Joint Meeting of the
New York State Reliability Council, L.L.C. (NYSRC)
Reliability Rules Subcommittee (RRS) /
Reliability Compliance Monitoring Subcommittee (RCMS)
Thursday, August 4, 2016

Minutes of RRS Meeting No. 204

RRS Members and Alternates:
Roger Clayton, Electric Power Resources (Chairman)
Larry Hochberg, NYPA (Vice Chairman) (Phone)
Martin Paszek, Con Edison (Secretary)
Zoraini Rodriguez, PSEG_LI/LIPA (Phone)
Roy Pfleiderer, National Grid (Phone)
Erin Doane, Central Hudson

Non-Voting Participants:
Al Adamson, Consultant
Jim Grant, NYISO

Guests:
Wayne Sipperly, NYPA
Dan Head, Con Edison (Phone)
Brian Shanahan, National Grid
Mark Capano, NYISO
Chris Sharp, NYISO
Paul Gioia, Counsel
David Johnson, Read & Laniado, LLP
Mark Schwall, IPPNY
James D'Andrea, TransCanada
Liam Baker, Eastern Generation, LLC ("EasternGen") (Phone)
Mark Dworkin, Osaka Gas (Phone)
Margie Philips, Direct Energy (Phone)
Edward Schrom, DPS (Phone)

RRS Meeting # 204 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

Mr. Clayton requested the following Agenda Item:

3.2.2 I.5 (R2) Disturbance Recording

2. Approval of Minutes / Action Items

2.1 Approval of RRS Minutes #202

RRS reviewed the Minutes from the last RRS meeting. Minor comments were provided to the Minutes and with these changes, Minutes are considered as final.

2.2 RRS 203 Status Report to EC

Mr. Clayton presented to the RRS a copy of the 'RRS 203 Status Report to EC', which he develops for the purpose of summarizing at the next NYSRC Executive Committee meeting what RRS has done at its prior meeting.

2.3 RRS Action Items List

Action Item 203-6: The status is changed to 'Completed'.

Action Item 203-5: Mr. Grant stated that the Action Item 'as is' would be a big undertaking ('at one fell swoop') and he proposed that such a review should follow the RCMS's Score Card. Mr. Grant envisioned that when the NYISO prepares compliance documentation for a particular requirement they could review, at that moment, the associated NERC and NPCC Standards and Criteria in order to ascertain if the NYSRC Reliability Rules are not less Stringent or less Specific.

Mr. Clayton stated that this is a good idea and ask Mr. Head to create an on-going Action Item under the RCMS #198 meeting that would accomplish Mr. Grant's proposal.

The status is changed to 'Completed'.

Action Item 203-4: On agenda today and status is changed to 'Completed'.
Action Item 203-3: On agenda today and status is changed to 'Completed'.
Action Item 203-2: On agenda today and status is changed to 'Completed'.
Action Item 203-1: On agenda today and status is changed to 'Completed'.
Action Item 202-6: On agenda today and status is changed to 'Completed'.

Action Item 197-8: Mr. Clayton asked Mr. Sharp if the NYISO wants to withdraw this Action Item which states: *"Develop clarifications to Reliability Rules regarding statements in Rules section that may be interpreted as different or additional to Requirements."* Mr. Sharp agreed. The status is changed to 'Completed'.

Action Item 191-2: On-going.
Action Item 141-1: On-going.
Action Item 139-1: On-going.
Action Item 87-5: On-going.
Action Item 83-8: On-going.

3. NYSRC Reliability Rules Development

3.1 Outstanding PRR List

PRR 128 is tabled pending NPCC A-10 revision.

PRR 130 was approved by the NYSRC Executive Committee as final and is included in the latest revision of the NYSRC RR&CM – revision 37. Mr. Clayton will remove the reference to PRR 130 from the Outstanding PRR list.

PRR 131 and 133 are on the table for today's discussion.

PRR 132 was approved by the NYSRC Executive Committee to post for comments. Mr. Clayton stated that, to this date (i.e. 8/4/2016) no comments have been received.

