New York ISO
Independent System Operator

# Enhancing Fuel & Energy Security


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# Agenda

- Background
- 2020 Project Scope
- Fuel Security Monitoring Elements
- Related Efforts
- Next Steps

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# Background

- **In 2019, the NYISO engaged Analysis Group to perform an assessment of fuel and energy security (FES study) in New York**
  - The final study report as well as the NYISO Management Response are posted with the material for the November 21, 2019 ICAPWG meeting
- **Today's presentation will outline the NYISO's plan to enhance fuel security monitoring**

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# 2020 Project Scope

- **Enhance monitoring by adding additional fuel security elements to the Winter Capacity Assessment (Fall) and Cold Weather Operations (Spring) presentations**
- **Develop forward load forecasts (e.g., 14+ days) to be used as an input for internal fuel and energy security assessments**
  - This effort could potentially include enhancements such as applying severe cold weather event, generic dispatch assumptions, fuel disruptions, etc
- **Continue to further define and incorporate on-going initiatives:**
  - Potentially develop fuel security-related "thresholds or triggers" to assist in identifying the potential for future concerns
  - Determine if/when it may be prudent to re-run a Fuel and Energy Security study

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# Fuel Security Monitoring Elements

- Fuel Security Monitoring will be updated at least twice a year and compared to the assumptions in the 2019 FES study
- If there are large deviations in actual conditions vs. the assumptions that are impactful to reliability, this may trigger the need for a refresh of the FES study

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# Fuel Security Monitoring Elements cont'd

- **Generation Mix:**
  - Deployment of new renewable and clean resources
    - On & Offshore Wind
    - Solar (BTM and Utility Scale)
    - Storage (Battery and other)
  - Hydro and thermal forced outages
  - Generator outages due to lack of fuel
  - Retirements of dual-fuel generators and reductions in alternate fuel capability
  - Winter season starting alternate fuel inventory
  - NYSDEC "peaker rule" impacts

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# Fuel Security Monitoring Elements cont'd

- **Gas Infrastructure:**
  - Capacity, demand, and utilization
- **Dual Fuel Availability:**
  - Extended weekly fuel inventory evaluations (14+ Day Look Ahead)
  - Enhanced annual surveys (Winter Prep/Fuel Availability)
- **Fuel Disruptions and Impact:**
  - Potential need to revisit/refresh Fuel and Energy Security Study
  - Develop fuel security-related "thresholds or triggers" to assist with identifying potential future concerns
  - Gas pipeline constraints and contingencies

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# Fuel Security Monitoring Elements cont'd

- **Forecasting (Load, EE, EV, Electrification, DER, DR, etc.):**
  - Status of transmission upgrades
  - Actual load/winter load forecasts
  - SCR/EDRP activations & magnitude
  - DER
  - EV (Electric Vehicle penetration)
  - Electrification (Primarily heating)

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# Related Efforts

- Another 2020 project (B688 GFER Upgrade) features enhancements to the generator fuel inventory survey application to better inform NYISO on generator winter preparation/fuel availability
- NYISO is actively involved in many industry groups focused on Gas/Electric coordination and fuel security (IRC EGCFT, EIPC EGTF, NERC EGWG, etc.)
- CARIS 2020 (70 x 30 scenario),Climate Change Impact Study Phase II (100 x 40 analysis), RNA, and Grid in Transition
- NYSRC High Renewable Resource Modeling Whitepaper

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# Next Steps

- NYISO will return to a working group in fall 2020 to discuss enhanced fuel security findings as part of the 2020-2021 winter assessment

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# Feedback/Questions?

- Email additional feedback to:
  Debbie Eckels, deckels@nyiso.com

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**The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:**

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system

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