

Remarks as Prepared

Bill Von Hoene Talking Points
“Environmental Regulation: Building a Clean Energy Future”
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30 minutes; Expert responses and Q&A to follow

Slide 1: Title Slide

Slide 2: Introduction / About Exelon

Thank you, Dr. Fullerton, for that kind introduction — and thanks to the Center for Business and Public Policy for inviting me to speak to you today.

The Center’s mission is to examine the intersection between market forces and public policy, a place where Exelon – as part of the highly regulated electric utility industry – lives, day in, day out.

Let me begin by telling you a bit about our company.

One of the nation’s largest electric and gas utilities, with more than \$17 billion in annual revenue and a market cap of close to \$30 billion.

Family of companies includes energy generation, power marketing and energy delivery.

One of the industry’s largest electricity generation portfolios, with about 31,000 megawatts, including the largest fleet of nuclear power plants in the U.S.: 17 units at 10 locations, including nearby Clinton Power Station, about 40 miles from Champaign.

Because nuclear produces no CO2 emissions, Exelon is the least-carbon intensive of the nation’s large utilities.

Portfolio also includes plants powered by hydro, wind, solar, landfill gas and fossil fuels.

On the energy delivery side, Exelon serves 5.4 million customers through ComEd utility in northern Illinois and PECO utility in southeastern Pennsylvania.

Slide 3: The Climate Change Problem

From Exelon’s perspective, climate change is one of the greatest financial, technological and public policy challenges facing our industry and the country.

There are some who still claim that climate change is not real — but the science is clear.

Errors by a few members of the UN's Intergovernmental Panel on Climate Change last year caused some to broadly doubt the consensus.

In May 2010 the National Academy of Sciences issued a series of new reports that confirm climate change is indeed occurring due to human activities that produce greenhouse gas emissions.

And GHGs aren't the only problem. To a large extent, our industry continues to rely on the burning of coal and other cheap fossil fuels, which emit numerous traditional pollutants, such as sulfur dioxide, nitrogen oxide, mercury, acid gases and other hazardous pollutants, and coal ash.

These pollutants raise serious financial and regulatory questions for our industry, many of which are expected to come to a head in the next three to four years, and which I'll discuss in greater detail later.

What is clear is that electric utilities have a leading role to play in charting the course to a clean energy future – as uncertain as the path forward may be.

This uncertainty has made the industry hesitant to make the large-scale investments needed to make the transition, as power plants are long-term investments that take many years to build and longer to produce returns.

Slide 4: Different Fuels, Different Problems

As we examine our current fuel options for electricity generation, we know that there is no silver bullet technology; each comes with its own set of challenges.

And until legislation or regulation moves forward, it will continue to be difficult to make long-term business decisions.

As we know, coal is cheap right now, but is the greatest contributor of air pollution – a societal and health cost not yet reflected in its low cost.

Clean coal with carbon sequestration is still in its experimental stages and remains unproven.

We've discovered expansive new reserves of natural gas, which is cleaner than coal, but there are environmental concerns over extracting it.

Building new nuclear plants would add emission-free baseload power, but is not currently economic and lacks a long-term solution for storing spent fuel.

Renewable sources of energy like wind and solar are clean, but continue to be hampered by their relatively high cost and intermittency. The wind doesn't blow and the sun doesn't shine all the time – but we need access to electricity 24/7.

Slide 5: Obstacles to a Clean Energy Future at the Lowest Cost

Furthermore, a “perfect storm” of economic and political challenges has made this an especially difficult time to transition to cleaner energy sources.

Political wrangling between the parties over how best to address the nation's energy problems – and in some cases, whether we need to address them at all – has made it difficult to move forward with policy solutions.

Meanwhile, the federal government continues its ad hoc approaches to climate change and energy security.

Congress has provided tax credits and subsidies for expensive wind, solar and other renewable projects since 1992.

New nuclear plants currently have access to expanded loan guarantees.

And there are similar proposals to fund clean coal projects through these types of mechanisms and others.

Nearly 30 states have adopted Renewable Portfolio Standards requiring a fraction of the electricity utilities supply come from renewable sources, regardless of whether they are the most economic clean energy options.

All these policies have the potential to reduce emissions, but in an inefficient and non-transparent way.

