



Electricity Generation Alternatives for New Jersey's Future: What is the Right Mix for Improving Air Quality and Reducing Climate Change?

Market Approaches to Carbon Abatement as the CAC Plans Ahead and Considers Solutions for Clean Air



Joseph Dominguez

April 1, 2009

Multi-Regional Generation

1



Total Capacity

Owned: 24,808 MW
Contracted: 7,524 MW
Total: 32,332 MW

New England Capacity

Owned: 194 MW

Midwest Capacity

Owned: 11,388 MW
Contracted: 4,271 MW
Total: 15,659 MW

ERCOT/South Capacity

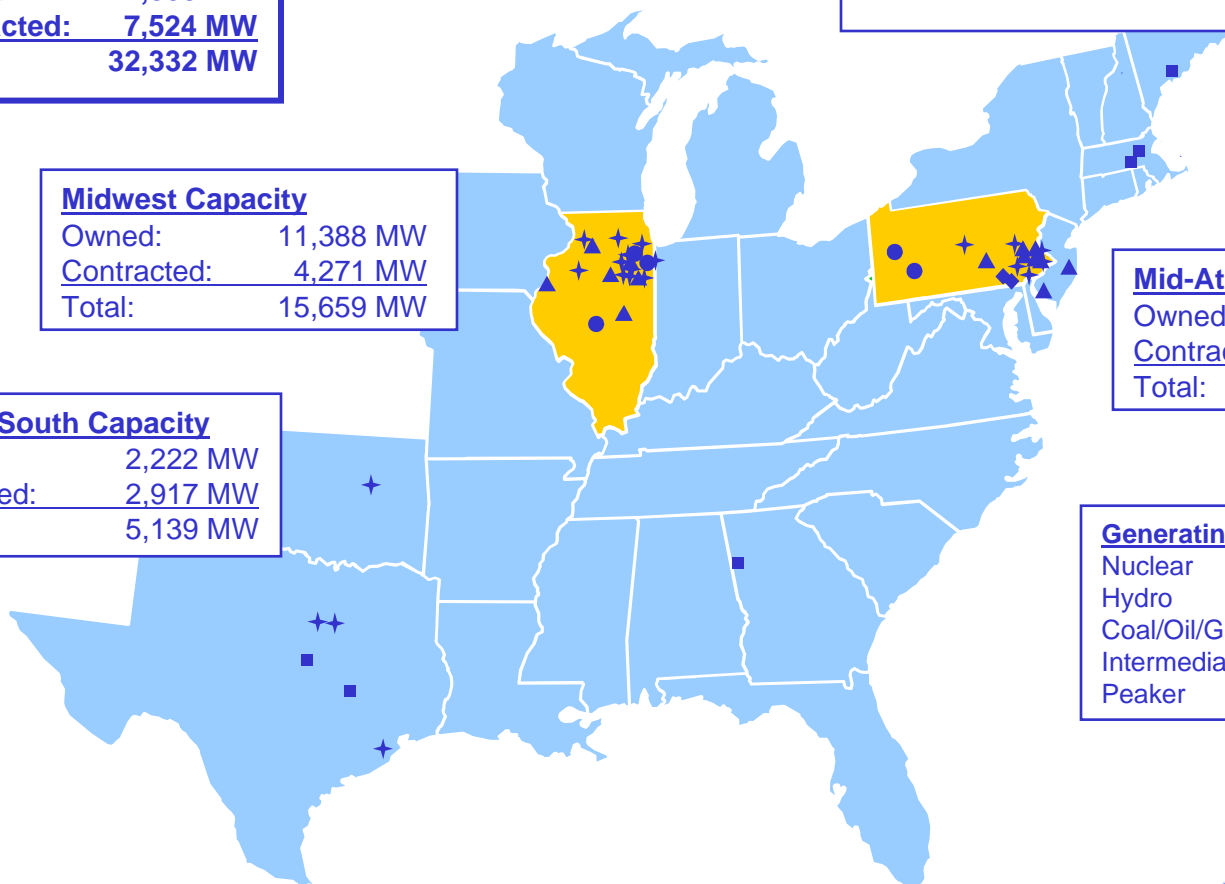
Owned: 2,222 MW
Contracted: 2,917 MW
Total: 5,139 MW

