

Final Minutes
New York State Reliability Council, L.L.C. (NYSRC)
Executive Committee
Meeting No. 197 – September 11, 2015
Albany Country Club, Voorheesville, 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 - Phone
George Smith, P.E	Unaffiliated Member
Bruce Ellsworth	Unaffiliated Member
Richard J. Bolbrock, P.E.	Municipal & Electric Cooperative Sector – Member
Chris Wentlent	Independent Power Producers of NY. – Alternate Member
Frank Pace	Central Hudson Gas & Electric – Alternate Member
Mayer Sasson	Consolidated Edison Co. of NY, Inc.- Member
Rich Brophy	New York State Electric & Gas/RG&E – Representative
Sunil Palla	New York Power Authority – Member
Mike Mager	Couch White (Large Customer Sector) – Member

Other

Paul Gioia, Esq.	Counsel
Carl Patka, Esq.	New York Independent System Operator (NYISO)
Henry Chao	New York Independent System Operator (NYISO)
Howard Tarler	New York Independent System Operator (NYISO)
Wes Yeomans	New York Independent System Operator (NYISO)
Rana Mukerji	New York Independent System Operator (NYISO)
Ed Schrom	NYS Department of Public Service
Don Raymond	Executive Secretary
Al Adamson	Treasurer, Consultant
Erin Hogan	NYDOT – ICS Chair

Visitors- (Open Session)

Phil Fedora	NPCC
Kelli Joseph	NRG
Herb Schrayshuen	Power Advisors, LLC.

“*” Denotes part-time

I. Open Session

1.0 Introduction – Chairman Dahl called the NYSRC Executive Committee (Committee) Meeting No.197 to order at 9:30 a.m. on September 11, 2015.

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 Topics – None

2.0 Meeting Minutes/Action Items

2.1 Approval of Minutes for Meeting No. 196 (August 14, 2015) – Mr. Raymond introduced the revised draft minutes which included all comments received to date. No additional comments were offered. Mr. Ellsworth moved for approval of the draft minutes. The motion was seconded by Mr. Bolbrock and unanimously approved by the Executive Committee members – (13 to 0). The Executive Secretary will post the minutes on the NYSRC website – **AI #197-1.**

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>
188-4	Superseded by AI #196-4
194-5	The number of “Emergency Transfers” is reported by Mr. Yeomans.
195-4	PRR #127, Establishing Operating Transfer Limits, was approved at the August 14, 2015 Executive Committee Meeting.
196-2	Same as AI #195-2.

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 showed a balance of \$159,000 at the end of August 2015. He noted that the 3rd Quarter Call-for-Funds was fully paid-up. Mr. Adamson added that the year-end budget variation is projected to be \$91,000 under budget when including the \$50,000 contingency. Also, Mr. Adamson requested a 4th Quarter Call-For-Funds based on an analysis of the projected monthly expenditures for the remainder of 2015. The request is for \$25,000 per TO due on October 1, 2015. Mr. Bolbrock moved for approval of the Call-For-Funds. The motion was seconded by Mr. Loehr and unanimously approved by the Executive Committee – (13 to 0).

3.2 Other Organizational Issues

i. Administrative Assistant Position – Mr. Dahl has circulated an email to the Executive Committee indicating that Carol Lynch will be stepping down as Administrative Assistant at year-end for personal reasons. Mr. Adamson indicated that he approached Ms. Lynch’s daughter (Melissa) who

has performed very well as back-up. Melissa Lynch accepted the Executive Committee's offer on September 3, 2015 and will begin in January 2016.

- ii. **Retention of Meeting Material** – Mr. Adamson indicated that a request was made to retain meeting material on the NYSRC website for more than the current two years. In discussion with Ms. Lynch it was decided that 2014 and 2015 material would remain on-line and subsequent years would be added. The years before 2014 are available through a request to Ms. Lynch. Also, they determined that to convert about 400 sets of meeting materials for the Executive Committee and the Subcommittees beginning in 2005 to “html” format will cost over \$1,000. The Executive Committee asked Mr. Adamson to obtain a firm estimate from Carol Lynch and Kim Garzone – **AI #197-2**.