To make matters worse, the economy fell off a cliff two years ago, and its impact still reverberates throughout the energy sector.

So long as unemployment remains high, it will shift the focus to short-term job gains, while clean energy investment will take a backseat.

Furthermore, the price of natural gas, which sets the price of electricity, is at historic lows. This, and a reduction in demand, further hinders investment and innovation in clean energy, because it takes away the economic incentives to transition to higher-cost fuels.

Slide 6: The Risks of Inaction

Despite the obstacles, the risks of inaction are far greater.

Our infrastructure is expensive. The electric power industry needs to invest over a trillion dollars by 2030 just to keep the lights on, according to a study by The Brattle Group.

This figure does not include investments needed to meet the requirements of forthcoming environmental regulations or the carbon legislation we hope will eventually reemerge in Congress.

Yet, more than 120 proposals for new coal-fired power plants have been cancelled over the last 10 years.

And no new nuclear plants will be built without the incentives of a price on carbon or a guaranteed rate of return.

Once the industry gets some clarity around how emissions will be legislated or regulated – and therefore which clean energy options will make the greatest economic sense – we can start to make the significant investments that will help the economy and create jobs.

In the meantime, our competitors abroad are moving ahead of us in the clean energy race.

Ernst & Young last month named China the most attractive place to invest in renewables, knocking the U.S. out of the top position.

In 2009, for instance, nearly \$35 billion in private money flowed into Chinese renewable energy projects, according to Bloomberg New Energy Finance; the U.S. attracted under \$19 billion.

That difference represents green jobs that could be created at home but instead are being created abroad.

The regulatory uncertainty also sustains our reliance on foreign oil, which has serious implications for our national security.

Meanwhile, our emissions of carbon and air pollution continue unchecked, posing significant risks to our natural environment and public health that carry far greater long-term costs.

Slide 7: The Need for a Market-Based System

There are two primary ways to motivate electric utilities to reduce their emissions: legislation or regulation – the carrot or the stick.

We believe that the best way to transition to a clean energy future would be a market-based system that puts a price on carbon, such as cap-and-trade.

This would impose the least cost on businesses and consumers and create the financial incentives power generators need to begin to make the massive investments in a clean energy future.

The U.S. House of Representatives passed legislation to create such a cap-and-trade system in 2008.

For the many reasons discussed previously, the Senate failed to follow suit and now that the mid-term elections are upon us, the likelihood that Congress will enact legislation is very low.

In the absence of a price on carbon, the U.S. EPA has made it clear it intends to move forward with regulations of traditional pollutants and carbon under the Clean Air Act, a successful piece of federal legislation passed 40 years ago that requires the EPA to control air pollution to protect public health.

Slide 8: Legally Mandated EPA Regulations

If the EPA's numerous rules proceed as expected, they have the potential to improve the quality of the air we breathe and transform the electric industry.

The cost of compliance with these regulations will lead companies to retire the oldest, dirtiest, least efficient coal plants.

In fact, companies have already announced the retirement or mothballing of many of these units because even without these regulations, it is no longer economic to continue running them.

Our analysis indicates that two EPA regulations – the Transport Rule and Hazardous Air Pollutants rule – would likely result in the retirement of 10% of U.S. coal-fired generation.

Those that don't retire will require pollution controls like scrubbers to clean their stacks, resulting in a sweeping new construction program for compliance.

Slide 9: EPA Regulations – Market Implications

Contrary to what some are saying, the electricity grid will remain stable and the lights will stay on during this transition.

A recent study by MJ Bradley Associates found that the industry is "well-positioned to respond" to the EPA's regulations without threatening electric reliability.

Further, an MIT report found that much generation from coal retirements could be replaced by existing, underutilized natural gas capacity.

Opponents of EPA action say complying with the new rules will cost too much.

But the costs of compliance will be far less than the healthcare and economic costs of noncompliance, as confirmed by studies by the EPA, Resources for the Future and others.

In fact, EPA estimates that for every dollar spent to comply with existing Clean Air Act rules, we have received more than \$40 of benefits in return — and that's not to mention the prevention of 200,000 premature deaths and millions of respiratory illnesses thanks to improved air quality.

The transition will be greatly eased by expanding reserves of natural gas and prices which are both lower and more stable than in recent years.

Coal industry special interests also claim that EPA regulations will result in job losses.

