POTOMAC ECONOMICS

MMU Comments on Firm Fuel Capacity Accreditation Proposal

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Installed Capacity Working Group
April 9, 2025

Introduction

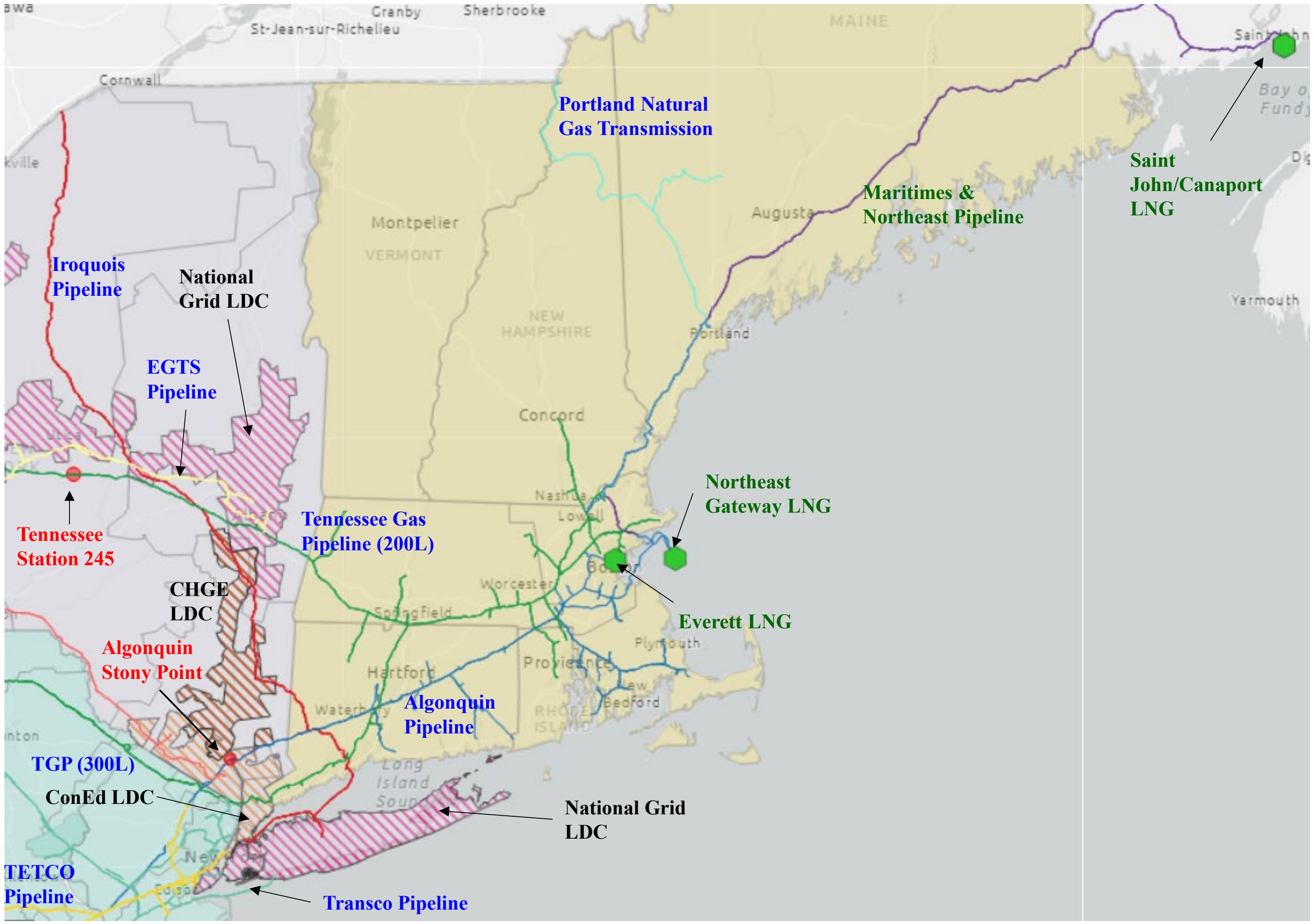
- NYISO has recognized the need to accredit capacity resources based on marginal reliability impact.
- This "marginal accreditation" is important for the transition:
  - From a conventional resource mix with summer risk
  - To a non-conventional resource mix with winter risk
- <u>NYISO's current tariff:</u> Applies marginal accreditation to firm gas and oil units (starting in 2026/27 CY) and is enforced based on documentation.
- <u>NYISO's proposal: F</u>undamentally alters obligations of gas-fired units in the firm fuel CARC by imposing performance-based enforcement rules.
- This presentation provides our evaluation of the NYISO proposal and recommends improvements to address our concerns.

