

Testimony of John W. Rowe  
Chairman and Chief Executive Officer  
Exelon Corporation  
Before the Committee on Environment and Public Works  
United States Senate  
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Madam Chairman and Members of the Committee:

My name is John W. Rowe, Chairman and CEO of Exelon Corporation. I appreciate the opportunity to appear before you today. Exelon is headquartered in Chicago and our retail utilities, ComEd in Chicago and PECO in Philadelphia, serve 5.4 million customers, or about 12 million people – more than any other utility company in the United States. We also have a significant presence in New Jersey and in Texas. We have nuclear, fossil, hydro, and renewable generation facilities. Our nuclear fleet is the largest in the nation and the third largest in the world.

Exelon supports passage of comprehensive legislation to address the greenhouse gas issue. We need an economy-wide bill with realistic targets and timetables, an effective cost-containment mechanism, and an allowance allocation mechanism that awards allowances to electricity delivery companies to prevent dramatic consumer rate increases. Without prompt action, our industry will be caught in a carbon purgatory: we will lack the certainty we need to make the large-scale investments in clean generation that are necessary to both keep the lights on and meet the challenges associated with climate change.

I am the longest-serving CEO in my industry, having served in that capacity with a succession of companies since 1984. Exelon is pleased to be a member of the United States Climate Action Partnership (USCAP). I chair, or have chaired, the Nuclear Energy Institute (NEI), Edison Electric Institute (EEI) and the bipartisan National Commission on Energy Policy (NCEP). I am proud to note that each of these organizations has endorsed passage of comprehensive legislation to address the climate change issue.

I first testified in favor of tackling climate change before the House Energy and Power Subcommittee in 1992 when I was the CEO of another utility. Exelon was an early and vocal advocate of climate change legislation. We have testified in favor of passage on several occasions. We believe that the climate change science is settled, as exemplified by the comprehensive work of the National Academy of Sciences and the United Nations Intergovernmental Panel on Climate Change. The IPCC has declared that evidence for a discernable warming of the planet's climate system is now "unequivocal" – and has warned that much larger changes are in store if we don't begin reducing global emissions of heat-trapping greenhouse gases and do it soon. We simply must take action

now to address the problem. The longer we wait to start, the more expensive and more difficult it will be for our economy and our citizens to deal with the problem. I implore the members of this Committee to redouble your efforts to pass a bill that slows, stops, and ultimately reduces greenhouse gas emissions while protecting the American economy.

Exelon is not waiting to address this growing danger. Last year we produced “Exelon 2020,” our company’s program to reduce, offset, or displace our entire carbon footprint – some 15 million tons annually by 2020. Earlier this year, we announced that we have achieved one-third of our goal by reducing nearly 6 million metric tons of carbon dioxide equivalent – equal to taking more than a million cars off the road. Our entire “Exelon 2020” plan is available on our website ([www.exeloncorp.com](http://www.exeloncorp.com)).

Exelon 2020 includes an analytical framework for assessing the cost of reducing greenhouse gas (GHG) emissions for Exelon, our customers and the markets we serve. It shows the most and the least cost-effective ways for Exelon to address the greenhouse gas problem. The analytical results are attached to this testimony. Our analytical framework graphically shows that some ways of reducing greenhouse gases are less expensive than others. For example, the cost of reducing greenhouse gases in energy efficiency programs offered by our utilities, ComEd and PECO, ranges from -\$50.00 to \$9.00 per ton. New wind generating capacity ranges from \$45 to \$80 per ton depending on the location. New nuclear generating capacity is \$75 per ton. A new integrated gasification combined cycle plant with carbon capture and sequestration costs \$160 per ton. Adding new solar photovoltaic generating capacity costs more than \$700 per ton. These numbers do not include the effect of tax incentives or subsidies. One of the most important aspects of cap and trade legislation is that it would encourage pursuing the least expensive options first.

