations, such as the Edison Electric Institute, the Center for Energy and Economic Development (CEED), The Business Roundtable and Americans for Balanced Energy Choices (ABEC), which engage in lobbying and make political contributions. We do not agree with every position or action they take. For income tax purposes, trade associations are required to report any portion of our dues that is used for political purposes. We have not tracked these amounts in the past, except for tax purposes, but will begin tracking and reporting amounts in 2007.

Starting with our 2007 Corporate Responsibility Report, we will ask trade associations to which our dues or payments are significant to provide us with a breakdown of what portion of our dues or payments were used for expenditures or contributions that, if made directly by us, would not be deductible under section 162(e)(1) and other applicable subsections of the Internal Revenue Code (which deny tax deductibility of lobbying expenses and a variety of categories of political contributions).

Learn more about our corporate political contributions policy and a list of 2006 corporate political contributions at <a href="https://www.AEP.com/cr/political">www.AEP.com/cr/political</a>.

## Challenges, Goals, Progress for 2006

Challenge	Goal	Progress
Public Policy Strategy		
Work with governors, state legislators, stakeholders and regulators to adopt investment recovery provisions in clean energy bill initiatives and cost-effective DSM/EE programs.	Continuing outreach in states and organizations such as National Governors Association, National Conference of State Legislatures and National Association of Regulatory Utility Commissioners.	102-page research report on state financia incentive precedents completed.
	Legislation enacted in one or more states that includes clean energy bill initiatives.	Provided clean energy bill initiatives for state legislative action.
Constructively work to better define what a reasonable approach to climate change legislation is. The challenge is defining "reasonable" in such a way that is acceptable to all affected constituencies.	Work with Congress, EEI, EPRI, labor and environmental advocates and other stake-holders to help define reasonable climate change policy.	Our position on climate change evolved to support carbon controls.
Work with governors and state legislators to pass laws regulating the sale of metals, such as copper, and enact harsher penalties to deter theft and reduce fatalities.	Legislation enacted in one or more of our jurisdictions.	Bills introduced in several states with AEP support.
Climate Change		
We are committed to reduce or offset approximately 46 million metric tons of carbon dioxide equivalent emissions between 2003 and 2010. This is a 6% reduction below our baseline (average 1998-2001 levels). Although legally binding, these are voluntary reductions and it is uncertain how they will be treated under anticipated climate legislation.	We will continue to take actions to meet our CCX commitment through 2010 through a broad portfolio of actions: Power plant efficiency improvements. Renewable generation such as wind and biomass co-firing. Off-system GHG reduction projects. Reforestation projects. Direct purchase of emission credits through our involvement with CCX.	Through 2006, we reduced or offset CO <sub>2</sub> emissions of approximately 31 million metric tons through:  Improving efficiency of existing power plants.  Adding wind generation.  Improving availability and capacity of the Cook Nuclear Plant.  Retiring older and less efficient gas steam and coal units.  Reducing leakage rate of SF6 gas from transformers.
If no further actions are taken, AEP projects emissions will increase by approximately 10 million to 15 million metric tons between 2010 and 2020, as four new generating plants are built. With climate legislation on the horizon, we must be ready to address this emissions growth.	We will be actively engaged in the climate change policy debate.  We will be positioned to adapt to climate policy because of our investments in technology and in other actions to reduce, avoid or offset GHGs. These include:  Bringing new carbon capture and storage technologies to commercial operation.  Investing in other clean-coal technologies, including IGCC and USC.  Increasing renewable forms of energy, including wind and biomass.  Investing in offsets such as tree planting, methane capture and destruction, fleet and aviation offsets and market-based credit purchases.	AEP developed a strategy to reduce approximately 5 million metric tons of carbon dioxide equivalent emissions per year, as follows:  • 2 million from wind power purchase agreements.  • 2 million from domestic offsets.  • 500,000 from increases in forestry and other offsets.  • 200,000 from fleet and aviation offsets.  An additional 1.5 million metric tons will be reduced when carbon capture and storage is in service at our Northeastern Station.

