

ISO New England 2009/10 Winter Experience

Electric/Gas Operations Committee Meeting
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Mark R. Babula
Principal Engineer

Presentation Outline

2009/10 Winter Experience

- 1.1) Regional Fuel Supplies
- 1.2) Regional Natural Gas System Highlights
- 1.3) Monthly Operational Reviews, Demand & Weather
 - 1.3.1) December 2009
 - 1.3.2) January 2010
 - 1.3.3) February 2010

Question & Answers

2009/10 Winter Experience

Regional Fuel Supplies

- Entered the heating-season with:
 - Total crude oil and petroleum stocks, including the Strategic Petroleum Reserve (SPR), above the 5-year average
 - Includes residual, distillate, kerosene/jet fuels
 - National gas storage levels exceeding 5-year averages
 - Increased gas supply to the region (LNG & pipeline capability) has reduced the risks during cold weather
- During this past winter, no major fuel supply or deliverability issues with respect to:
 - Coal, heavy & light oil, natural gas or LNG
- New LNG supply source at Distrigas:
 - First scheduled delivery of LNG from Yemen on February 23, 2010, along with heightened security protocols

Regional Natural Gas System Highlights

- Cold weather combined with high demand triggered several (routine) *Imbalance Warnings* on regional pipelines:
 - Shippers are required to schedule receipts commensurate with expected deliveries
 - Meter operators are required to flow gas at scheduled volumes
 - No imbalance gas should be taken off the pipeline system
- Some pipelines subsequently invoked FERC Order No. 698 requirements, which mandates that direct-connect, gas-fired power stations provide them with projected daily volumes and projections of hourly consumption profiles
 - If pipeline conditions continue to deteriorate, these situations may lead to invocation of Operational Flow Orders (OFOs), Action Alerts or flow control limitations

Regional Natural Gas System Highlights, *cont.*

- Several unplanned outages were experienced on regional pipelines and compression stations, which created temporary constraints on regional pipeline capacity; however, no major impacts were observed
- No major issues with natural gas quality / interchangeability
 - Some minor problems were experienced at generators due to various changes in heat content of the gas stream
- No major issues with LDC deliveries to power generators
- Several, short-term supply disruptions occurred at the Sable Offshore Energy Project (SOEP)
 - However, Canaport LNG seemed able to supply replacement gas

Monthly Operational Reviews, Demand & Weather

December 2009 - Operational Review

- Weather Patterns:
 - Boston: Below normal temperatures and below normal precipitation
 - Hartford: Above normal temperatures and below normal precipitation
- MLCC2 Declarations:
 - Dec 5, 12, 18 & 19 – All of New England for Capacity
- OP-4 Events:
 - None
- Minimum Generation Emergencies:
 - None
- Natural Gas and Oil Prices:
 - December natural gas prices were 75% higher while oil prices were 4% lower than November 2009 average values

December 2009 - Demand & Weather

- December 2009:
 - Peak Load = 20,791 on December 17, 2009 at HE 18:00 @ 15° (F) at -3 dew point (*please see Note 1 & 2 below*)
 - Monthly Energy = 11,525 GWh (+1.2% from December 2008)
 - Weather = 1,076 Actual HDD // Normal/Avg = 1,039 HDD = +3.6% Variance

Note 1: Peak temperature degrees (F) = 8-city weighted dry-bulb temperature at peak hour.

Note 2: Peak dew point = 8-city weighted dew point temperature at peak hour.

January 2010 - Operational Review

- Weather Patterns:
 - Boston: Average temperatures and below normal precipitation
 - Hartford: Above average temperatures and below normal precipitation
- MLCC2 Declarations:
 - Jan 12 – PSNH Only – Due to computer issue (HE 15:45-16:40)
 - Jan 17 – Real time contract curtailment (HE 17:00-20:00)
- OP-4 Events:
 - None
- Minimum Generation Emergencies:
 - Jan 26 – Reduce online generation by -250 MW & reduce contracts by -250 MW (HE 02:00- 05:00)
- Natural Gas and Oil Prices:
 - January natural gas prices over the period were 8.9% higher while oil prices were 2.7% higher than December 2009 average values

January 2010 - Demand & Weather

- January 2010:
 - Peak Load = 19,901 MW on January 29, 2010 at HE 19:00 @ 13° (F) at -8 dew point
 - Monthly Energy = 11,568 GWh (-3.6% from January 2009)
 - Weather = 1,176 Actual HDD // Normal/Avg = 1,194 HDD = -1.6% Variance

Note 1: Peak temperature degrees (F) = 8-city weighted dry-bulb temperature at peak hour.

Note 2: Peak dew point = 8-city weighted dew point temperature at peak hour.

February 2010* - Operational Review

- Weather Patterns:
 - Boston: Above average temperatures and below average precipitation
 - Hartford: Above average temperatures and average precipitation
- MLCC2 Declarations:
 - February 2, 4, 6, 16, 27, 28 – Real time contract curtailment
- OP-4 Events:
 - None
- Minimum Generation Emergencies:
 - None
- Natural Gas and Oil Prices:
 - Average February natural gas prices were 11.4% lower, while oil prices were 4.1% lower than January 2010 average values

(*) Data through February 24th unless otherwise noted

February 2010 - Demand & Weather

- February 2010:
 - Peak Load = 19,294 MW on February 1, 2010 at HE 19:00 @ 27° (F) at +6 dew point
 - Monthly Energy = 10,145 GWh (0.0% from February 2009)
 - Weather = 973 Actual HDD // Normal/Avg = 1,028 HDD = -5.3% Variance

Note 1: Peak temperature degrees (F) = 8-city weighted dry-bulb temperature at peak hour.

Note 2: Peak dew point = 8-city weighted dew point temperature at peak hour.

QUESTIONS

Mark Babula
Principal Engineer
ISO New England Inc.
System Planning - Resource Adequacy
(413) 535 – 4324
mbabula@iso-ne.com