



New England's Bad News/Good News Story

PUC-Approved Subsidies of NH Coal Plants and ISO-NE Capacity Market Improvements

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NE Coal Plants



COAL-FREE NEW ENGLAND

CONSERVATION LAW FOUNDATION

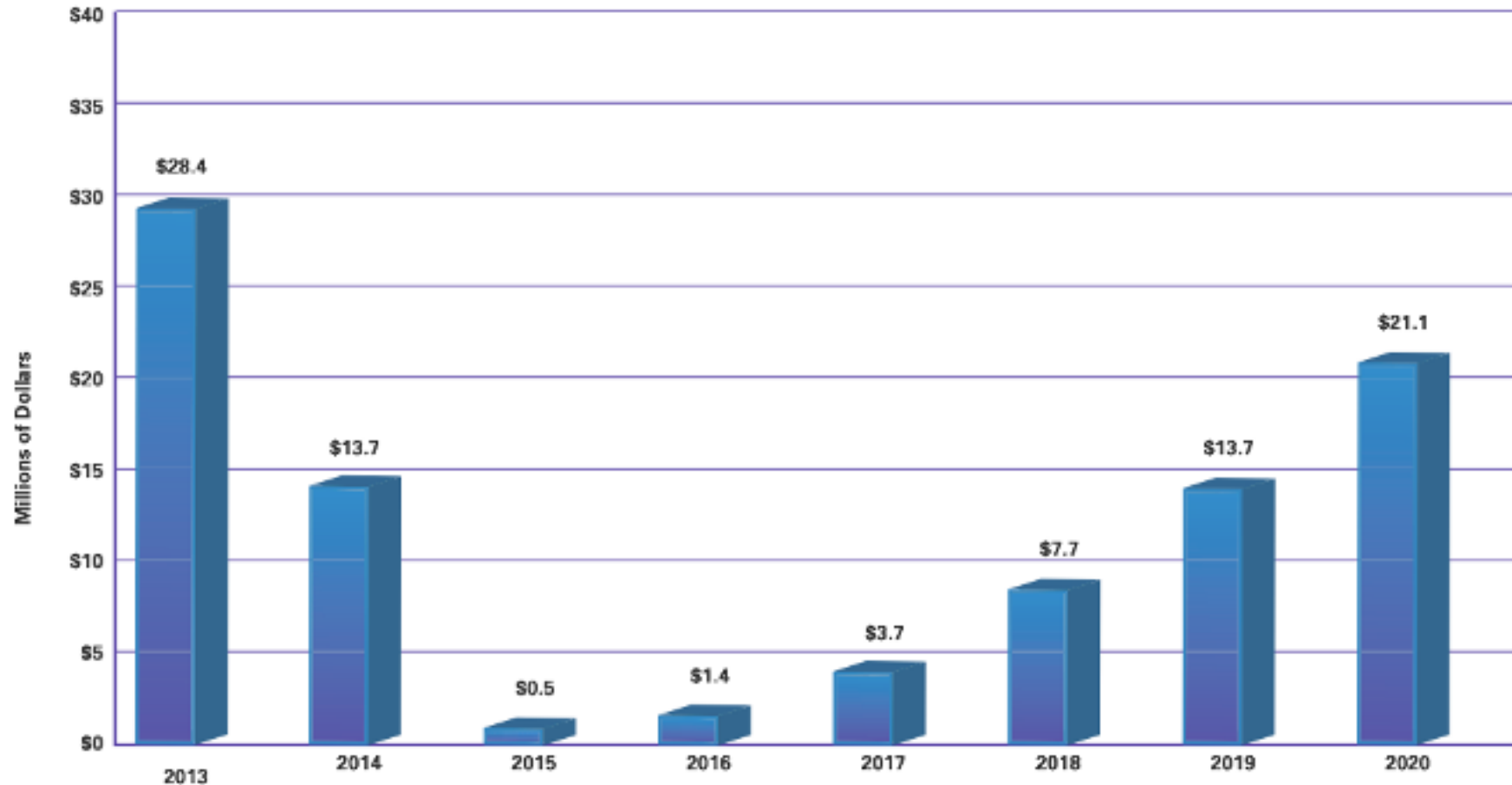
- ~~1. Brayton Point, Somerset, MA~~
- ~~2. Salem Harbor, Salem, MA~~
3. Mount Tom, Holyoke, MA
- ~~4. Somerset, Somerset, MA~~
5. Bridgeport Harbor, Bridgeport, CT
6. Merrimack Station, Bow, NH
7. Schiller Station, Portsmouth, NH
- ~~8. AES Thames, Uncasville, CT~~

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Brayton Point EBITDA

Figure 16: Projected Brayton Point EBITDA, 2013-2020 – Less Optimistic Scenario



Source: *Dark Days Ahead: Financial Factors Cloud Future Profitability at Dominion's Brayton Point* (available [here](#))

What is sustaining New England's remaining coal plants?