. Working with regulators and policy-

Challenge	Goal	Progress
	makers to implement cost-effective DSM and EE programs.  Making continued efficiency improvements to existing plants and retirements of less efficient, older plants.	
	Continue participation in construction of FutureGen.	Participated in pre-construction activities of FutureGen project.
Because AEP and most state regulatory emphasis has been on keeping customer rates low (our customers have enjoyed	Ongoing commitment to Leadership Group of National Action Plan for Energy Efficiency.	We manage DSM/EE programs in four states within our service territory: Texas – 59,782 MWh saved (2005 data; 2006
some of the lowest electricity rates in the nation), there has been little emphasis on implementing DSM/EE programs, particu-	Develop and publish DSM/EE public policy statement in 2007.	data not yet available).  Kentucky – 1,360 MWh saved – 2006.  Ohio & West Virginia –
larly during times of plentiful generation availability. But, with energy cost increases across the board, the need for new generation evident and the rise of CO2 concerns, it becomes increasingly important to develop DSM/EE programs and green power options, if they are embraced by regulators in our jurisdictions.	Continue evaluation of DSM/EE offerings through Integrated Resource Planning (IRP) process.	Multi-year commitments funding low- income weatherization programs. Significant avoided-capital tariff offer- ings, such as Demand Response, Inter-
	Engage in state-level dialogue with regulators/legislators/other stakeholders on application of DSM/EE to meet needs of our customers.	ruptibles, Time-of-Day, etc.
	Involve our stakeholders to help us advance DSM/EE programs in our service territory.	
	Secure approval of DSM/EE programs in one or more jurisdictions.	
Climate legislation in the United States is likely to be enacted within the next few years with direct impacts on all fossil fuel use, but especially on coal, which fuels 67% of our generating fleet and half the nation's electricity.  Carbon controls must be achievable,	Lead in development of reasonable legislation, such as a market-based cap-and-trade program that includes all sectors and sources, rewards early action, allows GHG offsets, supports public and private funding for technology development and does not adversely affect the U.S. economy.	Engaged with policymakers and industry peers.
affordable, include all GHG sources from all sectors of the economy and encourage participation of developing countries. Otherwise, carbon controls could impede our ability to provide reasonably priced electricity to our customers, create trade	Continue leadership within national and international organizations (such as e8, APP, G8+5, etc.) to encourage a global solution to climate change.	Hosted Asia-Pacific Partnership counterparts for technology and information-sharing conference; attended by the U.S. State Department and White House Council on Environmental Quality.
imbalances that could harm the U.S. economy and put our shareholders at risk.	Host and participate in e8 technology and knowledge-sharing conference (similar to APP) in May 2007.	Ongoing participation in Asia-Pacific, e8 and other international efforts.

Zero Notices of Violations (NOVs).

AEP received 9 NOVs in 2006;

lessons learned were shared.

collective fines were approximately

\$25,000. Corrective actions were taken and

**Environmental Performance** 

Environmental regulations are complex and frequently changing. The challenge

is to achieve environmental compliance,

improve accident response, and foster

Challenge	Goal	Progress	
positive regulatory relationships to enhance environmental performance.		<b>NOV</b> past performance: 2005 – 5 2004 – 12	
	Conform to ISO 14001 environmental management systems standard to provide mechanisms to prevent non-compliance and improve performance. Rollout continues in 2007 at four power plants; up to 8 more plants to begin implementation in 2007.	Developed implementation plan and began rollout for ISO 14001.	
	Continue proactive outreach with regulatory agencies.	Proactive outreach to regulatory agencies.	
Reducing and offsetting emissions from our 11,000-vehicle fleet.	Reduce AEP's mobile fleet consumption of petroleum-based products.	2005 – 5.5 million gallons of gasoline and 4.7 million gallons of diesel used to operate mobile fleet. (last year data were available)	
	Offset or reduce greenhouse gas emissions from mobile fleet, including corporate jet, beginning in 2007. Expect to offset 0.2 million metric tons per year.	2006 – 264,000 gallons biodiesel used. Two hybrid line trucks deployed (diesel/ electric motor); improved fuel economy up to 50%; reduced emissions up to 90%.	
Increasing the number of hybrid vehicles in our fleet depends upon the availability of quality suppliers to service hybrid vehicles within the AEP service territory.	2008 – 10% of new light-duty vehicle acquisitions are hybrids or alternative fuel vehicles.		
AEP does not measure energy use at most of its facilities. Improving energy efficiency at AEP non-power plant facilities requires metering our facilities and tracking use at more than 400 facilities in 11 states to get a benchmark of usage, so that we can set measurable goals.	2007 – Baseline year to collect energy consumption data.	Began study at non-generating facilities to measure energy use at AEP facilities (autors) work already does an power.	
	Develop work plan to improve energy efficiency of AEP facilities.	(extensive work already done on power plant efficiency).	
	All new buildings to be built using best practices relative to energy efficiency and sustainability.	Major lighting efficiency upgrades completed in AEP buildings between 1995 and 2005 under the EPA's GreenLights Progran continue to provide benefits. During this time, these upgrades have resulted in 233,000 short tons of avoided CO2 emissions.	
	2008 – Implement plan.		
Reducing office waste stream and encouraging suppliers to take steps to improve their environmental performance.	Implement recycling program over one year (eventually reaching more than 400 facilities).	Established cross-functional team to develop comprehensive office recycling program and supply chain review to reduce waste.	
	Partner with U.S. EPA's Green Suppliers Network for pilot program, targeting five AEP suppliers to improve their environ- mental performance.	TOUGOU WUSIO.	
AEP has a regulatory obligation to be in compliance with air, water and waste management permits. We challenge ourselves to go beyond compliance with	<ul><li>2007 Goal (changes annually) = 12 incidents.</li><li>1. Opacity – the measure of visual</li></ul>	Environmental Performance Index set a target of 15 incidents. 9 incidents occurred:  Opacity exceedances – 0	
vill	Facily and model of violati		

