

**2020** >  
a low-carbon roadmap

2009 update

**OUR GOAL:** We will reduce, offset or displace more than 15 million metric tons of greenhouse gas emissions per year by 2020.

**OUR PROGRESS:** We have achieved one-third of this goal by reducing nearly 6 million metric tons of greenhouse gas emissions.



# Executive Summary

June 2009

In 2008, Exelon launched an ambitious plan, unique in the electricity industry, to shrink our carbon footprint. Exelon 2020: A low-carbon roadmap is a comprehensive package of initiatives to reduce, offset or displace more than 15 million metric tons of greenhouse gas (GHG) emissions per year by 2020—an amount roughly equal to Exelon’s total emissions in 2001, the first full year of our company’s operations.

Exelon 2020 outlines a three-pronged strategy for achieving comprehensive GHG reductions:

- 1. Reduce or offset Exelon’s carbon footprint by greening our operations**
- 2. Help our customers and the communities we serve reduce their greenhouse gas emissions**
- 3. Offer more low-carbon electricity in the marketplace**

Our strategy is predicated on a comprehensive economic analysis of the GHG abatement options available to Exelon. We set out to position our company to succeed in a carbon-constrained future.

One year later, we are making tangible progress in meeting our Exelon 2020 goals. This report documents our accomplishments in each of the core areas of our 2020 roadmap, most notably our efforts to:

- Improve the energy efficiency of Exelon facilities and equipment
- Green our supply chain
- Deliver effective energy efficiency programs to our customers
- Introduce smart grid technologies
- Expand our commitment to renewable energy resources
- Implement uprates at our existing nuclear plants

Of course, there is much more to be done, along with new challenges to confront. The world has changed in the short time since we embarked on this plan. Each new ton of abatement will be harder to achieve than the last. But we are heartened by the fact that Exelon’s GHG emissions are already more than 35 percent lower than they were in 2001—which means we’ve already achieved annual reductions of nearly 6 million metric tons. Exelon 2020 has become embedded in the very fabric of our enterprise. Thus, we remain committed to the roadmap we put forward in 2008—and more confident in our ability to achieve the ambitious goal we laid out.

“We committed to GHG reduction under the EPA Climate Leaders program to demonstrate that we could achieve meaningful carbon reductions. We expanded that goal with Exelon 2020, which will drive our transition to a low-carbon future.”

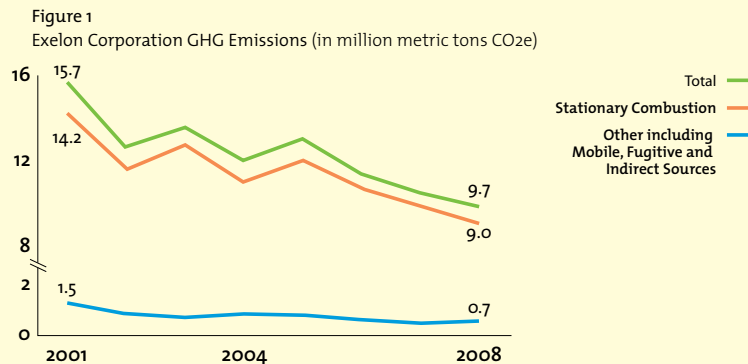
John W. Rowe

## Exelon surpasses its U.S. EPA Climate Leaders goal

As an early participant in the U.S. Environmental Protection Agency's Climate Leaders program (one of only 10 electric utilities to join the program), Exelon has surpassed our commitment to reducing GHG emissions 8 percent below 2001 levels. Stantec, an independent third-party environmental consulting firm, verified our GHG inventory. In fact, the EPA reviewed Exelon's results and confirmed that we had achieved nearly 6 million metric tons of carbon dioxide-equivalent reductions as of the end of 2008. This represents a reduction of more than 35 percent compared to Exelon's emissions in 2001. Most of these early GHG reductions were achieved by focusing on opportunities within Exelon's own operations, including:

- Retiring or “mothballing” less efficient and higher-emitting fossil fuel power plants in Massachusetts, Pennsylvania and Texas
- Reducing leakage of GHGs—including sulfur hexafluoride (SF<sub>6</sub>), an especially potent GHG—from our electricity transmission and distribution network and natural gas delivery system
- Increasing energy efficiency in Exelon's own buildings
- Improving the fuel economy of Exelon's vehicle fleet, including the purchase of additional hybrid-electric vehicles

As Exelon works toward the additional GHG reductions needed to achieve our 2020 goal, we will continue to implement a diverse suite of initiatives.



We couldn't take a million cars off the road.  
But we did reduce GHG emissions by that much.

## A Changed Landscape

We launched Exelon 2020 expecting that our plan for achieving GHG reductions would evolve over time. But early in July 2008, no one could predict just how much the world would change or how fast: oil was near its all-time high of \$145 a barrel, natural gas cost \$13 per million Btu (mmbtu) and the Dow Jones Industrial Average was above 11,000.

Today, as the nation confronts a financial crisis and global economic downturn of historic proportions, the price of oil is approximately \$70 per barrel, natural gas prices are hovering around \$4 per mmbtu and the Dow Jones has yet to return to the 9,000 mark. On one hand, the recession has relieved pressure on energy supplies and temporarily slowed the high global GHG emissions growth rates that accelerated earlier this decade. On the other hand, falling energy prices, excess power generating capacity and broader credit problems also undercut prospects for investment in emerging low-carbon technologies.

This new landscape has had a profound impact on the business context in which Exelon operates and on the relative attractiveness of the various GHG abatement options identified in our original 2020 plan. It also underscores the inherent difficulty of forecasting the future. Exelon 2020 stated that we would take a pragmatic and flexible approach in pursuing our climate goals. We are doing just that.