First, these regulations will only impact the 50% of plants that have failed to install pollution controls – and only 10% of those are likely to shut down.

Second, these requirements will result in a new construction program for compliance.

Jobs will be created in constructing new gas plants and renewables to replace retiring coal plants.

And installing scrubbers at power plants will create between 800 and 1,000 jobs per project, according to Industrial Economics.

Utilities that have already made it a priority to have a clean fleet will be at an advantage when these regulations are implemented. And customers who have already borne these costs should be advantaged also.

There are some in our industry who believe that they can go to the next Congress and have these regulations delayed or stopped altogether.

But delay of these regulations will simply add to the investment uncertainty, continue to keep capital on the sidelines, and won't create jobs.

Slide 10: Exelon 2020

Exelon has decided not to wait for Congress or EPA to act.

In 2008, we introduced *Exelon 2020*, a business strategy – and the only of its kind – to eliminate the equivalent of our carbon footprint by 2020. We are focusing our efforts in three areas:

1. Greening Exelon’s operations to reduce our emissions.
2. Helping the customers and communities we serve reduce their emissions.
3. Offering more low-emission electricity in the marketplace.

It is not a happy coincidence that Exelon is in a position to achieve this goal.

We have long believed that a clean energy portfolio, based on sound economics, creates compelling shareholder value and provides a clear competitive advantage.

Therefore, we began the transition to a clean energy future years ago by selling fossil plants and investing in our emission-free nuclear fleet.

Slide 11: *Exelon 2020* Framework for Lowest-Cost Approach

Our current *Exelon 2020* analysis, shown here, tells us which investments have the highest returns for our shareholders, while also providing our customers with clean, reliable and secure power in the most cost-effective manner.

We update this analysis each year to evaluate clean energy supply options based on factor such as the price of natural gas, which sets electricity prices.

1. Today, we see that retiring inefficient coal plants (light purple) has become the cheapest option, even before EPA regulations take effect.

Exelon is in the process of retiring four carbon-intensive fossil units in Pennsylvania for a total of 933 MW.

2. Most energy efficiency (yellow) initiatives remain attractive, and we continue to offer successful energy efficiency programs to our utility customers in Illinois and Pennsylvania through ComEd and PECO.
3. Nuclear uprates (light blue) also remain attractive. Uprates are efficiency improvements that can be made to increase a nuclear plant’s output.

Exelon is in the midst of a plan to that will add up to 1,500 megawatts of zero-emission power – the equivalent of building a new nuclear plant – through uprate projects by 2017, at half the cost.

One such project was recently completed at the Clinton plant.

Other options begin to get very pricey

Wind (dark green) requires a carbon price between \$80-\$120/metric tonne of emissions.

New nuclear (dark blue) requires \$100/tonne, so we have no plans to build a new plant.

Solar cost is down one-third from a year ago but is still \$450/tonne and off the chart.

An existing proposed clean coal project requires \$500/tonne to be economic.

This analysis reinforces the need for a market-based solution to the problem.

The data show that picking favored technologies in 2008 would have led to some good decisions, like energy efficiency and uprates, but also very large expensive ones, like new nuclear plants and clean coal, that don't make economic sense today.

If we had chosen to solve our carbon problem with wind that we expected at the time to cost \$45 per tonne, we would find ourselves in a position where it costs \$80 per tonne today.

A market-based approach will reward companies for reducing their carbon emissions in the cheapest way possible, and keep electricity prices lower.

Following this approach, Exelon is now halfway to achieving its goal of eliminating its carbon footprint, which shows that it is doable and can make a difference.

Slide 12: Conclusions

There is no easy path to a clean energy future without regulatory certainty.

A price on carbon remains essential to ensure that national efforts to move toward clean energy are undertaken at the lowest possible cost.

But while the debate over climate change legislation continues, an orderly implementation of new regulations, starting soon, is better than doing too much too late.

EPA's regulation of emissions and/or carbon legislation will change the way the electric industry looks in the not too distant future.

The question facing the United States is not whether it should reduce emissions, but how to do so affordably, especially in light of current economic conditions.