environmental performance by tracking measures of air quality, water quality and waste management through an internal Environmental Performance Index (EPI) that sets more stringent targets. Although the Index goes beyond compliance, performance is tied to compensation. The EPI sets an annual target of total number of incidents for the Index.	appearance of gas exiting power plant stack and is a rough indicator of particulate emissions.  2. NPDES (National Pollutant Discharge Elimination System) permit requirements (wastewater exceptions) – a measure of water quality permit compliance.  3. Oil & chemical spills – a measure of how we respond to and manage spills.	NPDES – 9 Oil & chemical spills – 0
Energy Security, Relia	ability & Growth	
We need timely regulatory approval to site and build new utility infrastructure, including the I-765 interstate transmission project in order to meet growing demand for electricity, improve reliability and bring more renewable energy to market.	Due to delays in approval by the PJM stakeholder process, the projected inservice date is now 2015. This assumes eight years for siting and construction.	Regulatory filings initiated.  Regulatory actions: FERC granted conditional approval of request for incentive rate treatment.  PJM agreed to evaluate eight backbone projects (including I-765) to determine most effective combination to meet needs of PJM region.
	We will work with and listen to all affected constituencies.	Stakeholder engagement initiated in states. (See <i>Stakeholder Engagement</i> section and metrics for more details.)
We are seeking designation of our I-765 Interstate project as a National Interest Electric Transmission Corridor (NIETC) under the Energy Policy Act of 2005, which recognizes the importance of modernizing the electric grid in the United States.	Timely response to regulatory requests.	Filed request with U.S. Department of Energy.
The age of our infrastructure threatens the reliability of service to customers.	Review and update long-range plan for asset replacement/repair program and capital budget constraints and seek timely regulatory recovery.	Recovery of infrastructure reliability and environmental compliance costs in Virginia and Oklahoma.
We must achieve timely cost recovery for investments in research and development for technologies that might improve service and reliability and reduce carbon without creating burdensome rate increases for our customers.	Maintain or increase investments in R&D where possible.	\$12.5 million invested in R&D.
	Serve in leadership roles to identify or advance R&D projects.	

Goal

### **Work Force Issues**

Achieving top-quartile performance within electric industry by 2010, as measured by recordable and severity incident rates, requires a major shift at AEP in behaviors and attitudes about safety and health. Benchmarking of performance against comparably sized EEI companies.

#### Recordable Rate – Goal:

2007 - 1.99

2008 - 1.79

2009 - 1.61

2010 - 1.44

Focus on hazard recognition, proactive behaviors to prevent injuries, accountability when we fail and reward/recognition for successes. Build into goals for each business unit.

#### Recordable Rate:

2006 - 1.66

**Progress** 

2005 - 2.35

2004 - 2.19

Slips, trips and falls were the primary cause of injuries.

Although performance exceeded set goals for achieving top-quartile performance, we will not change the overall goals for future years. Housekeeping, hazard recognition, awareness and job safety assessments contributed to the lower rate in 2006.

