Meeting Minutes
Reliability and Security Technical Committee

June 10, 2020

Webinar

A regular meeting of the NERC Reliability and Security Technical Committee (RSTC) was held on June 10, 2020, via webinar. The meeting agenda is affixed as **Exhibit A**.

RSTC Chair Greg Ford convened the meeting at 1:00 p.m. Eastern on Wednesday, June 10, 2020 and led introductions of RSTC members, observers and NERC staff.

Chair Ford called the meeting to order, and thanked everyone for attending. Tina Buzzard, NERC staff, reviewed the procedures for the meeting, read the Antitrust Compliance Guidelines and public meeting notice, and confirmed quorum for the RSTC.

Chair Ford reminded attendees to look around their office and evaluate actions in case of emergency. He noted that safety is always a priority.

> **Meeting Highlights**
> 1. The RSTC endorsed the 2020 State of Reliability Report.
> 2. The PPMVTF presented a white paper regarding gaps in Reliability Standard MOD-025. The group requested authorization to draft a SAR based on the white paper to revise MOD-025. The RSTC approved the white paper and authorized drafting the SAR.
> 3. The IRPTF presented four Standards Authorization Requests (SAR) for RSTC Endorsement. The RSTC endorsed all four SARs.
> 4. The RSTC Approved a revised Scope for the Resources Subcommittee.
> 5. The RSTC accepted the Security Guideline: BCSI Cloud Encryption.
> 6. The RSTC approved the Compliance Implementation Guidance: Cloud Solutions and Encrypting BCSI.
> 7. Chair Ford appointed Evan Shuvo as chair and Rajesh Nimbalkar as vice chair of the System Analysis and Modeling Subcommittee, both effective June 1, 2020.

Introductions and Chair's Remarks

Chair Ford provided the following remarks:

1. We have all faced challenges over the past few months with working remotely and social distancing and we are slowly returning to a more normal life.

2. This is a big day as it's the first meeting of the RSTC after the dissolution of the technical committees. A day that we have all have worked hard to bring to a reality.

3. The agenda is packed with a number of approval items of significant importance to industry; depending on how the timing plays out to complete those actions there is the possibility we may need to divert some non-action topics to next meeting.

4. Many of the items address risks resulting from the transformation of the grid, thus ensuring the system of the future will be reliable, secure and resilient.

5. The transition team has been working to ensure that we do not miss anything from the technical committees.

6. Looking forward to a productive transformation into the RSTC.

Consent Agenda

Chair Ford noted that the State of Reliability Report, which was on the Consent Agenda in the package that was provided before the meeting, has been moved to the Regular Agenda.

- Minutes* - Approve

  a. March 3-4, 2020 Critical Infrastructure Protection Committee (CIPC) Meeting*

  i. Note: Need to correct Andy Dodge's affiliation to FERC

  b. March 3-4, 2020 Operating Committee (OC) Meeting*

  c. March 3-4, 2020 Planning Committee (PC) Meeting* - Chair Ford noted that for the PC Minutes, the RSTC is affirming the approval completed by the PCEC in May 2020.

  d. March 4, 2020 RSTC Meeting*

- *Technical Report: BPS-Connected Inverter-Based Resource Modeling and Studies submitted by the IRPTF* – Affirm PCEC Approval

  Chair Ford noted that is an additional item for the Consent Agenda. The PCEC previously approved the Technical Report. Per the RSTC Charter, the RSTC can affirm that approval.

- *Motion to approve the Consent Agenda (minutes only) with correction to CIPC minutes made by Peter Brandien. The motion passed without dissent.*

- *Motion to affirm the PCEC action on the Technical Report made by Brian Evans-Mongeon. The motion passed without dissent.*

Regular Agenda

- State of Reliability Report (SOR) – Endorse – John Moura presented a summary of the SOR.

  Motion to endorse the 2020 SOR was made by John Stephens. The motion passed without dissent.