Environmental Regulation: Building a Clean Energy Future

*William A. Von Hoene, Jr.
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About Exelon

Exelon.
Generation

ComEd.
An Exelon Company

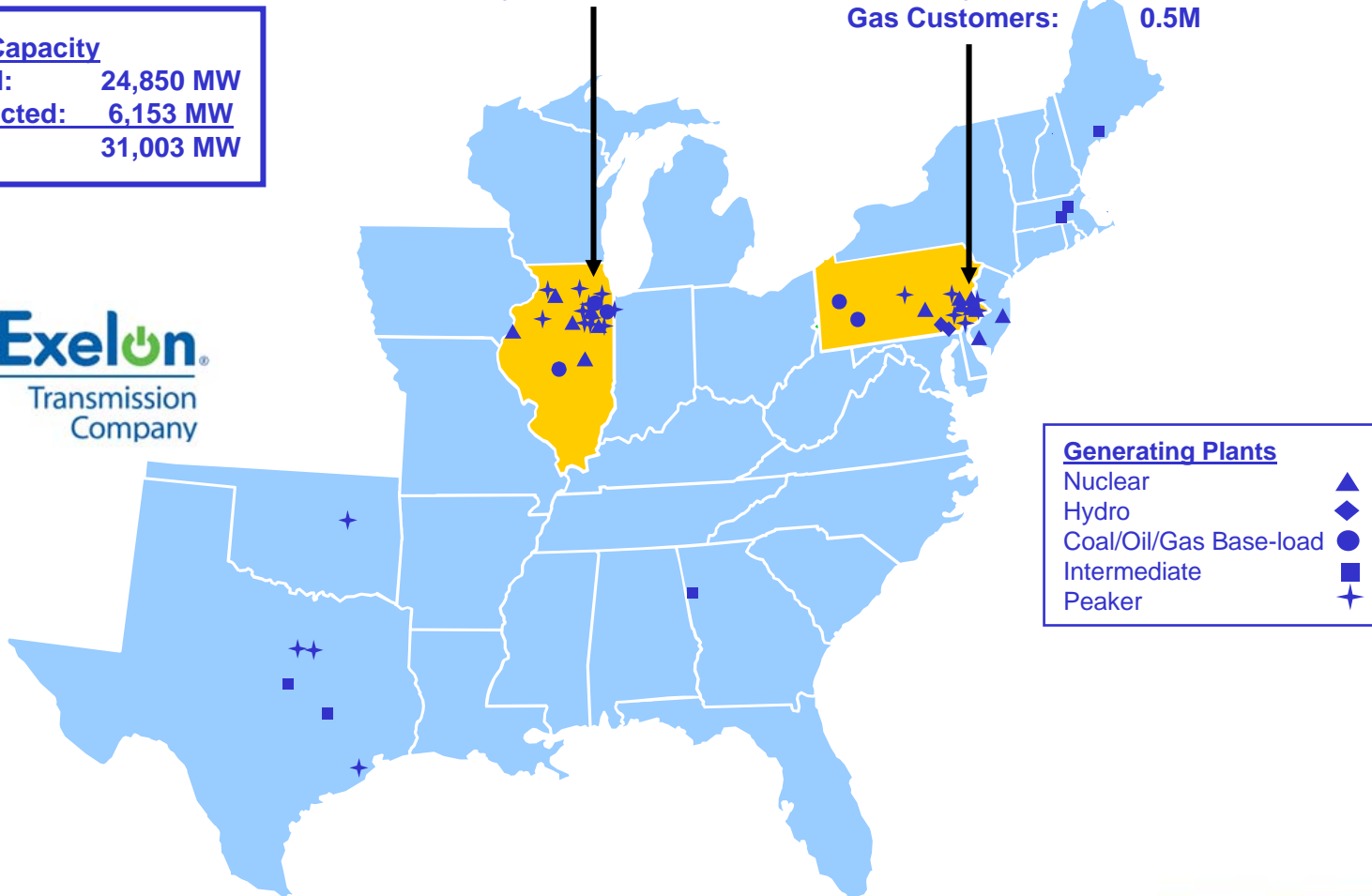
PECO.

