

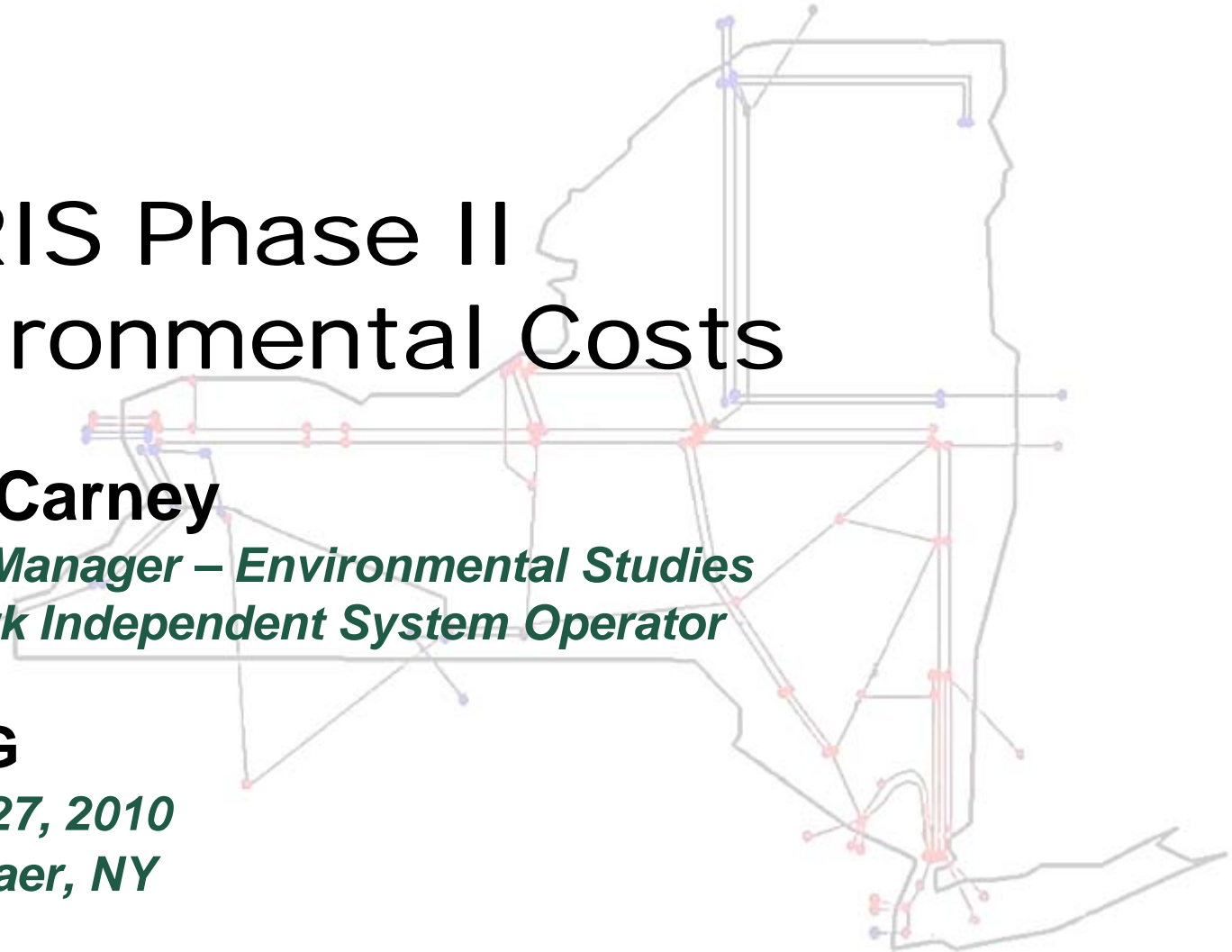
CARIS Phase II Environmental Costs

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ESPWG

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Changes in Emission Allowance Markets

- ◆ CO₂
 - *2009 RGGI marketplace has significant surplus*
 - *2012 RGGI Cap reset?*
 - *Federal Legislation delayed*

- ◆ USEPA Clean Air Transport Rule (CATR)
 - *Replaces Clean Air Interstate Rule (CAIR)*
 - *Allowance Futures markets crash*
 - *Aggressive compliance timeframes 2014*
 - *NY SO₂ Budget 12% below 2009*
 - *NY Annual NO_x Emissions Budget 36% below 2009*
 - *NY Ozone Season NO_x Emission Budget 26% below 2009*

