

Uneconomic Retention and Repowering of Existing Units



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- ◆ On March 19, 2015 the FERC issued an order directing the NYISO to establish, and report on, a stakeholder process
 - *150 FERC ¶ 61,214, FERC Docket No. EL13-62-000*
- ◆ In general, FERC asked that the NYISO look at:
 - *Whether there are circumstances that warrant the adoption of BSM measures in Rest of State (ROS)*
 - *Whether there is a need for, and what mitigation measures would need to be in place to address, repowering agreements with the potential to suppress capacity prices*
- ◆ Stakeholder discussions
 - *The NYISO made three presentations in the Spring and Summer of 2015, primarily focused on the potential need to apply BSM to new entry in ROS*

- ◆ **The NYISO's made an informational report to the FERC on June 17, 2015**
 - *In its report, the NYISO told the Commission that it did not see a compelling need for BSM rules for new entry in ROS at this time*
 - *However, the NYISO indicated that there may be concerns regarding the potential market effects of uneconomic retention and repowering*
 - *The NYISO requested that the Commission allow it to:*
 1. **Propose any necessary measures related to uneconomically retained units and repowering projects that address a reliability need in its October 19 RMR Compliance Filing**
 2. **File a further report 90 days after filing the RMR Compliance Filing addressing further analyses and stakeholder discussion on the uneconomic retention of existing units and repowerings pursuant to agreements that are not principally driven by a reliability need.**

- ◆ **Recap the measures related to uneconomically retained units and repowering projects proposed in the RMR Compliance Filing**

- ◆ **Describe the NYISO's plan for further analysis and Stakeholder discussions**

- ◆ **Present & discuss the analysis that the NYISO has completed to date**

- ◆ **Describe further work and next steps**
 - *Continuation of the NYISO study and of Stakeholder discussions*
 - *Report to FERC due January 19, 2016*

- ◆ **Solicit Stakeholder feedback**

- ◆ **Key measures included in the NYISO's RMR tariff process to address uneconomic retention and repowering**
 - **Reporting requirements** – *Generators that provide a notice of proposed mothball or retirement are required to provide information on all sources of revenue*
 - **RMR Offer Price** – *if a Generator that is not the most economic solution to a Reliability Need is selected for RMR service, its offers into the ICAP Spot Market Auctions will reflect its avoidable costs. This encourages the identification and timely deployment of an alternative solution to the reliability need and prevents the indirect uneconomic retention of the Generator through inaction or delay*
 - **Exclusion of certain bilateral transactions** – *if a bilateral agreement or other subsidy appears not to be an arm's length transaction or was not entered into in the ordinary course of business, the NYISO would not consider it in its calculation of the Generator's avoidable costs and would bring it to the attention of the Commission*
 - **'Silent Auction'** – *When there are multiple generation solutions to a Reliability Need, the ISO will solicit offers from each and select the Generator whose offer results in the lowest net cost. This makes it more difficult for an entity to target the retention of a specific unit as it cannot know which unit will be selected for RMR Service*

◆ Potential Incentives

- *Further analysis on the potential incentive to suppress market prices in ROS through the retention or repowering of uneconomic units*

◆ Risk Aversion & Risk Premiums

- *Analysis to look at the risk aversion behavior of load side entities, and how large of a risk premium they are willing to pay for a hedge*