Challenge

Challenge	Goal	Progress
	Severity Rate – Goal: 2007 – 35.38 2008 – 30.07 2009 – 25.56 2010 – 21.73	Severity Rate: 2006 – 31.77 2005 – 43.91 2004 – 53.00 In 2006, the injuries that occurred were less severe than in the past. Performance exceeded set goals for achieving top-quartile performance, but we will not change the overall goal path for future years.
	OHSAS 18001: Long-term conformance with these standards will be reflected in recordable and severity rates. Rollout is under way in Generation, and implementation is being reviewed for other business units.	OHSAS 18001: Implementation plan developed in 2006; began implementation in four power plants.
	Zero fatalities.	2006 – 1 employee/1 contractor 2005 – 1
It is imperative that we eliminate worker fatalities. AEP has experienced at least one worker fatality every year in the last 35 years, except for one year.	Through greater emphasis on hazard recognition, proactive injury prevention activities, sharing best practices and lessons learned from near-misses, we expect and will accept no more than zero fatalities.	2004 – 3
	Continually learn from incidents by sharing lessons learned.	AEP received 3 citations; estimated fines are \$5,500 with one case still pending. Issues related to confined space, lockout/
Reducing injuries to employees and contractors is necessary if we are to prevent OSHA and state regulatory agency citations to AEP.	Improve outreach to OSHA to improve communications and understanding.	tagout controls and training. Corrective actions taken.
	Proactive focus on hazard recognition. Build into goals for each business unit.	Past Performance: 2005 – 1 citation; \$85,000 fine. 2004 – 6 citations; fines of \$83,100.
	Improve compliance management as OHSAS 18001 is implemented in power plants; apply principles across AEP system.	
	Zero fatalities.	7 public fatalities due to copper theft and live wire contacts.
Preventing public injuries or fatalities caused by contact with electrical facilities.	2007 – Develop and implement formal tracking of public safety education actions.  New safety ad addressing copper theft	Actions Taken: Bill inserts; advertising; web sites; awareness training for first responders, contractors and civic and government
	to debut (see Public Policy metrics for legislative action).	organizations; on-hold phone messages; teacher workshops.

### Stakeholder Engagement

We need to implement a systematic company-wide stakeholder outreach program to build our relationships in the communities and states where we operate. We need to be more than a good neighbor; we Identify and engage with stakeholders to create shared value in support of sustainable development objectives.

Develop outreach program, in partnership

2006 – Began data collection and development of outreach strategy and program.

Worked with Ceres on conference call with NGOs following announcement of

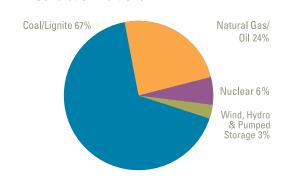
Challenge	Goal	Progress
need to be actively involved with all of our stakeholders.	with business units, that can be integrated with existing community outreach activities and communication plans.  Hold quarterly stakeholder briefings with environmental, social and community-based NGOs, similar to financial analyst calls, starting in 2007.	new generation in west; senior leadership, including CEO, participated.  Through Ceres, 17 financial, social and environmental advocates participated in a review of this Corporate Responsibility Report.
	Integrate stakeholder review as part of annual process to develop Corporate Responsibility Report. Extend reach to include diverse stakeholder groups.	Outreach with community leaders, civic/ service groups; communications with com- munities on issues related to road impacts, construction activity, etc. Ongoing community interaction related
	Local stakeholder review is part of 2007 reporting process.	to Smith Mountain shoreline management plan as part of re-licensing process.
Without continued employee involvement in the community, AEP's message may not be heard and relationships would not be as strong.	Continue \$150 grant award opportunities for community involvement.	\$141,140 in grants awarded to organizations on behalf of 941 active and retired employees and family members who collectively performed 124,803 hours of volunteer service, in 2006.
		I-765 Project Outreach:  More than 300 contacts with stakeholders, including FERC, PennFuture, American Wind Energy Association, legislators and regulators.  Meetings with PA Utility Commission, Consumer Advocate, Small Business Advocate and DEP Office of Energy; also, consumer activists in York County, Pa.
Continue philanthropy and corporate giving, even in economic downturns when the support is needed most.	Annual United Way fund-raising campaign achieves goal.	AEP employees pledged \$2 million through its annual United Way campaign; AEP matched it with a \$1 million grant.
Continue to grow support for United Way and other forms of giving, even in economic downturns when support is most needed.	Continue partnership with IBEW for United	Corporate giving totaled \$9.1 million.
	Way campaign and other community service initiatives.	AEP Foundation paid \$3.18 million to 28 organizations in 2006.
Increase energy and environmental knowledge of public, teachers and children in AEP states through educational programs targeted at students. Achieve the same goal through customer communications.		Sponsored COSI On Wheels Investigating Energy presentations to 17 elementary schools in 2006-2007 school year.
		Chaired National Energy and Education Development project to expand to more than 52,000 classrooms nationwide.
		Foundation for Environmental Education installed solar systems at over 250 schools, generating over 5 million kilowatt hours.
Obtaining timely cost recovery.	Seek timely cost recovery of our investments in all jurisdictions.	New rate plans approved in Kentucky, West Virginia and Ohio. Filed rate cases in Texas and Oklahoma.

