

Final Minutes
New York State Reliability Council, L.L.C. (NYSRC)
Executive Committee
Meeting No. 207 – July 8, 2016
NYISO, 10 Krey Blvd, Rensselaer, NY

Members and Alternates

in Attendance:

Curt Dahl, P.E.	PSEGLI – Member – Chair
Peter Altenburger	National Grid, USA – Member – Vice Chair
George Loehr	Unaffiliated Member
William H. Clagett	Unaffiliated Member
Bruce Ellsworth	Unaffiliated Member
George Smith	Unaffiliated Member
Richard J. Bolbrock, P.E	Municipal & Electric Cooperative Sector – Member
David Johnson	Independent Power Producers of NY. – Member
Scott Leuthauser	Independent Power Producers of NY. – Alternate Member
Jim McCloskey	Central Hudson Gas & Electric – Member
Mayer Sasson	Consolidated Edison Co. of NY, Inc.- Member
Mike Mager	Couch White (Large Customer Sector) - Member
Sunil Palla	NYPA – Member
Ray Kinney	New York State Electric & Gas/RG&E – Representative

Other

Chris Sharp, Esq.	New York Independent System Operator (NYISO)
Brian Hodgdon, Esq.	New York Independent System Operator (NYISO)
Rana Mukerji	New York Independent System Operator (NYISO)*
Henry Chao	New York Independent System Operator (NYISO)
Aaron Markham	New York Independent System Operator (NYISO)*
Dana Walters	New York Independent System Operator (NYISO)
Leka Gjonaj	NYS Department of Public Service
Don Raymond	Executive Secretary
Bob Boyle	ICS Chair
Roger Clayton	Electric Power Resources, LLC – RSS/RCMS Chair
Al Adamson	Treasurer, Consultant

Visitors- (Open Session)

Philip Fedora	Northeast Power Coordinating Council (NPCC)
Mariann Wilczek	PSEGLI
Herb Schrayshuen	Power Advisors, LLC
Tim Lundin	NYPA
Kelli Joseph	NRG

“*” Denotes part-time

- 1.0 Introduction** – Chairman Dahl called the NYSRC Executive Committee (Committee) Meeting No. 207 to order at 9:30 a.m. on July 8, 2016.
- 1.1 Meeting Attendees** – All Members and/or Alternate Members (or representatives) of the NYSRC Executive Committee were in attendance.
- 1.2 Visitors** – See Attendee List, page 1.
- 1.3 Requests for Additional Agenda Items** – None
- 1.4 Declarations of “Conflict of Interest”** – None
- 1.5 Executive Session Topic** – None
- 2.0 Meeting Minutes/Action Items**
- 2.1 Approval of Minutes for Meeting No. 206 (June 10, 2016)** – Mr. Raymond introduced the revised draft minutes of the June 10, 2016 Executive Committee meeting which included all comments received to date. There were no additional comments. Dr. Sasson moved for approval of the minutes. The motion was seconded by Mr. Ellsworth and unanimously approved by the Executive Committee members – (13 to 0). The Executive Secretary will post the minutes on the NYSRC website – **AI #207-1.**
- 2.2 Action Items List** – The Executive Committee reviewed the Outstanding Action Items list and accepted removal of the following items:

<u>Action Item #</u>	<u>Comments</u>
200-2, 3	Mr. Boyle stated that the Multi Year Wind Model and the 5 Bubble Model were completed at the June 10, 2016 Executive Committee meeting.
200-9	Mr. Gioia received approval to bind the new Liability Policy at the Executive Committee’s June 10, 2016 meeting.
200-10	The Compensation Report was addressed at the June 10, 2016 Executive Committee meeting.
200-11	Officers were elected for a one year term at the June 10, 2016 Executive Committee meeting.