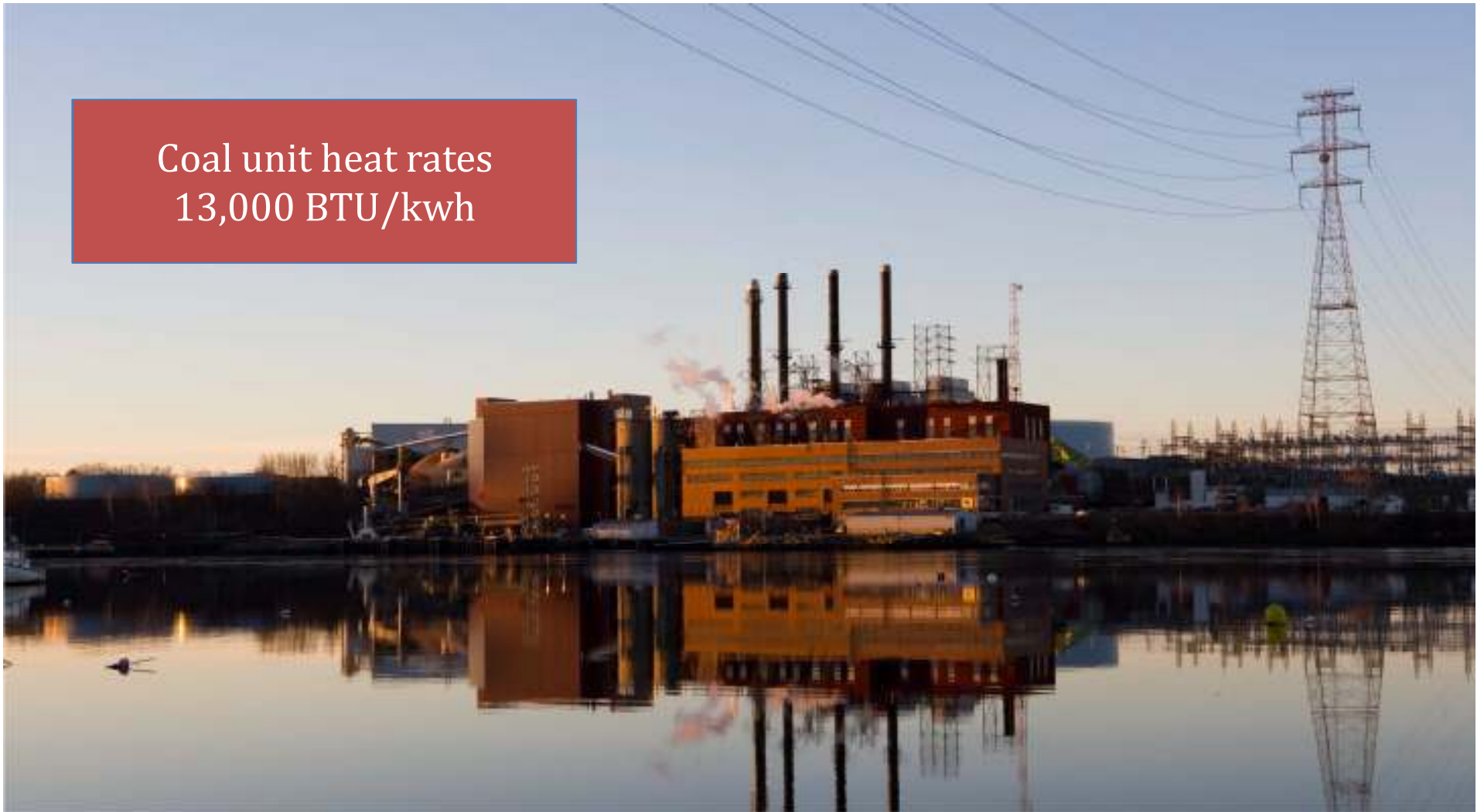
- Why are inefficient coal units in NH surviving?
- Will capacity market design hasten or delay coal plant retirements?