Exelon believes that the Waxman-Markey bill that passed the House and the proposed Kerry-Boxer bill before this Committee each constitute a good start toward a cost-effective, efficient, market-based response to the climate change challenge. A cap and trade system similar to those contained in these bills incents companies like ours to find the lowest cost solutions to the climate problem. We should reward low cost solutions rather than mandating higher cost solutions, whether those are renewable, carbon capture and sequestration or my own favorite, nuclear energy. Again, this is the idea behind our Exelon 2020 plan. A cap and trade program will force this outcome because of its competitive market nature; it will require that alternatives compete on a price basis. Climate change legislation should be designed to encourage low-cost solutions. Command and control options do not impose the discipline of the marketplace on solutions. They encourage ad hoc responses to the climate issue and subsidize expensive solutions.

I want to emphasize the importance of including four key provisions in the Committee's bill: (1) an allocation formula that protects electricity customers; (2) cost containment that protects the overall economy and jobs; (3) more reasonable near- and mid-term targets and timetables for curbing GHG emissions; and (4) support for the widespread deployment of commercial nuclear power.

### **Consumer Protection for Electric Customers**

First, climate legislation must contain an effective consumer protection measure for our industry's customers. We firmly believe that we can accomplish our national environmental objectives while ensuring robust economic growth. We support a mechanism that will allocate, rather than auction, the emissions allowances for the power sector to benefit our customers. Allocating 40% of the total allowances to local distribution companies – known as LDCs – for a transitional period is critical to help limit increases in electricity prices for our customers without sacrificing the desired environmental objectives. We at Exelon have done pioneering work on this subject having first proposed it almost four years ago. The program would be overseen by state utility regulators who will ensure that the benefits of those allowances go to customers rather than corporations.

To be abundantly clear, neither Exelon nor its shareholders will profit from allowances that go to the LDCs. The formula for distributing those allowances is very important to ensure that no single region of the country is disproportionately hurt or benefited. EEI has endorsed the formula in the Kerry-Boxer bill, and the Chairman's mark, that would distribute half of the allowances based on an LDC's historic emissions and half of the allowances based on an LDC's sales. We do not support distributing all of the allowances based on emissions as some would urge you to do; nor does EEI. Doing so would mean that virtually all of the benefits of the allowances would go to states whose generation is principally coal based and would not be fair to customers of utilities who have already made substantial investments in low carbon emitting generation fleets. This distribution formula was a key component in garnering our industry's support for the House-passed allocation provision.

We are pleased that the Kerry-Boxer bill and the Chairman's mark provide 30% of allowances to LDCs for the benefit of their customers and uses the EEI formula to distribute those allowances. I do want to note, however, that the actual number of allowances to LDCs under the Chairman's mark would be nearly 18% less in 2020 than under the House-passed bill because so many allowances are taken "off the top" of the total pool for things like deficit reduction and numerous other programs. We join EEI in supporting increasing the electric sector's share to 40% of the total pie, which is comparable to our sector's share of emissions.

## **Cost Containment**

Second, climate legislation must include an effective cost containment mechanism that will limit societal costs in the early years of the program. While it is very important to begin putting a “price” on carbon, it is also important to cushion the impact on our economy and customers for a reasonable transition period. EEI, USCAP and NCEP have emphasized the importance of cost containment provisions. We endorse a so-called “price collar” mechanism that establishes a floor and ceiling on emissions allowance prices. This consumer protection measure will help reduce the economic impact on electricity consumers, U.S. workers, and the economy while discouraging market manipulation and limiting price volatility. The Kerry-Boxer bill would establish a government reserve of GHG credits, including both allowances and offset credits, and both a floor and a ceiling on the price of both. Allowances and offsets sold from the reserve must be accounted for over time under the overall cap on GHGs. The reserve must be large enough to ensure price stability in allowance prices, particularly in the early years of the program.

## **Targets and Timetables**

We believe that the targets and timetables for greenhouse gas reductions in the Kerry-Boxer draft, which are also in the Chairman’s mark, are overly aggressive. We are particularly concerned about the goals established for the earliest years before new greenhouse gas reduction technologies have been developed and commercially deployed. For example, we do not expect substantial deployment of either new nuclear generating stations or new coal generating stations with carbon capture and sequestration in a timeframe that will achieve the results mandated by the draft. Consequently we believe that a goal of reducing emissions 14% below 2005 levels by 2020 is much more appropriate and achievable than the 20% goal included in the Kerry-Boxer bill. We look forward to further discussions with the members of the Committee on this subject.