Introduction

- Based on our evaluation of the NYISO Proposal, we find that it would:
  - Would create incentives generators to rely on inferior types of firm service to qualify for the firm fuel CARC.
  - Would dilute incentives for firm service and undermine reliability benefits of firm fuel capacity accreditation under winter conditions.
  - Would rely primarily on FERC enforcement to address the conduct that may result from these incentives.
- Overview of presentation:
  - Natural gas supply and demand in the Northeast US
  - Evaluation of NYISO Proposal on incentives for firm contracting and enforcement of obligations
  - Conclusions and recommendations

Natural Gas Supply and Demand in the Northeast US

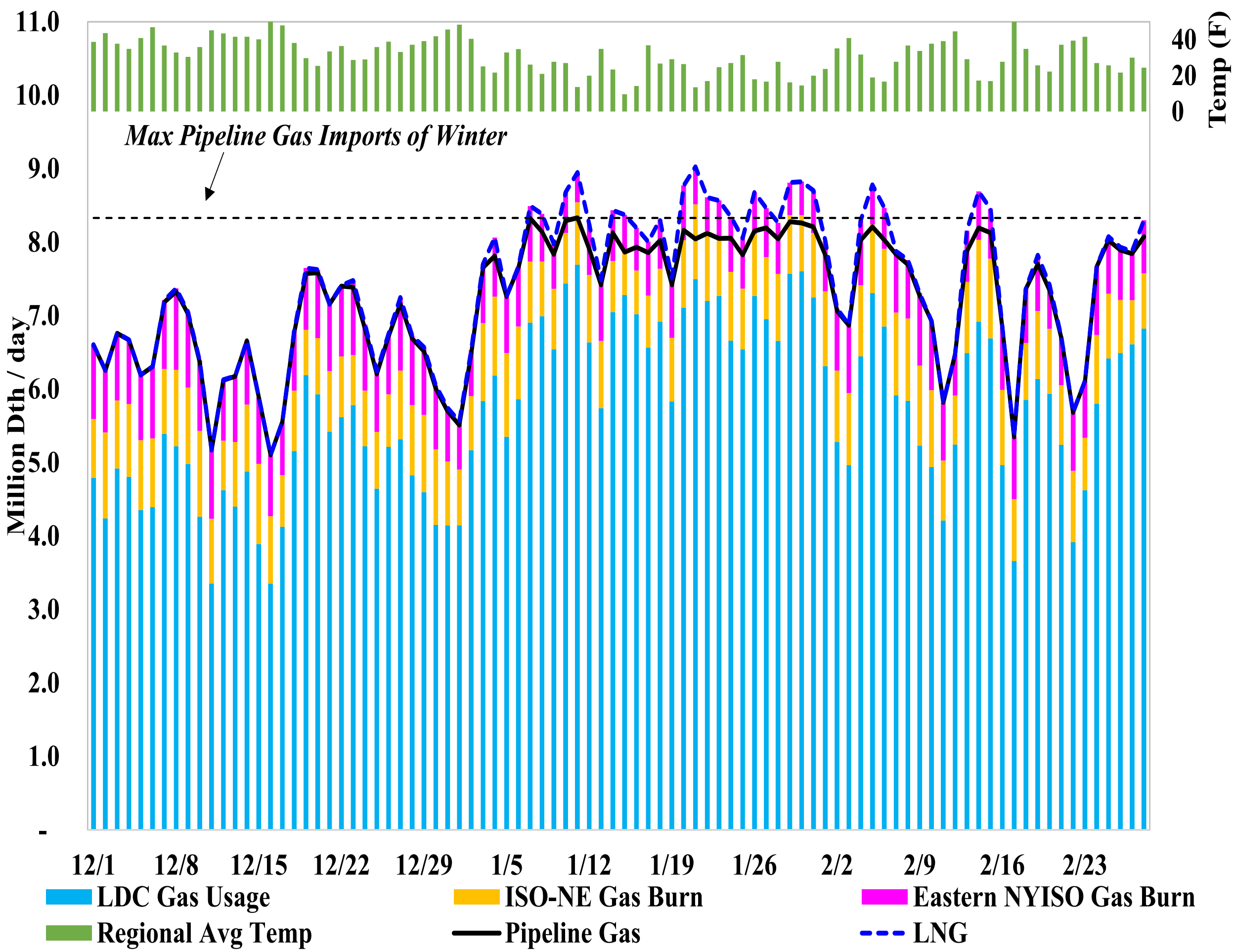
Pipeline Network in New York & New England



