

Agenda

Operating Reliability Subcommittee

September 9, 2020 | 11:00 a.m. – 5:00 p.m. Eastern

[WebEx](#) Only

Dial-in Number: + 1-415-655-0002 US Toll (Canadian Toll) + 1-416-915-8942

Meeting Number Access Code: 160 957 2534 | Security Code: 09092020

Introductions and Chair's Remarks

[NERC Antitrust Compliance Guidelines](#), [Public Announcement](#), and [Participant Conduct Policy](#)

Agenda

1. Administrative

- a. Arrangements, Safety Briefing – Chair Chris Pilong, PJM Interconnection
- b. Announcement of Quorum – Secretary Darrell Moore, NERC
 - i. Operating Reliability Subcommittee (ORS) Roster*
 - (1) Updates
- c. Parliamentary Procedures* – Secretary
- d. Balancing Authority-to-Reliability Coordinator Mapping* – Secretary
- e. Future Meetings – Secretary
 - i. Nov 4-5, 2020 | Taylor TX | Hosted by ERCOT (Potential WebEx)
 - ii. Feb 9-10, 2021 | Tampa FL | Hosted by FRCC RC (Tentative)
 - iii. Schedule future meetings

2. Meeting Minutes* (Approve) – Chair Pilong

- a. [Minutes](#) of May 5, 2020 Operating Reliability Subcommittee Meeting

3. Reliability Plans* Chair Pilong

- a. Periodic Review of Reliability Plans
 - i. Guideline for Approving Regional and Reliability Coordinator Reliability Plans*
- b. New or Revised Reliability Plans for Endorsement
 - i. BC Hydro Reliability Plan* – Asher Steed
 - ii. VACAR South Reliability Plan* – Linwood Ross

4. Review of 2020 ORS Work Plan* – Chair Pilong

5. Gas and Electric Reliability Guideline – (Review) – All

- a. Review Managing Increased Dependency on Natural Gas - Fuel Planning, BA/TOP-Gas Pipeline Coordination, Contingency Planning* – Chair Pilong
- 6. Reliability and Security Technical Committee (RSTC) Update* – Steve Crutchfield, NERC**
 - a. RSTC 2020 Work Plan Update*
- 7. Synchronized Measurement Subcommittee (SMS) Update* – Timothy Fritch, TVA**
 - a. Synchronized Measurement Working Group (SMWG) Scope* (Approve)
- 8. Event Analysis Subcommittee (EAS) Update – Rick Hackman, NERC**
 - a. Lessons Learned on Control Center Operations and Support Staff
- 9. Operations Review – All**
 - a. Operations Review
 - b. Use of Proxy Flowgate
 - c. Energy Emergency Alert Level 3
 - i. WECC, RC West, Turlock Irrigation District (TID) – 1
 - ii. WECC, RC West, California Independent System Operator (CAISO) – 3
 - iii. WECC, SPP West, Western Area Power Administration, Lower Colorado Region (WALC) – 1
- 10. Resources Subcommittee (RS) Update to ORS – Chair Greg Park, NWPP**
- 11. Interconnection Frequency Monitoring**
 - a. Frequency Monitor Reports and Frequency Excursions – All
 - i. Eastern – Terry Williams
 - ii. ERCOT – Jimmy Hartmann
 - iii. Western – Tim Reynolds
 - iv. Quebec – Stéphane Desbiens
 - b. Options to Remove Frequency Criteria Monitor Reporting From Agenda (Discuss) – All
 - ⊖ Review of Frequency Monitor Criteria – Chair Pilong
- 12. Time Error Correction (TEC) – Joshua Phillips SPP**
- 13. Alberta Frequency Load Shed Event* – Jason Bucholtz, AESO**
- 14. Grid Security Emergency (GSE) Communications – Darrell Moore**
- 15. SAFNR v3 Update – Michael Legatt, ResilientGrid/Darrell Moore**
- 16. IDC SC Update – Chris Wakefield, Southern Company**
- 17. Round Table Open Discussion (Open) – All**
 - a. Technology Update* – Stephanie Lawrence, NERC

*Background materials included.

Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.

Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

Public Announcements

REMINDER FOR USE AT BEGINNING OF MEETINGS AND CONFERENCE CALLS THAT HAVE BEEN PUBLICLY NOTICED AND ARE OPEN TO THE PUBLIC

Conference call version:

Participants are reminded that this conference call is public. The access number was posted on the NERC website and widely distributed. Speakers on the call should keep in mind that the listening audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.

Face-to-face meeting version:

Participants are reminded that this meeting is public. Notice of the meeting was posted on the NERC website and widely distributed. Participants should keep in mind that the audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.

For face-to-face meeting, with dial-in capability:

Participants are reminded that this meeting is public. Notice of the meeting was posted on the NERC website and widely distributed. The notice included the number for dial-in participation. Participants should keep in mind that the audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.

August 10, 2010

NERC Participant Conduct Policy

General

Consistent with its Rules of Procedure, Bylaws, and other governing documents, NERC regularly collaborates with its members and other stakeholders to help further its mission to assure the effective and efficient reduction of risks to the reliability and security of the grid. Many NERC members and other bulk power system experts provide time and expertise to NERC, and the general public, by participating in NERC committees, subcommittees, task forces, working groups, and standard drafting teams, among other things. To ensure that NERC activities are conducted in a responsible, timely, and efficient manner, it is essential to maintain a professional and constructive work environment for all participants, including NERC staff, members of NERC committees, subcommittees, task forces, working groups, and standard drafting teams, as well as any observers of these groups. To that end, NERC has adopted the following Participant Conduct Policy (this “Policy”) for all participants engaged in NERC activities. Nothing in this Policy is intended to limit the powers of the NERC Board of Trustees or NERC management as set forth in NERC’s organizational documents, the NERC Rules of Procedure, or under applicable law. This Policy does not apply to the NERC Board of Trustees or the Member Representatives Committee.

Participant Conduct Policy

All participants in NERC activities must conduct themselves in a professional manner at all times. This Policy includes in-person conduct and any communication, electronic or otherwise, made as a participant in NERC activities. Examples of unprofessional conduct include, but are not limited to, verbal altercations, use of abusive language, personal attacks, or derogatory statements made against or directed at another participant, and frequent or patterned interruptions that disrupt the efficient conduct of a meeting or teleconference.

Additionally, participants shall not use NERC activities for commercial purposes or for their own private purposes, including, but not limited to, advertising or promoting a specific product or service, announcements of a personal nature, sharing of files or attachments not directly relevant to the purpose of the NERC activity, and communication of personal views or opinions, unless those views are directly related to the purpose of the NERC activity. Unless authorized by an appropriate NERC officer, individuals participating in NERC activities are not authorized to speak on behalf of NERC or to indicate their views represent the views of NERC, and should provide such a disclaimer if identifying themselves as a participant in a NERC activity to the press, at speaking engagements, or through other public communications.

Finally, participants shall not distribute work product developed during the course of NERC activities if that work product is deemed Confidential Information consistent with the NERC Rules of Procedure Section 1500. Participants also shall not distribute work product developed during the course of NERC activities if distribution is not permitted by NERC or the relevant committee chair or vice chair (e.g., an embargoed report), provided that NERC, or the committee chair or vice chair in consultation with NERC staff, may grant in writing a request by a participant to allow further distribution of the work product to one or more

specified entities within its industry sector if deemed to be appropriate. Any participant that distributes work product labeled “embargoed,” “do not release,” or “confidential” (or other similar labels) without written approval for such further distribution would be in violation of this Policy. Such participants would be subject to restrictions on participation, including permanent removal from participation on a NERC committee or other NERC activity.

Reasonable Restrictions on Participation

If a participant does not comply with this Policy, certain reasonable restrictions on participation in NERC activities may be imposed, as described below.