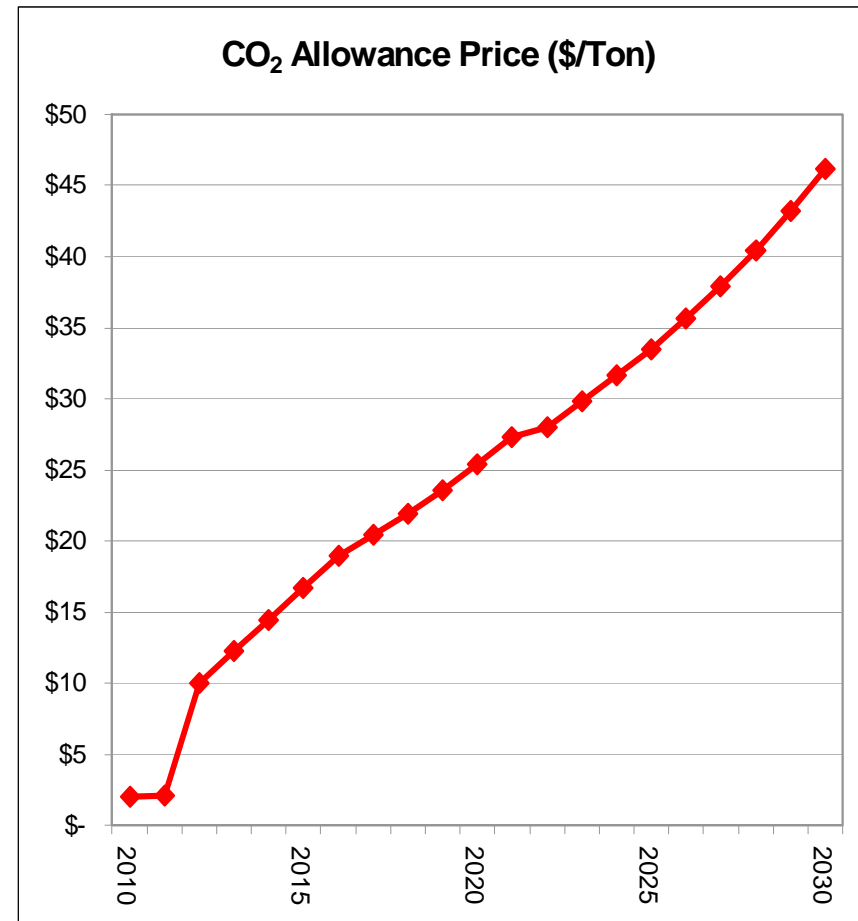
CO₂ Emission Cost

◆ 2009 RNA

- *“reliability is not expected to be negatively impacted in the near term.”*
- *WCI CO2 estimates \$24 to \$71*
- *EU ETS prices \$35 to \$50.*
- *“... the convergence of CO2 emission allowance prices with world market price may create carbon emission costs that would render units uneconomic leading to otherwise unexpected retirements”*