### Updating our assessment of GHG abatement options

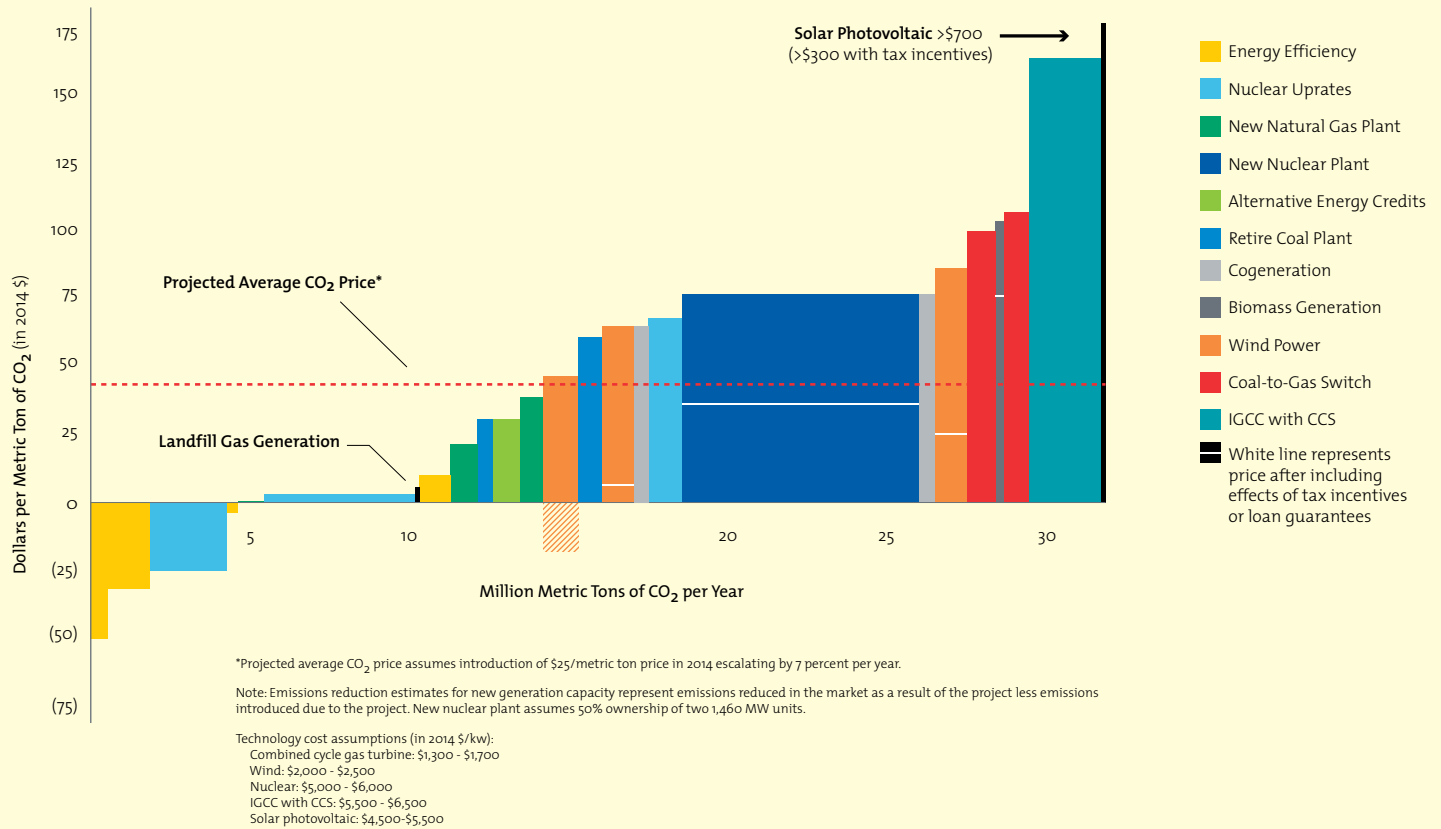
The attractiveness of the opportunities to reduce GHG emissions depends on one's view of the future. We have updated our original analysis of the costs and abatement potential of various emissions-reducing opportunities under two different scenarios to illustrate the potential requirements for achieving our 2020 goal.

In the first, more optimistic scenario, a moderate recession is followed by a return to domestic and global economic growth rates in line with average annual growth rates since 2000 – we assumed 2.6 percent U.S. Gross Domestic Product (GDP) growth. Long-term energy prices rebound from current lows to historical levels over time and eventually rise above them. Real oil prices average just over \$100 per barrel and natural gas prices average \$8.50 per mmbtu (in 2014 dollars) in this scenario. Electricity demand also returns to close to its historical average since 2000, growing at 1.4 percent across the country.

The second scenario is more pessimistic in its economic assumptions. The global recession is deeper and longer lasting. The economy eventually recovers, with long-term growth in U.S. GDP of 2.3 percent, lower than recent history. Long-term energy prices remain relatively low: real oil prices average \$65 per barrel and natural gas prices average \$6.60 per mmbtu (in 2014 dollars). Long-term electricity demand growth is also low relative to recent history, averaging 1 percent across the country.

Figures 2 and 3 present snapshots of the economics and scale of various emissions-reducing opportunities under these two scenarios. The x-axis shows the amount of GHG emissions that could be reduced, offset or displaced annually by undertaking a particular initiative, expressed in CO<sub>2</sub>-equivalent metric tons. The y-axis shows the total cost of each initiative, expressed in terms of dollars per metric ton of CO<sub>2</sub>. Initiatives that fall below the zero line are economic, meaning the net benefits exceed the cost of implementing the initiative over its life. Initiatives that show a positive cost require introduction of a carbon price to become economic – the height of the bar indicates the long-term carbon price that is required for an initiative to become a break-even proposition.