\$422 million FGD scrubber

PSNH's Merrimack Station, Bow, NH
~450 MW, 2 units (1960, 1968)

Coal unit heat rates
13,000 BTU/kwh



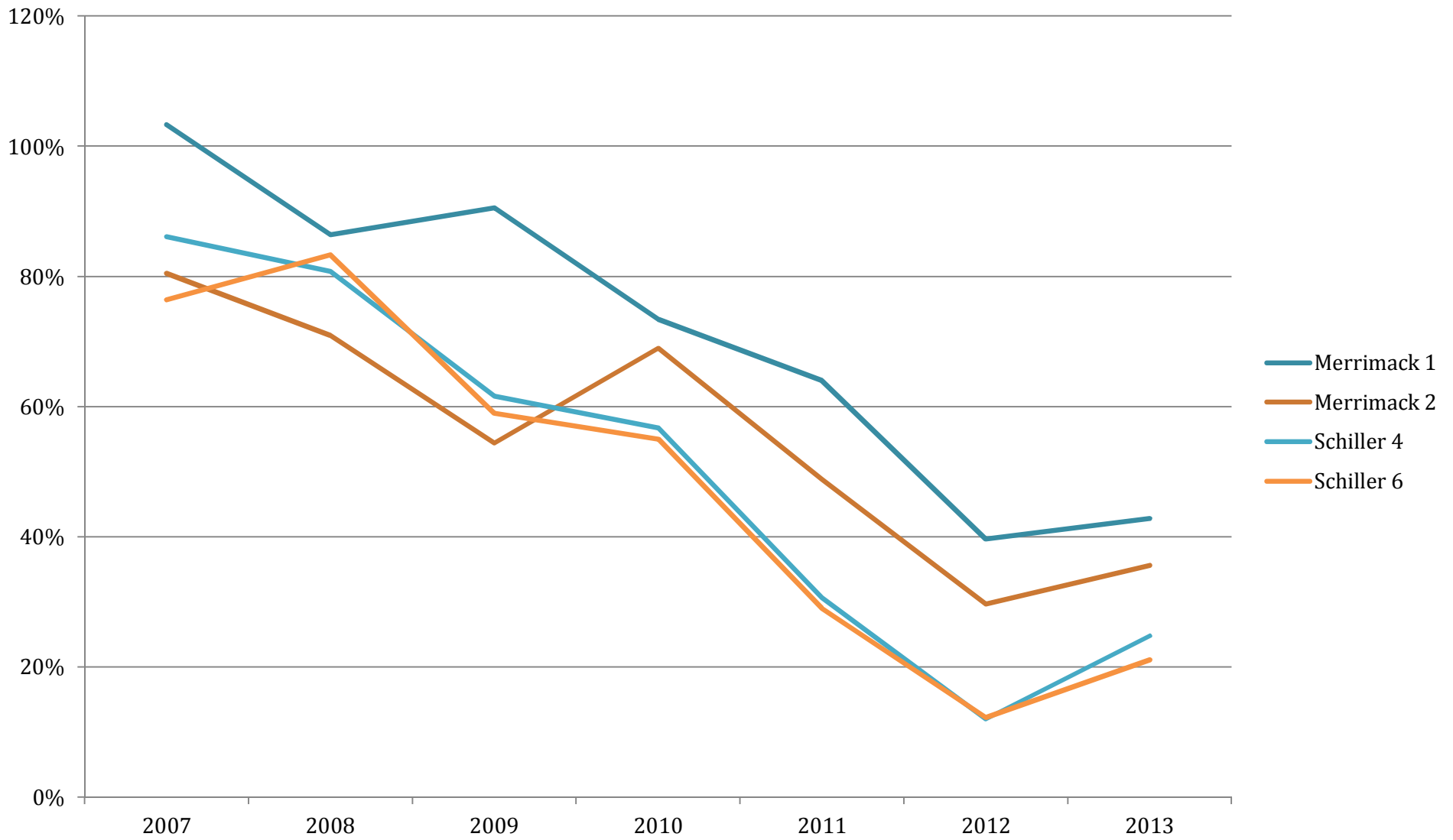
PSNH's Schiller Station, Portsmouth, NH
100 MW, 2 coal units (1950s)
1 50 MW biomass unit

Figure 8: ISO-NE Supply Curve

(Source: Based on 2011 SNL Data)

