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NYISO Consumer Interest Liaison Weekly

May 4 – May 8, 2015

Notices:

- *The NYISO's annual Joint Board of Directors and Management Committee Meeting will be held on Monday, June 15th, at The Sagamore Resort on Lake George in Bolton Landing, NY. Following the Joint Board/ MC Meeting, a Management Committee meeting will be held on Tuesday, June 16th, also at the Sagamore Resort.*
- *Cubit Power One Inc. has been approved as a Non-Voting Entity in NYISO Governance.*
- *New York Transco has been approved as a Non-Voting Entity in NYISO Governance.*
- *The NYISO has posted the final NYISO Capacity Market Report prepared by the Analysis Group. To see the Report, please go to:
https://www.nyiso.com/public/webdocs/markets_operations/committees/bic_icapwg/meeting_materials/2015-02-25/AG%20Capacity%20Market%20PDF.PDF*

Meeting Summaries:

Monday, May 4, 2015

Joint Electric System Planning Group/Transmission Planning Advisory Sub-Committee Order 1000 Regional Planning Compliance Filing

Carl Patka of the NYISO presented a review of the Order 1000 Order on rehearing and compliance, issued April 16, 2015. The due date for the compliance filing is May 18, 2015. The NYISO will complete the tariff changes and file a pro forma transmission Development Agreement for reliability planning as directed by FERC. The NYISO intends to bring for stakeholder review and to file a pro forma transmission operating agreement later this year. Mr. Patka highlighted and led discussion on the NYISO proposed changes. To see the redline tariff sections, please go to:

http://www.nyiso.com/public/committees/documents.jsp?com=bic_espwg&directory=2015-05-04

2015 Fuel Price Forecast



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Arvind Jaggi of the NYISO presented the 2015 fuel price forecast. The revised methodology used in the forecast was discussed with stakeholders at multiple ESPWG meetings from November 2014 through March 2015. Mr. Jaggi explained which elements of the forecast remain unchanged and which elements are revised. The elements that have been revised are:

- *Annual bases calculated using nine-month weighted monthly average (excluding Jan., Feb., and Dec.) as opposed to a twelve-month average*
- *Three-year averages (2012-2014) for annual bases (changed from five-year averages)*
- *“Spike structure” is normalized around mean monthly average prices*

Graphs were provided depicting natural gas and fuel oil prices for 2015 through 2017, the natural gas forecast for Zones J and K 2014 vs. 2015, the natural gas price forecast for the three NYCA regions, the low and high natural gas price scenarios for Zones J and K and the Mid-state vs Upstate gas price scenario. One stakeholder requested that the NYISO return to a future ESPWG meeting to walk through the process used to derive the price forecasts for clarity. The NYISO took the suggestion into consideration. To see Mr. Jaggi’s presentation, please go to:

http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_espwg/meeting_materials/2015-05-04/Agenda%20Fuel%20Price%20Forecast.pdf

2015 CARIS 1 Follow-Up Items

Tim Duffy of the NYISO presented a follow-up from prior CARIS 1 discussions. A matrix of the 2015 CARIS base case assumptions was presented containing information from the recently posted 2015 Gold Book. Mr. Duffy highlighted the updates to the assumption matrix and explained the background on updates to the assumptions. After presenting the updated assumption matrix, Mr. Duffy led a discussion in greater detail on:

- Emission allowance price forecasts
- Hurdle rates to be used for the model
- CARIS 1 Scenarios -- Highlighting
 - Low and high load forecast scenarios
 - High solar penetration
 - High CO₂ forecast

The next step in the CARIS 1 process is to finalize the 10-year study base case and continue to collect cost data. A presentation will be made to the ESPWG on the historic and forecast congestion analysis. Generic solutions will be discussed as well as the “Study Cases”. To see Mr. Duffy’s complete presentation, please go to:

http://www.nyiso.com/public/committees/documents.jsp?com=bic_espwg&directory=2015-05-04

Solar Integration Study

Howard Tarler of the NYISO presented the status of the plans to go forward with a solar integration study. As of the end of 2014, there was 310MW of behind-the-meter solar generation capability on the NYISO system. The NY-Sun Initiative has a goal of 3000MW of solar generation capability by 2024. This will change the load shape as well as reduce system loads and have an impact on system planning and operations. Graphs were provided to illustrate the



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impact of Solar Photo-Voltaic (PV) generation on peak day hourly loads and the potential volatility of Solar PV on clear vs. sunny days. Task 1 of the process will be to create a forecast for incremental installed Solar PV for the next 15 year period. PV load shapes will be developed for graduated volumes of growth over the period. Consultants will help the NYISO evaluate the accuracy of solar forecasting. Task 2 of the process is for the NYISO to research recent experience and studies to:

- Evaluate the solar integration experiences in California, PJM, Hawaii, Germany, Italy and elsewhere, and review recent research papers by national labs
- Compare capacity and energy factors and contribution at different times of day/locations
- Evaluate performance during disturbances, including low voltage ride-through
- Document PV interconnection, metering and communication requirements in other states