3.0 Organizational Issues

3.1 NYSRC Treasurer’s Report

- i. Summary of Receipts & Disbursements** - Mr. Adamson introduced the Summary of Receipts and Disbursements which shows a surplus of \$199,000 at the end of June 2016. Also, he noted that one TO has yet to make its 3rd Quarter 2016 Call-For-Funds of \$25,000. He added that the electronic method of payment is working very well. Also, he indicated that the 2016 budget contains

\$2000.00 to replace the Administrative Assistant's six year old computer. The cost is expected to be about \$1500.00.

3.2 Other Organizational Issues - None

4.0 Capacity Subcommittee (ICS) Status Report/Issue

4.1 ICS Chair Report – Mr. Boyle reported that the ICS met on June 30, 2016. He focused the discussion on the topics below:

- (a) Emergency Assistance – Mr. Boyle indicated that the NYISO white paper was discussed by ICS, but remains in draft form. It shows that the limiting amount of emergency assistance should be between 2620Mw and 2970Mw. The smaller limit is based on the NYISO's operational reserves and the larger on neighboring control areas average unused 10-minute GTs. Ms. Joseph expressed concern about the larger limit while Mr. Bolbrock, Dr. Sasson and others felt this was the proper limit to use. ICS is now preparing comments on the white paper. The final white paper is expected to be available by the August 12, 2016 Executive Committee meeting – **AI #207-2**.
- (b) Policy 5 Revisions – Policy 5 focuses on the process used by the NYSRC for determining and setting the amount of resource capacity required to ensure an acceptable level of service reliability in the NYCA. Mr. Boyle indicated that ICS is proposing two revisions to Policy 5, one pertaining to the NYCA Capacity Model and another addressing a Special Sensitivity Case. ICS is proposing the addition of a paragraph indicating that the NYISO's Qualified Capacity, i.e. capacity that is eligible to participate in the NYISO's ICAP market as defined by the NYISO procedures and tariffs, would be used in the annual IRM Study. Messrs. Gioia, Bolbrock, Mager and Dr. Sasson expressed concern regarding whether the NYSRC, rather than the NYISO should develop the Qualified Capacity list. Dr. Sasson suggested that the proposed revision be adjusted to reflect that the Qualified Capacity List would be taken into consideration when developing the Capacity Model for the IRM Study, but that the NYSRC retains the authority to alter the List for IRM studies as the Executive Committee deems appropriate. The Executive Committee unanimously concurred with the suggestion. Mr. Boyle noted that with this change, a proposed Appendix C, Generator Inclusion Guidelines, can be removed from Policy 5. Also, ICS proposes the addition of a paragraph addressing a Special Sensitivity Case during the IRM Study process. The paragraph indicates that following the approval of the base case assumptions, if new information indicates that an assumption or group of assumptions have changed and should be in the base case, a Special Sensitivity Case will be conducted including the Tan 45 methodology. The Executive Committee may at a later date use the Special Sensitivity Case IRM as the final base case IRM. The Executive Committee requested changes to the paragraph to add flexibility and clarify that the Special Sensitivity Case is undertaken in order to achieve the IRM schedule and date for the final IRM report. Mr. Altenburger agreed to provide new language – **AI #207-3**.
- (c) Assumptions Matrix – Mr. Boyle introduced the Assumptions Matrix and noted certain parameters that are not yet finalized including: (i) Large Hydro, (ii) Cable FORs, (iii) Special Case Resources, and (iv) ISONE data. Dr. Sasson expressed concern regarding the updated topology since physical limitations were sufficiently described. He requested that the physical limitations be better described in the next IRM Study. Following further discussion, Mr. Clagett moved for approval of the Assumptions Matrix conditioned upon finalizing of the parameters that require updating. The motion was seconded by Mr. Ellsworth and unanimously approved by the Executive Committee – (13 to 0).
- (d) Forward Sales Modeling – Mr. Boyle indicated that an ICS task force has begun discussions on how to model capacity sales from New York to neighboring control areas' forward market studies. Four options are under consideration.