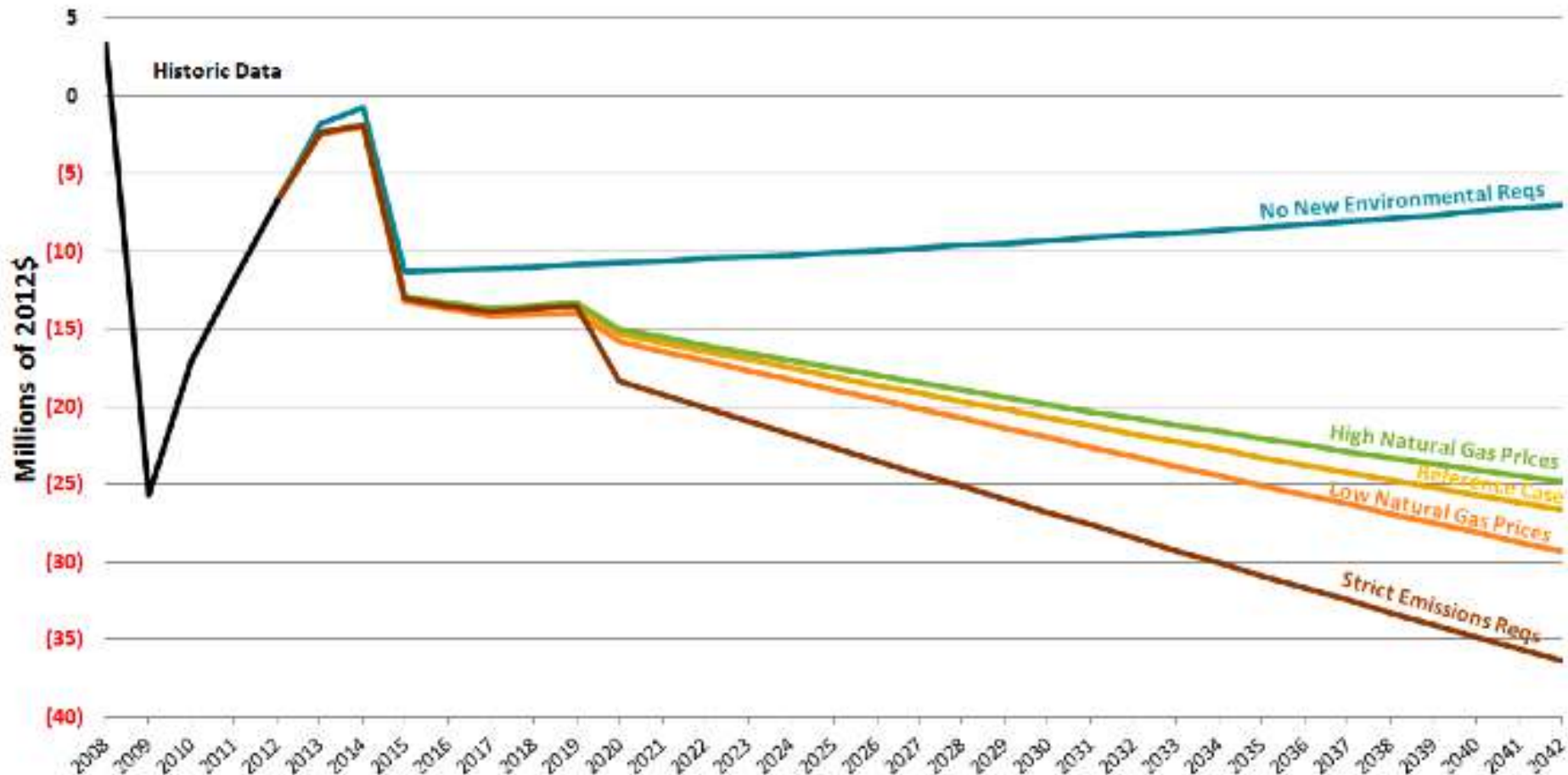
Source: SNL/NHPUC

PSNH Coal Unit Capacity Factors 2007-2013



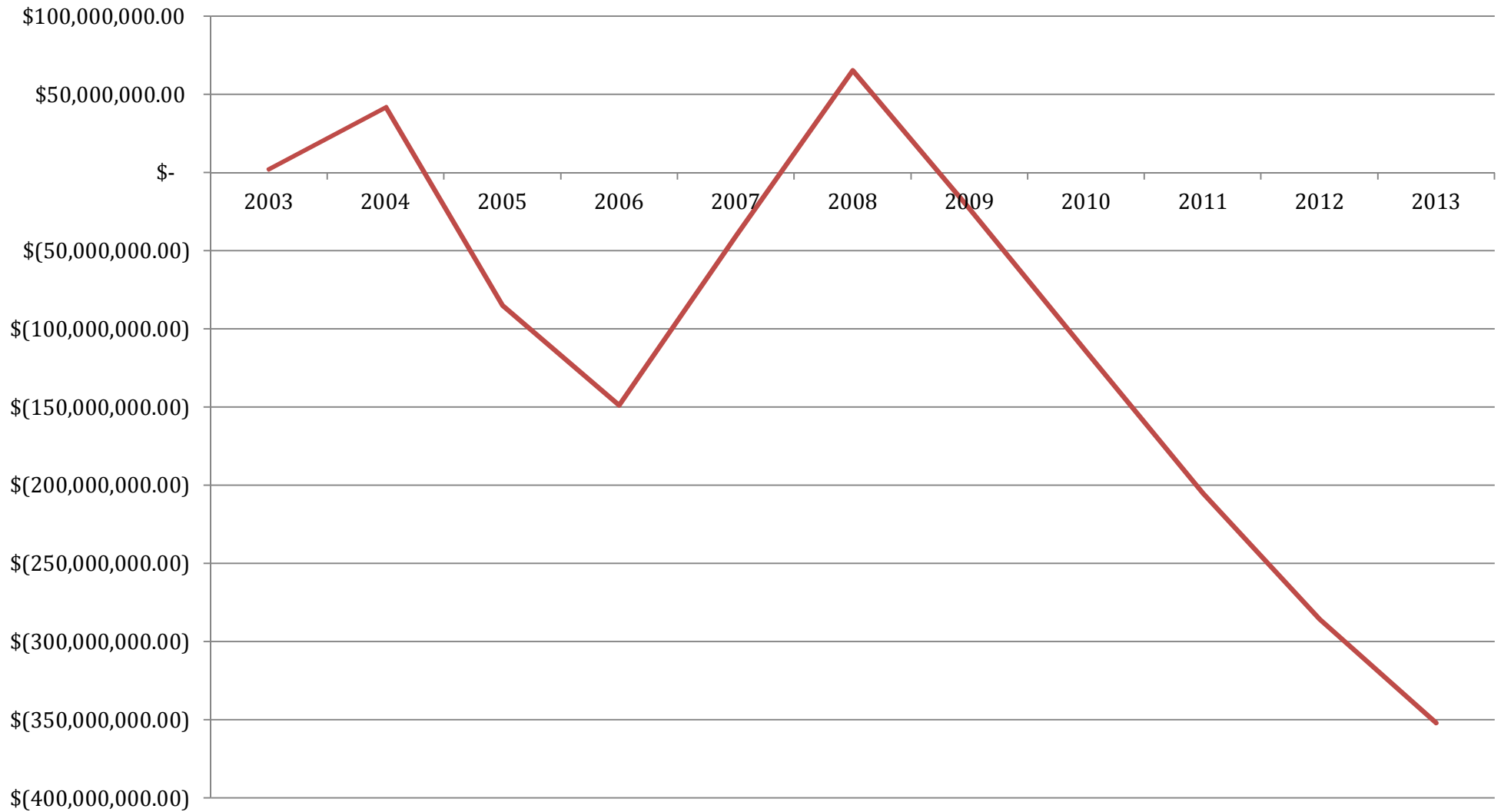
Schiller 4 & 6 Combined