**Figure 2**  
**Supply Curve of Exelon's Greenhouse Gas Abatement Opportunities - Optimistic Scenario**

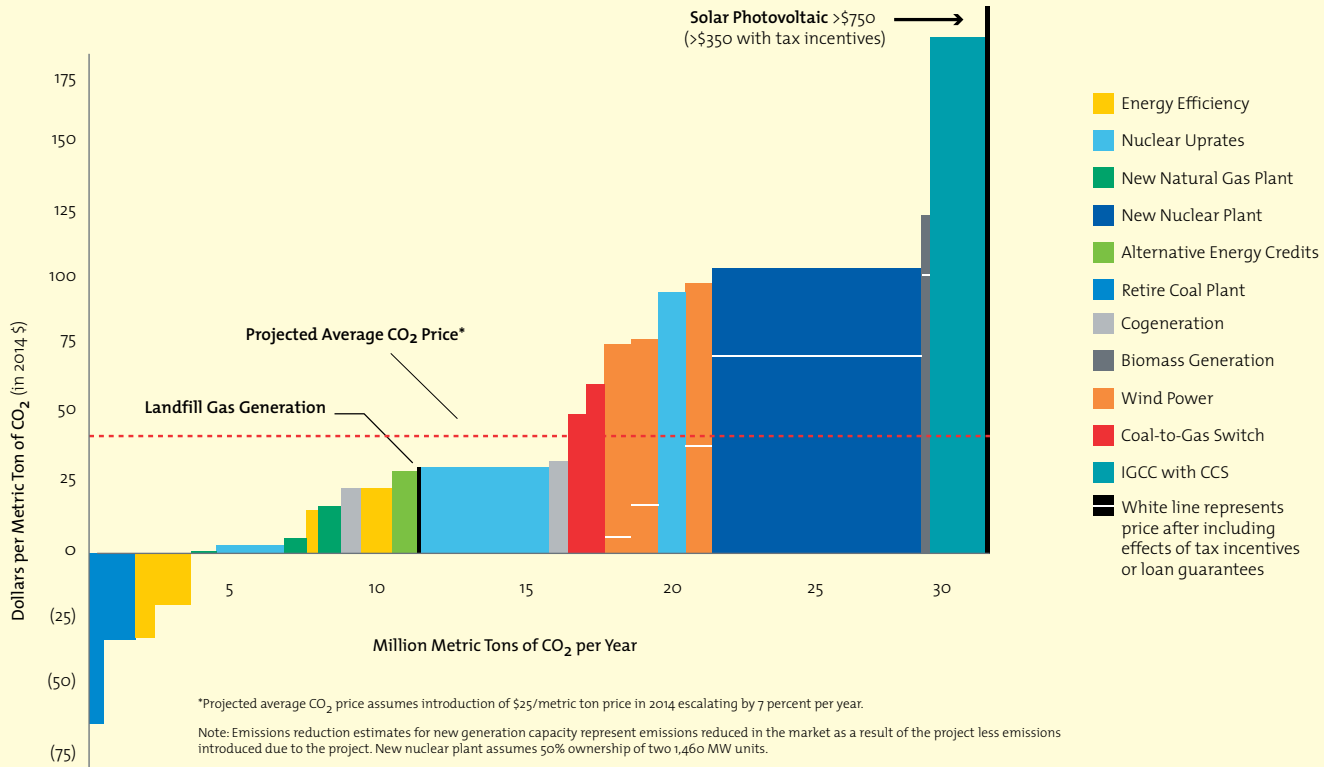


The results are different across these two scenarios and they highlight the potential impact of GHG legislation currently under consideration in Congress. Under the more optimistic scenario shown in Figure 2, energy efficiency is still Exelon's first and best emissions-reducing option—often yielding net cost savings for Exelon's customers. The next most cost-effective option is generating more power from existing nuclear plants through capacity uprates. Many of these projects continue to be economic without a carbon price. Of course, there will be a limited supply of these opportunities. In this scenario there are reductions of approximately 5 million metric tons of CO<sub>2</sub> emissions with cost-effective energy efficiency and nuclear uprate initiatives in the absence of a carbon price. Beyond this, the introduction of a carbon price would be necessary for initiatives to become economic.

Moving from left to right on the curve, natural gas generation continues to be the lowest-cost option for new generating capacity, but it is not needed for several years. Opportunities for wind power expand, particularly with tax incentives and potential loan guarantees, though the economics of wind differ by geographic region. The curve shows that some wind opportunities are break-even business propositions with the help of existing incentives and would not require the introduction of a CO<sub>2</sub> price; other wind opportunities will cost more. New nuclear and advanced clean coal technologies continue to be more expensive than most other options. Our analysis suggests that development and construction costs have risen over the last year for these large, baseload technologies, making them more expensive relative to other alternatives. While we expect solar costs to continue to decline, for now solar remains an exceedingly costly method through which to abate CO<sub>2</sub> emissions.

Under the more pessimistic scenario, shown in Figure 3, the most cost-effective abatement option is to retire coal-fired power plants. In a scenario in which economic growth and demand for electricity slow significantly, power prices remain relatively low and many of the nation's older, less efficient and higher-emitting coal plants are priced out of the market. Some of the energy efficiency initiatives continue to be economic without a carbon price, although they are not quite as attractive as in the more optimistic scenario. Coal plant retirements and the most cost-effective energy efficiency initiatives would contribute approximately 3.5 million metric tons of GHG abatement in this scenario. New gas-fired capacity would need little to no carbon price to break even, depending on when and where generation is needed because lower cost fuel allows gas plants to compete more effectively against other generators. The cost of adding renewable energy sources, as well as new low-carbon baseload generation increases significantly, again reflecting the fact that demand for new baseload capacity is reduced under a scenario with a more severe recession and a slower recovery. Expanding energy efficiency programs and low-carbon sources of supply – through nuclear uprates, the addition of gas-fired generation and new renewable generation – would require some combination of existing tax incentives and an explicit carbon price to become break-even business propositions.

Figure 3  
Supply Curve of Exelon's Greenhouse Gas Abatement Opportunities - Pessimistic Scenario



## Taking stock of future challenges

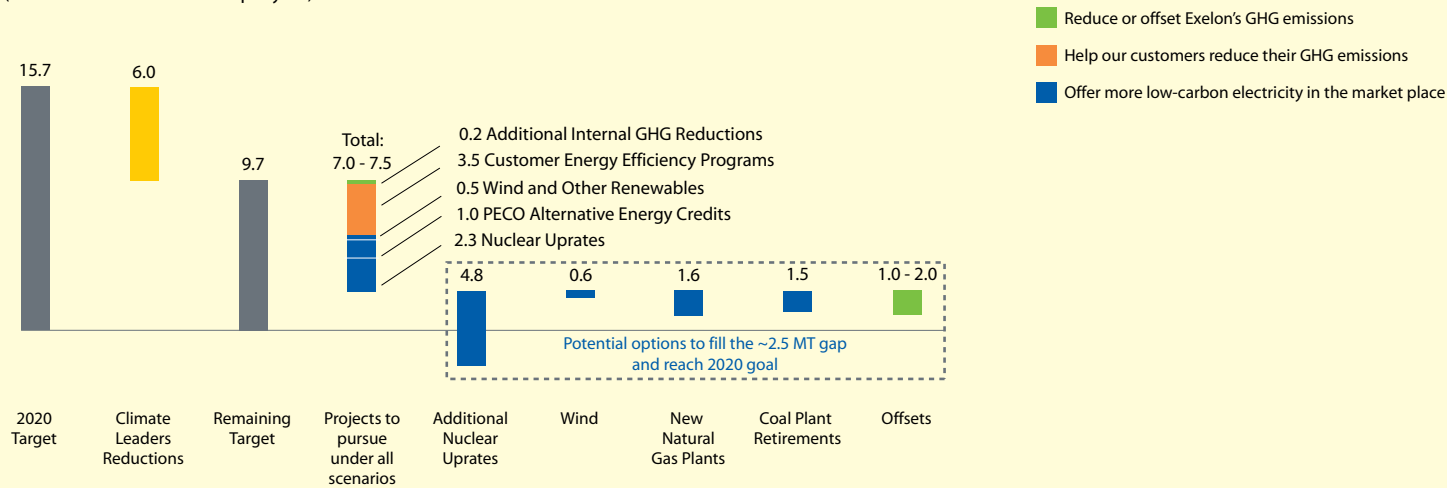
Many of our lowest-cost abatement opportunities have already been tapped. Achieving the nearly 10 million metric tons of additional GHG abatement needed to meet our 2020 goal will be more difficult and it will depend in large part on the broader regulatory and economic environment in which we find ourselves. The role of potential carbon legislation is an important factor, particularly in the more pessimistic scenario. To pursue the full range of emissions-reducing opportunities in a way that makes business sense requires a sufficient price signal, through some combination of incentives and an explicit carbon price, to stimulate investment. The introduction of a modest carbon price (e.g. \$25/metric ton and slowly escalating) would make many of the low-carbon alternatives, including advanced energy efficiency, nuclear uprates, new gas-fired generation and new wind capacity, with existing tax increase, break-even business propositions.

