

**“Energy Dependence and Climate Change”  
John Rowe, Chairman and CEO, Exelon  
Prepared Remarks  
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**The creator of electricity industry, Thomas Edison, once said, “Discontent is the first necessity of progress”**

**Let us hope that is true, for we find ourselves in a time of much discontent**

**The financial crisis has the markets reeling**

**Since hitting its peak last October, the total value of stocks covered by the Dow Jones Wilshire 5000 has dropped 54% -- From \$19.1 trillion to \$8.7 trillion – a loss of \$10.4 trillion.**

**And a protracted recession looms**

**Projections suggest economic strain will continue for several years, and unemployment will approach 10%.**

**Our new president inherits a nation with a fragile economy, a war abroad, and a warming climate.**

**Any one of these challenges would test an incoming president—addressing all will require an unprecedented effort.**

**Yet common to each is the pressing need for an effective energy policy.**

**Our nation has not had one in 30 years – except to passively enjoy low-cost fossil fuels.**

**For transportation, we are increasingly dependent on foreign oil, much of which comes from countries from which we are politically estranged.**

**We are all concerned about the role of oil in our policies in Iraq**

**We have equal reason to be concerned about Russia’s recent incursion into Georgia, and its ever-greater dominance over European gas.**

**In my industry, we depend very little on oil, natural gas is very important, and we continue to depend heavily on coal.**

**The United States today gets about 50% of its electricity from coal, and 20% from natural gas.**

**Nuclear, which generates virtually no GHGs, makes up about 20% of our nation's power supply.**

**And renewables account for less than 10%, with three quarters of that coming from hydroelectric power.**

**Yet climate change and other environmental concerns now threaten our reliance on both**

**The demand for energy must be met**

**And it must be met with the least reliance on unfriendly nations**

**The least impact upon our climate**

**And the least burden on the U.S. economy**

**Tonight, I will share the five key elements I believe are imperative to a sound energy policy, and the actions Exelon is taking while we await that policy.**

**First, the next administration must work with Congress to enact mandatory, economy-wide climate legislation – and enact it soon.**

**With the nation's attention on the recession, some believe this action should be delayed.**

**That would be a grave error, both for our economy and our climate.**

**The Brattle Group's recent study for the Edison Foundation projected the industry will need to invest as much as \$2 trillion between now and 2030 to meet growing demand and replace carbon-intensive infrastructure.**

**Unfortunately, capital does not move well against uncertainty.**

**Our ability to build anything other than gas will continue to be hampered by the lack of certainty around the future price of carbon emissions.**

**A delay in passing climate change legislation will do much more than discourage needed infrastructure investments - it will also seriously hamper our ability to address the climate challenge in time to make a real difference.**

**Building a low carbon economy takes time, innovation and capital – all these things are wasted if we delay action.**

**The scientific community has warned that a discernible warming of the planet's climate system is now "unequivocal."**

**Reports by the Intergovernmental Panel on Climate Change and the National Academy of Sciences persuade all but the most skeptical**

**Global average temperatures are rising, and human activity, specifically the burning of fossil fuels, is a major contributor.**

**Predictions about the long-range effect on the world's ecosystem range from the inconvenient to the catastrophic.**

**But we cannot allow that uncertainty to prevent us from getting started.**

**We would be far wiser to begin a moderate program now than to wait and do something draconian when it may be too late.**

**The major bills that deal with climate change are all based on cap-and-trade systems.**

**These systems would effectively deal with the climate problem by providing economic incentives to reduce greenhouse gas emissions, and have proven effective in the fight to limit NOx and SOx emissions.**

**Only by incorporating the cost of carbon into the marketplace will we get the innovation we need to drive effective solutions.**

**But we must resolve three very vexed issues to make cap-and-trade work**

**The first is how to ensure cost increases are phased in gradually**

**We have a weak economy, and we do not want to shock the system.**

**A cost containment mechanism would give political stability to a cap-and-trade regime, enhance its longevity, and allow time for better technological solutions to be developed and implemented.**

**The second vexed issue is how best to account for offsets**

**Offsets come in many varieties, but the concept is basically that one can pay to reduce emissions elsewhere instead of reducing one's own emissions.**