Mid-Atlantic Capacity

Owned: 11,004 MW
Contracted: 336 MW
Total: 11,340 MW

Generating Plants

Nuclear ▲
Hydro ◆
Coal/Oil/Gas Base-load ●
Intermediate ■
Peaker *

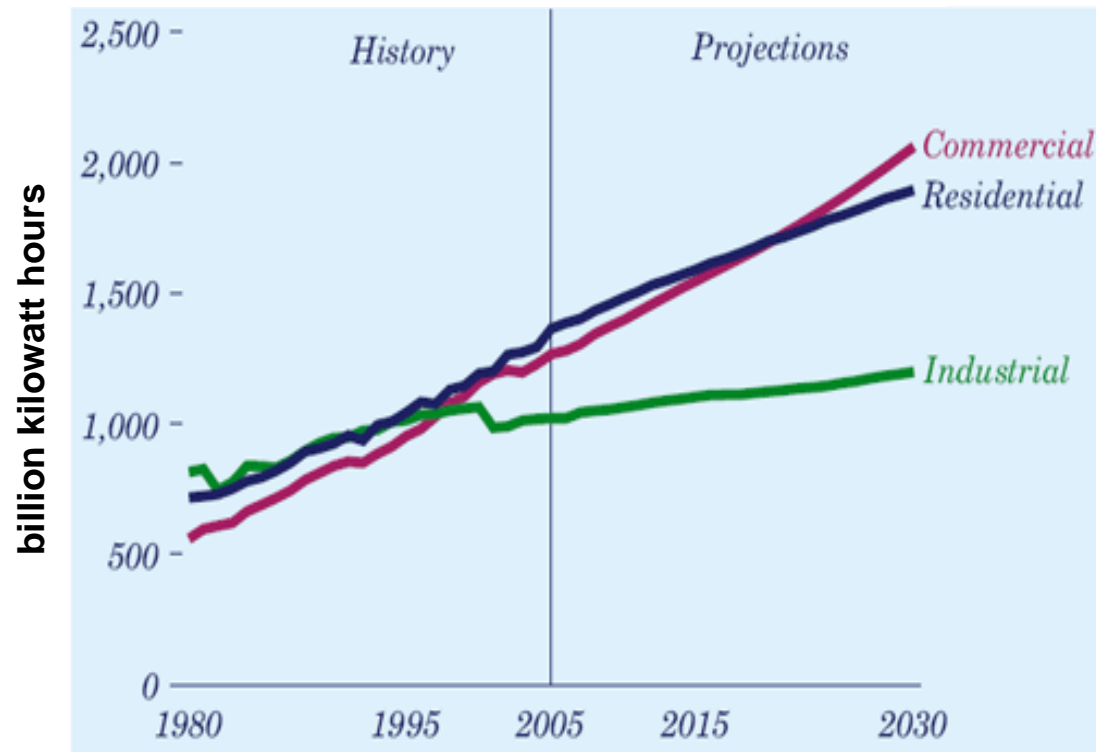


Energy Policy Must be Guided by Future Demand

2

U.S. electricity consumption is projected to grow over **30%** by 2030.

- ✓ According to a recent report for the Edison Foundation, the U.S. will need to invest over **\$1.7 trillion** in electric infrastructure in next 20 years to meet growing demand and carbon regulation.