We are taking steps that will benefit Exelon and its stakeholders, while helping to achieve our climate goal whatever scenario emerges. These include investments in greening our own operations, expanding customer energy efficiency programs, boosting output from existing nuclear plants, investing in wind and solar energy and purchasing other renewable energy. These

initiatives are estimated to contribute as much as 7-7.5 million metric tons per year toward the remaining abatement target of approximately 10 million metric tons per year. In parallel, we continue to evaluate additional uprates, additional renewable generation, new gas-fired generation, coal plant retirements and high-quality emissions offsets. We have a broad portfolio from which to choose so that we can meet or exceed our 2020 goal in any scenario, as shown in Figure 4.

We are tracking our progress on a regular basis. We have integrated performance monitoring of our 2020 efforts, and the resulting GHG emissions, into Exelon's quarterly management reporting process. Each of the operating companies documents their progress and results on 2020 initiatives as part of the overall quarterly operational and financial review with the company's senior leadership.

Figure 4  
 Meeting the Goal – Exelon 2020 Initiatives to Reduce, Offset or Displace Greenhouse Gas Emissions  
 (million metric tons of CO<sub>2</sub>e per year)



Note: Emissions reduction estimates for new generation capacity represent emissions reduced in the market as a result of the project less emissions introduced due to the project.

## Progress to date

### I. Greening our operations

Greening our operations is the first element in Exelon's three-pronged strategy for shrinking our carbon footprint. We started our search for cost-effective GHG abatement opportunities by looking at our own operations, setting aggressive goals and engaging employees. Exelon employees in all parts of the organization have played a role in making Exelon 2020 a priority. They are sharing information and tools to reduce energy, water and material consumption where possible and to reuse or recycle in instances beyond that. They are factoring environmental considerations into their business decisions. And they have created local green councils and companywide contests around energy efficiency, paper reduction and other initiatives. In this section, we detail recent accomplishments and next steps for our own operations, from cutting energy use in Exelon buildings and greening our supply chain to reducing emissions from our vehicle fleet.



This PECO hybrid bucket truck is an example of the Exelon companies integrating new lower-carbon technologies into our operations.

## Reducing energy consumption 25 percent across our facilities

Exelon's Energy Reduction Challenge is a collaborative effort across the Exelon family of companies to reduce energy consumption at our commercial buildings 25 percent by 2012. Our most recent analysis indicates that Exelon buildings achieved overall savings of 113,000 mmbtu through 2008 —nearly as much as the energy used each year by 1,000 average single-family American homes. This represents a 16 percent reduction compared to our energy use in 2001 —and a significant step toward the 25 percent target.

To identify cost-effective efficiency opportunities, Exelon's Business Services Company has spearheaded a series of comprehensive energy audits across the operating companies. We have completed more than 70 efficiency projects and identified additional improvements that will enable us to reach our overall goal by the end of 2012. Projects include infrastructure improvements, workplace modifications and employee awareness programs. Going forward, we plan to invest more than \$25 million in this initiative. Part of this effort has also included greening our IT practices, infrastructure and data center operations. Exelon now requires that all new personal computers and monitors be ENERGY STAR® certified.

Operating Exelon facilities according to the guidelines of the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) program and securing LEED certification for our buildings are high priorities. Exelon currently has three LEED-certified facilities: our Chicago Chase Tower headquarters, which remains the largest commercial office renovation to gain LEED Platinum certification, Exelon Generation's Renewable Energy Education Center in Fairless Hills, Penn. and PECO's West Chester service building. Exelon has also applied for LEED certification for a building at the Clinton Nuclear Power Station and will seek certification of five additional buildings or projects later this year.



Exelon Nuclear opened a new administrative building at the Clinton Power Station last year. The facility, built to LEED specifications, includes an open, three-story atrium that provides natural light to most of the common areas, reducing costs and power usage.



**Exelon Generation** has achieved a 5 percent reduction in energy use through a variety of projects that have included replacing more than 5,700 lights, installing more than 160 office occupancy sensors, lowering water heater settings and shutting down electronic equipment at the end of the day. Current plans call for additional air conditioning and lighting system improvements at five facilities, among them the Cantera Nuclear headquarters and the Kennett Square offices of Generation and Power Team.

**ComEd** has reduced energy consumption across its facilities by approximately 20 percent with more efficient space conditioning and lighting systems, process improvements and workplace modifications. In 2008, 2,618-watt neon lights in the ComEd sign atop Lincoln Center were replaced with 323-watt LED (light-emitting diode) lights. The LED lights consume 88 percent less energy and last longer. ComEd has identified additional projects at 50 of its facilities.

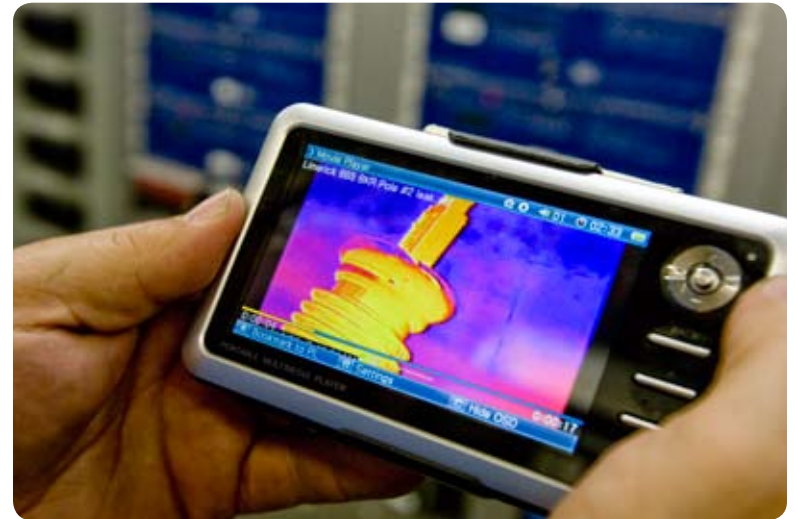
**PECO's** facility energy savings so far total 9 percent. Its West Chester service facility was LEED-silver certified in early 2009. Similar improvements are underway at other facilities, including PECO's Main Office Building and the Berwyn, Warminster, G & Luzerne, Phoenixville, Baldwin, Plymouth Meeting and Christian Street sites. PECO recently unveiled a 45,000-square-foot green roof on its headquarters building. This is the largest green roof in the Philadelphia area and it will reduce heating and cooling costs while also providing air quality and storm water runoff benefits. Finally, on July 4, 2009, energy-efficient LEDs will light up the famous Crown Lights atop PECO's Main Office Building.