Electricity Customers: 3.8M

Electricity Customers: 1.6M
Gas Customers: 0.5M

<u>Total Capacity</u>	
Owned:	24,850 MW
Contracted:	6,153 MW
Total:	31,003 MW

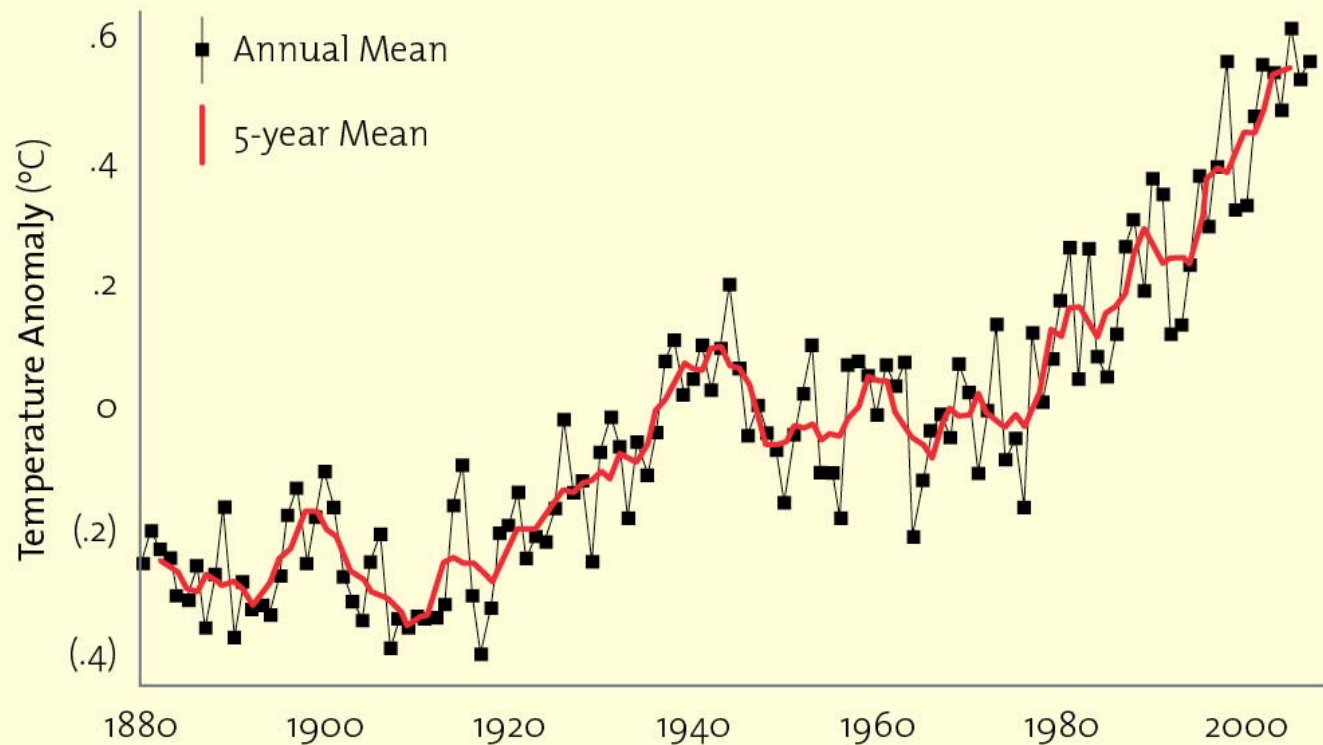
Exelon.
Transmission Company



<u>Generating Plants</u>	
Nuclear	▲
Hydro	◆
Coal/Oil/Gas Base-load	●
Intermediate	■
Peaker	+

The Climate Change Problem

Figure 1
The Thermometer Record



Source: NASA Goddard Institute for Space Studies

Different Fuels, Different Problems

- ✓ **Fossil fuels:** coal, natural gas, oil
 - Dirty, but cheap
- ✓ **Nuclear**
 - Emission-free, but costly to build and need long-term spent fuel storage
- ✓ **Renewables:** hydro, wind, solar, geothermal, TBD
 - Clean, but expensive and some are intermittent