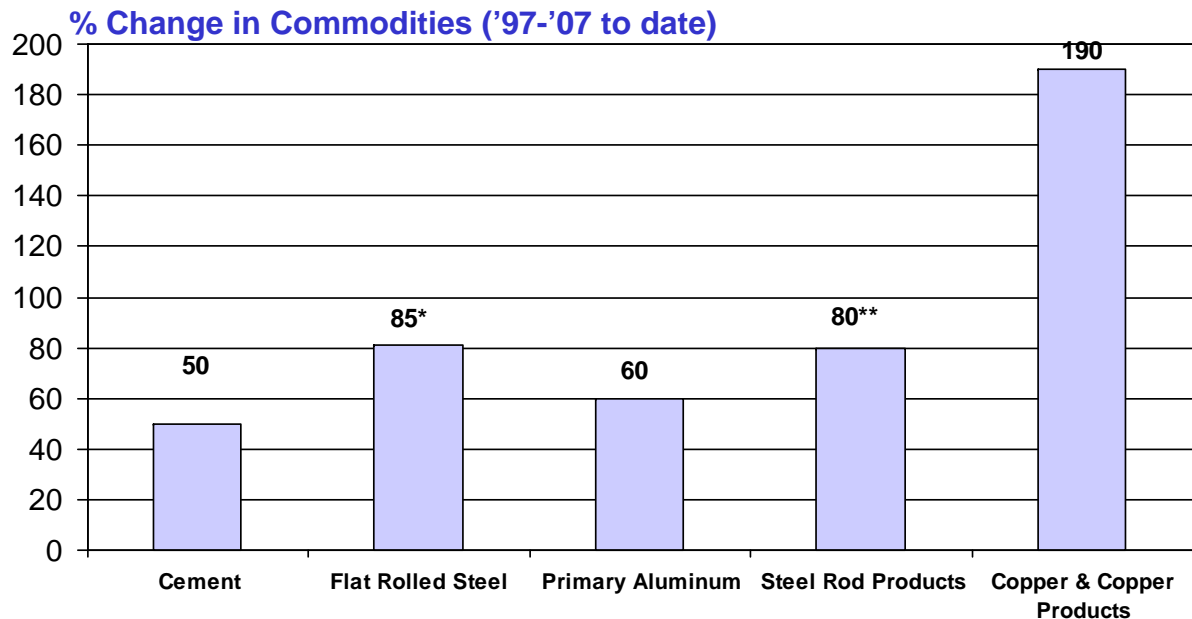
Increased electricity demand requires new resources in an era of increasing fuel prices, escalating construction costs, and more stringent environmental requirements.

Cost of New Generation Escalating Rapidly

3

- ✓ From 2000 to 2007 generation construction costs increased by **130%**.
- ✓ Increased global demand competing for limited resources.
- ✓ Carbon regulation will significantly increase costs for fossil generation.
- ✓ Permitting and construction lead times vary from 4 to 8 years.

Key Drivers to Construction Cost Increases



*The 85% increase shown was from 12/07- 3/08

**The 80% increase shown represents Arcelor Mittal increase since 9/07.

Construction costs have exploded, and continue to rise.

Exelon 2020 Goal

Reduce, offset or displace more than 15 million metric tons of GHG emissions per year by 2020

Why 15 mm metric tons?

- ✓ Our GHG baseline was 15.7mm metric tons in 2001 (CO₂e)
 - ✓ Documented baseline for our EPA climate leaders' goal
 - ✓ Also the emissions for Exelon's first full year of operations
 - ✓ Not every GHG emission associated with the business is included (e.g. employee travel)

What do the terms reduce, offset and displace mean?