3.1.1 PRR 131 I.6 Modeling & Data (Dual fuel Testing Requirements)

Mr. Clayton provided a short summary on this subject where, upon last meeting's discussion, Con Edison was requested (per Action Item 203-2) to modify PRR 131 to be applicable only to the combined cycle units that are part of the Minimum Oil Burn (MOB) program; Zone J only. Mr. Paszek stated that this PRR has a long history. The initial PRR 131 was written to be applicable to dual fuel units in Zones J and K, than per discussions at the RRS, the scope of this PRR was expanded to dual fuel units in NYCA. This latest revision, now PRR 131 version C (PRR 131C), per further discussion at the RRS and with input from the Generator sector, is now applicable to only the combined cycle units that are part of the MOB program in Zone J.

Mr. Clayton stated that the PRR 131C does not directly call out combined cycle units, but instead it references: *"[…] dual fuel units, which have the ability to automatically swap from natural gas to a liquid fuel source […]*". Mr. D'Andrea asked where the new requirements call out the MOB program. Mr. Paszek stated that these new requirements would be part of the NYSRC Reliability Rules section G.2: *Loss of Gas Supply – New York City;* the G.2 Reliability Rules are the initiating rules behind the MOB program. Mr. Baker suggested that combined cycles units should be specifically spelled out in the Reliability Rules in order to avoid confusion. Mr. Paszek agreed with this suggestion.

Mr. D'Andrea asked if 'we' know which units would be subjected to these new requirements. Mr. Paszek stated that the new Requirement #3 would require the NYISO to document, maintain and publish a list that would identify such units. Mr. D'Andrea followed and asked if TC Ravenswood unit number 4 is currently listed as part of the MOB program, and how does a unit get to be on the MOB list. Mr. Head explained, on a very high level, how Con Edison performs the Loss of Gas studies and how Con Edison decided which 'existing' dual fuel units are chosen to be either on the 'minimum oil burn' or which 'existing' dual fuel units should be prepared for 'activation of automatic fuel swap'; all depending on system load level. Mr. Head stated that Con Edison cannot draft a unit into the MOB program.

Mr. D'Andrea stated that twice a year there is an Application of NYSRC Reliability Rules prepared (i.e. ARR69) that is not approved by any 'senior' committee; no actual voting actually occurs. Mr. D'Andrea stated that this is voted at the NYISO Operating Committee (OC), and he stated that a 'unit' could be drafted into the MOB program by that single vote. Mr. Head stated that how would ARR69 pass if Con Edison wanted to draft a unit that does not have the required capability. Mr. D'Andrea stated that this is an opinion and that his Company experienced being drafted into 'such' program(s). Mr. D'Andrea stated that TC Ravenswood 4 does not have auto fuel swap capability. Mr. Clayton stated that this is taken care by the proposed Reliability Rules where it states that *"[…] which have the ability to automatically swap […]"*. Mr. D'Andrea stated that the 'ability' could be changed by a vote at the NYISO OC. Mr. Clayton disagreed. Mr. Paszek stated that proposed Requirement #3 addresses this issue through the NYISO documenting, maintaining and publishing a list that would identify such units, and if TC Ravenswood identifies to the NYISO that one of its units is not capable of performing automatic fuel swap, than the proposed Requirements 4, 5 and 6 would not be applicable.

The group decided to include the *"combine cycle"* phrase into the proposed Reliability Rules.

Mr. Clayton asked if this PRR 131C would require NYISO to change its Tariff. Mr. Sharp stated yes; with respect to testing and compensation. Mr. Sharp requested that PRR 131C should have an implementation plan that would require NYISO Tariff change before the rule changes in this PRR can be implemented. The group decided to utilize the language from the Implementation Plan of PRR116A *Identification of Black Start Resources Needed for an Effective System Restoration Plan*.

Mr. Clayton stated that he would like to move this PRR, if possible, to the upcoming NYSRC Executive Committee. MR. Clayton asked if with the addition of "*combined cycle"* phrase and with the changes to the Implementation Plan, he can do that. Mr. Adamson stated that he has few additional comments. Mr. Adamson provided few comments which were accepted by the group.

Mr. Hochberg suggested replacing the word "*immediate*" as it is not practical from R6.1 and replace it with "*take steps to*". The group accepted this change.