- East NY & ISO-NE are import constrained
- Pipelines provide fixed import capability
- LDCs must maintain security and reliability
- Gas storage is limited in the Northeast
- Incremental supply is provided by LNG imports

Daily Supply & Demand for Gas in East NY & ISO-NE

Winter of 2021/22 – See NYSRC ICS Materials for details (here)



- Pipeline capability was ~8.3M Dth/day
- LDC usage peaked at 7.8M Dth one day (Jan 11th)
- East NY gas-fired generation made possible by LNG imports on that day
- This winter had the 3rd coldest January since 2011 but was moderate overall

Planning for Design Day Conditions by Northeast LDCs

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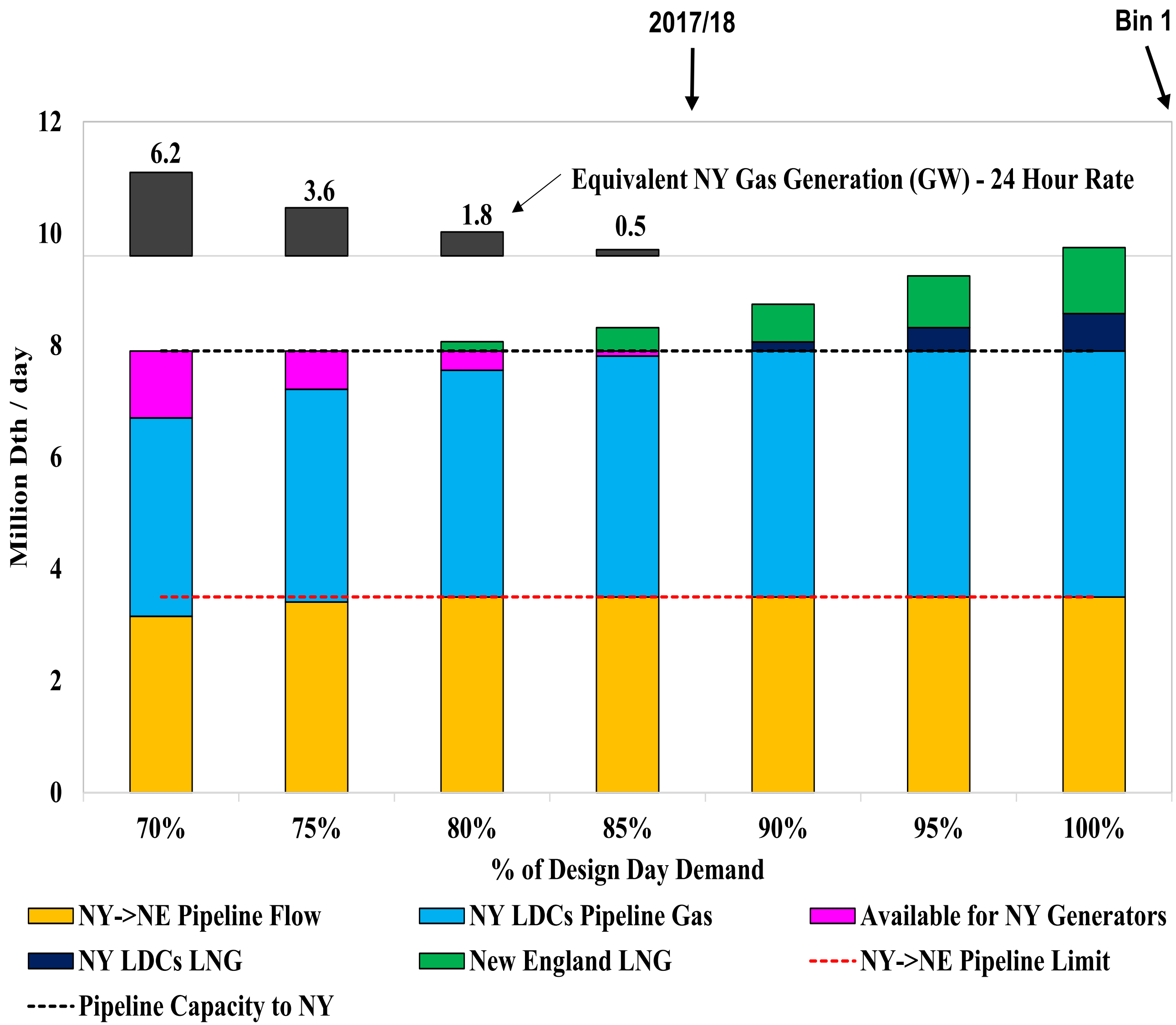
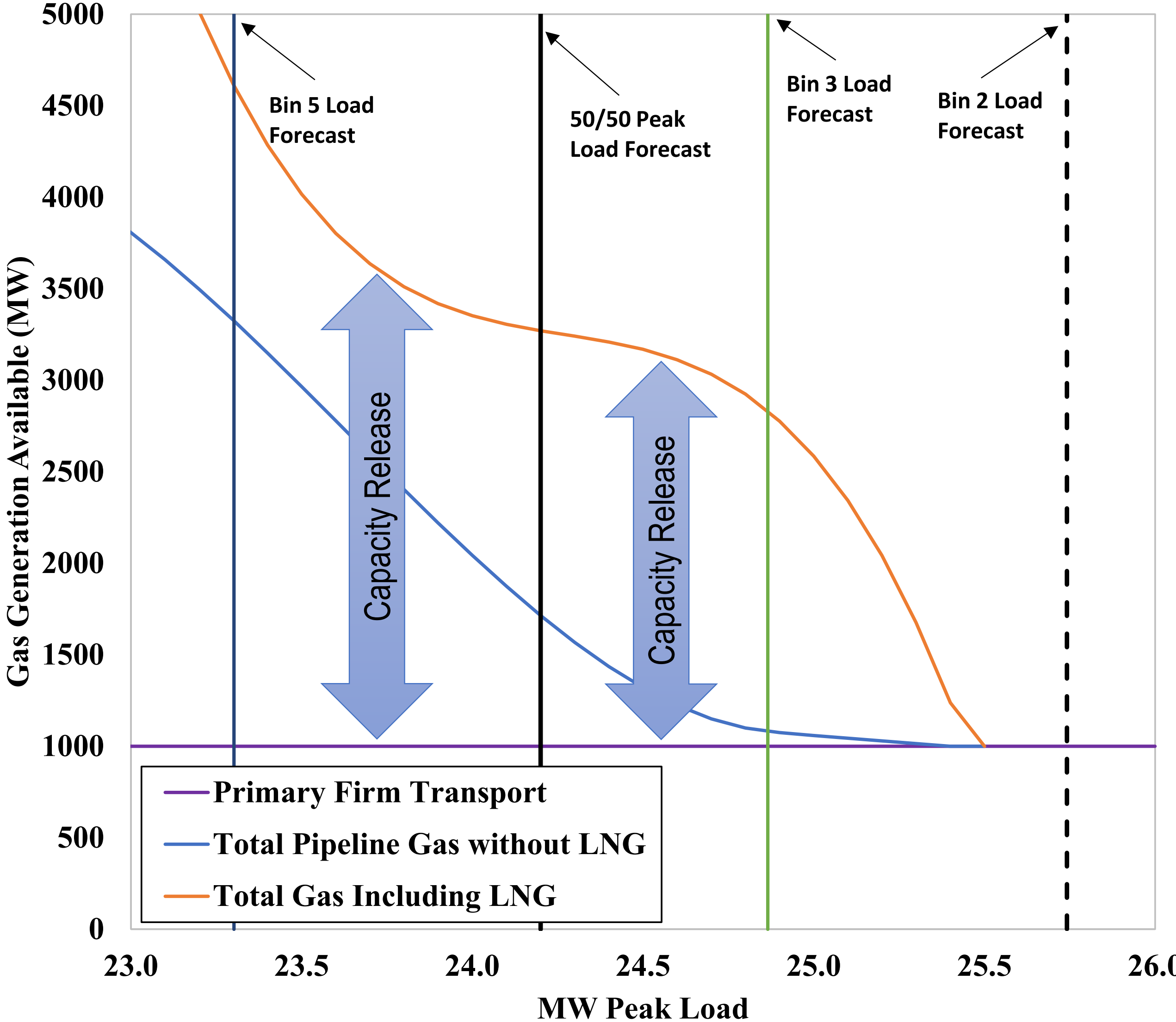
Illustration of Gas Availability if Generators Do Not Contract for Firm



