

**Joint Meeting of the  
New York State Reliability Council, L.L.C. (NYSRC)  
Reliability Rules Subcommittee (RRS) /  
Reliability Compliance Monitoring Subcommittee (RCMS)  
Thursday, April 5, 2018**

**Minutes of RRS Meeting No. 224**

**RRS Members and Alternates:**

Roger Clayton, Electric Power Resources (Chairman)  
Larry Hochberg, NYPA (Vice Chairman)  
Zoraini Rodriguez, PSEGLI/LIPA (Secretary)  
Rahul Pandit, PSEGLI/LIPA  
Brian Shanahan, National Grid  
Brian Gordon, NYSEG  
Abhilash Gari, NYPA  
Michael Roszkowski, Con Edison

**Non-Voting Participants:**

Al Adamson, Consultant  
Jim Grant, NYISO  
Mark Capano, NYISO

**Guests:**

Paul Gioia, NYSRC Counsel  
David Allan, NYISO  
Aaron Markham, NYISO

RRS Meeting No. 224 was called to order by Mr. Clayton at 9:30 AM.

**1. Introduction**

1.1 Executive Session

None requested.

1.2 Requests for Additional Agenda Items

6.3 Report on the NYSRS/DEC 2/22/2018 meeting.

6.4 Distributed Energy Resources (DER)

## **2. Approval of Minutes / Action Items**

### 2.1 Approval of RRS Minutes No. 223

RRS reviewed the Minutes from the last RRS meeting and they were accepted as final with minor changes.

### 2.2 RRS 223 Status Report to EC

Mr. Clayton presented to the RRS a copy of the 'RRS 223 Status Report' which he develops for the purpose of summarizing, at the next Executive Committee meeting, what RRS has done at its prior meeting.

### 2.3 RRS 223 Action Items List

Action Item 223-4: On agenda. This action item is completed.

Action Item 223-3: This action item is completed.

Action Item 223-2: This action item is completed.

Action Item 223-1: On agenda. This action item is completed.

Action Item 222-5: Nothing to report. The status remains as 'Ongoing'.

Action Item 222-4: Nothing to report. The status remains as 'Ongoing'.

Action Item 83-8: There was nothing new reported. The status remains as 'Ongoing'.

## **3. NYSRC Reliability Rules Development**

### 3.1 PRR List

#### 3.1.1 PRR List Outstanding

PRR 140 and 141 are out for comments. No comments have been received so far.

### 3.2. PRRs for EC Final Approval after Posting

3.2.1 None.

### 3.3. PRRs for EC Approval to Post for Comments

3.3.1 None.

### 3.4. PRRs for discussion

#### 3.4.1 Voltage control with GSU LTCs

Continuation from last week's discussion, Mr. Roszkowski asked RRS if there is enough support from the other TOs to create a new reliability rule.

Mr. Gordon, Mr. Shanahan, Ms. Rodriguez and Mr. Hochberg, all confirmed that their respective companies operated their GSU and L&P transformers at a fixed tap. It is a normal practice for the generator owner to come up with a fixed tap that is carefully selected so that they can meet their voltage criteria.

When asked if Con Edison is looking for the ability to use the dynamic VAR capability at pre-contingency, Mr. Roszkowski replied yes. Con Edison would like to adjust the LTC pre-contingency to make reactive resources available. There were concerns among RRS members that by utilizing these reactive resources at pre-contingency, it will take away the margin for solving post contingency.

Mr. Hochberg pointed out that usually these transformer taps are set so that generators can be operated near unity power factor over a wide range of system conditions in order to minimize losses. RRS agreed. Mr. Hochberg also suggested that maybe Con Edison could share their study, perhaps a whitepaper, so that RRS can have a better understanding of the issue.

Con Edison has a unique system, too much of a reactive system compared to the rest of the TOs. Hence, a paper or study would help RRS understand operating the LTCs on GSU and L&P transformer would help Con Edison. Mr. Roszkowski would check internally and get back to RRS. [AI-224-1]

Mr. Clayton also suggested that Con Edison takes a look at their local interconnection criteria. Perhaps this topic could be included in the Con Edison's local criteria, if not already. Mr. Roszkowski will confirm with Mr. Paszek.