PECO recently unveiled a new green roof on its Main Office Building (MOB), the largest green roof in an urban setting in Pennsylvania. An integration of beauty and function, the green roof will regulate rain water run-off, reduce cooling costs and improve air quality. This photo was taken from the top of MOB looking down at the green roof.

## Reducing emissions from our generation, transmission and distribution infrastructure

Besides reducing building energy consumption, Exelon Generation is improving efficiency and reducing electricity consumption at several fossil and nuclear generating stations. Both of Exelon's delivery companies, PECO and ComEd, are reducing SF<sub>6</sub> emissions from their transmission and distribution systems. SF<sub>6</sub> is an insulating gas used in circuit breakers; released to the atmosphere, its global warming impact is nearly 24,000 times greater than that of

carbon dioxide. Older circuit breakers that use SF<sub>6</sub> are being replaced, and both PECO and ComEd are enhancing preventative maintenance programs to reduce future leaks. PECO purchased a state-of-the-art infrared camera to help identify and repair SF<sub>6</sub> leaks from large substation circuit breakers. Additionally, PECO is working to reduce methane emissions from its natural gas distribution system.



PECO now uses a state-of-the-art SF<sub>6</sub> detection system, including this thermographic camera, to locate and fix leaks. Employees film transmission equipment and view it through a special sensor that changes color if SF<sub>6</sub> is apparent.

## Greening our supply chain

Looking beyond our own operations and facilities, Exelon is working to improve the environmental performance of our suppliers while also reducing impacts from the materials and services we procure. In 2008, Exelon became the first U.S.-based utility to join the Carbon Disclosure Project's Supply Chain Leadership Collaboration. We began asking our top suppliers to disclose their GHG emissions and energy consumption. We also convened a group of investor-owned electric utilities to establish consensus-based environmental standards and best practice standards for industry suppliers. This led to the creation of the Electric Utility Industry Sustainable Supply Chain Alliance (the Alliance), which Exelon now chairs. The Alliance is also working to develop environmental performance standards for materials such as wood poles, transformers, fleet vehicles, wire and cable.

Using the Alliance's standards as a guide, Exelon has integrated environmental criteria into our sourcing process. We now evaluate the environmental performance of prospective suppliers and encourage them to propose innovative solutions for reducing Exelon's carbon footprint. In December 2008, Exelon joined the U.S. EPA/Department of Commerce Green Supplier Network program as a corporate champion and committed to sponsor five of our suppliers through a "lean and clean" assessment in 2009.

Finally, Exelon is working to reduce our supply chain's environmental impacts closer to home by greening our warehouse operations and optimizing logistics. For example, we avoided 105,000 metric tons of GHG emissions and generated nearly \$20 million in revenues in 2008 by recycling or re-using more than 30 million pounds of scrap metal and other solid material and 700,000 gallons of oil. We introduced reusable pallet boxes and significantly reduced our use of standard packaging materials. In addition, we are installing more efficient lights and motion sensors in our warehouses, optimizing delivery routes and order quantities to reduce vehicle trips, optimizing the use of alternative fuels in material handling equipment and reducing paper use by moving to electronic invoices and payments.



Exelon's Supply team uses electric fork lifts in its warehouses to reduce GHG emissions. Supply has also introduced recycled, reusable eco-pallets that reduce waste.

## Reducing emissions from our vehicle fleet

Part of greening our own operations involves reducing GHG emissions from our vehicle fleet. In 2008, Exelon and its family of companies introduced significant numbers of efficient hybrid-electric and alternative-fuel vehicles. Exelon also introduced new vehicle guidelines to continue to maximize fuel efficiency and reduce fleet emissions over time. As of January 2009, ComEd's fleet included more than 1,900 alternatively-fueled vehicles, including 1,774 biodiesel trucks, 131 hybrid and 10 plug-in hybrid vehicles. In fact, ComEd was recently recognized by GreenBiz.com and *Automotive Fleet Magazine* as

having the seventh largest fleet of alternative-fuel vehicles in the United States. Among U.S. utilities, it has the second largest fleet.

PECO has likewise invested heavily in greening its vehicle fleet, 57 percent of which is now made up of environmentally-friendly vehicles. This includes 47 hybrid vehicles, a prototype hybrid bucket truck, 14 natural gas vehicles and 651 biodiesel trucks. Other PECO initiatives, such as an anti-idling campaign, are also contributing to reductions in vehicle-related GHG emissions.



ComEd has 131 hybrid cars in its vehicle fleet and is currently piloting the use of plug-in hybrid-electric vehicles.



## Offsetting a portion of our own emissions

Exelon continues to view offsets as an important tool in meeting our low-carbon goal as well as an essential component in meeting national and global GHG reduction targets economically. We support the development of offset standards and markets that rigorously evaluate the environmental benefits from each project are real, quantifiable, verifiable and additional.

We continue to support The Field Museum of Chicago's biodiversity work in Peru. We are making progress in our effort to generate high-quality carbon offset credits from the Reducing Emissions from Deforestation and Forest Degradation (REDD) project associated with Cordillera Azul National Park in Peru. We have identified the two voluntary standards that we will use to document the project and quantify its avoided emissions: the Voluntary Carbon Standard (VCS) and the Climate, Community and Biodiversity (CCCB) Standard. These standards will also serve as the basis for the third party validation and verification of the project. We are in the process of engaging a contractor to provide the technical methodology and carbon stock inventory support for this REDD project. It is necessary to use voluntary standards because avoided deforestation projects are not yet approved as Clean Development Mechanisms under the Kyoto Protocol. A commitment to study such projects was made at the 2007 Conference of the Parties (COP) meeting in Bali, and a more informed discussion is expected at the 2009 COP meeting in Copenhagen.

Should we be successful, this project will be among the largest validated and verified REDD projects in the world and may be the first REDD project registered with VCS. The additional benefits for biodiversity, watershed protection and quality of life for neighboring residents are significant. We plan for this project to be completed in mid-2010.