**Examples in my own company include PECO's energy efficiency programs and our nuclear uprate program, which displaces the emissions of others with low-carbon nuclear generation.**

**Most commonly, however, offsets are thought of as international projects, such as the work that Chicago's Museum of Natural History is doing at Cordillera Azul National Park in Peru, with Exelon's support, to prevent deforestation.**

**Offsets can be difficult to measure and verify, and carry risks of impermanence**

**But will be essential to moderate the near-term cost of reducing carbon emissions.**

**The third issue is how to distribute carbon allowances – Do you auction? Do you give them out for free?**

**In the electric sector, we support initially allocating allowances to local distribution companies like PECO for the benefit of customers, and phasing them out over time.**

**While Washington sorts through these questions, we at Exelon have decided to take action now.**

**We recently launched "Exelon 2020: A Low-Carbon Roadmap."**

**Our goal is to reduce, offset, or displace more than 15 million tons of greenhouse gas emissions per year by 2020, the equivalent of our entire carbon footprint.**

**Exelon 2020 is both a roadmap for our own actions and a set of recommendations for policy decisions, recommendations that we advocate on Capitol Hill.**

**The second imperative is a commitment to energy efficiency and conservation across our entire economy**

**President Obama will clearly be focused on efficiency and has called it the "cheapest, cleanest, fastest energy source."**

**We concur.**

**Simply stated, the initial increments of energy efficiency produce the most cost-effective way to reduce reliance on foreign energy, reduce reliance on fossil fuels, reduce CO2 emissions, and reduce the total cost of energy.**

**I see three fundamental drivers for increased efficiency.**

**First, government at all levels must adopt new building, equipment and appliance efficiency standards, something clearly on the agenda of the new administration.**

**Second, customers must see the real cost of energy**

**This goal is at the heart of a cap-and-trade regime, which would internalize the cost of greenhouse gas emissions and make efficiency more attractive to consumers.**

**Third, utilities can play a significant role, not only through subsidy programs, but also by adopting technologies like smart grid that will enable customers to understand the economic impacts of their usage and to manage that impact.**

**We recently redesigned our own Chicago headquarters, reducing electricity consumption by 50% and earning a LEED Platinum certification – but we are not stopping there.**

**Exelon 2020 contains an internal goal of reducing energy-consumption in our buildings by 25% within the next 5 years, and we take this goal very seriously.**

**Denis mentioned some of the wonderful ways PECO is greening both their facilities and their operations, putting Exelon 2020 into action here in Philadelphia.**

**But efficiency alone will not get the job done**

**The Institute for Electric Efficiency projects that efficiency programs can offset about 35 percent of expected growth in electricity usage between 2008 and 2030.**

**Yet this does not put a dent into our existing carbon-intensive infrastructure - we also need new sources of supply**

Which brings me to the third imperative – an economically responsible approach to renewable energy

Renewables are the favored solution of most politicians, both left and right

28 states and the District of Columbia have now adopted so-called renewable portfolio standards, and there is strong support for enacting a federal standard.

Unfortunately, renewables tend to be a very expensive way to reduce carbon impacts.

Our own analysis, the heart of 2020, found that without subsidies, it is three times as expensive to displace a metric tonne of carbon in our service territories with wind than it is with natural gas, and 50% more than with new nuclear.

And at its current cost, solar is more than 10 times as expensive as wind, although we do expect costs to contract in coming years.

And the intermittent operation of most renewable resources means that we must install backup generation, usually gas fired, for when the wind doesn't blow or the sun doesn't shine.

A recent poll suggests that most voters think climate is a real problem and want action.<sup>1</sup>

But they don't like a tax – they know it costs money; they don't like cap-and-trade – they think it costs money; and they DO like RPS – because they think it's free.

Ironically, RPS can be the most-expensive way to skin the cat, because it removes the ability of the markets to search out the most economic low-carbon solution.

Renewables, like efficiency, clearly must be a part of the solution

We must enact longer-term production tax credits to provide the certainty that will attract investment.

Yet at the same time policymakers must keep an eye on the economics of each renewable alternative.