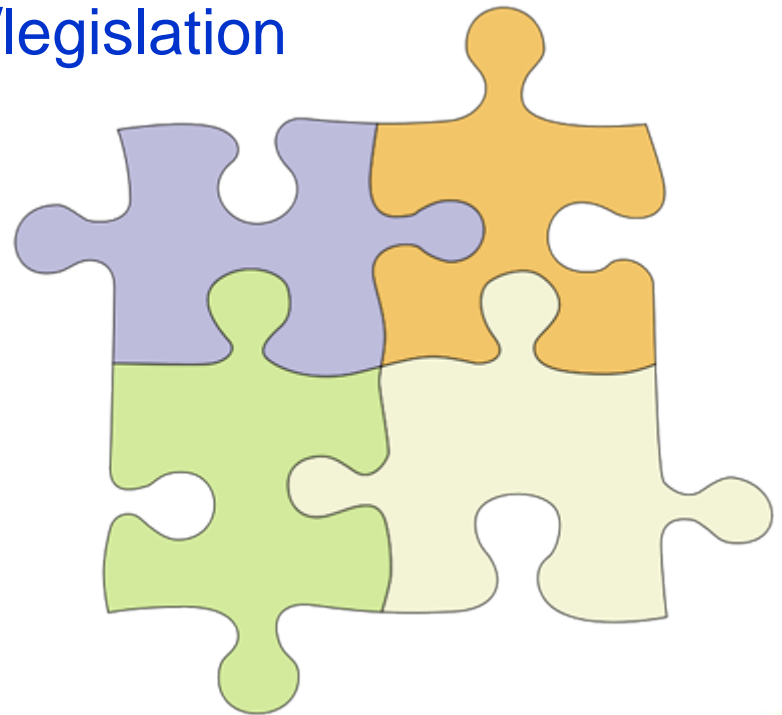
Obstacles to a Clean Energy Future at the Lowest Cost

✓ Political

- Subsidies to higher-cost options
- Varying regional regulation/legislation

✓ Economic

- Sluggish economy, jobs
- Cheap natural gas



Risks of Inaction

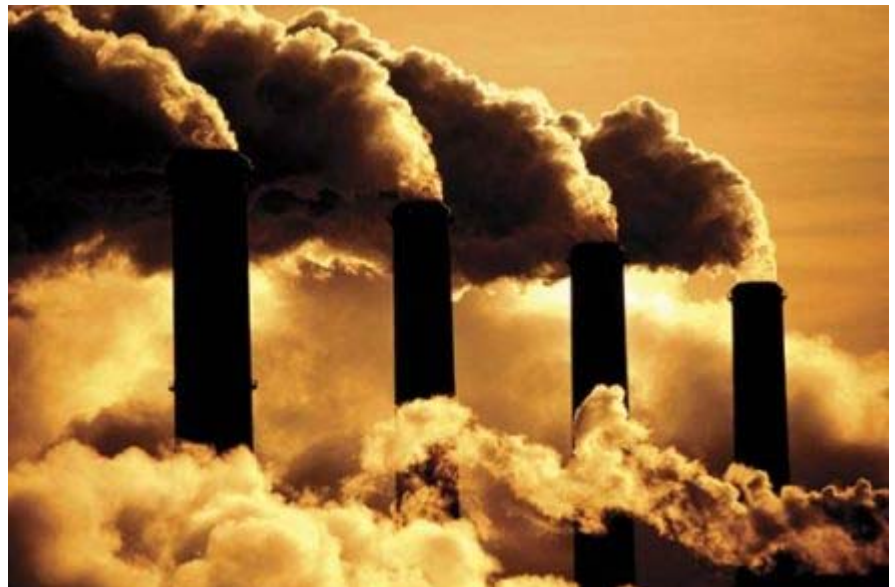
✓ Financial

- Continued legislative/regulatory uncertainty = Stymied investment
- Global competitiveness
- Job creation