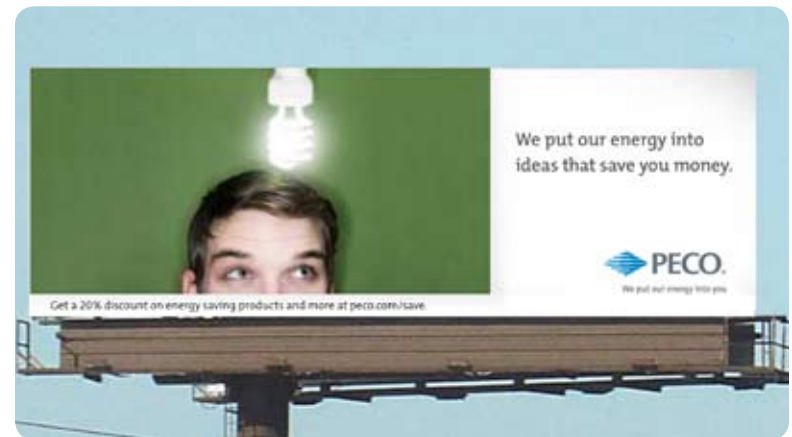
The **Field**  
Museum

An isolated lake nestled in the lush forests of Cordillera Azul National Park in central Peru.

*photo: Alvaro del Campo*

## II. Helping our customers and the communities we serve reduce their greenhouse gas emissions

The Exelon companies will spend more than \$350 million through 2011 to implement a portfolio of energy efficiency and demand response programs to help our customers reduce their energy consumption by more than 1.6 million MWh and reduce peak load by 226 MW. Our energy efficiency programs place Exelon third among the nation's utilities in terms of customer energy savings. Over the next five years, spending on energy efficiency and demand response across ComEd and PECO is anticipated to reach \$290 million per year resulting in estimated cumulative energy savings of 3.7 million MWhs and a reduction in peak load of 388 MW. The Exelon companies are also making substantial investments in advanced metering technology and new pricing programs to help customers use energy more efficiently, reduce costs and improve system reliability. ComEd and PECO are also working in partnership with the cities of Chicago and Philadelphia to seek funding from the American Recovery and Reinvestment Act of 2009 to further expand their energy efficiency programs and smart grid infrastructure.



Local advertising by ComEd and PECO creatively informs customers on energy-efficiency tips and programs.

## Customer energy efficiency programs

ComEd recently completed the first year of a three-year, \$250 million energy efficiency program that targets residential and commercial energy savings. The program, called Smart Ideas, is co-administered by the Illinois Department of Commerce and Economic Opportunity and is expected to produce lifetime electricity savings of more than 11.3 million MWh and lifetime customer cost savings of \$645 million when fully implemented. Results are on track with savings of more than 207,000 MWhs in the first year, as well as 13.4 MW of demand response added.

ComEd has also launched a number of innovative programs, including a Community Energy Challenge in which 10 Illinois municipalities are competing to deliver the greatest per capita energy savings. This program offers ComEd the opportunity to test a community delivery channel. In addition, ComEd is piloting a Home Energy Report designed to motivate customers to save energy by comparing their energy consumption to other households in the community. With insights from recent research in behavioral economics, this pilot program will test a relatively low-cost way of influencing energy consumption and customer habits.

PECO is likewise expanding its investments in customer energy efficiency and demand response to reduce overall consumption by 3 percent and peak load by 4.5 percent by 2013. The company plans to spend more than \$340 million through 2013 to achieve cumulative energy savings of 1.2 million MWhs. PECO is also expanding demand response programs to achieve a peak load reduction of 355 MW. PECO will file a detailed proposal with the Pennsylvania Public Utilities Commission (PUC) this summer with the intent to begin rolling out programs later this year.

## Innovative technology and pricing programs

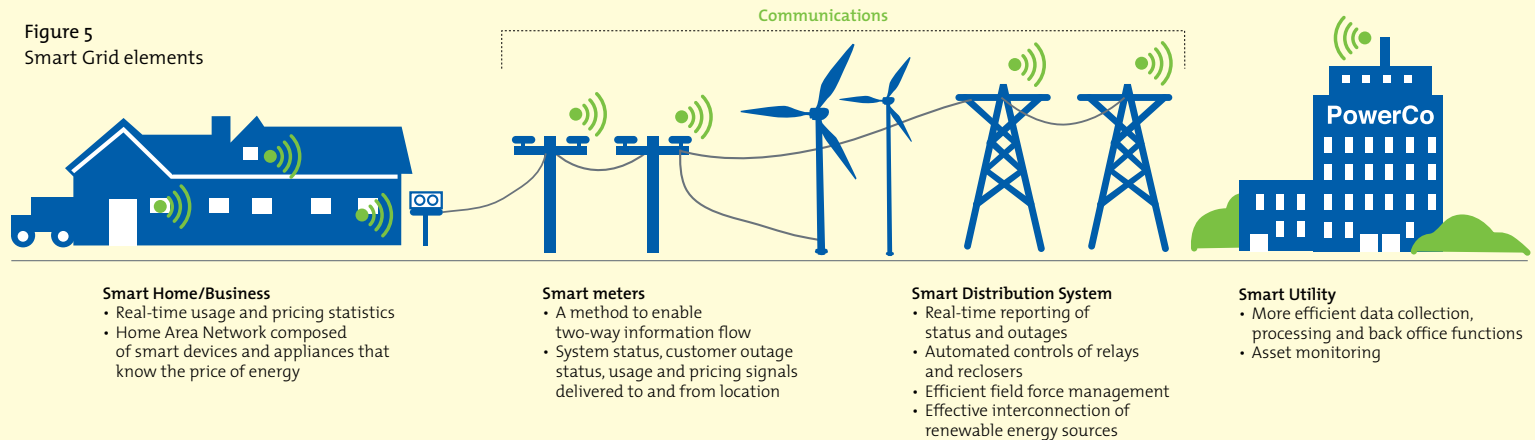
In 2008, ComEd provided a real-time pricing program to more than 6,000 residential customers. This year, with approval from Illinois regulators, ComEd will launch a \$56 million, 18-month Advanced Metering Infrastructure (AMI) pilot program. The AMI pilot will provide two-way automated “smart” meters to as many as 141,000 customers. These advanced meters are capable of capturing 15-minute usage data, they can be read and connected or disconnected remotely and in real time, and they will allow customers to access usage information via the Internet. At the same time, ComEd will launch a first-of-its-kind pilot program with approximately 10,000 customers that combines advanced meters with in-home network devices and real-time and other market pricing programs. This program will provide valuable information about likely consumer responses to the suite of new technologies that are at the core of the smart grid concept. (See Figure 5)

Meanwhile, PECO, which already has one of the largest fully automated meter reading systems in the United States, will continue to upgrade its metering system with state-of-the-art technology. Specifically, PECO will file a plan with state regulators later this summer to deploy two-way smart meters to its 1.6 million electric customers. Subject to PUC approval, PECO anticipates combining this program with voluntary real-time pricing programs that will help customers better manage their energy usage.