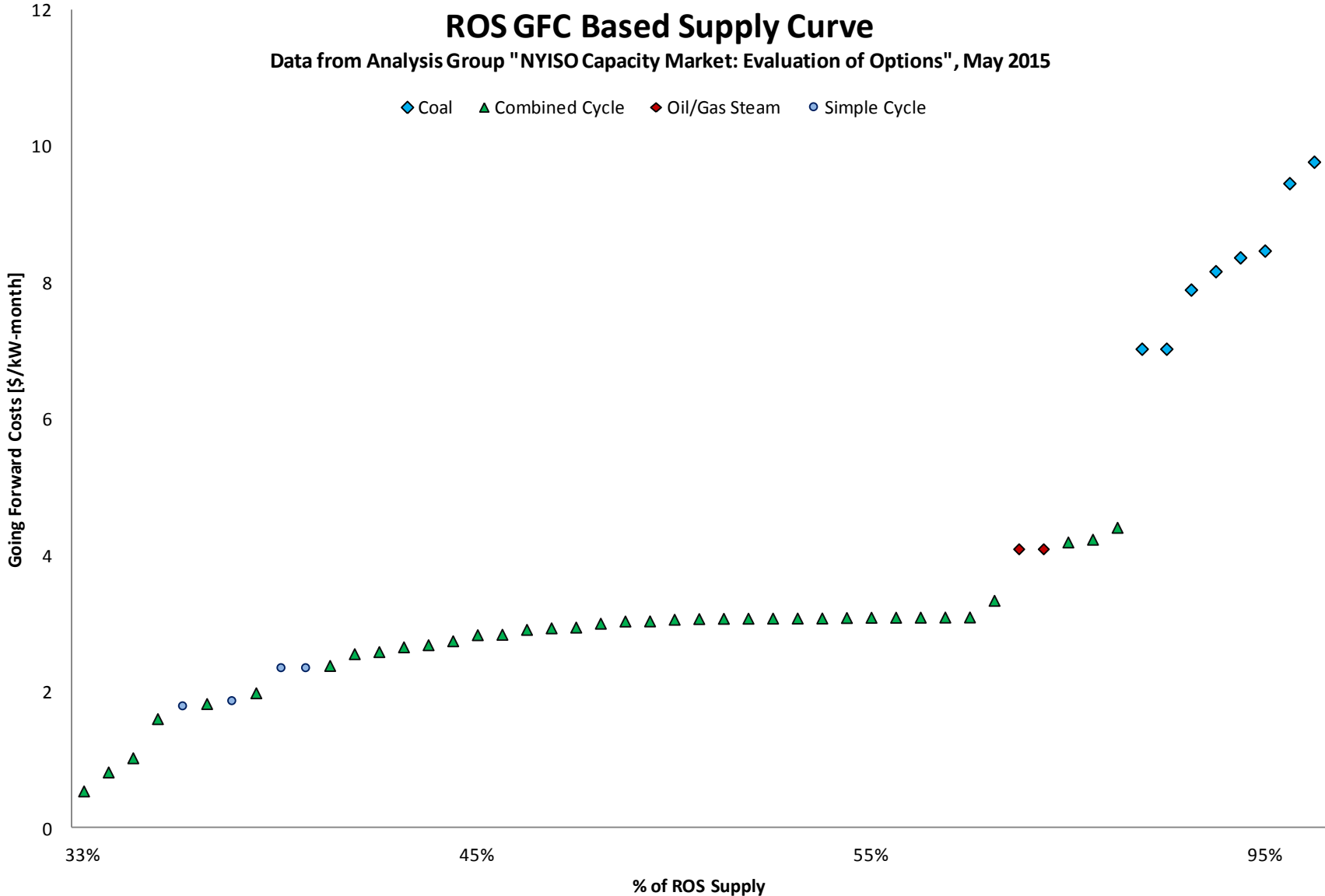
◆ Potential Mitigation Measures

- *“Whether there is a need for, and what mitigation measures would need to be in place to address, repowering agreements with the potential to suppress capacity prices”*
- *The NYISO has not yet determined whether there is a need to implement mitigation measures for existing units*
- *Potential designs for mitigation measures to address concerns related to the retention and repowering of uneconomic units*

- ◆ **Strategies to suppress prices by retaining existing resources are different than those that rely on the subsidy of new generation.**
 - *The initial capital cost of uneconomic retention and repowering is likely lower than the cost of new generation, and may be negligible in some cases*
 - *Contracts for the retention of existing units may be for much shorter periods than the amortization period of new entry*
 - *The cost of retaining a unit depends on the specific circumstances of the generator being retained, which can vary considerably among individual units and technologies*

- ◆ **These differences give rise to concerns**
 - *In some circumstances, the costs of retaining or repowering an uneconomic unit may be significantly lower than the cost savings stemming from the unit's impact on the ICAP market*
 - *Market response is less relevant in the context of short-term contracts, as the cost of the contract is recovered "in real time"*
 - *The 'tail' of the GFC based supply curve is steeply sloped, which may be exploited in some scenarios to further reduce the chances of a market response*