Mr. Hochberg also questioned the fundamental need for this PRR as the Con Edison system can sustain the loss of one unit if it fails to auto swap. Mr. Paszek stated that the auto swap capability is required in case of loss of gas supply which would affect a broad number of units. Mr. Hochberg continued by questioning the language in Section 4 of PRR131C that states "*Con Edison […] observed a significant failure rate of fuel switching events […] which could jeopardize the reliability of the NYS Bulk Power System as well as could result in the loss of electric load within the New York City zone […]"* stating again that the Con Edison system can sustain the loss of one unit if it fails to auto swap; it'll not cause a reliability issue. Mr. Paszek disagreed with that statement. Mr. Hochberg stated that the statement is simply too powerful. Mr. Head stated that there could be a single contingency on the gas system that affects multiple units and that is what potentially jeopardizes the Bulk Power System. Mr. Clayton stated that first of all this section is not part of the proposed Reliability Rules, and secondly 'we' all agree that there is a need for this proposed Reliability Rules; the wording 'as is' is Ok.

Mr. Hochberg stated that we should not have this proposed Reliability Rules as it would only affect 3 units. Mr. Paszek stated that this proposed Reliability Rules would be applicable not only to the existing units but also to new Interconnections.

Mr. Sharp stated that he has concern with including the NYISO as the entity that 'observed a significant failure rate'; that the NYISO did not take a position. Mr. Paszek stated that the NYISO (i.e. Wes Yeomans and other) presented on this issue multiple times at the RRS where the NYISO did observed a significant failure rate. Mr. Gioia asked the NYISO if these units were to fail would (potentially) the NYS Bulk Power System be jeopardized. Mr. Clayton stated that when Mr. Yeomans was asked what would happen if 'these' (i.e. dual fuel units) units were to fail auto swap, he stated there would be a 'concern', therefore the NYISO has a concern.

Mr. Johnson asked how the NYSRC decides (i.e. convention) the Levels of Non-Compliance. Mr. Adamson stated that Level 4 is the worst and it is up to NYSRC to decide what to actually require / measure and how to set the Levels of Non-Compliance. Mr. Johnson also asked what the definition of a 'successful test' is. Mr. Paszek stated that the proposed Requirement R4.2 provides a lot of leeway to the NYISO and the individual Generator Owners as R4.2 would require the NYISO to have in their procedures identification of the appropriate parameters for a test to be considered successful; the NYSRC would not be specifying what they ought to be. Mr. Grant stated that the Subject Matter Experts from the NYISO and the Generator Sector would have to agree on what is technically reasonable.

Action Item 204-1: Modify PRR 131C per comments received. Mr. Clayton asked if the next revision of PRR 131C can have a different font color for the new comments. Mr. Paszek agreed to do so.

3.1.2 PRR 133 F System Restoration (F.1 revision / F.2 retirement)

Mr. Paszek provided a short summary on this subject stating that existing NYSRC Reliability Rules toward Black Start testing are less stringent and less specific (and contradictory) to those of NERC and NPCC. Mr. Paszek also described PRR 133 and how it would align these reliability rules.

Mr. Gioia asked if under NPCC Directory 8 the steam electric units are considered Black Start units. Mr. Grant stated that the steam electric units cannot perform the required (by NERC and NPCC) Black Start testing. Mr. Gioia then stated that therefore the NYSRC Reliability Rules bring them into fold. Mr. Paszek stated that NPCC Directory 8 does not distinguish between unit type (steam, hydro or gas turbine); it requires Black Start units to perform a specific test (no matter what type of a unit). In addition, Mr. Paszek stated that the steam electric units that are part of the Con Edison System Restoration Plan (SRP) were not subject to NERC EOP-005 or NPCC Directory 8 because the NYISO utilizes the NYISO SRP (not the NYCA SRP which includes NYISO SRP together with Transmission Owners (TO) SRP) toward their compliance with these standards. Mr. Grant agreed with the above statement; as it relates to NERC/NPCC compliance. Mr. Paszek stated that, prior to July 1st, 2016, none of the Black Start resources in the Con Edison SRP were subject to NERC EOP-005 or NPCC Directory 8. On July 1st, 2016 Con Edison, as well as other NYCA TO, registered as NERC Transmission Operators (TOP).