## Expanded green product and service offerings

As part of Exelon 2020, we are expanding the range of green products and services we offer to our wholesale and retail customers. Exelon Energy, the competitive retail subsidiary of Exelon, offers a suite of low-carbon products to commercial customers. Last year, Exelon Energy, which had already been offering renewable energy credits (RECs), was certified by the Center for Resource Solutions’ Green-e<sup>sm</sup> Energy program as a marketer of Green-e<sup>sm</sup> RECs. In March, Exelon Energy unveiled a new product: the Emission-Free Energy Certificate (EFEC). EFECs are being offered as part of a pilot program to select

Figure 5  
Smart Grid elements



commercial and industrial customers. Participating customers can compare air pollution impacts from low-carbon generation sources to the standard blend of generation resources available in the region. PJM's Environmental Information Services tracks and reports the environmental attributes of this and other products for electricity suppliers. Exelon Generation's fleet of nuclear generating plants, the largest in the nation, is the primary source for EFECs.

Exelon's delivery companies are also expanding their green product and service offerings. PECO's residential and commercial customers already have the option to purchase PECO WIND<sup>sm</sup>, which supplies 160,000 MWh annually to

more than 38,000 customers and was named one of the top 10 utility green power programs in the country. Products like PECO WIND<sup>sm</sup> enable customers to have control over the greenhouse gas and other environmental attributes of the energy they buy.

ComEd and PECO are encouraging customer-owned renewable generation - such as solar panels - under net metering tariffs. This tariff allows customers who produce electricity at their homes and businesses to sell excess power back to the utility, thereby reducing their bills as well as the need for higher-emitting sources of electricity generation.

## Customer education and outreach

The Exelon companies have continued to implement a wide range of initiatives to educate customers and reach out to the communities we serve.

ComEd sponsored the *Smart Home: Green + Wired* exhibit at Chicago's Museum of Science and Industry. Launched in 2008, the 12 Ways to Green year-long campaign raised awareness about energy efficiency and ComEd's environmental initiatives. In 2009, ComEd will expand its efforts to focus on long-term energy and cost savings for customers as well as the related environmental impact of efficiency measures. Additionally, ComEd's Smart



At the Fairless Hills Renewable Energy Education Center, an Exelon employee talks with a student about the many different kinds of electricity generation.

Ideas For Your Home program launched in June 2008 to provide residential customers incentives, tools and tips to help them save money, become more energy efficient and help the environment. A primary focus for ComEd's education efforts includes the promotion of its Web site. ComEd.com features easy access to program information and other tools such as the on-line Energy Home Energy Analysis Tool, the on-line Energy Store, the "Showcase of Homes" and "Ask the Energy Doctor."

PECO, in partnership with The Franklin Institute's Center for Innovation in Science Learning and the National Energy Education Development (NEED) Project, has developed an environmental education program for middle schools. The program focuses on the sources, uses and conservation of energy and includes a classroom component, a school energy audit, a home energy audit kit, a field trip to a generation facility and a grant for a project in the school community. In 2009, PECO piloted the program at six area middle schools; in 2010, the pilot will expand to include at least 10 schools.

PECO has also formed a partnership with ENERGY STAR® to provide consumers with more energy saving tools through the company's Web site. PECO.com/save includes an interactive home that takes visitors on a tour from attic to garage so they can explore energy saving tips and green retrofit information. Other programs include EnergySaver kits and high efficiency heat pump rebate programs. PECO's plan for launching its new energy efficiency programs will also include an extensive education and outreach effort.

In 2008, Exelon Generation opened the LEED-silver certified Exelon Renewable Energy Education Center at its landfill gas electricity generating facility in Fairless Hills, Penn. This facility features information on conservation and renewable energy technologies and provides a variety of educational resources; similar enhancements are planned for the Conowingo Hydroelectric Visitor Center. Exelon Generation's Community Affairs team also has developed a mobile energy carnival to educate students on renewable energy and conservation.

### III. Offering more low-carbon electricity

Offering more low-carbon electricity in the marketplace is a critical element of Exelon 2020. We've already made significant progress in reducing GHG emissions from Exelon's portfolio of generation resources. As we seek additional GHG abatement opportunities going forward, we recognize that the economics of different low-carbon options have shifted. Our basic approach, however, remains the same: we will continue to invest, wherever feasible, to maximize the output of existing low-carbon resources and to add new low-carbon generating capacity when and where it is needed.



Electricity generated at the Twin Groves wind farm near Bloomington, Ill., is purchased by Exelon Generation.

## Increase investment in renewable power

Exelon is expanding its already strong position in renewable energy markets by entering into substantial new resource commitments and power purchase agreements with renewable suppliers. Exelon Generation owns 638 MW of hydroelectric and landfill gas capacity and 1,070 MW of pumped storage capacity. Exelon Power Team is still the largest marketer of wind energy east of the Mississippi. Since launching Exelon 2020, Power Team acquired 198 MW of output from a wind farm near Bloomington, Ill., bringing its total wind holdings to more than 350 MW. In addition, Power Team acquired the output from a 4.8 MW landfill gas facility in Ohio and entered into power purchase agreements with two solar producers, totaling 4.5 MW, in 2008.

Exelon has established a new generation development organization to identify and develop new low-carbon energy sources, with a particular focus on renewable energy. Most recently, in response to stakeholder interest and incentives through the American Recovery and Reinvestment Act, Exelon Generation announced a partnership with SunPower to build the nation's largest urban solar installation. A federal loan guarantee will enable this 10 MW photovoltaic plant to be developed on a brownfield site in an industrial corridor on the South Side of Chicago and completed by the end of 2009.

Exelon's delivery companies are also bringing more renewable energy to their customers. PECO was the first electric distribution company in Pennsylvania to seek early procurement of Alternative Energy Credits (AECs) under the state's 2004 Alternative Energy Portfolio Standards Act. The act requires PECO to supply 3.5 percent of the energy delivered to customers using alternative resources by 2011. PECO has purchased 452,000 MWh of AECs for five years and anticipates purchasing 8,000 MWh of solar energy credits for 10 years. These early purchases stimulate renewable investment while securing supply in a cost-effective manner. ComEd is nearly doubling the amount of renewable power supplied to its customers through the purchase of Renewable Energy Credits consistent with Illinois' renewable portfolio standard. In the 2008-2009 delivery period, ComEd purchased more than 796,000 RECs to meet 2 percent of the load it serves. For 2009-2010, ComEd will purchase in excess of 1.5 million RECs to meet 4 percent of its load.



