



2016-2017 Winter Preparedness

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FERC Winter Assessment
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Winter 2016 Review

- ◆ **New York Winter 2016 was milder than the past two winters and milder than the 10-year and 30-year averages**
- ◆ **Generation and transmission performance was good across the winter.**
 - *Fuel inventories were maintained and gas infrastructure performance was good.*
 - *No need for out-of-market generation commitments.*
 - *Low number of generator derates.*
 - *No need to activate Demand Response resources.*
- ◆ **February 12-15, 2016 was the second coldest weekend in NY in 45 years.**
 - *New York State set an all time total gas throughput of 6.6 BCF on 2/13/2016*

Winter 2017 Assessment

- ◆ For projected baseline forecast peak conditions and expected performance of the transmission, generation, and gas pipeline infrastructure, the NYISO expects to meet reliability criteria throughout Winter 2016-17.

<i>2016-2017 Capacity Margins - MW</i>				
Region	Base Case		Loss of Gas Case	
	Normal Weather	90th Weather	Normal Weather	90th Weather
NYCA	9,433	7,829	5,431	3,827
GHIJ	5,494	4,871	3,659	3,036
NYC	5,281	4,779	3,621	3,119

Winter Preparedness

- ◆ **Seasonal generator fuel surveys indicate sufficient winter starting oil inventories along with arrangements for replacement fuel oil for oil-burning units.**
- ◆ **The NYISO Market Mitigation and Analysis Department has performed many on-site visits of generating stations to discuss past winter operations and preparations for Winter**
- ◆ **Minimum Oil Burn procedures defined by the New York State Reliability Council; IR-3 & IR-5**
 - *Establish fuel switching at certain cold weather load thresholds to mitigate gas pipeline contingencies*

Situational Awareness

- ◆ **Control Room gas-electric support**
- ◆ **Northeast interstate pipeline system is displayed on the operator Video Board. Operational Flow Orders are posted with enhanced brightness on the Video Board**
- ◆ **A web-based, fuel survey “portal” provides generator fuel information to the operators**
 - *This is updated weekly by generators and updated daily during cold weather conditions*

Gas Electric Communications

- ◆ **A communications protocol is in place with NY state agencies to improve the speed and efficiency of generator requests to state agencies for emissions waivers if needed for reliability**
 - *Weekly dashboards & daily dashboards during cold weather conditions are issued indicating fuel and capacity margin status*
- ◆ **An emergency communication protocol is in place to communicate electric reliability concerns to pipelines and gas LDC's during tight electric operating conditions**
- ◆ **FERC Order 787**
 - *The NYISO modified its code of conduct per the FERC Order 787 to accommodate pipeline requests for reliability information*

Market Enhancements

- ◆ **November 2015**
 - *Implemented enhancements to Shortage Pricing to increase incentives for generators to secure sufficient fuel to meet Day-Ahead schedules*
- ◆ **November 2015**
 - *Increase the Total Operating Reserve Requirement from 1965 MW to 2620 MW in the day ahead market and real time dispatch on November 1, 2015*
- ◆ **Regarding FERC Order 809, the NYISO market closes at 5 AM (est.) and posts day ahead electric schedules around 9:30 AM (est.). Decided not to advance the market timing.**
- ◆ **June 2016**
 - *Enhanced Scarcity Pricing for Demand Response activations deployed*

Continued Winter Challenges

◆ Gas Availability

- *It continues to be a fact that Gas LDC retail load has gas transportation priority over electric power generation during cold weather conditions.*

◆ Extended Cold Weather Conditions

- *Burn rates of alternative fuels can exceed replacement rates of alternative fuels during extended cold weather and result in reduced generation capacity (and during extended time periods when oil costs are below gas costs)*

◆ NOx Restrictions

- *Generator switching from gas to oil in some instances results in capacity limitations due to newer, more restrictive NOx emission limitations*
- *The NYISO internally tracks daily and 30 day rolling average NOx emissions for reliability*

◆ Emissions challenges to dual fuel capability

- *Burning oil may be further restricted by reduced NOx emission limits, less Northeast refinery capability, or potential for reduced carbon emissions targets*

◆ New gas pipeline siting remains challenging

The mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit 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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