- LDCs plan for 100% of design day conditions
- LDC design day needs exceed pipeline capability + LNG storage
- LDCs supplement with LNG imports
- Firm contracting by gas-fired units leads LDCs to rely more on LNG imports
- Gas available thru capacity release in most winters

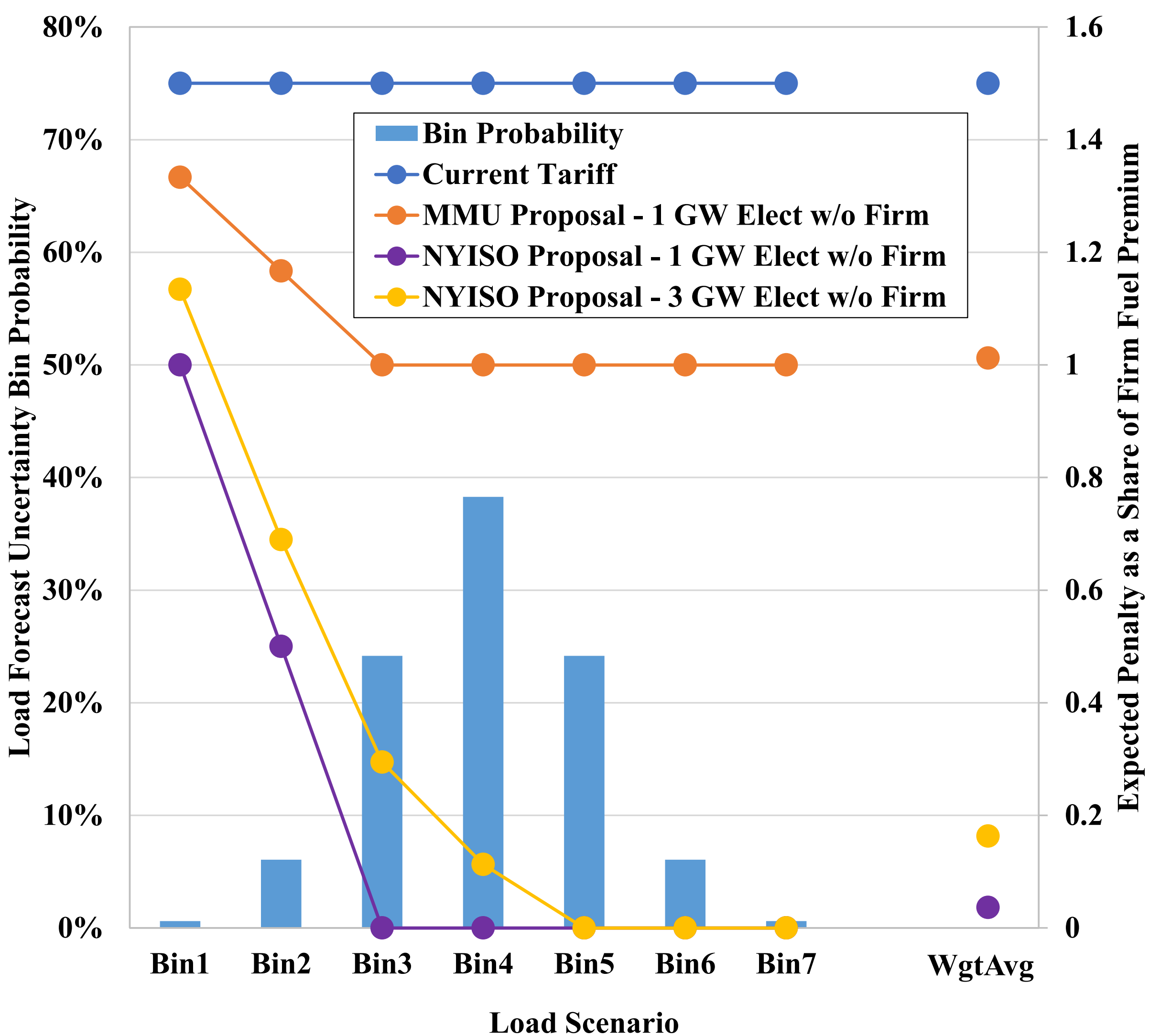
Gas Available to East NY Generators by Load Level