- Remarks and Reports

  e. Remarks – Greg Ford, RSTC Chair

  Chair Ford thanked Ken DeFontes for his participation and continued support from the Board.

  i. Subcommittee Reports included in agenda package*

  Chair Ford referenced the subgroup reports contained in the Agenda package and asked if anyone had any questions or comments. There was no discussion of the reports. Chair Ford noted that the reports were submitted in the format that was previously done for the CIPC, OC, and PC. In the future, we will develop a consistent reporting template for the RSTC.

ii. System Analysis & Modeling Subcommittee (SAMS) leadership. Per the RSTC Charter, the RSTC Chair appoints subgroup leadership. Chair Ford noted that the SAMS had recommended a chair and vice chair for the group. Chair Ford noted his concurrence and appointed Evan Shuvo as chair and Rajesh Nimbalkar as vice chair, both effective June 1, 2020.

f. Report of May 14, 2020 Member Representatives Committee (MRC) Meeting and Board Meeting

Chair Ford summarized the MRC and Board meetings:

MRC Meeting

iii. The MRC meeting focused on the policy input submitted regarding the Align tool and the ERO Secure Evidence Locker, good discussion and additional input was provided for the Board to consider in advance of its review for approval at the Board of Trustees meeting.

iv. Andy Dodge presented a regulatory update, providing a summary of the actions by FERC in response to the COVID-19 Pandemic, reviewed the order granting deferred implementation of certain NERC Reliability Standards, and delays on certain reliability and security related actions.

v. Lonnie Ratcliff provided a comprehensive presentation on cloud computing in lieu of the panel discussion that was to have occurred during the onsite meeting.

vi. John Moura presented summaries of the findings for both the Summer Reliability Assessment and the State of Reliability Report.

Board Meeting

i. The meeting opened with Jim Robb providing remarks on the COVID-19 ERO Enterprise Response, then Bruce Walker, Assistant Secretary, DOE provide an update on the recent DOE Executive Order and subsequent Task Force.

ii. There were two main approval items the most significant being the approval of the investment and funding strategy for the ERO Secure Evidence Locker and Align Delay costs. The second item was the approval of the Regional Delegation Agreement.

iii. Manny Cancel provided a summary of the actions by the E-ISAC respective to COVID-19.

iv. Chair Ford Ford presented on the RSTC Transition Plan – the presentation was very well received and the incredible work completed by the Transition Team and supported by the committee impressed the Board with Roy Thilly stating it was an extraordinary summary. I thank everyone for their input and look forward to the work of the RSTC and its impact.

v. NERC Board meetings will be via teleconference/WebEx for August 2020.

- RSTC Action Items Review

Vice Chair David Zwergel provided a brief summary of the RSTC Actions Items to date. He noted that several are closed and the remaining action items are on track.

- MOD-025 White Paper

Shawn Patterson, Chair of the Power Plant Modeling Verification Task Force (PPMVTF) presented an overview of the white paper. The white paper was reviewed by the Planning Committee membership and all comments received by the PPMVTF have been addressed. The PPMVTF is requesting RSTC approval of the white paper and authorization to draft a standard authorization request (SAR) based on the white paper to revise MOD-025.

Question arose regarding the appropriate hand-off between a SAR and a standards drafting team. This is an item for further discussion.

Motion to approve the white paper was made by Carl Turner. The motion passed without dissent. Motion to authorize drafting a SAR based on the white paper was made by Carl Turner. The motion passed without dissent.

- Inverter-based Resources Performance Task Force (IRPTF) SARs

Chair Ford called on Jeff Billo to present the four SARs developed by the IRPTF.

g. IRPTF performed a review of all NERC Reliability Standards to identify potential gaps or needed clarifications related to inverter-based resources (IBRs)

h. All identified issues were documented in the *IRPTF Review of NERC Reliability Standards Whitepaper*: https://www.nerc.com/comm/PC/InverterBased%20Resource%20Performance%20Task%20Force%20IRPT/Review_of_NERC_Reliability_Standards_White_Paper.pdf

i. The PC and OC approved the whitepaper at their respective March 2020 meetings

j. Based on the Whitepaper, IRPTF developed four SARs:

   i. **FAC-001-3 and FAC-002-2** should be revised to: (a) clarify which entity is responsible for determining which facility changes are materially modifying, and therefore require study, (b) clarify that a Generator Owner should notify the affected entities before making a change that is considered materially modifying, and (c) revise the term "materially modifying" so as to not cause confusion between the FAC standards and the FERC interconnection process;