5.0 Reliability Rules Subcommittee Status Report/Issues

5.1 RRS Status Report & Discussion Issues – Mr. Clayton reported that a joint RRS/RCMS meeting was held on June 30, 2016. Two separate meetings were held, each with its own agenda and minutes. He summarized RRS’s current activities which are included in Sections 5.2 – 5.5 below.

5.2 Status of New/Revised Reliability Rules

i. Proposed NYSRC Reliability Rules Revision

a. List of Potential Reliability Rules (“PRR”) Changes – Mr. Clayton introduced the List of Potential Reliability Rule Changes:

PRR # 128, Definition of Bulk Power System. PRR 128 is tabled pending the NPCC review of A-10 revisions. It is hoped that the NYSRC may adopt the revised NPCC A-10 list thereby eliminating discrepancies between the NYSRC and NPCC definition of Bulk Power System.

PRR #130, ETC Application, The Executive Committee approved PRR #130 at its June 10, 2016 meeting. The PRR is in the latest version of the RR&C Manual.

PRR #131, Dual Fuel Testing Requirements. It appears that the problem is predominantly down state (Zones J and K) only. Therefore RRS is moving toward making PRR #131 a Local Rule or part of the Min Oil Rule.

PRR #132, I.4(R3) Transmission Data, was under consideration to clarify the definition of “erroneous data” used in determining potential Non-Compliance with the Reliability Rules by Market Participants. The PRR was approved for “Posting for Comment”. No comments have been received to date.

PRR #133, F, System Restoration, RRS is reviewing the Rule to assure that it is not less stringent than the corresponding NERC and NPCC Standards.

5.3 Proposed NYSRC Reliability Rule Revisions

a. Status of New/Modified Reliability Rules

- 1. PRRs for EC Final Approval** – None
- 2. PRRs for EC Approval to Post** – None
- 3. PRRs for EC Discussion** – None

5.4 NERC Standards Development – Nothing new to report.

5.5 Other RRS Issues –

i. RRS Status Report – See Section 5.2ia

ii. Bucket List – Mr. Clayton noted that Rule C.4, Solar Magnetic Disturbances is being revised to be consistent with the new NERC Standards along with all of the other Reliability Rules.

iii. Environmental Impacts – Mr. Clayton noted that DEC is considering ozone constraints on simple cycle units under high energy demand days in Zones J and K. There will be rulemaking hearings later this summer.

Dr. Sasson added that the PSC is falling behind in adopting Reliability Rule revisions in the RR&C Manual. Mr. Gjonaj agreed to look into this situation – **AI #207-4**.

6.0 Reliability Compliance Monitoring Subcommittee (RCMS) Report/Issues

6.1 RCMS Status Report & Discussion Issues – Mr. Clayton reported that RCMS met on June 30, 2016 following the RRS meeting.

6.2 2016 New York Reliability Compliance Program (NYRCP) – RCMS found the NYISO to be in full compliance with the following Requirement(s):

- (c) C.8 (R1), Real Time Operations of the NYS BPS,
- (e) I.3 (R2), Annual actual and forecast load data, and
- (c) I.4 (R3), MP Transmission data reporting and review.

7.0 Reliability Initiatives

7.1 Defensive Strategies – Mr. Smith reported that as of July 1, 2016 a successful operation of the fully automated controlled separation scheme was achieved. The test involved one of the most difficult extreme contingencies internal to the New York system. The scheme used Kalman filter estimates of phase angle differences across the interface combined with a prediction algorithm to anticipate impending instability. Some features of the test are:

- (a) One of two candidate separation interfaces was tested.
- (b) Immediate tripping of lines (no delay due to breaker operation) was performed.
- (c) An updated model of UFLS was employed and was successful in tripping some SENY load with no modification of the delay times or frequencies (CSSS required reducing the delay times).
- (d) The result is for phase 1 of the testing which does not include the security provision whereby out of step relays are modeled to perform actual tripping in the simulation.