✓ National security

✓ Environmental

- Climate
- Health



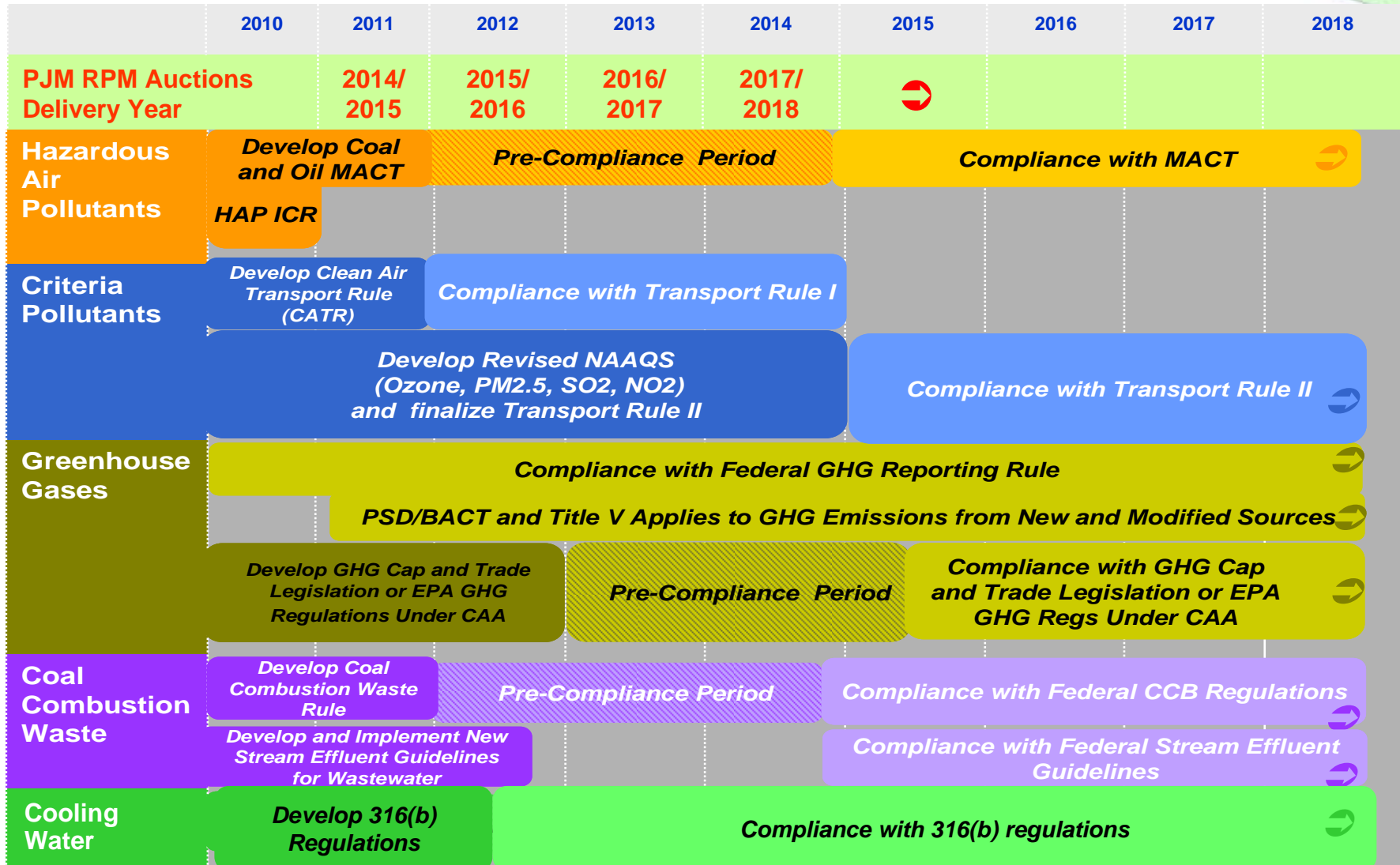
The Need for a Market-Based System and Its Recent Fate

✓ Price on carbon

- Most cost-effective way to transition to a clean energy future
- Spurs investment and innovation
- Levels the playing field with an economy-wide approach
- Legislative approach – cap-and-trade – died this Congress



Legally Mandated EPA Regulations



Notes: Reliability Pricing Model (RPM) auctions take place annually in May.

For definition of the EPA regulations referred to on this slide, please see the EPA's Terms of Environment (<http://www.epa.gov/OCEPAterms/>).

EPA Regulations – Market Implications

- ✓ Electric system reliability
 - Dirty, inefficient coal plants can be retired in orderly fashion without reliability problems
- ✓ Economic cost
 - Cost of compliance much lower than healthcare and economic costs of noncompliance
- ✓ Jobs
 - Only 10% of coal plants likely to close; new jobs to install pollution control technology and in clean energy
- ✓ Cost of electricity to consumers
 - Prices will go up, so we need to transition to lowest-cost options

Exelon 2020

The Goal

Reduce, offset or displace more than 15 million metric tons of greenhouse gas emission per year by 2020