Figure 2: Annual Net Revenue (Losses) For Schiller 4 & 6 Combined



Source CAVT V.4.23

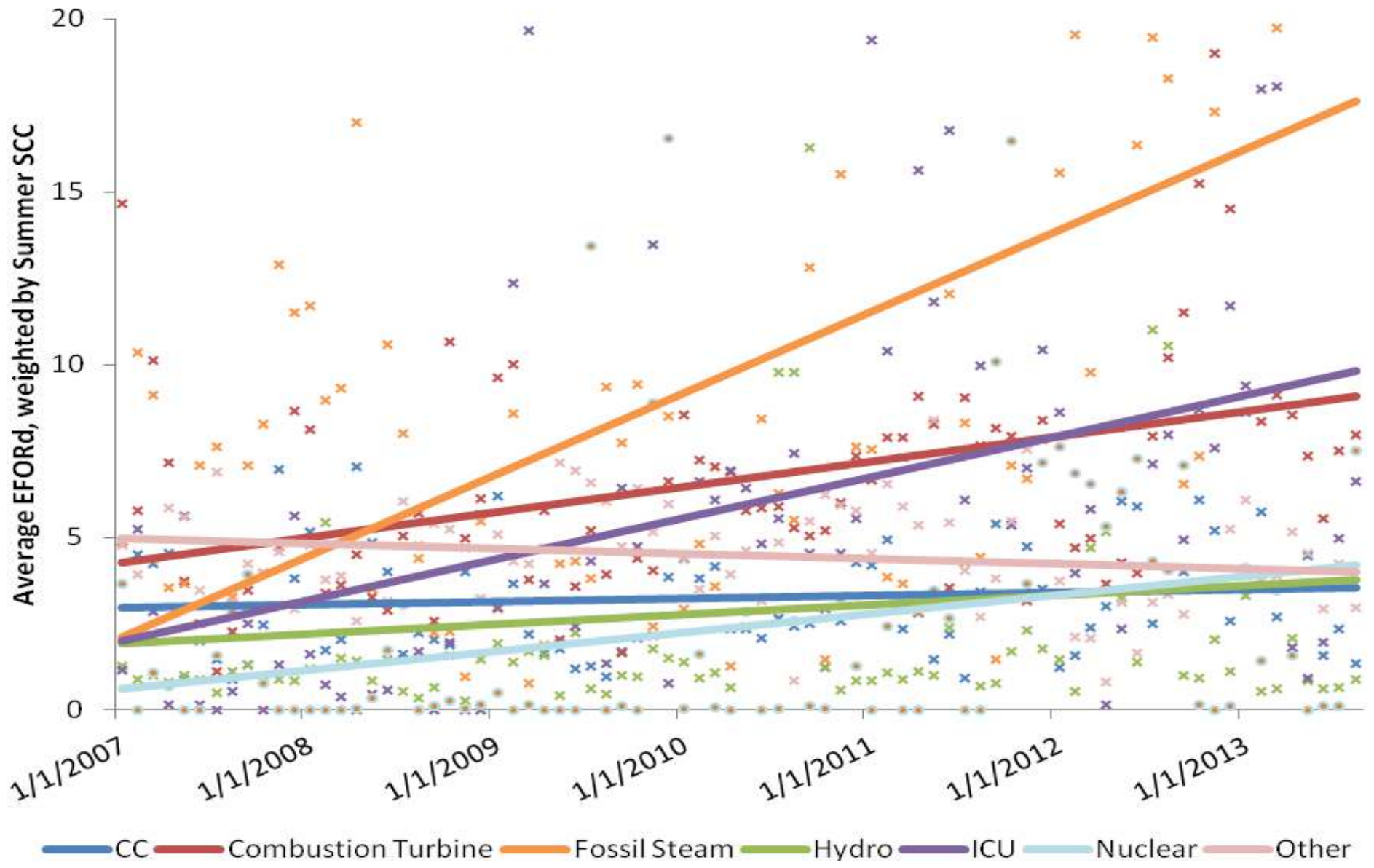
Cumulative Losses for PSNH Default Service Customers versus GSEC/Liberty