4.0 Capacity Subcommittee (ICS) Status Report/Issue

- 4.1 **ICS Chair Report** – Ms. Hogan indicated that ICS had hoped to bring the parametric results using the preliminary base case to the Executive Committee at this meeting. However, some of the cases have provided unexpected results. The NYISO is verifying its test results and working with GE to determine the cause of the anomalies. ICS has scheduled a meeting for September 16, 2015 in anticipation of reviewing the parametric results and the Tan 45 curves for the preliminary base case. If successful, both will be presented at the October 8, 2015 Executive Committee meeting – **AI #197-3**. The sensitivity cases will be presented at the November 13, 2015 Executive Committee meeting. The NYISO has completed the high level data review without finding any problems and the detailed review with GE has begun.

5.0 Reliability Rules Subcommittee Status Report/Issues

- 5.1 **RRS Status Report & Discussion Issues** – Mr. Adamson, substituting for Mr. Clayton (RRS Chair), reported that a joint RRS/RCMS meeting was held on September 3, 2015. 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”) Change** – Mr. Adamson introduced the List of Potential Reliability Rule Changes. He noted PRRs #120, through #122, Revision to Tables B-1, B-2 and C-1 are tabled pending NPCC Directory 1 approval. The NPCC Directory 1 Operating and Planning Tables specifying contingency events and performance requirements will be placed in PRRs #120 through #122 and supplemented with the NYSRC more stringent performance requirements.

Mr. Adamson reminded the Executive Committee that PRR #127, C-R1 Establishing Operating Transfer Limits, was approved by the Executive Committee at its August 14, 2015 meeting. A new RR&C Manual was issued on August 14, 2015 and has been sent to the PSC by Mr. Gioia.

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** – PRR #128, Definition of NYS Bulk Power System is under review at RRS. RRS is planning on using the NPCC A-10 with consideration of a ConEd radial exclusion proposal. Action is tabled pending NYSE&G/RG&E review and comments.

5.4 NPCC/NERC Standard Tracking

- i. **NERC Standards Development** – Mr. Adamson indicated that the NYSRC voted “Yes” on IRO-006,009, Interconnection Reliability Operations & Coordination and “No” on BAL-002-2, Phase 1 of Balancing Authority Reliability-based Controls.

5.5 Other RRS Issues –

- i. **Proposed New NYC Local Rule on Gas Generation** – Mr. Adamson noted that the NYISO gave an excellent presentation, The Efforts For Improving Performance Assessments, focusing on resource performance incentives for dual fuel generators that perform poorly. The presentation included the cost of real time replacement energy vs. day ahead bid prices and EFORDs relative to capacity revenue.

In response to a question from Dr. Sasson, Mr. Yeomans indicated that the NYISO is pursuing with the generator owners generator trips by multiple units but with the same engine type as experienced in the 1st Quarter of 2015.

- ii. **ConEd Exception Request** – Mr. Adamson indicated that ConEd’s request for approval of modifications to the existing list of “Exceptions to Reliability Rules” at the Executive Committee’s August 14, 2015 meeting was remitted to RRS for a recommendation. The modifications include: (a) Correct the application of Exceptions #8, #18, and #20 to the Reliability Rules, (b) Correct typos/incorrect data in Exceptions #7 and #20, and (c) Rescind Exception #16. RRS reviewed the request at its September 1, 2015 meeting and recommends approval. Dr. Sasson moved for approval of ConEd’s exceptions request. The motion was seconded by Mr. Loehr and unanimously approved by the Executive Committee – (13 to 0).
- iii. **Reforming the Electric Vision (REV)** – Mr. Adamson reminded the Executive Committee that RRS was asked to investigate the reliability implications of the REV initiatives. He reported that RRS intends to invite an REV expert to give a presentation on REV and to develop reliability based questions. Mr. Gioia indicated he spoke with Diane Barney (PSC) about the presentation. She expressed a positive view and agreed to get back to Mr. Gioia with a recommended person to give the presentation.

6.0 Reliability Compliance Monitoring Subcommittee (RCMS) Report/Issues

- 6.1 **RCMS Status Report & Discussion Issues** – Mr. Adamson reported that RCMS met on September 3, 2015 following the RRS meeting.