- Few generators acquire primary firm transport for the winter
- Available gas estimated from historic operations 2017/18 to 2021/22
- Most firm gas used by generators was available through capacity release
- Capacity release shrinks in RA-risk hours (i.e., Bins 1&2)

Effects of NYISO Proposal on Gas-Fired Generators

Expected Penalty if Firm CARC Unit Relies on Non-Firm



- We estimated gas available through capacity release by LFU Bin by month
- Likelihood of penalty depends on MW electing firm vs available gas
- NYISO proposal allows unit to profit from firm election w/o primary firm transport (for Bins 2-7)
- Current tariff provides disincentive to rely on capacity release
- See slide 14 for MMU proposal

Effects of NYISO Proposal on Gas-Fired Generators

- The NYISO proposal incents suppliers to elect to be in the firm CARC and rely on capacity release or pooling agreements with contingent service.
- This will lead to:
  - Lower capacity prices
  - Less capacity electing to be firm oil
  - Diminished incentives to support reliability in a worse-than-average winter
  - Distorted investment incentives (from under-valuing firm fuel)
- Requiring generators to elect to be firm (or non-firm) 16 months before the winter:
  - Raises the cost of firm gas-fired generation
  - Increases risk that the cost of firm gas will exceed firm fuel CARC premium
  - These additional costs will likely be passed on to consumers

Reliance on FERC Enforcement

- NYISO's proposal would require gas-fired generators in the firm fuel CARC to:
  - A. Contract for firm by December 1
  - B. Inform NYISO if such agreements have not been obtained by December 1
- NYISO would rely on FERC enforcement to address the effects of the poor incentives described above because:
  - Failing to do A or B would violate NYISO's tariff
  - Failing to do B would constitute a violation of 18 CFR 35.41(b) on communications
- Example 1: Unit elects firm but does not obtain primary firm or inform NYISO
  - MMU refers tariff violation and provision of false/misleading information
  - Likelihood of FERC action uncertain. The likelihood is increased by the violation of 18 CFR 35.41(b) but reduced by not informing NYISO and avoiding discovery.
- Example 2: Unit elects firm, does not obtain primary firm, informs NYISO
  - Generator "tries" to contract for firm but is "unable" to find it at a "reasonable" cost
  - Primary firm contracting opportunities dry up by November and informs NYISO
  - MMU refers tariff violation
  - Low likelihood of FERC action without clear evidence of bad faith

Conclusions and Recommendations

Conclusions & Recommendations

- The current tariff provides strong financial incentives for firm gas CARC units to contract for primary firm service – substantially weakened under NYISO proposal and encourages generators to make risky elections
  - MMU recommends rejecting NYISO's proposal in its current form
- The MMU's concerns could be addressed by the following changes:
  1) For units that notify NYISO of failure to contract by Dec. 1:
     - ✓ Apply a Firm Fuel Sanction Multiplier of 1.5 in any Winter Performance Month with a lack of fuel event (consistent with NYISO's proposal).
     - ✓ In addition, apply a Firm Fuel Sanction Multiplier of 1.0 in any other Winter Performance Month.

     This would address the incentive to make a risky election
  2) For units that do not notify NYISO of failure to contract and are discovered:
     - ✓ Same financial sanction as in (1), but also referred to FERC enforcement for tariff violation and violation of 18 CFR 35.41(b)
  3) Push back election deadline from August 1 of the previous year to March 1
     - ✓ Reduces cost uncertainty for generators when they make their election