Forward Capacity Market Problems

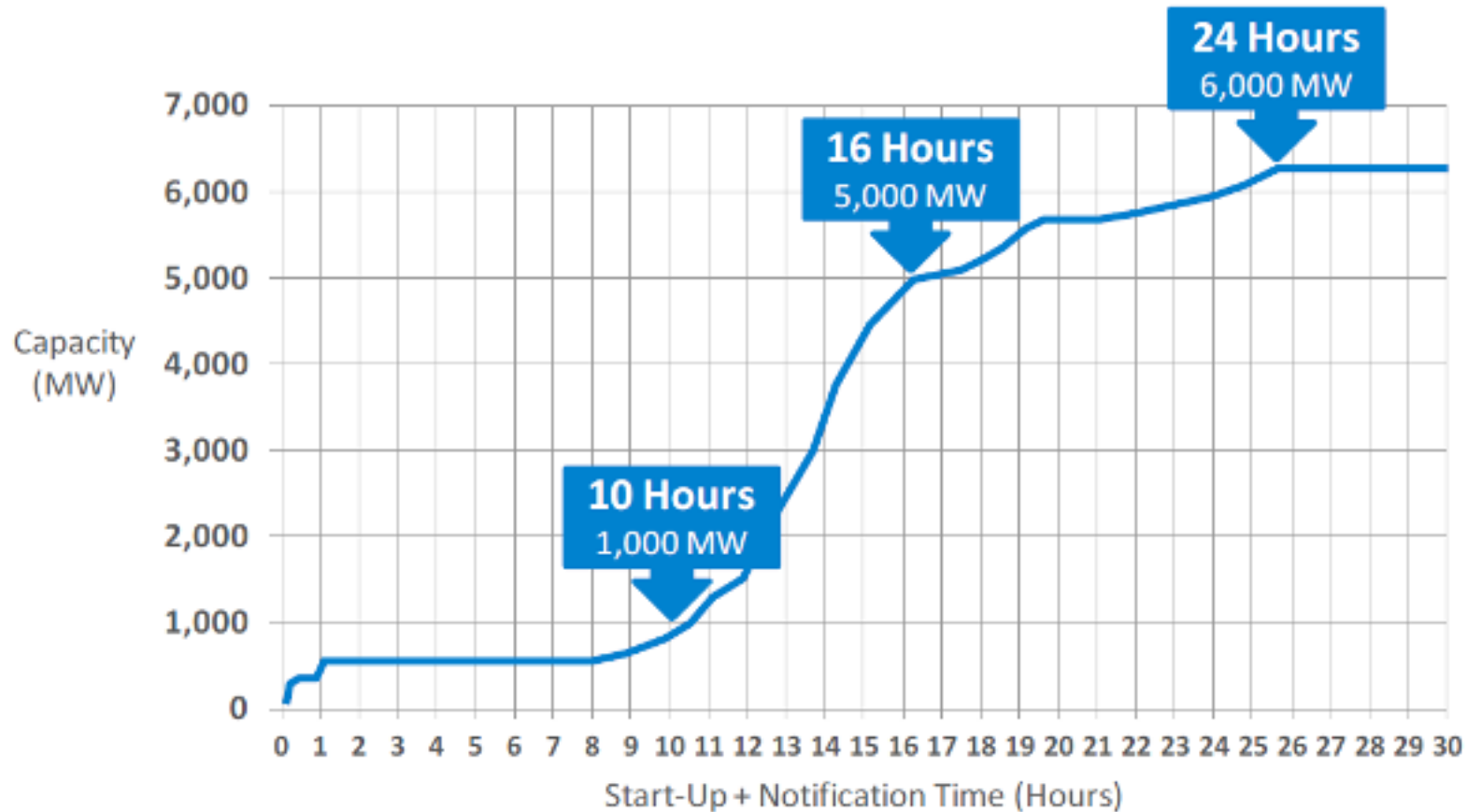
“Pervasive and worsening performance of existing generation fleet in New England”