## **Nuclear Power**

Exelon is proud to be the nation’s largest owner of commercial nuclear power generating stations; we own 17 nuclear reactors at 10 generating stations located in Illinois, Pennsylvania, and New Jersey. Nuclear energy is the nation’s largest emissions-free source of power, providing nearly 20% of our country’s electricity. New nuclear plants will both help us meet our future energy needs and also serve as an important source of green jobs. Studies conducted for the Nuclear Energy Institute indicate that construction of a new nuclear power plant provides up to 2,400 jobs during construction and will provide approximately 700 permanent jobs for several generations of workers over the 60 year operating life of the plant. And these are good jobs, paying 36 percent more than average salaries in the local area. Compared to other generation sources, nuclear power

is an enormous jobs producer. For every 1,000 megawatts of capacity, nuclear power provides 550 operations jobs. This compares to 220 jobs in a 1,000 megawatt coal plant, 90 jobs for a comparably size wind farm, and 60 jobs for natural gas.

We were very pleased to see the nuclear provisions included in the Kerry-Boxer bill, including the laudatory language about the role nuclear power plays in avoiding GHG emissions and the recognition that the long lead times for nuclear power plant construction require that action to move forward with new nuclear development not be delayed. We were also gratified to see the “statement of policy” section that calls for facilitating the continued development and growth of a safe and clean nuclear energy industry, through: (1) reductions in financial and technical barriers to construction and operation; and (2) incentives for the development of a well-trained workforce and the growth of safe domestic nuclear and nuclear-related industries.

We also applaud the provisions on nuclear workforce training, nuclear safety and waste management, as well as research and development provisions on extending plant life beyond 60 years, advanced fuel designs to enhance safety, and proliferation-resistant recycling technologies.

However, from a substantive standpoint, we are concerned that the bill does little to actually facilitate the large-scale deployment of new plants that will be necessary to reduce emissions on a broad scale. Modeling by the Environmental Protection Agency and the Energy Information Administration estimates that we will need well over 100 new nuclear plants to meet our climate goals. Those analyses also indicate that we can achieve our environmental goals faster, and more cheaply, with the widespread deployment of new plants in the near term. Simply put, we need to do more. This need was recognized in a very important op-ed by Senators Kerry and Graham, entitled “Yes We Can (Pass Climate Legislation),” published in the *New York Times* on October 10. We support their joint effort to develop a more comprehensive proposal in support of nuclear power to be included in the Senate’s climate bill.

I want to highlight three proposals we believe should be included in a nuclear power title. I do recognize that this Committee and the Energy and Natural Resources Committee have jurisdiction over various aspects of the nuclear industry. Our suggestions fall within both Committees’ jurisdiction.

#### Nuclear Upgrades and the Renewable Electricity Standard (RES)

We believe that nuclear upgrades – that is, projects that increase the electrical output from existing nuclear generating stations – provide the quickest way to get additional emissions-free nuclear generation on line. Roughly 8,000 megawatts of new, clean nuclear energy are achievable in this way.

Unfortunately, continued low natural gas prices and high capital costs would make the largest of these potential uprate projects economically unattractive. However, these projects would remain economically viable even in a very low price markets if nuclear uprates were treated as a “qualifying resource” under the proposed RES. Treating uprates as a qualifying resource would put nuclear on a par with “incremental hydro” (hydro uprates) in the legislation. Doing so would allow a utility to meet part of its renewable obligation by purchasing electricity generated from nuclear uprates. The Energy and Natural Resources Committee has reported a bill that includes an RES, so this provision should be added as part of a manager’s amendment or on the Senate floor. In the event that there is a tax title, we also believe that uprates should be entitled to an Investment Tax Credit like other clean energy technologies.

### Waste Confidence

The second issue, which affects both existing and new plants, is waste confidence. The Nuclear Regulatory Commission (NRC) regulations require the Commission determine that it has reasonable assurance that spent nuclear fuel will be safely and securely managed and disposed of before it can issue a new license, or extend an existing listing, for a nuclear plant. The NRC has long relied upon the eventual construction of the Yucca Mountain repository to support that determination. It is now apparent that the NRC can no longer rely on that program as the basis for its determination that a repository will be operational by 2025.