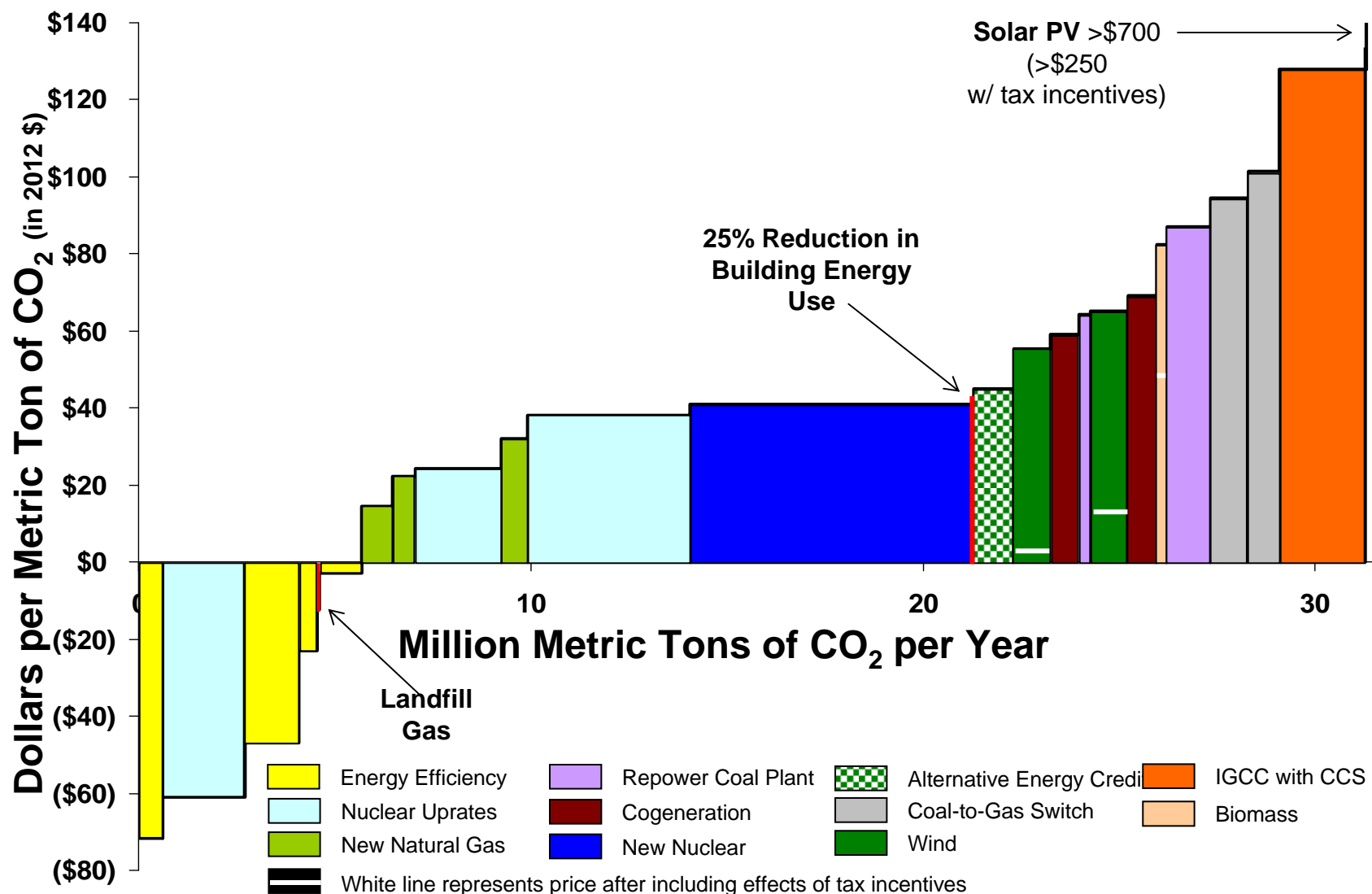
- ✓ **Reduce:** Reduce our direct GHG emissions, e.g. CO₂, SF₆
- ✓ **Offset:** Invest in a project (or buy the credits from a project) that reduces GHG emissions or increases CO₂ absorption outside the electric sector (beyond business as usual), e.g. methane abatement, afforestation
- ✓ **Displace:** Take an action that increases the supply of low-carbon energy or reduces demand, thereby reducing or avoiding the GHG emissions of other generators, e.g. energy efficiency, new no/low-carbon generation

Will we be carbon neutral in 2020?

- ✓ No, Exelon will still emit GHG's in 2020
 - ✓ But an estimated 10-15% less than in 2001

Supply Curve of Exelon's Abatement Opportunities

5



Innovation + Markets = Solutions

http://inside.exeloncorp.com/NR/rdonlyres/688F822C-9866-40C2-BFFE-C2D24D4C8996/8919/Exelon2020_A_Low_Carbon_Roadmap3.pdf