Setting up cases for the remainder of the verification tests is in process including 7 additional extreme internal disturbances, 8 extreme external disturbances and 4 “normal” or within criteria disturbances. Items such as choice of the final controlled separation interface as well as incorporation of delays for signaling and breaker operation need to be finalized.

In addition, Mr. Smith noted that there were project delays associated with the use of the new UFLS bus-by-bus model. He suggested proceeding using the older model which has the same settings but does shedding on an area vs. bus-by-bus basis. Messrs. Chao and Loehr agreed.

Mr. Smith believes the project is slightly behind schedule and he will keep the Executive Committee informed.

8.0 State/NPCC/Federal Energy Activities

8.1 NPCC Board of Directors (BODs) – Mr. Forte provided a summary of the NPCC Prioritized Reliability Issues List that evaluates the strengths, weaknesses, opportunities, and threats of various issues on the reliability of the bulk power system (BPS). At the June 2016 BOD meeting, the NPCC CEO & President discussed two areas of focus: (a) cyber and physical risks and (b) resource adequacy. Questions and/or comments should be directed to Dr. Sasson or Mr. Forte (ConEd).

8.2 NPCC Report – Mr. Fedora reported that the NPCC BOD has approved the Business Plan and budget. NPCC is currently addressing the assessment for the 2016-17 Winter Capability Period using a multi-area probabilistic model to estimate the number of times operating procedures may be needed for base case and severe case conditions. The results will be approved by the RCC at its September 2016 meeting, but will not be released until the corresponding deterministic analysis is approved at the RCC’s December 2016 meeting.

The NERC Member Representative Committee (MRC) has scheduled a pre-meeting for July 13, 2016. The agenda will include: (a) reliability assessments that NERC is intending to pursue, (b) the scope of a study to assess the impact on reliability of distributed energy resources, and (c) the EROs proposed method to address planning activities across the Enterprise.

9.0 NYISO Status Report/Issues

9.1 Reliability Planning Process – A first draft of the 2016 Reliability Needs Assessment (RNA) with the preliminary results will be discussed at the July 5, 2016 ESPWG meeting. The preliminary RNA results indicate that there are no resource adequacy needs for the 2017-2026 study period, but it has identified transmission security issues in western New York and Long Island beginning in 2017, which the TOs are reviewing.

9.2 CARIS – The NYISO is extending and updating the 2015 CARIS 1 database for potential specific project submittals. Preliminary Base Case results for 2016 CARIS 2 were presented at the July 5, 2016 ESPWG meeting.

No specific 2016 CARIS 2 project proposals were submitted as of June 28, 2016. Empire Connector

has requested an additional CARIS study to assess the economic impact of a new transmission facility connecting Marcy and New York City. The study is on-going.

The NYISO staff is continuing its internal assessment of appropriate metric methodologies for estimating the capacity benefits of transmission projects and other potential metrics of project impact.

9.3 Public Policy Transmission Planning Process – On July 16, 2015, the PSC declared a Public Policy Transmission Need (PPTN) in Western New York. The solicitation for solutions was issued on November 1, 2015 and solutions were due on December 31, 2015. The NYISO reviewed 15 proposals received from eight developers and performed the viability and sufficiency assessment (VSA). The VSA was published on April 29th, 2016, and the final report was published on May 31, 2016. The NYISO identified ten viable and sufficient projects and recommended certain non-bulk transmission upgrades also be made to fulfill the objectives of the transmission need identified by the PSC. On December 17, 2015, the NYPSC issued an Order finding that there is a transmission need driven by Public Policy Requirements to increase transfer capability of the Central East and UPNY/SENY interfaces. The NYISO issued a solicitation for solutions on February 29, 2016 with project responses due April 29, 2016. The NYISO is reviewing the 16 proposals received from six developers, and will perform the VSA.