“Delays exit of poor performers from the market; creates a bias in the FCM to clear less-reliable resources”



Oil and Coal Resources have Long Start-Up Times

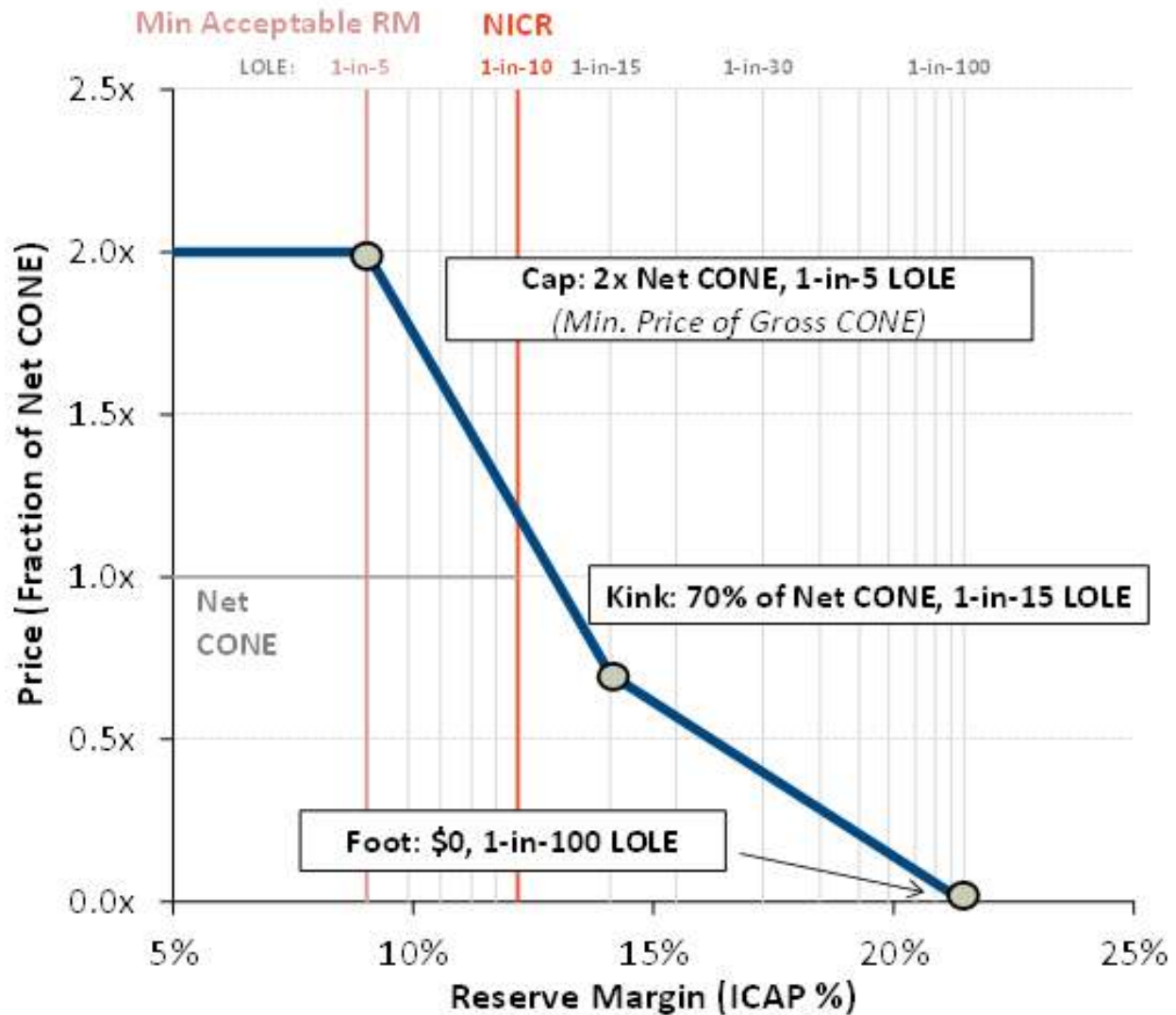
Time before resources can be online from "cold start"