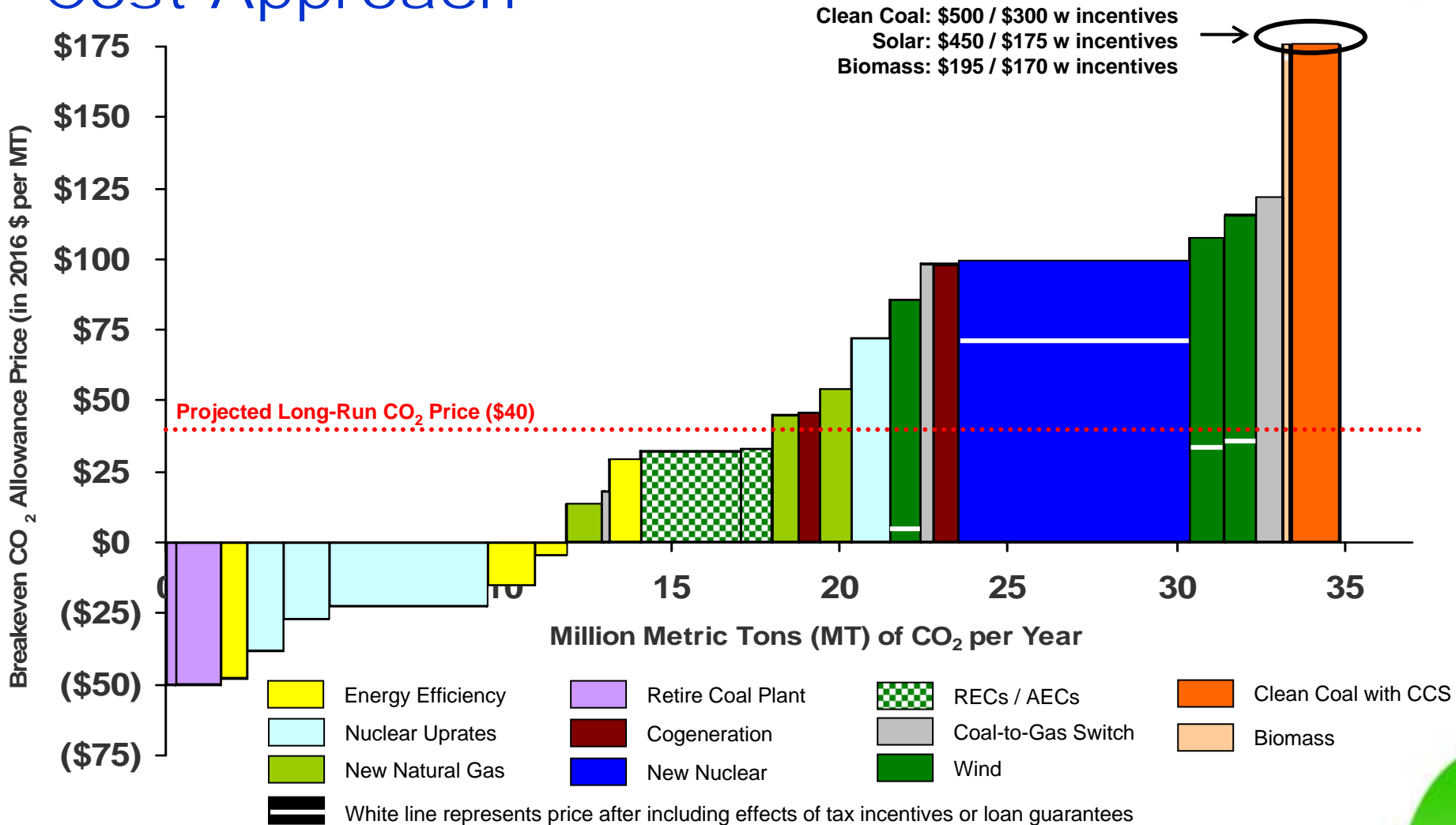
The Strategy

Reduce or offset our carbon footprint by greening our operations

Help our customers and the communities we serve reduce their emissions

Offer more low-carbon electricity in the marketplace

Exelon 2020 Framework for Lowest-Cost Approach



Conclusions

- ✓ The need for regulatory certainty in face of budding opposition to EPA rules
- ✓ The sooner we act, the better
- ✓ The transition to a clean energy future will occur – but at what cost?