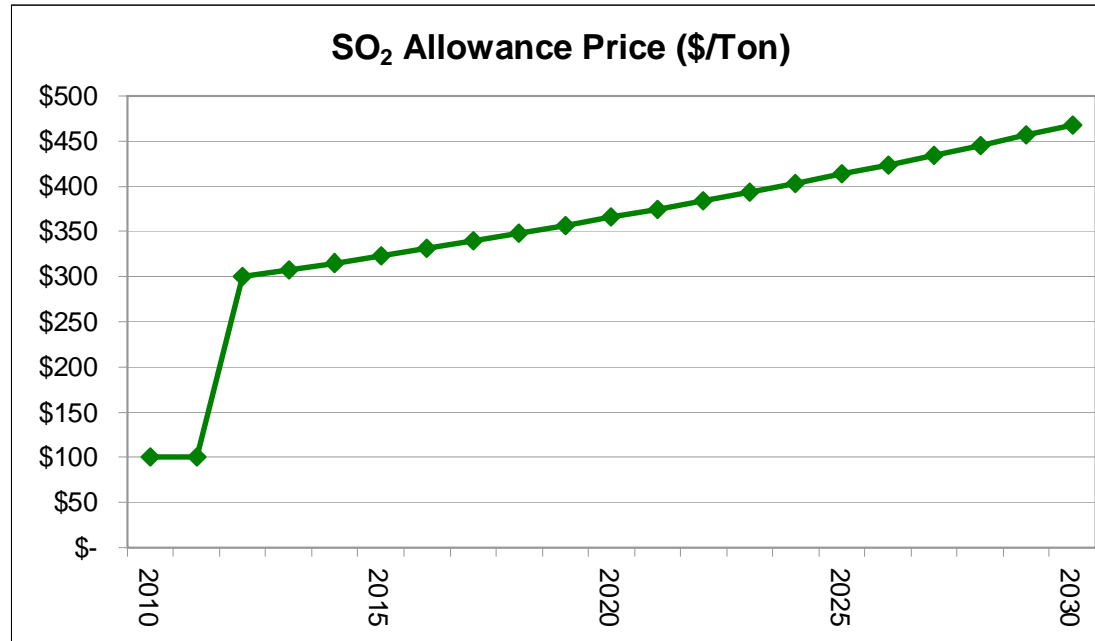
◆ Assumptions

- *RGGI remains oversupplied until 2012, when the cap is lowered and WCI uses RGGI allowances for offsets*
- *Federal legislation with allowance price effects similar to HR 2454 becomes effective in 2015*



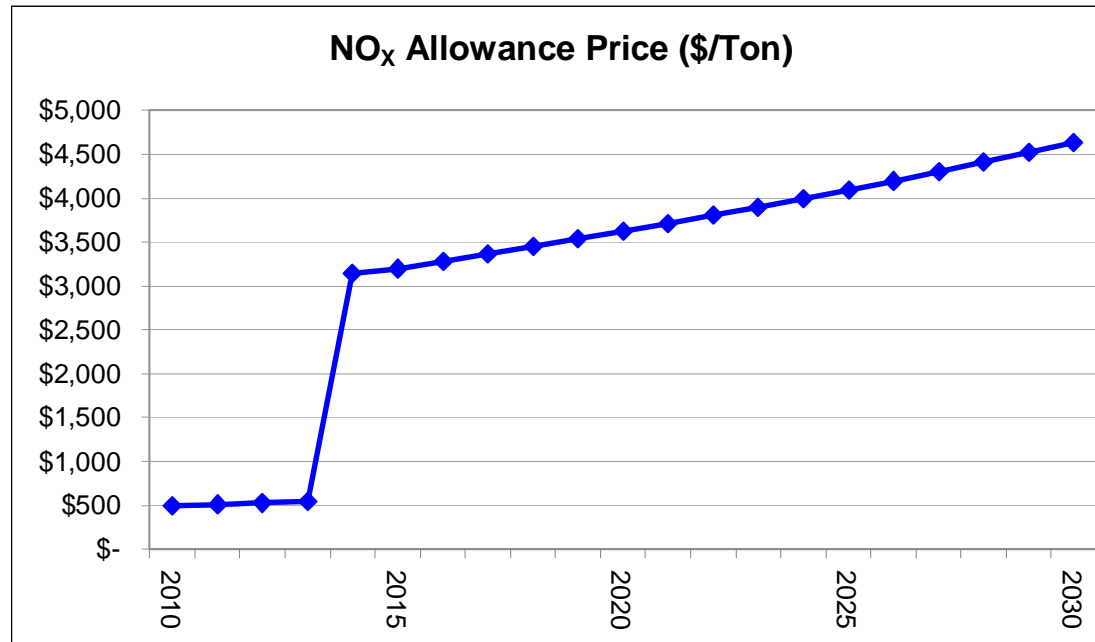
SO₂ Emission Cost

- ◆ **Emission costs are driven by new CATR**
 - *12% reduction in SO₂ emissions by 2014*
 - *Maximum reduction operation of existing FGD systems*
 - *Fuel switching*
 - *Effectively no allowance trading in NY*