Potential Incentives

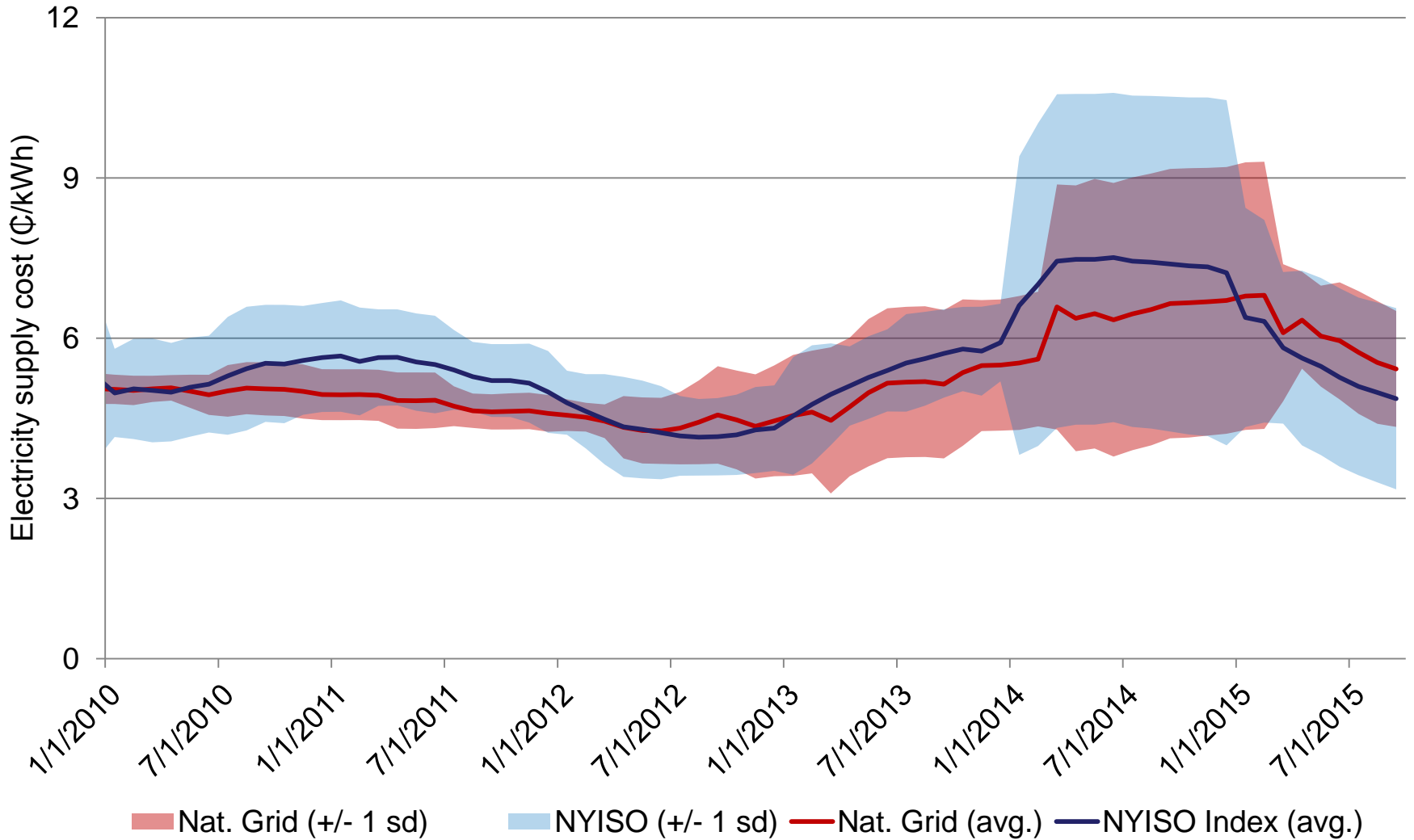


- ◆ **The NYISO will post a workbook to accompany this presentation**
 - *The workbook will examine a hypothetical uneconomic retention scenario and the financial benefits it could provide the funding entity*
 - *It will also include a generic template to allow users to examine their own hypothetical scenarios*
 - *Areas shaded in yellow are inputs where the user can edit and enter values*
 - *Areas not shaded in yellow may have embedded calculations and should not be edited for the workbook to function as intended*
 - *The workbook will function similarly to spreadsheet model released in June/July, which accompanied the June 10th ROS BSM presentation*
 - *Stakeholders are encouraged to review the workbook and provide comments and feedback for inclusion in the discussion*