9.4 NYISO Clean Power Plan Study – The objective of the NYISO CPP study is to examine how New York’s compliance strategies interact with existing market rules and system reliability. The study will examine changes in transmission and system resources and changes needed to meet program objectives while maintaining essential reliability services. A presentation was made to the ESPWG on July 5, 2016. PTI Siemens will be studying system stability under low load/high renewable cases. NERC Essential Reliability Services will also be reported.

9.5 Interregional Transmission Studies

i. EIPC Study – Phase I – Final 2015 EIPC Roll-up Report was completed in March 2016 and posted to the EIPC website: <http://www.eipconline.com/non-doe-documents.html>.

In Phase II, the Technical Committee suggested offering EISPC a webinar or series of presentations on recently completed regional studies in lieu of engaging in a scenario analysis on the 2025 cases. The NYISO offered the CPP Study and the Solar Integration Study. The SSMLFWG Chair will discuss with EISPC the list of studies and topics that could be presented.

ii. IPSAC – The NYISO, PJM, and ISO-NE drafted the 2015 Northeast Coordinated System Plan report in accordance with the Amended Northeast Planning Protocol under Order 1000. An IPSAC webex was held on May 9, 2016 to present: (a) The final NCSP report, (b) Regional Planning Needs and Plans for each of the ISO/RTOs, and (c) Projects potentially affecting neighboring systems.

9.6 Other Studies/Activities – None

10.0 Market Initiatives Impacting Reliability – Mr. Mukerji (NYISO) discussed updates to market initiatives that are felt to have significance from a reliability perspective.

The Behind the Meter: Net Generation Model will clearly define rules to allow incremental generation behind the meter to participate in the NY Wholesale Electricity market. The NYISO received stakeholder approval of the market design in December 2015 and sought FERC approval of the relevant tariff changes. The NYISO will also engage with stakeholders on further enhancements as part of the Distributed Energy Resources Roadmap development. The Comprehensive Shortage tariff changes were implemented in November 2015. The Comprehensive Scarcity pricing tariff changes were implemented in June 2016. Also, the NYISO is reviewing various options for recognizing fuel-constraints through additional bidding features to evaluate interest in further developing the concept. Incorporating the fuel limitations directly in the scheduling software will allow for more efficient use of the resources to meet reliability needs.

The NYS Public Service Commission (PSC) initiated the “Proceeding on Reforming the Energy Vision (REV)” with the goal of aligning electric utility practices and the regulatory paradigm with technological

advances in information management, power generation, and distribution. These changes include: (a) a new business model in which Distributed Energy Resources (DERs) become a primary tool in the planning and operation of electric systems. Utilities would be encouraged to invest in DERs that help to avoid or defer the need for more historically traditional distribution system investments and (b) the establishment of a Distributed System Platform Provider (DSPP) that actively manages and coordinates DERs while providing a market in which customers are able to utilize DERs in response to dynamic system conditions. Such customers would provide, and be compensated for, any system benefits associated with their responses. The NYISO is also looking to partner in various REV demonstration projects to evaluate the potential for operational and market impacts from DER participation. FERC directed the NYISO to develop and file a set of rules to designate resources for Reliability Must Run (RMR) service to ensure the continued reliable and efficient operation of the power system and the NYISO Markets. The structure and administration will require: (a) specifying the retirement notification obligations, (b) a process for evaluating alternative solutions, (c) definition of compensation and cost allocation provisions, and (d) expectations for participation in the capacity and energy markets. The NYISO developed and filed with FERC a proposed solution framework. In addition, the NYISO is exploring enhancements to its long-term planning process to support identification and development of solutions for potential generator retirements. FERC has given the NYISO further compliance obligations in its ruling on the RMR proposal. The NYISO is developing these further compliance requirements with input from the stakeholders.