Even without Yucca Mountain, however, there is a consensus in our industry, and in the nuclear regulatory community, that on-site storage of used fuel is a safe long-term alternative while we explore other permanent storage options. Congress should legislatively declare that the existing on-site storage technologies for used fuel provide sufficient confidence that used fuel will be safely stored at both existing and new nuclear generating stations while we search for a new permanent storage option. A legislative solution will avoid years and years of protracted litigation on this subject.

I personally believe that reprocessing of used nuclear fuel will ultimately prove to be a viable option, but I do not believe all of the issues pertaining to reprocessing have been adequately explored. Clearly there is broad, bipartisan support in the Senate for continued research and development on the reprocessing issue.

### Loan Guarantees

As I have indicated, any successful, long-term GHG reduction program must include additional development and deployment of new nuclear power generating stations and coal-fired power plants with carbon capture and sequestration. I will focus on nuclear plants because that is where I have the

most expertise. Deployment of new nuclear plants simply will not happen, given the large up-front capital costs, without a much more robust federal loan guarantee program than currently exists.

The Energy Policy Act of 2005 included a loan guarantee program for our sector. While that program has great potential, its authorization ceiling – known as the “loan guarantee volume” – simply is inadequate to provide the support necessary for a substantial expansion of commercial nuclear power. In passing the stimulus package earlier this year, the Senate supported increasing the loan guarantee volume for new nuclear plants by an additional \$50 billion. Unfortunately that increase was dropped during conference with the House. We urge you to renew your support for an authorization at that level.

The Energy and Natural Resources Committee has endorsed a Clean Energy Deployment Administration that would expand the amount of loan guarantees available and provide additional independence for the program within the Department of Energy. There are also a host of technical changes to the loan guarantee program that should be included. We endorse these efforts as essential to a successful program.

NEI has also identified a list of additional initiatives to be included in a comprehensive bill, and I commend them to you. They can be found at: <http://www.nei.org/newsandevents/newsreleases/nei-unveils-package-of-policy-initiatives-needed-to-achieve-climate-change-goals/>. Several of these are tax credits which, of course, are under the jurisdiction of the Senate Finance Committee.