Mr. Gioia stated again that, whatever the reason, the steam electric units are not subject to NERC EOP-005 or NPCC Directory 8. Mr. D'Andrea stated that maybe 'we' should not call these units Black Start units; maybe 'system restoration units'. Mr. Gioia asked if that suggestion would eliminate some of the confusion as it relates to the steam electric units; as the NYSRC calls steam electric units Black Start units. Mr. Paszek stated that because Con Edison became a TOP, it will require Black Start resources that are part of the Con Edison SRP (whatever the type) to test per NERC EOP-005, as it is applicable. Mr. Gioia asked if a steam electric unit cannot energize a dead bus would it be outside the Black Start program. Mr. Paszek stated that if any unit fails the test and does not address the underlying cause of the failure (and re-test) they would fall out of the Black Start program. Mr. Gioia asked if Con Edison would have a working SRP if the steam electric units would drop out from the Black Start program. Mr. Paszek stated yes. Mr. Clayton stated that Con Edison has recently redesigned their plans to restore the system.

Mr. Baker asked a clarifying question toward the 'new' testing requirements; in the past the steam electrics were required to synchronize to a live system and now the steam electrics would be required to close to a dead bus. Mr. Paszek stated yes. Mr. Baker asked if the dead bus meant the L&P dead bus within his Company's yard or does it mean the dead bus at the Con Edison Astoria 138kV yard. Mr. Paszek stated the latter.

Mr. Gioia asked if Con Edison is going to require the steam electric unit to do what they cannot do, what the value of this action is. Mr. Paszek asked EasternGen and TC Ravenswood, owners of steam electric units, if they can Black Start test per NERC EOP-005 and Directory 8 requirements. Mr. Baker stated yes, however due to visibility into Con Edison system the unit may not be able to pick up load. Mr. Paszek stated that the Black Start test does not require load pickup; it requires a unit to start 'on its own', idle and close to a dead bus at the Astoria 138 kV yard. Mr. D'Andrea stated that is tricky but can be done; 'Engineers need to look into this'. Mr. Baker added that it can be done but his company might not be willing to do so.

Mr. Clayton stated that at this point we understand that TC Ravenswood and EasternGen steam units could potentially meet NERC EOP-005 or NPCC Directory 8 requirements related to Black Start testing. Mr. Gioia stated that the NYSRC should not be doing anything that would degrade reliability. Mr. Clayton stated that in this case 'we' are improving reliability by making the applicable NYSRC requirements more stringent and specific (in order to align them with the applicable NERC and NPCC requirements).

Ms. Rodrigues raised an issue with the fact that the NERC requirements require an 'annual' test versus the current NYISO testing requirement to test within a 'capability year'. Mr. Grant stated that the NYISO staff is looking into this issue.

Mr. Baker asked if Con Edison could meet with EasternGen in order to discuss the new Black Start testing requirements. Mr. Paszek stated that Con Edison has plans to meet with all Black Start providers in its service area in order to discuss the new Black Start testing requirements.

Mr. Clayton asked if there is any reason why the NYSRC shouldn't go forward and put this up for a NYSRC Executive Committee; that there are no fatal flaws with this proposal. Mr. Paszek stated that the proposed Reliability Rules are essentially the same as those of NERC-005 and NPCC Directory 8. No fatal flaws were provided.

Action Item 204-2: Con Edison to inform RRS on the progress of its meetings with Black Start providers (within Zone J).

Action Item 204-3: Add Compliance Elements (Measurements and Levels of Non-Compliance levels) to PRR 133.

3.2. Discussion Items

3.2.1 NYSRC Rule C.4 & NERC EOP-010 GMD Comparison

Mr. Clayton provided a short introduction on the topic. Mr. Adamson reviewed the provided comparison of NYSRC Reliability Rule C.4 R2 – *Operating during a Severe Magnetic Disturbance* and NERC Standard EOP-010 – *Geomagnetic Disturbance Operations*. Mr. Adamson stated that the comparison shows that in some cases the NERC Standard is more stringent and specific and in some cases the NYSRC Reliability Rules are more stringent and specific. Mr. Adamson recommendation was to add the more stringent and specific NERC requirements to the NYSRC Reliability Rules. Mr. Grant asked why 'we' would add NERC Requirements to the NYSRC Reliability Rules; 'just to add them'. Mr. Paszek asked the group if the group should have a separate discussion toward how to proceed going forward; are 'we' going to add more Requirements to the NYSRC Reliability Rules because now NERC & NPCC has them on their books, or are 'we' going to remove the Requirements that overlap. Mr. Sipperly added that every time NERC or NPCC changes their Standards and Criteria the NYSRC Reliability Rules would have to modified as well; an additional administrative burden.