Task 3 is to determine the “Net Load” for wind and solar variabilities while preparing “net load” profiles with varying amounts of wind and solar. A table was presented to demonstrate the volumes of solar and wind scenarios that will be studied. Task 4 will address the operational impacts to the system at various levels of PV and wind MWs. Task 5 is to develop a draft report for November 2015 delivery. To see Mr. Tarler’s presentation, please go to:

http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_espwg/meeting_materials/2015-05-04/Agenda%20Solar%20Integration%20Study.pdf

Thursday, May 7, 2015

System Operations Advisory Sub-Committee

NYISO Operations Report – April 2015

Peak Load

The peak load for the month was 19,521MW which occurred on Wednesday, April 8, 2015, HB19. Reserve requirements were as follows:

Reserve	10 Sync	Non-Sync	30 Min
Requirement	655	1,310	1,965
For Hour	1,338	2,370	4,379
DSASP Cont.	89	0	89

Major Emergencies

None

Alert States -- On 21 occasions Alert State was declared:

2 – System Frequency 2 – Low, 0 – High

19 – Emergency Transfer Declared

Alert state was declared 16 times during April of 2014

Thunder Storm Alerts – 0

Reserve Activations – 7

Emergency Actions – Special Case Resources – SCR Test conducted 4/14/2015 All Zones

HB18

TLR3 Declared – 0 for a total of 0 hours



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Application for the Loss of Generator Gas Supply – New York City

Lou Maiocco of Consolidated Edison (ConEd) presented the study verifying the requirements of the application for the Summer 2015 capability period. Mr. Maiocco provided the forecast levels and the associated resultant actions for the levels. The study concluded that the number of generators required to be on minimum oil burn remains the same as during the Summer 2014.

ConEd recommends that a revision to Application No. 69, including these updated summer capability period requirements, be accepted and submitted to the Operating Committee for implementation. In response to a stakeholder request, Mr. Maiocco committed to provide information on the number of times during the Summer 2014 that ConEd invoked minimum oil burn as a result of system conditions that were not identified in the seasonal study.

The SOAS recommended the study to the OC for approval with an abstention.

To see the ConEd presentation, please go to:

https://www.nyiso.com/secure/webdocs/markets_operations/committees/oc_soas/meeting_materials/2015-05-07/04a_LOG%20Study%20Presentation%20SOAS%20May%207%202015.pdf

PSEG Long Island – Loss of Gas Supply Study

Zoraini Rodriguez of PSEG Long Island presented the minimum oil burn requirements and load levels for the Long Island distribution system.

The SOAS recommended the study to the OC for approval.

To see the PSEG Long Island presentation, please go to:

https://www.nyiso.com/secure/webdocs/markets_operations/committees/oc_soas/meeting_materials/2015-05-07/05_LIPA%20Loss%20of%20Gas%20Supply%20for%20SOAS.pdf

Summer 2015 Operating Study Report

Robert Golen of the NYISO presented the study results for the NYISO Summer 2015 Operating Study. Mr. Golen highlighted the changes to generation to the NYISO system with a loss of 33MW and a gain of 770MW. Two new substations and a substation returned to service were identified. Mr. Golen announced the internal and external interface limits while explaining changes from 2014.

The SOAS recommended the study to the OC for approval.

To see the complete presentation including the NYISO Operating Study – Summer 2015, please go to: http://www.nyiso.com/public/committees/documents.jsp?com=oc_soas&directory=2015-05-07

NYISO 2015 Fault Current Assessment

Kalyani Abhyankar of the NYISO presented the study that performs symmetrical fault duty analysis on selected New York stations to determine whether the circuit breakers present in the New York Control Area system would be subject to fault levels in excess of their rated interrupting capability. This study is required annually by the New York State Reliability Council (NYSRC) rules. Ms. Abhyankar listed the major system changes from 2014. In reviewing 142 stations throughout the system, four required an individual breaker analysis. Out of those four, one was shown to have over-dutied circuit breakers at the National Grid Porter



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230kV station. National Grid will have a mitigation plan in place by the end of Summer 2015. A sensitivity analysis was performed and noted some potentially over-dutied breakers at the ConEd Astoria East 138kV station under certain circumstances and configurations. The NYISO recommends the continued implementation of the Interim Operating Protocol currently in place (approved by the OC on May 6, 2010) to prevent over-duty conditions at this station. To see the presentation and the full report, please go to:

http://www.nyiso.com/public/committees/documents.jsp?com=oc_soas&directory=2015-05-07

FERC Filings

May 4, 2015

NYISO filing on behalf of the NY Transco and NYTOs of a compliance filing regarding their proposed transmission cost-of-service formula rate template and formula rate implementation protocols

FERC Orders

May 6, 2015

FERC letter order accepting the CRIS revisions subject to the outcome of the tariff revisions ultimately accepted in other ongoing proceedings

Link to FERC Filings and Orders:

http://www.nyiso.com/public/markets_operations/documents/tariffviewer/index.jsp