- 6.2 **2014 New York Reliability Compliance Program (NYRCP)** – RCMS found the NYISO to be in full compliance with the following Measurement(s):

(a) C.1 (R1, R2), Establishing operating transfer limits.

6.3 Other RCMS Issues

- i. **Non-compliance Letter** – Mr. Adamson reported that in accordance with Policy 4, RCMS is preparing a draft report of its preliminary finding of NYISO non-compliance. Policy 4 states that if a Market Participant is found to be in non-compliance, then the NYISO is subject to a “preliminary non-compliance finding”. The report will address whether the NYISO has done all it can to avoid non-compliance. If it is found that the NYISO Procedures meet NYSRC requirements and that its Non-compliance Letter to the Market Participant is in the correct format and contains satisfactory a mitigation plan, RCMS could recommend waiving the sending of a letter to the NYISO on non-compliance.

The draft report will contain recommendations to add clarity, if necessary, to certain rules and the receipt of a report from the NYISO providing the results of the mitigation plan. Dr. Sasson noted the opportunity for “lessons learned” from review of the non-compliance incident and the review of the rules. Mr. Loehr suggested using different terminology for data errors vs. errors in planning or operating the system.

RCMS’s goal is to bring the draft report to the Executive Committee at its October 8, 2015 meeting – **AI #197-4.**

7.0 Reliability Initiatives

- 7.1 **Defensive Strategies** – Mr. Smith gave a presentation titled, MDMS Report to NYSRC EC, to update

the status of the MDMS project. The topics presented were: (a) angle estimation and prediction concepts associated with PMU data and (b) project schedule. He indicated that the concept uses estimated angle differences between two equivalent generation centers and their rates of change to predict angle differences in the future. This would allow preemptive action in advance of system separation. Mr. Smith recommended using ~~Pulmon~~ Kalman filtering technology which is an optimal estimation process. EnerNex agreed to model this and incorporate it into their simulation.

A simplified dynamic model of a spring/mass combination is used to simulate the upstate and downstate generation centers with the connecting transmission. The mechanical spring/mass oscillation is analogous to the elect oscillations that occur on the power system. The result is a tension between the generation centers that tries to maintain stability. A simple estimation concept can then be used to estimate the angle and rate of change of the angle between the generation centers. Given the rate of change of the angle and the current angle, a state transition matrix can be applied to predict where the angle might be in several hundred milliseconds. If the predicted angle is greater than 120 degrees, it is reasonable to assume that the system will go unstable and remedial action should be taken. One of the remedial actions being considered is to arm out-of-step relays and let conventional relays at discrete locations make the final decision whether or not to trip breakers.

Regarding project schedule, there is a technical workshop scheduled at the NYISO on October 7, 2015 to review: (a) implementation details of protection schemes and mitigation measures and (b) simulation case details/models. During the last coordination meeting, the EnerNex Project Manager implied that the project might be wrapping-up by December 3, 2015. Knowing that Task #3 is about half complete and nothing has been done on Task #4, Mr. Smith feels that compressing the remaining work will seriously compromise the project. Mr. Smith has written a letter expressing this view to the Project Manager, but has not received a response as of yet. Mr. Loehr feels the most important part of the work has yet to be done – **AI #197-5**. Messrs. Smith and Loehr plan to correspond with the NYISO and NYSERDA before the October 7, 2015 meeting. Ms. Hogan offered that if funding is the problem, they should meet with the NYSERDA Project Manager as soon as possible.

8.0 State/NPCC/Federal Energy Activities

8.1 NPCC Board of Directors (BODs) – Mr. Forte provided a summary of NERC’s September 3, 2015 webinar on “Winter Preparation for Severe Cold Weather”. The webinar discussed recent cold weather events, lessons learned, and offered links to documents stored on its Reliability Risk Management website.

Comments and/or questions should be directed to Dr. Sasson or Mr. Forte.