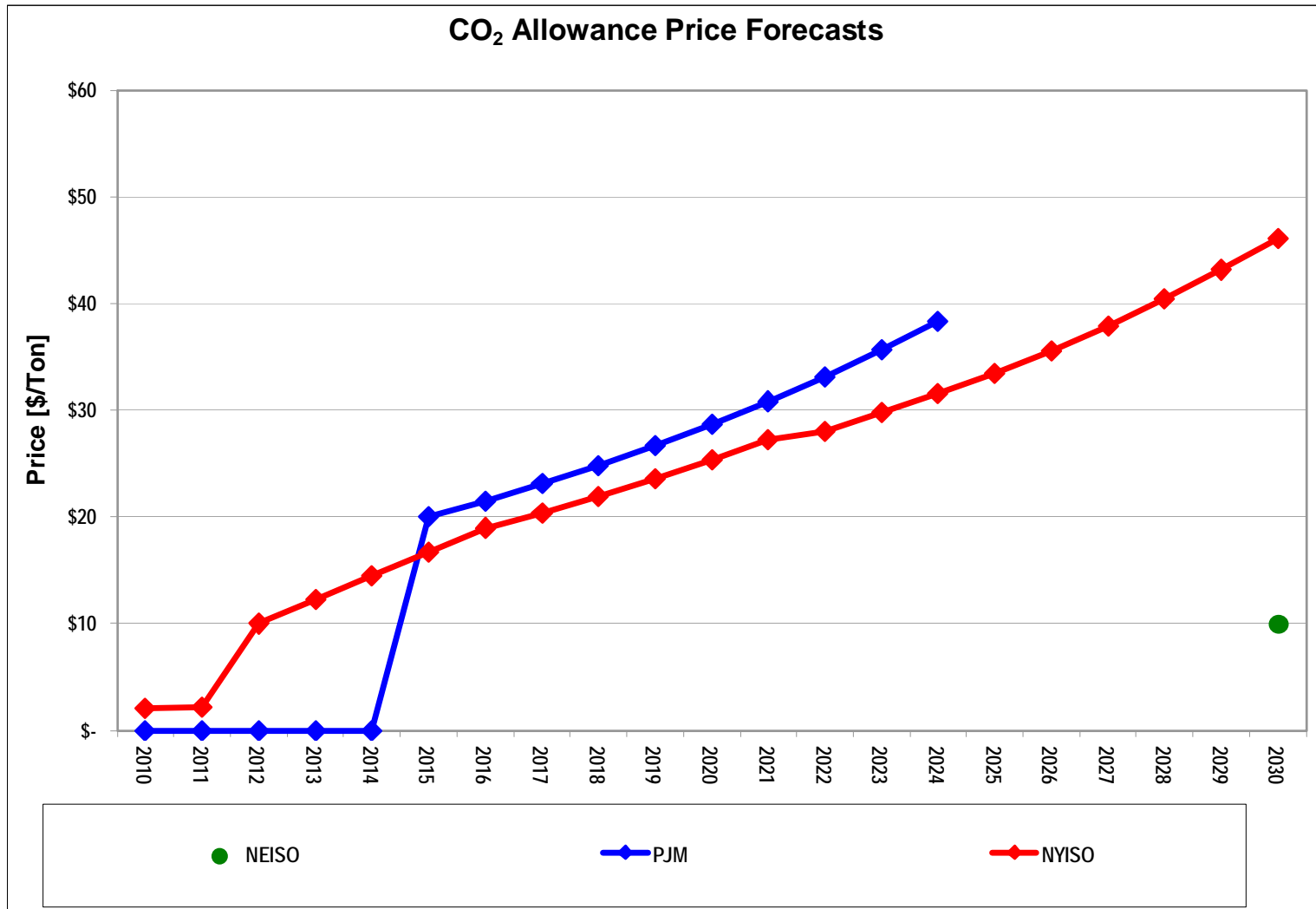


NO_x Emission Cost

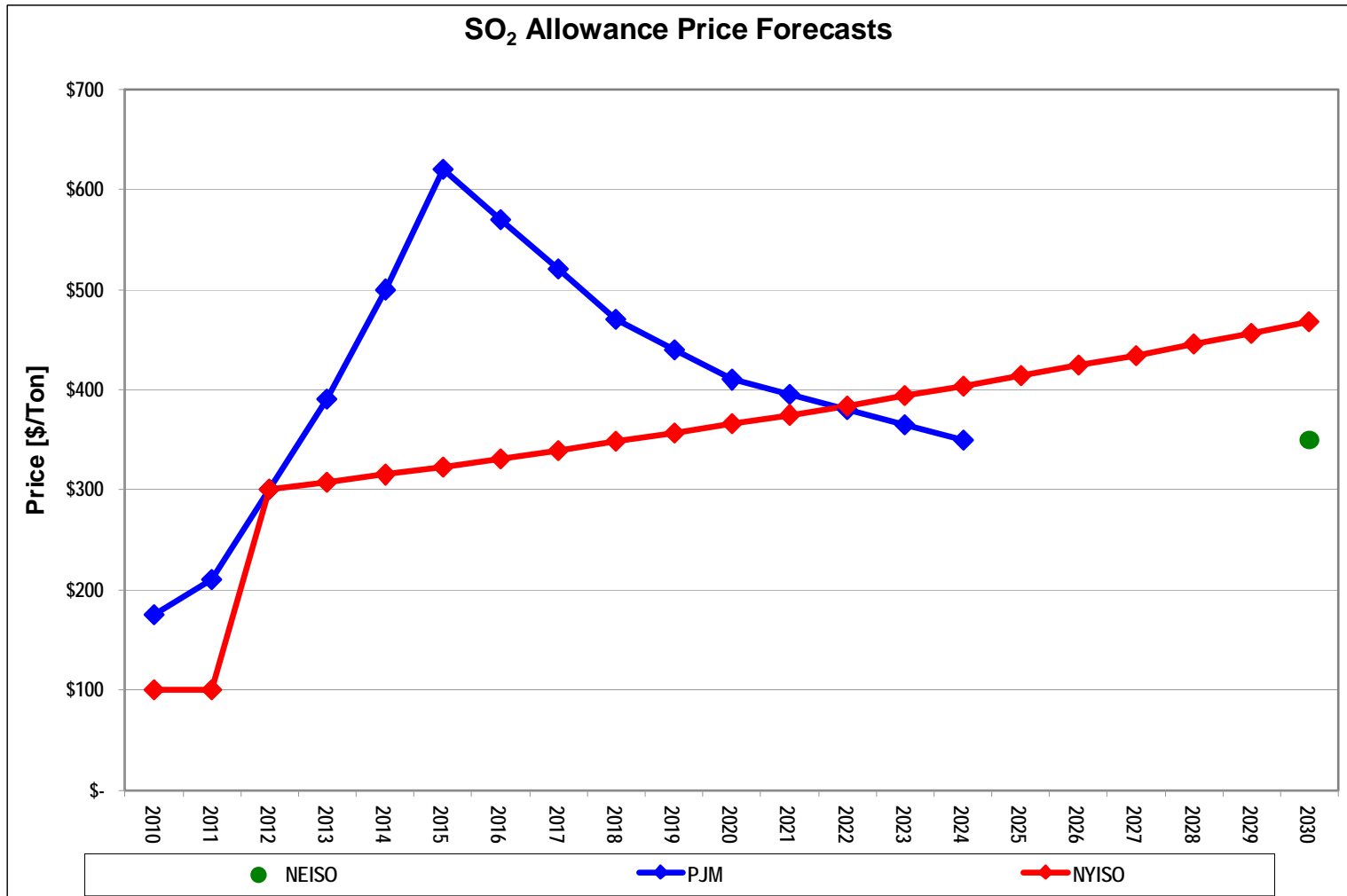
- ◆ **Emission Costs are driven by CATR**
 - *Required reductions go beyond NO_x RACT*
 - Annual NO_x Budget is 36% below 2009 emissions and 20% below NO_x RACT
 - *NO_x RACT study*
 - 2015 \$3170/Ton