Exelon recently announced plans to operate what will be the largest urban solar installation in the country that, in addition to having a capacity of 10 MW, will reclaim several acres of a brownfield site on Chicago's South Side. Top: site as it looks today. Bottom: Artist rendering of what the site will look like when the installation is complete.

## Reduce emissions from fossil generation

We continue to pursue improvements in the efficiency and thermal performance of our fossil generating plants. We are also continuing to evaluate the economics of our existing coal-fired generation facilities to determine if any units should be retired. In addition, Exelon continues to support carbon sequestration research conducted by the U.S. Department of Energy's Midwest Regional Carbon Sequestration Partnership and the Electric Power Research Institute.

Our original roadmap for Exelon 2020 indicated that we were exploring the development of two new combined-cycle natural gas power plants to meet expected needs for additional capacity in Pennsylvania and Texas. The recent economic downturn, however, has significantly trimmed expectations for growth in electricity demand. In February 2009, we announced that the project in Pennsylvania would be postponed. We will continue to evaluate regional energy needs and economic and market conditions to determine if the plant is needed and is economically viable. We are still exploring the potential construction of a 640 MW combined-cycle natural gas unit at the Mountain Creek generating station near Dallas and expect to receive an air permit later this year.



Employees at the Oyster Creek Generating Station in New Jersey celebrate the station's re-licensing by the U.S. Nuclear Regulatory Commission for another 20 years of operation.

## Expand nuclear generation

Operating our existing fleet of 17 nuclear plants safely and reliably is and always must be one of Exelon's first priorities. We continue to invest in these units to maintain reliability, extend their useful operating lives and maximize output from this virtually zero-GHG source of electricity. Earlier this year, Exelon received a 20-year license extension from the U.S. Nuclear Regulatory Commission for its 625 MW Oyster Creek nuclear station.

Nearly 1,100 MW of uprates have been completed at Exelon's nuclear power plants during their lifetimes, effectively adding the capacity equivalent of one full, additional reactor to the fleet. In our original Exelon 2020 roadmap, we identified the potential for adding up to 350 MW of nuclear capacity through uprates at existing plants through 2014 and indicated that we were exploring the engineering and economic feasibility of realizing up to an additional 1,100 MW over the next ten years. We have continued to refine our analysis of the potential for uprates and now estimate that uprates could yield 1,300 to 1,500 MW of additional capacity through 2017. Nearly one third of these uprates are planned for completion by 2014. The first of this wave of uprates, a 38 MW increase in output, was recently confirmed following equipment upgrades at our Quad Cities nuclear plant near Cordova, Ill. Adding 1,300-1,500 MW to the existing fleet of nuclear units through these potential uprates would displace 7 to 8 million metric tons of GHG emissions per year that would otherwise come from burning fossil fuels.

Exelon has been exploring the option of building a new nuclear plant in Victoria County, Texas. In September 2008, we submitted an application for a combined construction and operating license to the U.S. Nuclear Regulatory Commission for two new units at that site. As of this writing, general economic conditions, the limited resources available to the U.S. Department of Energy for loan guarantees and the federal government's decision earlier this year to halt the Yucca Mountain program for managing commercial high-level nuclear waste have combined to reduce the feasibility of our Victoria project. As we emphasized in our original Exelon 2020 roadmap, however, building a new nuclear plant is not required to meet our overall 2020 goal.

## Looking Forward

In 2008 we said we would not wait for action in Washington, D.C., to start reducing Exelon's carbon footprint. As this report shows, we have not waited.

But we also realize that to fully achieve our goal—and for other companies and our society as a whole to realize national GHG reduction goals—focused federal action is needed. Fortunately, the prospects for action look better than ever, with recent efforts to move serious climate legislation in Congress and support from the Administration. As the debate on Capitol Hill gathers momentum, Exelon is working with policymakers in both houses to craft sound legislation. In our view, a successful national strategy for dealing with climate change must have four components:

1. **It must put a price on carbon emissions.** Exelon continues to support a market-based cap-and-trade policy as the most cost-effective way to limit GHG emissions and harness the innovative energies of our free-enterprise system to find lasting climate solutions.
2. **It must include a robust cost-containment mechanism.** The fragile state of our economy is no reason to delay action on climate change. But it does make it all the more important to adopt an approach that avoids extreme price volatility and unduly severe cost impacts.
3. **It must include a sensible method for allocating allowances.** Working with a coalition of businesses and environmental groups called the U.S. Climate Action Partnership, Exelon has endorsed an approach that allocates 40 percent of allowances directly to local electricity delivery companies. Revenues from the allowances would be used to help mitigate increased costs to consumers.
4. **It must recognize the essential role of competition in meeting our energy and climate challenges.** Competition is the best way to foster needed innovation in new low-carbon technologies and it is the only way to ensure that we ultimately adapt to these changes in the most efficient way possible.

The road to a low-carbon future is a long one. We must all begin the journey now.



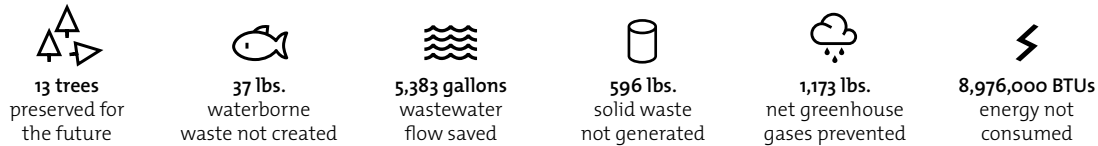
Time is not our friend with respect to global climate change. We must begin a long journey to address climate change and the usual approach – doing too much, too late – will not work.



**Forward-Looking Statements** This report includes forward-looking statements that are subject to risks and uncertainties. The factors that could cause actual results to differ materially from these forward-looking statements include those discussed herein as well as those discussed in (1) Exelon's 2008 Annual Report on Form 10-K in (a) ITEM 1A. Risk Factors, (b) ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and (c) ITEM 8. Financial Statements and Supplementary Data: Note 18; and (2) other factors discussed in Exelon's filings with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forward-looking statements, which apply only as of the date of this report. Although Exelon intends to update this report annually, Exelon does not otherwise undertake any obligation to publicly release any revision to its forward-looking statements to reflect events or circumstances after the date of this report.

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