8.2 NPCC Report – Mr. Fedora reported that the Board of Directors of NPCC held a strategy session during the week of September 8, 2015 to set future direction including that of the ERO Enterprise. The following day was the NPCC Board meeting and the RCC met on September 10, 2015. Both were given an update on NERC’s 2015 Reliability Leadership Summit looking into ways the Regions and NPCC can address: (a) how NERC can support the industry as it faces the challenges of a changing resource mix and (b) identifying NERC’S role in assuring the reliability of the bulk power system. There was also an update on NERC plans to address some of the implications of the EPA Clean Power Plan. While NERC’s role is advisory, it will be offering to State regulators and other interested Boards of Trustees a high level report containing a listing of reliability issues that the States should be considering as they develop their State Implementation Plans (SIPs). The report will be followed up in the 1st Quarter of 2016 with the second phase of NERC assessments designed to help the States understand some of the reliability impacts of their SIPs. Mr. Fedora pointed out that in the Greenhouse Gas Initiative there is a cap and trade program in place which could be used as a Clean Power Plan.

Mr. Fedora indicated that the NPCC General Meeting is scheduled for the 1st week in December 2015. The General Meeting topic is “Maintaining Reliability” and the speakers will be giving presentations on

REV. Also, he has invited John Marrow (NERC) to discuss NERC's efforts regarding the Clean Power Plan with the Governmental Regulatory Affairs Advisory Group.

At the RCC meeting, Directory 1 and revisions to Directory 4, System Protection Criteria, were approved for balloting. Status reports were given on two transmission Reliability Assessments and the work on load modeling. They are expected to be completed by the end of the year. The Multi Area Probabilistic Reliability Assessment for the winter of 2015-2016 was approved by the RCC and will be published in December 2015 together with the Deterministic Operational Assessment.

9.0 NYISO Status Report/Issues

9.1 CARIS – Based upon the analysis of historic and projected congestion patterns, the NYISO staff has finalized the three studies for the 2015 CARIS (Central East, Central East-New Scotland-Pleasant Valley) and reviewed the studies with stakeholders. Preliminary study results, including estimated production costs benefits and implementation costs for each study and generic solutions were provided to ESPWG on August 27, 2015. No specific 2014 CARIS 2 project proposals were submitted as of August 31, 2015. NYPA has requested an additional CARIS study be performed to assess the economic impact of various infrastructure upgrades in the NYCA transmission system. The NYISO staff is continuing its internal assessment of appropriate metric methodologies for estimating the capacity benefits of transmission projects.

9.2 Public Policy Transmission Planning Process – On July 2015, the PSC declared a Public Policy Transmission Need in Western New York. In August 2015, NYISO staff presented to stakeholders the baseline technical details and next steps. A solicitation for solutions will be issued by the NYISO on October 1, 2015.

9.3 2014 RNA – Requests for Developer Qualification applications were received from both NYCA TOs and out-of-state companies for construction of reliability based transmission solutions. The Qualified Developers have been notified.

9.4 2014 CRP – The 2014 CRP determined that the NY BPS will meet all applicable reliability criteria over the 2015 through 2024 study period, and confirmed that the initially identified Reliability Needs in the 2014 RNA are resolved. The final report was approved by the Board in July 2015.

9.5 Interregional Transmission Studies

i. EIPC Study – For 2015, EIPC members will create roll-up integration for summer and winter peak power flow cases of the Eastern Interconnection representing the year 2025. The gap analysis and linear transfer analysis will be performed and compiled in a Roll-up Model Report. In late 2015, EIPC will seek stakeholder feedback on potential scenarios of interest for analysis in 2016.

The Gas-Electric System Interface Study is being performed by Levitan & Associates. The baseline assessment of the existing system was completed on April 14, 2014. It included an evaluation of the capability of the gas system to satisfy the needs of the electric system completed on March 10, 2015 and the identification of gas-side contingencies that could impact electric reliability completed on March 27, 2015. A review of dual fuel capability was completed on December 1, 2014. The draft report was presented to stakeholders in May 2015. The final report was delivered to DOE for comments in July 2015.

ii. IPSAC – FERC issued an order on May 14, 2015 on the NYISO/PJM/ISO-NE interregional compliance filing from 2013. FERC largely accepted the Amended Northeastern Protocol and associated tariffs, but a further compliance filing is required to address relatively minor issues. Revisions were discussed at the NYISO IPTF on June 25, 2015 and the filing was submitted on July 13, 2015.

Through 2015, NYISO, PJM, and ISO-NE will be taking steps necessary to comply with Order 1000 and the protocol. An IPSAC meeting will be scheduled toward the end of 2015.