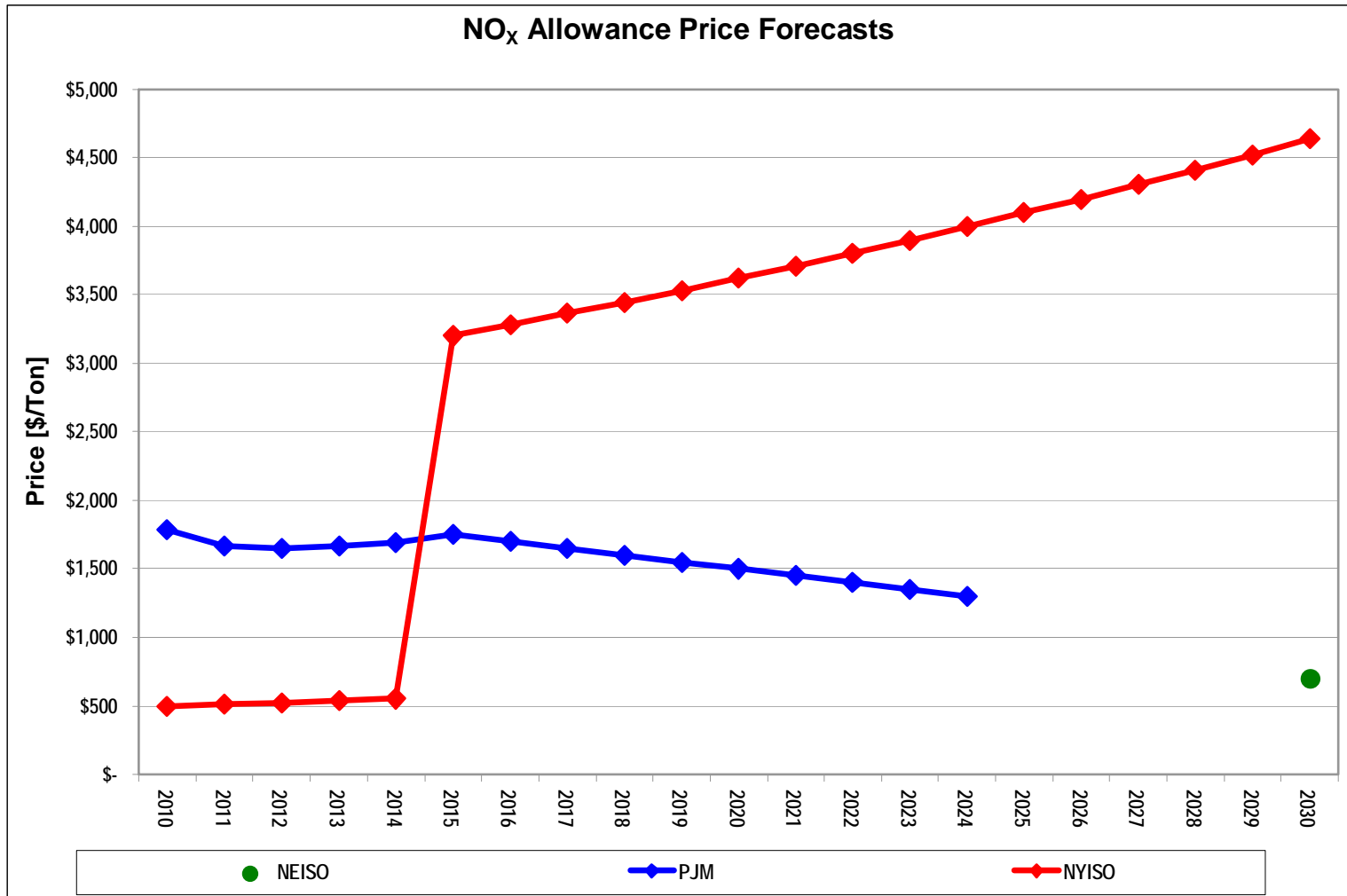
Comparison with Other Pools



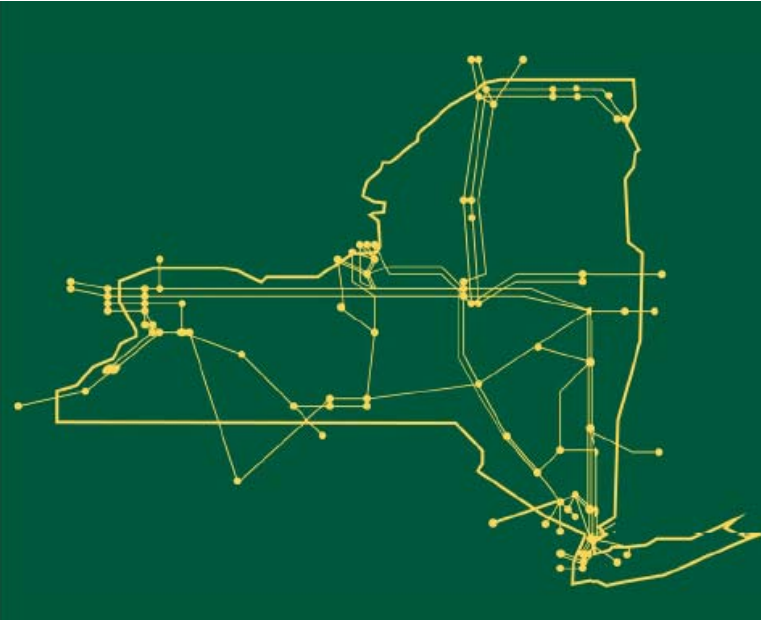
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The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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