Mr. Gioia pointed out that perhaps we should reach out to generator owners about this topic. Mr. Clayton offered to bring this topic up at the next EC meeting since the generator owners will be at that meeting [AI 224-2]

Mr. Markham, who joined in later in this discussion, agreed with RRS' concerns. Typically, System Operations prefers to utilize the switchable reactive resources first before using the dynamic reactive resources. If NYISO runs out of their static resources, then they may use the MVAR capability of the units to maintain voltage profile.

#### 3.4.2 Review of Central-East Major Emergency declarations

Mr. Clayton pointed out that there were three major emergencies declared by the NYISO for the past 6 months: Oct 8, 2017, March 8, 2018 and March 14, 2018. The concern is, if a major emergency was declared due to voltage collapse limit, and the limit is set at 5% back of the knee of the curve, how come the margin is in excess of 5% at all three events.

Mr. Markham explained how the NYISO solved for each major emergency event to RRS. After a lengthy discussion, Mr. Markham pointed out that both events occurred in March of 2018 are considered “beyond criteria”. NYISO’s study/guideline did not evaluate the loss of Phase 2 ~~&~~ Kendall 4 ~~and or Phase 2 &~~ Mystic ~~Line 9~~. NYISO had a discussion with ISONE about this and how these events impact the New York system. ISONE recognized this and is working to remedy this issue.

When asked to elaborate on the term “beyond criteria”, Mr. Markham answered that the NYISO solves for a major emergency using NPCC set criteria. In this case, NPCC does not solve for the N-2, loss of two independent generators or sources.

Mr. Markham explained that the post-contingency operating limit that the major emergency was called on is the limit to be secure for the worst contingency. is not the N-1 limit but is the actually N-1/-1 limit. For example, the 10/8/17 ME had the following characteristics:

- a. N-1 CE 100% Limit = 2900 MW (Set for the worst CE N-1 contingency)
- b. N-1 CE Actual Flow = 2357 MW (Post N-1 contingency flow)
- c. N-1/-1 CE 100% Limit = 2200 MW (Set for the worst CE N-1/-1 contingency with the MSU1 out of service)

Note that the 100% Limit numbers are 5% back from the knee of the voltage collapse curve. Therefore, the N-1 actual flow of 2357 MW was well below the N-1 limit of 2900 MW but was greater than the N-1/-1 limit of 2200 MW with the MSU1 for the next worst contingency. This properly required an ME to be declared per NYSRC Reliability Rule D.1 (R6.2).

When asked who set the operating limit within the NYISO, Mr. Markham answered that an internal group ~~called,~~ Operations Engineering sets and recommends the limits. These limits then are presented to the Operating Committee (OC) for their approval. Mr. Clayton asked that this process and procedure be referenced in the report.

Mr. Clayton requested a detailed report on all three major emergency events from the NYISO [AI-224-3]. The report should include the following information:

1. Detail description of all three events: N-1 contingency on 10/8/17 and “beyond criteria” events on the other two.
2. Explain why New England’s generation is not included in the analysis, hence beyond criteria.
3. Give detail MW flow of actual and limit on all three events. Please point out that the actual limit was operating to N-1-1 for the first event (not N-1).
4. Address Mr. Hochberg’s concern about the ISONE beyond criteria loss of source impact on Central East.

5. List the safety margin that is built into these numbers, i.e. non-peak load, assume all lines in service, etc.

## **4. NPCC Directories**

### 4.1. Review draft response to NYSRC request for N-1/-1 permissible actions

Mr. Clayton discussed the NPCC draft response to NYSRC's request for N-1/-1 permissible actions. This is an initial response that was put out for comments, so keep in mind that it is not final. The response is not what Con Edison expected or would like since this will result in loss of radial feed up to maximum load of 2000 MW.