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 is having on-going stakeholder discussions to fully develop the market design and establish the rules for participation in the energy and capacity markets. The NYISO is expected to seek concept approval of the market design proposal in September 2015.

The Comprehensive Shortage/Scarcity Pricing tariff changes and the November 2015 implementation date were approved by FERC. The NYISO has engaged stakeholders in a review of market design improvements to enhance the scarcity pricing mechanisms and is evaluating alternative market design solution options suggested by stakeholders. The NYISO will seek stakeholder approval in October 2015. The NYISO is reviewing various options for recognizing fuel-constraints through additional Fuel Constrained Bidding Features to evaluate interest in further developing the concept. Incorporating the fuel limitations directly in the software will allow for efficient use of resources to meet reliability needs. The NYISO is actively participating in the PSC's proceeding, Reforming the Electric Vision, directly supporting working groups formed under Track One to facilitate conceptual discussions of REV market design, system architecture, and potential interactions between retail activities and wholesale markets. The NYISO is also looking to partner in various REV demonstration projects to evaluate operational and market interactions.

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 is additionally exploring enhancements to its long-term planning process to support identification of, and development of solutions for potential generator retirements. The NYISO has developed a proposed solution framework and is working with stakeholders to review the program structure in preparation for submitting a compliance filing by October 19, 2015.

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 is facilitating a discussion in an ICAP Working Group Task Force to identify appropriate methodologies. Also, the NYISO is seeking stakeholder input on alternate methodologies. The NYISO will brief the ICS on these discussions.

The NYISO is reviewing vendor proposals to complete the upcoming Demand Curve Reset cycle. A consultant will be selected in September 2015 and stakeholder discussions will begin in October 2015.

11.0 Other Items

11.1 NYISO Operations Report – The monthly peak load occurred on Monday, August 17, 2015 at 30,543Mws. The Operating Reserve requirement at the time was 1965Mws resulting in a minimum Operating Capacity requirement of 32,508Mws. A Major Emergency was declared at 03:07 on August 17, 2015 when circuits 34 and 42 Coopers Corner-Rock Tavern (Common Tower) tripped causing Central East VC to exceed 105%. The Major Emergency terminated at 03:21. Alert states were declared on 13 occasions - 8 times for declared emergency transfers. There were no TLR Level 3s declared during the month. Reserve activations occurred 8 times. No emergency actions were taken. There were no NERC/NPCC Reportable DCS Events during August 2015.

11.2 Summer 2015 Warm Weather Operations – Mr. Yeomans gave a presentation on Operations during 2015 summer warm weather conditions. He indicated that summer 2015 warm weather conditions have

not been extreme and have been short in duration. The highest peak load was in July 29, 2015 at 31,138Mws beginning at 16:00 hours. The forecast summer peak was 33,567Mws. The all-time summer peak is 33,956Mws on July 19, 2013 during which Demand Response resources were activated. Without Demand Response the peak would have been about 35,000Mws.

The NYISO met all operating reliability requirements over the highest four days including no state-wide Supplemental Capacity Commitments, no Demand Response notifications or activations, and no NYISO-directed public appeals. There were no significant generator outages and very few fuel availability generator derates and no inventory problems. Transmission voltage performance was good with only one 345kV forced outage (345kV Mott Haven – Rainey) for a period of 4 hours. Neighboring Reliability Coordinators reported excess capacity margins over peak conditions. There were some OFOs issued by gas LDCs requiring customers to stay within nomination scheduled tolerances. On July 29, 2015 there was a pipeline compressor forced outage for one hour. Hourly peak day wind generation was inversely proportional to most hourly loads.

11.3 North American Energy Standards Board (NAESB) – Mr. Ellsworth reported that the NAESB held its Annual Meeting two weeks ago and a report will be issued October 1, 2015.

12.0 Visitors’ Comments – None

13.0 Meeting Schedule

Mtg.

<u>No.</u>	<u>Date</u>	<u>Location</u>	<u>Time</u>
198	Oct. 8, 2015	Albany Country Club, Voorheesville, NY	9:30 A.M.
199	Nov. 6, 2015	Albany Country Club, Voorheesville, NY	9:30 A.M.

The Executive Committee Meeting #197 adjourned at 1:15 P.M.