Pay for Performance Goals

- Incentivize resource decisions that promote reliability, esp. in gas-constrained market with growing # of variable resources
- Reward best-performing resources
- Penalize poor-performing resources
- Operation investments
- *Technology turnover*

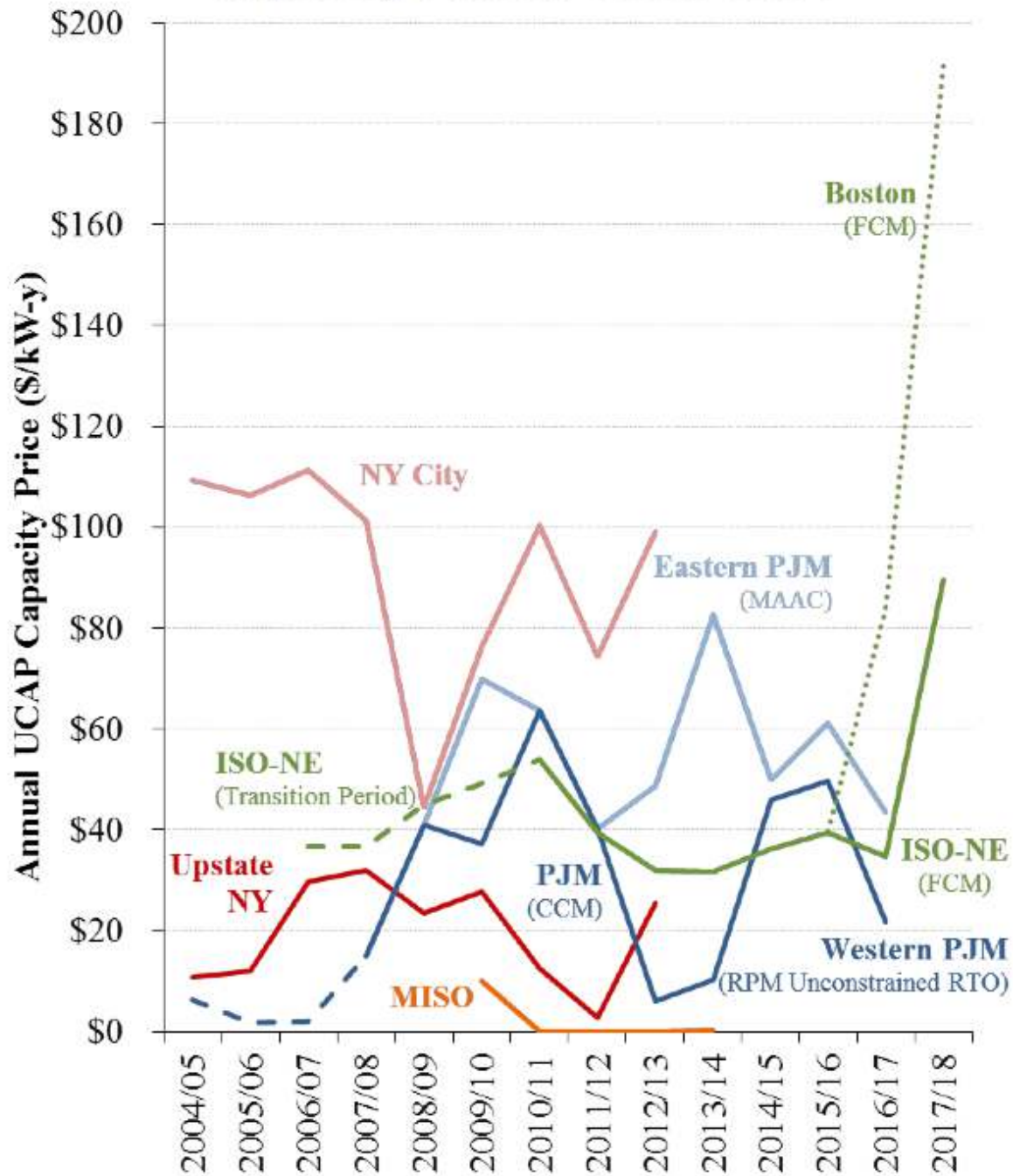
Downward Sloping Demand Curve



Notes:

LOLE lines shown in gray between 1-in-5 and 1-in-10 increase by increments of 1 (i.e. 1-in-6, 1-in-7, etc.), while lines in gray between 1-in-15 and 1-in-100 increase by increments of 10 (starting at 1-in-20).

Capacity Prices Across RTOs



Source: Brattle Group