- ◆ **Risk averse entities may be willing to pay a ‘risk premium’ above expected market prices to reduce the volatility of their payments for electricity supply**
 - *Due to perceived customer risk aversion, the NYPSC requires utilities to engage in hedging to reduce the volatility of electricity supply prices to mass market customers*
 - (Case 06-M-1017)
 - *Risk averse LSEs and TOs could rationally pay ‘above market’ prices for a portion of their electricity and capacity in order to reduce the volatility of their electricity supply portfolio*
- ◆ **Thus, an out of market contract between an LSE and a Generator does not necessarily indicate an attempt to artificially suppress market prices**

- ◆ **The NYISO examined public information to determine whether there was support for a quantifiable risk premium**
 - *As part of NYPSC Case 06-M-1017, several NY LSEs are required to make publically available information relating to the performance of their electricity supply portfolio in relation to the NYISO index, including cost and volatility information*
 - *According to the reports on its website, National Grid did not pay above market rates for electricity supplies from 7/2007 through 9/2015, despite succeeding in reducing the volatility of its electricity supply relative to the NYISO index*
- ◆ **The NYISO was not able to calculate a risk aversion coefficient for LSEs from this data, as it did not show a cost premium for reducing volatility**
- ◆ **Although initially unintuitive, a possible explanation is that suppliers as a whole are more risk averse than LSEs**
 - *They may be willing to accept below market prices in order to reduce the volatility of their revenues*

NGrid (Niagara Mohawk) Electric Commodity Portfolio Hedging Performance



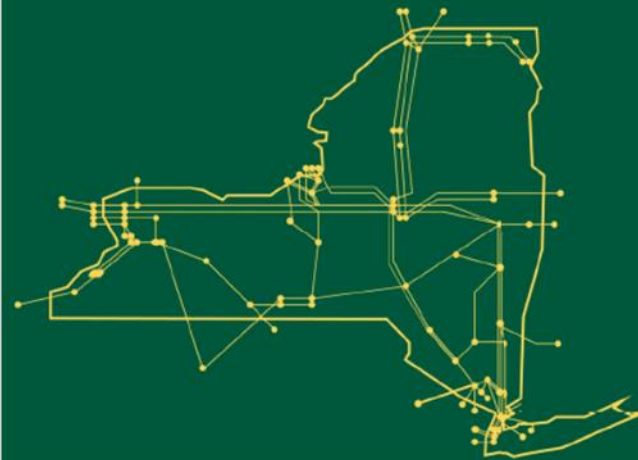
- ◆ **The NYISO has not yet determined whether there is a need to implement mitigation measures for existing units**
- ◆ **However, the ISO is preparing a selection of hypothetical mitigation measures for discussion**
 - *Stakeholders are encouraged to provide comments and feedback for inclusion in the discussion*
- ◆ **Key considerations/challenges:**
 - *Effectiveness of detection/screening measures*
 - *Minimizing the risk and harm of “false positives”*
 - *Avoiding a “chilling effect” on the bilateral market*

- ◆ **The NYISO's compliance report to FERC is due January 19**
 - *The NYISO intends to include in it a discussion of the analysis performed since the June 17 Filing, the outcome of stakeholder discussions including a discussion of potential mitigation measures, and the NYISO's recommendation on whether there is a need for mitigation measures*

- ◆ **The NYISO will continue its analysis and consider input received during today's meeting**
 - *The NYISO expects to return to the ICAP Working Group in December to further discuss and seek input on the results of the study, and to discuss potential mitigation measures*

- ◆ **Stakeholders are encouraged to provide further comments and analysis in writing to deckels@nyiso.com by December 4**

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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