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<sup>1</sup> Source: Resources for the Future

**The cost to comply with California's new 33% RPS was recently estimated at \$150/tonne by one of their own state regulators.**

**Which is why my fourth imperative for the next administration is to make a firm financial commitment to new low- carbon base load generation**

**The federal government must fund research and development of carbon capture and sequestration.**

**Coal is an abundant domestic fuel source and essential not just to the economies of Exelon's home states of Pennsylvania and Illinois, but to our nation's energy security.**

**Globally, we cannot successfully address climate change unless we develop technologies that will enable us to capture and sequester GHG emissions from existing coal plants.**

**But the technology remains elusive, the costs will be very high, and MIT's 2007 Future of Coal report poses serious unanswered questions about geological sequestration.**

**Federal support for research and development is essential, and can be financed by auctioning a small portion of the permits in a cap-and-trade system.**

**The federal government must also enact loan guarantees for new nuclear.**

**Nuclear power today supplies the vast majority of U.S. low carbon electric energy, and does so both safely and efficiently.**

**If we are serious about improving our energy security and addressing climate change, we will need at least 25 – 30 new reactors by 2030.**

**The cost of developing those reactors, particularly the initial 6 – 8 units, will be staggering -- \$4,000/kw or \$4B to \$6B per unit.**

**We cannot lead in this next generation without federal support in the form of loan guarantees.**

**With effective carbon legislation, these loan guarantees will be transitional.**

**We calculate that a carbon price of \$40/tonne will make new nuclear cost competitive without subsidy.**

**But so far, the federal government has failed to adequately fund the loan guarantee program.**

**The DOE has received loan guarantee applications totaling \$122 billion to finance the construction of 14 plants, far exceeding the DOE's \$18.5 billion in funding.<sup>2</sup>**

**I commend Governor Rendell and President-elect Obama for their recognition that infrastructure investment can help us make our way out of this economic morass.**

**We would be well served to include investment in low-carbon base load generation infrastructure in those plans.**

**Constructing a \$6 billion nuclear power plant could put a lot of people to work and help us meet the President-elect's goal of bringing our greenhouse gas emissions to 1990 levels by 2020.**

**Finally, the next administration must remain committed to competitive energy markets, particularly in wholesale electricity**

**Not a popular sentiment in these troubled times, which are characterized by rekindled regulatory fervor.**

**We all know, if we ever forgot, that you cannot have good property rights and good markets without good rules.**

**But the cure for the sins of Lehman Brothers is not the policies of the German Democratic Republic – nor is it a return to the monopoly utility industry of the 1980s and 1990s.**

**Competition in the electricity sector has delivered an impressive record of new, environmentally preferred investment.**

**It has also driven dramatic improvements in the operating performance of existing generation, and has helped contain wholesale price increases.**

**Since 1999, production improvements of nuclear plants under market competition have added the equivalent of 3,600 megawatts to the grid, or four good-sized nuclear units, at no additional capital cost.**

**We must acknowledge that inevitably, with the myriad ways in which we will attack the climate challenge, we will not get it just right.**

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<sup>2</sup> \$122 billion in applications includes Exelon's loan guarantee application for the Texas plant.

**With markets, both for energy itself and for greenhouse gas emissions through cap-and-trade, we can have a self-correcting mechanism.**

**Paul Joskow recently gave a talk at Resources for the Future, where he argued that an effective cap-and-trade regime for carbon will require extending competition across the country.**

**This would ensure consumers get the price signals needed to change usage behaviors and to prevent the cost overruns of the last wave of regulated investment**

**It would also provide a regulatory framework conducive to supporting long-distance transmission lines to bring renewable energy to load centers.**

**Unpopular though it may be, we must recognize that ours is a national industry, living in a global energy market, dealing with a global environmental crisis.**

**And so, we return to Edison's admonition**

**There is great discontent about energy today, and great provocation for it**

**The question is whether we allow that discontent to push us forward, or push us backwards**

**The answer to me in energy policy is self-evident**

**We must have climate change legislation**

**We must pursue the potential of energy efficiency**

**We must move forward on renewables, ever mindful of the cost**

**We must move forward on clean coal and next generation nuclear**

**And we must have the discipline and innovative drive of competitive markets**

**Exelon 2020 is our attempt to channel our discontent toward progress – You can find the full document it at [www.exeloncorp.com](http://www.exeloncorp.com). I commend it to your attention.**