   ii. **MOD-026-1** and **MOD-027-1** should either be revised or a new model verification standard should be developed for IBRs since these standards stipulate verification methods and practices which do not provide model verification for the majority of the parameters within an inverter-based resource. For example, the test currently used to comply with MOD-026-1 does not verify the model parameters associated with voltage control behavior during large disturbance conditions;

iii. **PRC-002-2** should be revised to require disturbance monitoring equipment in areas not currently contemplated by the existing requirements, specifically in areas with potential inverter-based resource behavior monitoring benefits;

iv. **VAR-002-4.1** should be revised to clarify that the reporting of a status change of a voltage controlling device per Requirement R3 is not applicable for an individual generating unit of a dispersed power producing resource, similar to the exemption for Requirement R4.

The IRPTF requests that the RSTC endorse all four SARs

A motion to endorse the FAC-001-3 and FAC-002-2 SAR was made by Peter Brandien. Robert Reinmuller seconded. Brian made a motion to revise the motion to have this SAR be tabled and ask the IRPTF to create Implementation Guidance regarding the term "materially modifying". John Stephens seconded this amendment. The revised motion failed 21-8. The original motion carried by 22-7

A motion to endorse the MOD-26-1 and MOD-027-1 SAR was made by Brian Evans-Mongeon. The motion passed without dissent.

A motion to endorse the PRC-002-2 SAR was made by Jeff Harrison. Seconded by Christine. Brian made a motion to revise the motion to have this SAR be tabled and ask the IRPTF to create Implementation Guidance. There was no second so the motion dies. The original motion passed without dissent but with one abstention (Brian).

A motion to endorse the VAR-002-4.1 SAR was made by Robert Reinmuller. The motion passed without dissent.

Chair Ford suggested having the RSTC EC prioritize the SARs we endorsed or authorized today.

- Resources Subcommittee Revised Scope

Stephen Crutchfield reviewed the revisions to the scope document. The changes were primarily to remove language indicating the chair was a non-voting member and to change the reporting structure indicating that the RS no longer reports to the Operating Committee and now reports to the Reliability and Security Technical Committee.

A motion to approve the revised scope was made by Todd Lucas. The motion passed without dissent.

- Security Guideline: BES Cyber System Information (BCSI) Cloud Encryption

Marc Child, CIPC Chair presented an overview of the Security Guideline and its development.

- Education on cloud services and encryption
- Foundational for understanding compliance complexities
- Primer for scenario- specific compliance implementation guidance document
- Approved by Compliance Input Working Group
- Endorsed by CIPC Executive Committee

A motion to accept Security Guideline was made by Marc Child. The motion passed without dissent.

- Compliance Implementation Guidance: Cloud Solutions and Encrypting BCSI

  Marc Child, CIPC Chair presented an overview the guidance and its development.

  - CIP-004 and CIP-011 guidance

  - Expands on concepts presented in the primer, provides specific guidance on compliance evidence and controls

  - Leverages information gathered through partnerships with cloud providers

  - Exhaustive list of additional vendor-specific reference material

  - Approved by Compliance Input Working Group

  - Endorsed by CIPC Executive Committee

  A motion to approve the Compliance Implementation guidance was made by Jody Green. The motion passed without dissent.

- Electromagnetic Pulse Task Force Update

  Chair Aaron Shaw presented and update on Electromagnetic Pulse Task Force (EMPTF) activities.