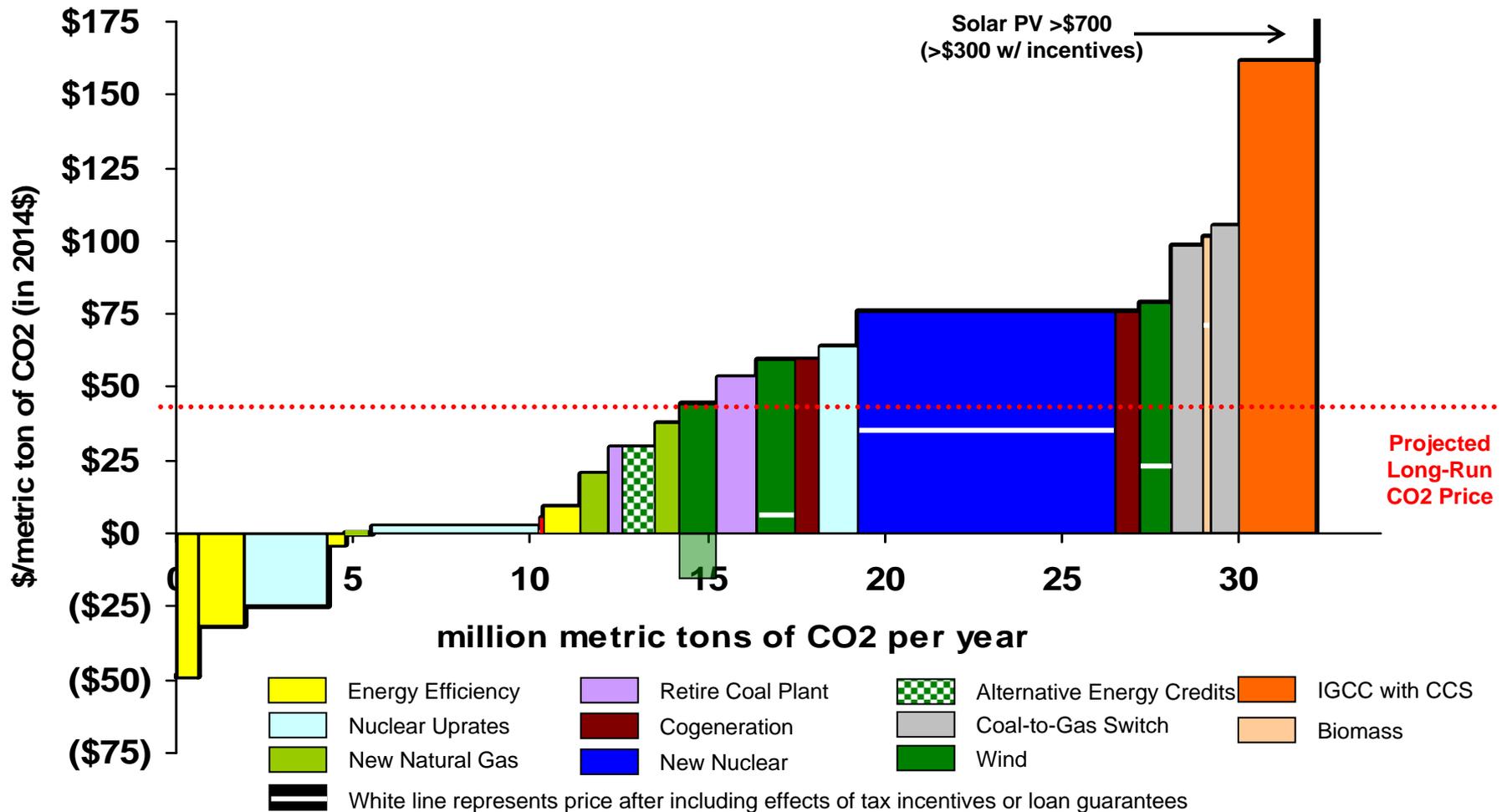
## Conclusion

In conclusion Madame Chairman, thank you for the opportunity to testify on this important issue. As you have already heard during the course of these lengthy hearings, there is a broad coalition of businesses, labor, environmentalists, academics, and other stakeholders who support passage of climate change legislation as soon as possible. As evidence of that support, I am attaching a statement, which we endorsed, that appeared recently in several national publications calling on the Senate to pass clean energy legislation with a cap on greenhouse gas emissions this year. The statement was signed by 32 parties.

I simply cannot overstate the critical need for this Committee to approve a comprehensive bill that will put us on the path to a low-carbon future. That path is long and challenging. We need an approach that is both bold and reasonable and provides some degree of economic certainty for us to plan for our future. I realize that you are encountering committed and powerful opposition; taking meaningful action on this very difficult challenge will require political courage and an ability to take the long view. Climate change truly is one of the greatest

challenges facing our nation and the world in this new century and nothing is more important for our nation's economic, energy and environmental future than dealing with it. Now is the time to get on with it.

# Cost of Carbon Mitigation in Electricity Supply



Note: Emissions abatement estimates for new generation capacity represents emissions reduced in the market as a result of the project less emissions introduced due to the project (if any). New nuclear plants assumes 1,460 MW of new generation.

Cap-and-trade legislation will encourage us to do the cheapest options first

# America's Energy and Environmental Future is in Our Hands.



Right now, Congress is working to develop legislation to save energy, improve our energy security, and address climate change in the most cost-effective way. This can help create an estimated **1.7 MILLION JOBS** across the United States – **CLEAN ENERGY JOBS IN EVERY STATE IN OUR COUNTRY.**

Legislation is needed to secure our country's energy supply while capping and reducing greenhouse gas emissions through a robust, market-based approach. Climate change is real and the longer we delay taking prudent action, the higher the cost for future generations. Legislation is our best opportunity to get a low cost, effective national response this year.

It's an American solution to a global economic and environmental challenge. That's why leading business, labor, and environmental advocates have joined together to support critical national legislation. Working together, we can do it, and create more jobs while we do so.

**We call on the Senate to pass clean energy legislation with a cap on greenhouse gas emissions this year.**



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