

# **Emerging Energy Issues: Electric Utility Carbon Future in Region 5**

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## Overview

- Clean Power Plan Highlights
- State Options and Implications
- Current and Emerging Environmental & Energy Policy Drivers

# Exelon: An Industry Leader

\$25B

Being invested in utilities through 2020

\$37M

In 2015, Exelon gave approx. \$37 million to charitable and community causes

#1

zero-carbon energy provider in America

195 TWh

Customer load served

32,700

Megawatts of total power generation capacity

10M

Six utilities serving 10M electric and gas customers, the most in the U.S.

34,000

employees

FORTUNE 100

Exelon is a FORTUNE 100 company and was named to Fortune Magazine's list of "World's Most Admired Companies"

2M

Exelon's Constellation business serves residential, public sector and business customers

12,042

transmission line miles for utilities

\$34.5B

Operating revenue in 2015

Top 10

in renewable energy sales

7.4M

Smart meters installed

Note: All numbers reflect year-end 2015; 2015 revenue number is Exelon and PHI combined

## CPP Highlights

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- The Clean Power Plan is a positive first step toward reducing carbon emissions from the power sector, a goal Exelon has long supported.
- The targets are more than achievable over the time period provided.
  - EPA anticipates a 32 percent reduction in CO<sub>2</sub> by 2030 (from 2005 levels).
  - The decrease represents a relatively modest 10 percent reduction from 2020 business as usual.
  - It is important to note that this is a national projection, not a requirement.
  - The actual level of reductions will depend greatly on states' implementation choices over the 15-year implementation timeline.
  - Notably, recent analyses agree CPP unlikely to bind at expected natural gas prices.
- Supreme Court stayed implementation of the rule in February 2016.
  - Procedural not substantive decision.
  - May or may not delay future deadlines.

## CPP Highlights Continued

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- Final rule addresses several key flaws from the proposal.
  - New NGCC is no longer credited, potentially at the expense of zero-carbon generation.
  - Wide disparity in state targets addressed – much more clearly a fossil fuel performance standard under which obligations on units are the same in Illinois or Maine.
  - Mass-based programs are placed on equal footing with rate-based.
  - Many “trading-ready” options to address reliability, seams concerns.
- Several concerns remain.
  - Selective crediting of technologies under rate-based compliance is troublesome and potentially detrimental to lowest cost compliance, achieving meaningful emission reductions, and long-term innovation.
    - However, states have the option to select compliance mechanisms that avoid these concerns.
  - How to effectively account for leakage under mass-based plans.
  - Delay to 2022 leaves a nearly seven-year gap.
    - Potentially exacerbates challenges to at-risk nuclear and other clean generation.
    - Premature retirements could affect states’ compliance, grid reliability.

# State Options and Implications for Clean Generation

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- **Mass-based programs are common and well-understood.**
  - Achieve actual, easily verified CO<sub>2</sub> reductions.
  - Minimize total compliance costs, including ratepayer impacts.
  - Preserve electric reliability.
  - Technology- and fuel-neutral.
  - Simplify compliance and reduce administrative burdens.
- **Mass-based programs may be single-state or allow trading between states.**
  - The final rule includes mass budgets (caps), eliminating the need for states to develop them independently.
  - State plans can be as simple as requiring the submittal of one allowance for each ton of emissions, with no requirement that the allowance be obtained in-state.
  - States retain control over allowance allocation and/or auction.
  - States do not need formal agreements with other states or a RGGI-like agreement to allow interstate trading.
- **Mass-based programs minimize costs to consumers.**
  - Mass-based programs ensure that customers are not overpaying to achieve environmental compliance. The least-cost resource – after incorporating the cost of pollution – will be rewarded.

# Current and Emerging Environmental & Energy Policy Drivers

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- Federal Clean Power Plan (aka CPP, 111(d), carbon pollution standards)
- State portfolio standards
- State energy efficiency programs
- Regulation of traditional air pollutants (ozone, NO<sub>x</sub>, SO<sub>2</sub>)
- Valuation of Clean Energy in Markets
- Clean Water Rule: Definition of 'Waters of the United States' (WOTUS) and Nationwide Permits
- Endangered Species Act (ESA)
- Methane
- Paris Accord, HFC Agreement

# Exelon's Carbon Policy Principles

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- **Exelon believes in our nation's ability to transition the generation fleet to a zero-carbon future while maintaining affordable and reliable electric service for consumers**
- For the foreseeable future, the most cost-effective carbon solution for our customers will be the continued operation of our nation's nuclear fleet
- Exelon believes competitive markets produce superior results for consumers and drive innovation. However, those markets do not currently incorporate appropriate pricing for environmental attributes.
- **Exelon is pursuing a two-part strategy for moving toward a more competitive treatment of CO<sub>2</sub> emissions:**
  - **First, we must maintain nuclear units that provide a cost effective form of CO<sub>2</sub> abatement.** The New York ZEC program demonstrates that as long as the clean energy payment required to maintain operations at existing nuclear units is lower than the social cost of CO<sub>2</sub> emissions and the cost of CO<sub>2</sub> abatement being paid to other zero carbon resources, maintaining nuclear capacity should be selected as the most competitive source of CO<sub>2</sub> abatement.
  - **Second, we must continue to work toward a technology neutral price of CO<sub>2</sub> abatement.** Exelon is pursuing approaches to reflect a uniform price on CO<sub>2</sub> in wholesale markets as an eventual substitute for technology-specific subsidies. As these approaches are phased in, the ZEC programs have been designed to automatically reduce ZEC payments in response to higher energy prices.