Mr. Clayton stated that in this case the NYSRC Reliability Rules should not be adjusted as the 'reader' would need to review the associated NERC and NPCC Standards and Criteria as documented in the NYSRC RR&CM under each section (i.e. "Introduction"); A. Reliability Rule / Item 1: Associated NERC and NPCC Standards and Criteria.

The resolution is too keep the NYSRC Reliability Rule C.4 R2 – *Operating during a Severe Magnetic Disturbance* "as is".

Action Item 204-4: RRS to discuss at the next meeting possible adjustments to the format of the NYSRC Reliability Rules as it relates to repeating the more stringent and specific NERC and NPCC requirements; a criteria for incorporating NERC and NPCC Requirements.

3.2.2 I.5 (R2) Disturbance Recording

Mr. Clayton provided a short introduction on the topic. Mr. Grant reviewed the provided comparison of NYSRC Reliability Rule I.5 *Disturbance Recording* and NERC Standard PRC-002 (both regional (NPCC – to be retired), and Continent-wide) – *Disturbance Monitoring*. Mr. Grant stated that the comparison shows that in all case both the regional and the Continent-wide NERC Standards are more stringent and specific. Mr. Clayton asked (to conform) if the Continent-wide PRC-002 is, in every respect, more stringent and more specific than the NYSRC Reliability Rules. Mr. Grant stated yes. Mr. Adamson stated that it is clear that NERC Standard is more stringent and more specific; in all cases.

Action Item 204-5: Mr. Grant to develop PRR 134 that will remove I.5 *Disturbance Recording* from the NYSRC Reliability Rules.

3.3 Bucket List

The status of Item 10 C.4 (Solar magnetic Disturbance) was changed to 5 - Resolved (See Agenda item 3.2.2)

4. NPCC Directories

There is nothing to report as it relates to RRS.

5. NERC SARS/Organization Standards

5.1 NERC Standard Tracking

Mr. Adamson highlighted to the RRS Members that Item 1 *Modification to TOP and IRO Standards IRO-002-5 and TOP-001-4* were controversial, and that NYSRC voted No (following NYISO's advise). Mr. Grant stated that there were 4 issues and the NYISO voted affirmative on three of them, but voted No on the 4th issue. The issue was with periodicity of testing; testing of redundancy of data communication systems in control centers. The proposal was to perform such tests monthly and the NYISO (with Con Edison) want to do such tests quarterly; for both IRO-002-5 and TOP-001-4 standards. Mr. Grant also states that the drafting team added a rationale that an entity could test certain components one month and other components some other months. The NYISO position was that rather than do that why not test all components at once; less frequent test but a more comprehensive test.

6. Additional Agenda Items

6.1 REV potential impact on NYS BPS reliability

Mr. Clayton provided a short introduction on the topic and described the posted News Release from the NYISO titled: *NYISO Preparing for Increased Solar Generation*. Mr. Clayton highlighted to the group that the NYISO raised an issue with frequency control and voltage right through characteristics of solar equipment. Mr. Clayton also highlighted to the group the following statement from the study: *"[…] The National Renewable Energy Laboratory (NREL) found that New York State has the potential to install 46.4 GW of rooftop solar PV systems, which could produce 55.3 TWh of annual energy generation, 37.4 % of New York's annual electric sales […]"*.

7. Reports

7.1 NYSRC EC Meeting Report

Mr. Clayton stated that New York State Department of Environmental Conservation (DEC) is considering Ozone constraints for simple cycle units on high peak days in Zones J and K. Mr. Clayton added that this is a concern as these units are the 'peakers'.

7.2 NYSRC ICS Meeting Report

Mr. Adamson stated that ICS is working on the Emergency Assistance model for the IRM studies; to properly model excess capacity in the neighboring systems. All the assumptions for the 2017 IRM have been completed and the NYISO staff started to perform the 2017 IRM study.

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Meeting ended at 1:25 PM.

Next Meeting #205

Thursday, September 1, 2016; 9:30 am @ NYSERDA, 17 Columbia Circle, Albany