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FC3

EC4	Significant financial assistance received from government. CW Policy, practices, and proportion of spending on locally based suppliers			
EC6	Policy, practices, and proportion of spending on locally based suppliers			
Environmental				
	ure on Management Approach			
EN1	Materials used by weight or volume			
EN3	Direct energy consumption by primary energy source			
EN6	Initiatives to provide energy-efficient or renewable products and services			
EU37	Demand side management programs			
EU38	MWh saved through demand side management programs			
EN8	Total water withdrawal by source. 24-25. CW/U			
EN9	Water sources significantly affected by withdrawal of water			
EN10	Percentage and total volume of water recycled and reused			
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high			
EN12	biodiversity value outside protected areas. 25 CW Impacts on biodiversity 25 CW			
EN13	Habitats protected or restored. 19. CW/U			
EN14	Strategies for managing impacts on biodiversity. 25. CW / U			
EN15	IUCN Red List species and national conservation list species with habitats in areas affected by operations			
EN16	Total direct and indirect greenhouse gas emissions by weight			
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved			
EN19	Greenhouse gas emissions			
EN20	NOx, SOx and other significant air emissions			
EN21	Total water discharge by quality and destination			
EN22	Waste volume by type and disposal method			
EU21	Long-term strategy for PCBs			
EN23	Total number and volume of significant spills			
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous			
EN25	Water bodies and related habitats significantly affected by discharges of water and runoff			
EN26	Initiatives to mitigate environmental impacts of products and services			
EN28	Fines for non-compliance with environmental regulations			
EN30	Total environmental protection expenditures and investments by type			
Labau	Practices and Decent Work			
	ure on Management Approach			
LA1	Total work force by employment type, employment contract, and region			
LA1	Total number and rate of employee turnover by age group, gender, and region			
LA2	Benefits provided to full-time employees versus temporary or part-time employees			
EU24	Processes to ensure retention and renewal of skilled work force			
LA4	Percentage of employees covered by collective bargaining agreements			
LA7	Rates of injury, occupational diseases, lost days, absenteeism, and number of fatalities by region			
LA8	Programs to assist work force members, their families, or community members regarding serious diseases 34			
LA11	Programs for skills management and lifelong learning			
LA12	Percentage of employees receiving regular performance reviews			
	Composition of governance bodies and breakdown of employees per category			
	n Rights			
	ure on Management Approach			
HR4	Total number of incidents of violations involving rights of indigenous people and actions taken			
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken			
Socie	ty			
Disclos	ure on Management Approach			
S05	Public policy positions			
S06	Total value of contributions to political parties			
S07	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes			
S08	Value of significant fines and total number of non-monetary sanctions for non-compliance 21 / 34 / 44			
Produ	Product Responsibility			
	ure on Management Approach			
PR8	Total number of substantiated complaints regarding breaches of customer privacy			
PR9	Fines for non-compliance concerning the use of products and services			
EU3	Long-term reliability			
EU4	Existing and future demand			

#### **AEP Generation Portfolio**



#### Market Price-Common Stock



#### **Service Territory**



#### **COMPANY OVERVIEW**

American Electric Power is one of the nation's largest electric utilities, serving 5.1 million customers in 11 states from Virginia to Texas. In 2006, AEP celebrated its 100th anniversary.

	2006
Revenues (in billions)	\$12.6
*Net Income (in millions)	\$1,002
*Earnings Per Share	\$2.54
Service Territory	197,500 square miles
Transmission	39,000 miles
Distribution	208,000 miles
Generating Capacity	38,300 MW
Generating Stations	More than 80
Railcars	More than 8,000
Barges (owned & leased)	2,600
Towboats	51
Employment	20,400

\*GAAP

AEP's utility units operate as AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana and eastTexas).

The company is based in Columbus, Ohio.

Printed on 20 percent post consumer recycled paper, with soy-based inks.

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