

***Meeting of the  
New York State Reliability Council, L.L.C. (NYSRC)  
Reliability Rules Subcommittee (RRS)***

***Minutes of RRS Meeting #274  
Thursday, February 2, 2023***

**RRS Members and Alternatives:**

Roger Clayton	EPR, LLC	Member/Chairman
Martin Paszek	CONED	Member/Vice Chairman
Saud Amin	CONED	Alt. Member
Damian Interrante	CHGE	Member
Michael Ridolfino	CHGE	Alt. Member
Brian Shanahan	National Grid	Member
Mohammed (Arif) Hossain	NYPA	Member
Frank Grimaldi	NYPA	Alt. Member/Secretary
Brian Gordon	NYSEG	Member
Robert Eisenhuth	PSEGLI	Member
Muhammad Ibraheem	PSEGLI	Alt. Member

**RRS Non-Voting Participants:**

Paul Gioia	Counsel
Al Adamson	Consultant
Wesley Yoemans	Consultant

**Guests:**

Jason MacDowell	GE
Sheila Manz	GE
Laura Popa	NYISO
Kevin DePugh	NYISO
Keith Burrell	NYISO
Chris Sharp	NYISO
Ben O'Rourke	NYISO
Dan Head	CONED
Rahul Pandit	PSEGLI

## **Agenda Items**

### **1.0 Introduction**

-Meeting 274 was called to order by Roger Clayton at 10:00.

-Al Adamson's final meeting.

#### **1.1 Executive Session**

No Executive Session was requested.

#### **1.2 Requests for Additional Agenda Items**

-Review NYSRC comments on FERC NOPR

-Con Edison requests consideration to rescind Exception #22

### **2.0 Approval of Meeting Minutes/Action Items**

#### **2.1 RRS 273 Approval of Minutes -R. Clayton**

Meeting minutes were approved pending minor edits to sections 4.1 and 5.2.

#### **2.2 RRS 273 Status Report to EC -R. Clayton**

Nothing to report.

#### **2.3 RRS 273 Action Item List -R. Clayton**

The following Action Items were reviewed:

Action Item 83-8: Ongoing  
Action Item 228-1: Ongoing  
Action Item 232-6: Ongoing  
Action Item 236-1: Ongoing  
Action Item 270-2: Retired

### **3.0 NYSRC Reliability Rules (RR) Development**

#### **3.1 Potential Reliability Rule (PRR) List Outstanding -R. Clayton**

None.

## **3.2 PRRs in development**

### **3.2.1 PRR 150 Resource Adequacy Requirements for Mitigating the threats of Extreme Weather -R. Clayton**

No changes, assigned to Extreme Weather working group. No action to be taken by RRS.

### **3.2.2 PRR 151 Establishing Minimum Interconnection Standards for Large Facility Inverter Based Resources (IBR) -R. Clayton**

Proposal to adopt IEEE 2800-2022 amended by Attachment A. Distributed to executive committee and NYISO for discussion.

Attachment A does not make requirements of IEEE 2800 more stringent.

Need for PRR 151: There is no existing criteria for interconnecting IBR devices. Guidelines exist for dynamic devices but the purpose of PRR 151 is to create formal requirements specifically for IBRs.

IEEE 2800.2 which deals with test and verification procedures has not yet been adopted.

Section 8 of IEEE 2800 deals with Power Quality is being excluded from PRR as a requirement.

#### Comments/Questions

1. Concerning RCMS compliance, if RCMS does an audit of the NYISO in meeting PRR 151, they would have to demonstrate how their procedures are satisfying the IEEE requirements.
2. Being required to have access and share IEEE 2800 could present an issue due to strict copyright rules.
3. Would the NYISO be able to enforce the IEEE document compliance with the restricted access of the document (cost to those the standard would impact)

## **3.3 PRRs for EC final approval after posting**

None.

### **3.4 PRR posted for comments**

None.

## **4.0 Extreme Weather WG**

### **4.1 WG Report -R. Clayton**

Meeting monthly. Focus on prioritizing the risk for impact on the reliability of the network. Statistics on wind lull, sun lull and combinations of those conditions. Acknowledgment of weather that is not statistically predictable. How to incorporate all the information into resource planning.

## **5.0 Inverter Based Resources WG**

### **5.1 IBR WG Report -R. Clayton**

The working group meets bi-weekly on Tuesday mornings.

Current priority is getting a PRR developed for IEEE 2800.

### **5.2 NYISO IBR Road Map Project -NYISO/GE**

On behalf of GE Energy Consulting, Sheila Manz and Jason MacDowell completed their presentation on the NYISO IBR Roadmap Project that started during the last RRS meeting.

The presentation started with a recap of what was covered during last meeting which summarized the risk factors associated with increased IBR penetration. These risk factors include, weak grid risks, small signal reliability risks, and frequency reliability risks.

Highlighted the potential changes in the NYS generation portfolio including a large injection of IBRs.

Illustrated the challenge of changing output of IBRs, load, and regulating generation. Also discussed the impact of not having ancillary services provided by synchronous generation when more energy demand is being met with IBRs as an area of concern.

With more IBRs online and less synchronous machines, the greater the challenge in dealing with frequency related events.

When more IBRs are online, where does the frequency support come from?

#### Commitment/Dispatch Conditions

1. Coordination across EI – How to meet NY’s Frequency Response Obligation with IBRs
2. Low Inertia – High IBR/low synchronous commitment
3. High Ramping – Can the remaining units reamp quick enough? Is there enough headroom left in the system
4. Low synchronous headroom – Not enough ability to support underfrequency
5. N-X condition – That may result in high IBR/Low inertia

Recommended approach to evaluate frequency stability risks include load flow and dynamic simulations. Develop EMT model of NYS.

Risk mitigation recommendations include:

1. IBR controls – fast frequency response (FFR), Primary frequency response (PFR), Fault ride-through capability, and tuning frequency response settings.
2. Operating/Resource Limits – Real time inertia monitoring and operating protocols to remain above floor, geographic limits for FR participation (e.g. by zone), and Technology limits for FR participation (e.g. SMs vs IBRs)
3. Network Upgrades – Flywheel additions, synchronous condensers

#### Questions/Comments

Q. At what point of % of IBR will inertia become less important?

A. IBRs may have enough room for frequency deviation but synchronous machines may not have the same tolerance.

## **6.0 NERC SARS/Organization Standards**

### **6.1 NERC Standard Tracking -A. Adamson/W. Yeomans**

Wes Yoemans will be taking over due to Al's retirement.

## **7.0 Additional Agenda Items**

### **7.1 NYSRC Comments on FERC NOPR -R. Clayton**

Roger summarized NYSRC's comments made on FERC NOPR.

Comment by Jason McDowell on MOD-026 standard modification that is being considered which would include requiring EMT models.

### **7.2 Removal of Exception #22 Request -M. Paszek**

Reviewed Con Edison's request to remove Exception #22 due to the retirement of Indian Point 2 and 3. NYISO supports retirement request. No objections or otherwise.

RRS will bring the request to EC for approval.

## **8.0 Reports**

### **8.1 NYSRC EC Meeting Report -R. Clayton**

No additional report.

### **8.2 NYSRC ICS Meeting Report -B. Shanahan**

Discussed improvements to MARS modelling of EOPs and gas availability concerns.

## **9.0 Next Meeting**

Meeting #274 was adjourned at 12:00 PM.

The next meeting (#275) is scheduled for Thursday, March 2, 2023 at 10:00 am by WEBEX.