  Background:

  k. Electromagnetic Pulse (EMP) events may pose a risk to the reliability of the bulk power system (BPS)

  l. In March of 2019, NERC's Board of Trustees (Board) established an EMPTF to identify potential methods for promoting resilience to the EMP threat

  m. In November 2019, the EMPTF report to the Board included recommendations for NERC to address that would help mitigate the risk to the BPS from an EMP event

  EMPTF Recommendations for NERC

  n. Policy recommendations

  i. Establishing BPS performance expectations for a pre-defined EMP event

  ii. Providing industry and public education on EMPs

  iii. Coordination with other Critical Infrastructure sectors on EMP matters

  o. Research recommendations

  iv. Monitoring current research and report on national initiatives

  v. Identification of gaps in research that need to be closed to enable movement toward EMP performance requirements and/or guidelines

  vi. Develop industry specifications for equipment

  p. Vulnerability Assessment Recommendations

      vii.   Regular collaboration and coordination with Federal Government to procure and effectively disseminate information needed by industry

     viii.   Development of EMP vulnerability assessment methods and guidelines

      ix.   Development of guidelines to identify and prioritize hardening of critical assets

    q.   Mitigation Recommendations

      x.   Develop Guidance on EMP Mitigation

    r.   Response and Recovery Recommendations

      xi.   Establish national EMP notification system

     xii.   Coordinated response planning

    xiii.   Enhance operating procedures

    xiv.   Incorporate EMP events into industry exercises and training

     xv.   Strategies for supporting recovery

Next Steps:

- Scope document: to focus the EMPTF's efforts on recommendations from the Board report

- EMP Task Force priorities

  - Establish performance expectations

  - Provide guidance on asset hardening

  - Provide guidance to industry for supporting systems and equipment for recovery

- **Membership:** confirm current members will continue to participate and seek additional volunteers

- **Logistics:** schedule meetings and develop work plan documentation

- **NERC Coordinator:** Tom Hofstetter

- RSTC Transition Plan

  - s.   Transition Team Activities

  Kayla Messamore reviewed select topics from the Transition Team slides. This includes Governance, Processes and work plan creation. Subgroup Organization

  Stephen Crutchfield noted that there were three sub-teams from the transition team that reviewed the CIPC, OC and PC work plans and organizations independently. These reviews were presented to the full transition team and a decision was made to look for more efficiency and effectiveness gains. The transition team is consolidating work plan task items and referencing them to the RISC risks and ERO Strategy items to help in this effort. The TT plans to develop a preliminary recommendation for subgroup structure in mid-to-late July and present

it to the full RTSC in a closed session. This initial recommendation will be fully discussed during the September 15, 2020 RSTC meeting.

    t. RSTC 2020 Calendar Review – Stephen Crutchfield reviewed the meeting dates below.

2020 Meeting Dates	Time	Location	Hotel
September 15, 2020	1:00 to 4:00 p.m.	Converted to a Call/Webex	None
December 15, 2020 December 16, 2020	1:00 to 5:00 p.m. 8:00 a.m. to 12:00 p.m.	TBD – Based on COVID-19 Guidelines	TBD

- Technical Committees Update

Vice Chair David Zwergel reviewed the actions taken by the CIPC, OC and PC since the March technical committee meetings.

CIPC:

    a. Reviewed and submitted comments about the draft State of Reliability Report

    b. Endorsed proposed implementation guidance, "Cloud Solutions and Encrypting BES Cyber System Information

    c. Endorsed proposed security guideline, "Primer for Cloud Solutions and Encrypting BES Cyber System Information"

OC:

    a. Actions since March 3-4, 2020 Meeting

    b. Reviewed and submitted comments about the draft State of Reliability Report

    c. Endorsed proposed implementation guidance, "Cloud Solutions and Encrypting BES Cyber System Information

    d. Endorsed proposed security guideline, "Primer for Cloud Solutions and Encrypting BES Cyber System Information"

PC:

    a. Endorsed the 2020 Summer Reliability Assessment

PCEC:

    a. Approved March 2020 PC Meeting Minutes

    b. Approved the *Technical Report: BPS-Connected Inverter-Based Resource Modeling and Studies* submitted by the IRPTF

    c. Reviewed and approved the PC Work Plan with updates from subcommittees, task forces, and working groups

- Forum and Group Reports – Information
    a. North American Generator Forum

       Allen Schriver provided a brief summary of his written report which will be posted with the meeting presentations.

    b. North American Transmission Forum

       Roman Carter referred to his written report included in the agenda package. He noted a few highlights of the NATF work:

       i. Coordinating with NERC/DOE on Pandemic plan – v1 posted on web site.

       ii. Collaborate with regions on higher risk standards

       iii. EPRI/DOE/PNNL – v0 transmission resiliency model

- NERC Compliance

  Lonnie Ratliff provided a brief NERC Compliance update.