RRS discussed other possibilities to address this issue. Currently, the NYSRC rule stated that we have to meet the N-1/-1 criteria without losing load. Some of the possibilities are to create more stringent and specific rule. Con Edison could propose a PRR to the effect that would eliminate the possibility of losing a radial feed. Since this new rule could have a big impact on others, Con Edison is asked to come back with answers to the following questions [AI 224-4]:

1. Please confirm if Con Edison have this situation in their existing substation configuration.
2. If not, why does Con Edison has this design in future substation and not in the new existing substation?

Mr. Shanahan pointed out that National Grid does not have an issue with this bus configuration. They would open a breaker if face with this situation. NYISO concurred that this way is acceptable.

This discussion leads to an action item to all Transmission Owners. All RRS members are to report back with the answer to following question: What will be the implication of not complying with N-1-1 event open breaker in Planning and Operations? [AI -224-5]

## **5. NERC SARS/Organization Standards**

### 5.1 NERC Standard Tracking

Mr. Adamson reviewed the NERC Reliability Standard Development Tracking Summary (dated 3-23-2018) with RRS.

## **6. Additional Agenda Items**

### 6.1 REV Potential Impact on NYS BPS Reliability

Mr. Clayton informed RRS that there will be a meeting with Mr. Smith and a subject matter expert at the NYISO to discuss the scope of the agenda on REV potential impact on BPS. Mr. Gioia and an EC member planned to attend this meeting as well. Once the agenda is set up, the group – NYSRC/NYISO DER Workshops, will then present it to RRS for comments. Mr. Clayton stated that he has been adding references to a document as he came across it. He will update the document and share it with RRS [AI-224-6]. The objective of this workshop is to decide whether we need to have new reliability rules or not.

There was also a discussion on the electric vehicle issues. Mr. Clayton pointed out that these electric vehicles could have a huge impact on planning and operating the power system. It could possibly be thousands of MW increase and we need to raise awareness on this subject. The goal was to have 850,000 electric vehicles by 2025.

Mr. Clayton also reminded RRS that the FERC technical conferences are scheduled on April 10<sup>th</sup>, 2018 and April 11<sup>th</sup>, 2018.

Mr. Gordon reported that NYSEG is seeing an increasing number of applications for DERs as well. Most of them are solar at 20MW and under.

Ms. Rodriguez informed RRS that she came across interesting presentation on the “Offshore Wind Injection Assessment” from NYISO dated December 1, 2017 and a report put out by NYSERDA’s “Offshore Wind Policy Options Paper” dated January 29, 2018. These documents were forwarded to her by another group within PSEGLI for review and provide comments from Operation’s point of view.

Mr. Grant will ask the owner of the presentation, Ms. Yachi Lin if she can share the presentation as well as the NYSERDA report with RRS [AI 224-7].

## 6.2 Review of the rescission of Exceptions 8, 17 & 18

Mr. Clayton reported that the EC approved the wordings for Exceptions 8, 17 & 18. These wordings have been updated in the Exception list and posted.

## 6.3 Report on Conference Call with DEC

Mr. Clayton reported that he received the notes from the NYSRC/DEC Conference Call meeting. He informed RRS of the items discussed at the meeting. Mr. Clayton said that he will distribute the meeting notes to RRS [AI-224-8].

## 6.4 Distributed Energy Resources (DER) – Inverter-based storage device

Mr. Clayton informed RRS of the NYISO’s request made at FERC to change a tariff. NYISO’s proposal is to allow the “Inverter-Based Energy Storage Resources” to participate as synchronous resources. He would share this request with RRS [AI-224-9].

## **7. Reports**

### **7.1 NYSRC EC Meeting Reports**

There were no other additional RRS items to report.

### **7.2 NYSRC ICS Meeting Report**

Mr. Adamson reported that the ICS is in process of developing new load shape model, most probably for next year's IRM study.

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The meeting ended at 11:32 AM.

## **8. Next Meeting No. 225**

Thursday, May 3, 2018; 9:30 AM @ NYSERDA, 17 Columbia Circle, Albany.