The NYISO has initiated stakeholder discussion on evaluating alternate Methodologies for Setting Locational Capacity Requirements (LCRs). There are multiple possible approaches to determine the LCR requirement for a Capacity Zone after the IRM has been set under NYSRC's Policy 5. The NYISO recognizes that some methodologies may require modifications to Policy 5, which must be approved by the NYSRC. The NYISO has continued discussions with stakeholders on alternative methods for determining Locational Minimum Installed Capacity Requirements (LCRs). This effort will look for ways to optimize LCRs based on minimizing capacity costs statewide while maintaining minimum Loss of Load Expectation criteria, and address any cost allocation rules to ensure that loads are paying their fair share of capacity costs. NYISO has engaged GE to assist in developing a mechanism that will evaluate the opportunities to refine LCR based upon the costs of maintaining the capacity. The NYISO expects preliminary results from GE in June 2016 and will discuss these with stakeholders and NYSRC's ICS committee.

The NYISO is reviewing vendor proposals to complete the upcoming Demand Curve Reset cycle. The selected consultant will conduct a study of the parameters used as the basis to set the NYISO's Installed Capacity Demand Curves beginning with the Summer 2017 Capability Period. It will assess whether these parameters should apply to Demand Curves for a three, four, five or six year period, and will propose and evaluate alternative methodologies to enhance the projection of Energy and Ancillary Services revenues used to determine the Unit Net CONE of the Demand Curve proxy plant, including approaches to reflect impacts from expected market rule changes. The Analysis Group has issued their draft report with preliminary recommendations on the demand curve parameters. Comments on the Report are requested by July 15, 2016.

On January 25, 2016, DPS Staff issued a whitepaper outlining its recommendations to the Public Service Commission for implementing the state's Clean Energy Standard (CES). The CES is intended to increase the amount of renewable energy generation in New York State to 50% of total generation by 2030 while retaining upstate nuclear power plants in support of the state's carbon dioxide emissions reduction goals. The NYISO is participating in the DPS stakeholder discussions and preparing comments on the white papers.

Since the announcement of the NYS PSC REV initiative, there has been a growing interest in wholesale market participation of storage resources. Currently, the NYISO has several resource classifications that can accommodate participation of storage in the wholesale markets that include: (1) Energy Limited Resource (ELR); (2) Limited Energy Storage Resource (LESR); and, (3) Demand Side Ancillary

Services Program (DSASP). The NYISO is initiating discussions in the market working groups to engage stakeholders in a review of resource characteristics, existing market rules that define the opportunities for storage resources to participate in the markets, and an evaluation of revisions that may be necessary to accommodate new storage resources.

11.0 Other Items

11.1 NYISO Monthly Operations Report - Mr. Markham reported that the monthly peak load occurred on Monday, June 20, 2016 at 26,286Mws. The Operating Reserve requirement at the time was 1965Mws resulting in a minimum Operating Capacity requirement of 28,251Mws. There were no Major Emergencies in June 2016. Alert states were declared on 12 occasions – 8 times for emergency transfers. There was one TLR Level 3 declared during the month for a total of three hours. Reserve activations occurred 11 times. There were no NERC/NPCC Reportable DCS Events.

The summer load peaked on July 6, 2016 at 29,656 which is the high for the month so far. Also, on the morning of July 6, 2016 three units in southeast New York tripped between 9:35 and 9:45 A.M. at a total of 2200Mws. The trips were unrelated. There were no transmission or voltage limits exceeded.

11.3 North American Energy Standards Board (NAESB) – Nothing new to report.

12.0 Visitors' Comments – None

13.0 Meeting Schedule

Mtg.

<u>No.</u>	<u>Date</u>	<u>Location</u>	<u>Time</u>
208	August 12, 2016	Albany Country Club, Voorheesville, NY.	9:30 A.M.
209	September 9, 2016	Albany Country Club, Voorheesville, NY.	9:30 A.M.

The Executive Committee Meeting #207 adjourned at 12:35 P.M.