  Joint FERC/NERC Whitepaper

  - Why?
      o 2012 House Permanent Select Committee on Intelligence Report
          ▪ Threats posed by foreign telecommunications companies
      o 2020 Executive Order on Securing US Bulk Power System
          ▪ May 1, 2020
  - What?
      o Whitepaper to identify Network Interface Controllers
          ▪ Malicious vendors
          ▪ Others?
  - Who?
      o Compliance Input Work Group (CIWG) reviewed / provided input
      o CIWG possibly modify for industry

Next Steps:

- CIWG update whitepaper

- CIWG identify volunteer participants to:
  - Assess networks
  - Coordinate data collection
  - Sanitize data

- Provide some type of sanitized analysis report to NERC/FERC
- Maintain document going forward?
  - Other?
- Chair's Closing Remarks/Adjournment

  Chair Ford thanked everyone for their participation. He noted that all discussions are appreciated and helpful for the actions taken by the committee today. Apologies for changes to materials and not getting them out early as we had hoped.

There being no further business before the RSTC, Chair Ford adjourned the meeting on Wednesday, June 10, 2020 at 4:25 p.m. Eastern.

Next Meeting
The RSTC will meet September 15, 2020 via webinar.

Stephen Crutchfield

Stephen Crutchfield
Secretary

Agenda
Reliability and Security Technical Committee

June 10, 2020 | 1:00–5:00 p.m. Eastern

Attendees Click Here: Join Webinar

Call to Order

NERC Antitrust Compliance Guidelines and Public Announcement

Introductions and Chair's Remarks

1. **Administrative items**
   a. Arrangements
   b. Announcement of Quorum
   c. Reliability and Security Technical Committee (RSTC) Membership 2020-2023*
      i. RSTC Roster*
      ii. RSTC Organization
      iii. RSTC Charter
      iv. Parliamentary Procedures*
      v. Participant Conduct Policy

Consent Agenda

2. **Minutes* - Approve**
   a. March 3-4, 2020 Critical Infrastructure Protection Committee (CIPC) Meeting*
   b. March 3-4, 2020 Operating Committee (OC) Meeting*
   c. March 3-4, 2020 Planning Committee (PC) Meeting*
   d. March 4, 2020 RSTC Meeting*
3. **State of Reliability Report – Endorse**

Regular Agenda

4. **Remarks and Reports**
   a. Remarks – Greg Ford, RSTC Chair

       i. Subcommittee Reports included in agenda package*

    b. Report of May 14, 2020 Member Representatives Committee (MRC) Meeting and Board Meeting – Chair Ford

5. **RSTC Action Items Review*** – Information – Vice Chair David Zwergel

6. **MOD-025 White Paper*** – Approve –Shawn Patterson, Chair PPMVTF

7. **Inverter-based Resources Performance Task Force Standards Authorization Requests** – Endorse – Jeff Billo, Co-Chair, IRPTF

8. **Resources Subcommittee Revised Scope*** – Approve – Sandip Sharma, Chair

9. **Security Guideline: BCSI Cloud Encryption*** – Accept – Marc Child, CIPC Chair

10. **Compliance Implementation Guidance: Cloud Solutions and Encrypting BCSI*** – **Approve** – Marc Child, CIPC Chair

11. **Electromagnetic Pulse Task Force Update*** – Information - Chair Aaron Shaw, AEP and Vice-Chair Rey Ramos, Southern Company

12. **RSTC Transition Plan** – Discussion – Chair Ford

    a. Transition Team Activities* – Kayla Messamore, RSTC

    b. Subgroup Organization – Stephen Crutchfield

    c. RSTC 2020 Calendar Review

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13. **Technical Committees Update*** – **Information** – **Vice Chair David Zwergel**

14. **Forum and Group Reports** – Information

    a. North American Generator Forum – Allen Schriver

    b. North American Transmission Forum* – Roman Carter

15. **Chair's Closing Remarks**

16. **Adjournment**

*Background materials included.