If a NERC staff member, or committee chair or vice chair after consultation with NERC staff, determines, by his or her own observation or by complaint of another participant, that a participant’s behavior is disruptive to the orderly conduct of a meeting in progress or otherwise violates this Policy, the NERC staff member or committee chair or vice chair may remove the participant from a meeting. Removal by the NERC staff member or committee chair or vice chair is limited solely to the meeting in progress and does not extend to any future meeting. Before a participant may be asked to leave the meeting, the NERC staff member or committee chair or vice chair must first remind the participant of the obligation to conduct himself or herself in accordance with this Policy and provide an opportunity for the participant to comply. If a participant is requested to leave a meeting by a NERC staff member or committee chair or vice chair, the participant must cooperate fully with the request.

Similarly, if a NERC staff member, or committee chair or vice chair after consultation with NERC staff, determines, by his or her own observation or by complaint of another participant, that a participant’s behavior is disruptive to the orderly conduct of a teleconference in progress or otherwise violates this Policy, the NERC staff member or committee chair or vice chair may request the participant to leave the teleconference. Removal by the NERC staff member or committee chair or vice chair is limited solely to the teleconference in progress and does not extend to any future teleconference. Before a participant may be asked to leave the teleconference, the NERC staff member or committee chair or vice chair must first remind the participant of the obligation to conduct himself or herself in accordance with this Policy and provide an opportunity for the participant to comply. If a participant is requested to leave a teleconference by a NERC staff member or committee chair or vice chair, the participant must cooperate fully with the request. Alternatively, the NERC staff member or committee chair or vice chair may choose to terminate the teleconference.

At any time, a NERC officer, after consultation with NERC’s General Counsel, may impose a restriction on a participant from one or more future meetings or teleconferences, a restriction on the use of any NERC-administered listserv or other communication list, or such other restriction as may be reasonably necessary to maintain the orderly conduct of NERC activities. Before approving any such restriction, the NERC General Counsel must provide notice to the affected participant and an opportunity to submit a written objection to the proposed restriction no fewer than seven days from the date on which notice is provided. If approved, the restriction is binding on the participant, and NERC will notify the organization employing or contracting with the restricted participant. A restricted participant may request removal of the restriction by submitting

a request in writing to the NERC General Counsel. The restriction will be removed at the reasonable discretion of the NERC General Counsel or a designee.

Upon the authorization of the NERC General Counsel, NERC may require any participant in any NERC activity to execute a written acknowledgement of this Policy and its terms and agree that continued participation in any NERC activity is subject to compliance with this Policy.

Guidelines for Use of NERC Email Lists

NERC provides email lists, or “listservs,” to NERC stakeholder committees, groups, and teams to facilitate sharing information about NERC activities. It is the policy of NERC that all emails sent to NERC listservs be limited to topics that are directly relevant to the listserv group’s assigned scope of work. NERC reserves the right to apply administrative restrictions to any listserv or its participants, without advance notice, to ensure that the resource is used in accordance with this and other NERC policies.

Prohibited activities include using NERC-provided listservs for any price-fixing, division of markets, and/or other anti-competitive behavior. Recipients and participants on NERC listservs may not utilize NERC listservs for their own private purposes. This may include lobbying for or against pending balloted standards, announcements of a personal nature, sharing of files or attachments not directly relevant to the listserv group’s scope of responsibilities, or communication of personal views or opinions, unless those views are provided to advance the work of the listserv’s group. Any offensive, abusive, or obscene language or material shall not be sent across the NERC listservs.

Any participant who has concerns about this Policy may contact NERC’s General Counsel.

Version History

Version	Date	Change Tracking
1	February 6, 2019	
2	February 22, 2019	<ul style="list-style-type: none"> • Clarified policy does not apply to Board or MRC • Addressed participants speaking on behalf of NERC

Operating Reliability Subcommittee

Chair	Chris Pilog Director of Dispatch	PJM Interconnection, L.L.C.
Vice Chair	James E. Hartmann, Jr. Senior Manger System Operations	Electric Reliability Council of Texas Inc.
	Tim Beach ** Director Reliability Coordination	California ISO/(RC West)
	Kyle Russell Senior Manager, Market Forecasts & Integration	Independent Electricity System Operator
	Richard McCall* Director, Environmental & Transmission Compliance	North Carolina Electric Membership Corp
	Raj Thappetaobula Manager, Reliability Coordination and Engineering	Midcontinent ISO
	Stephane Desbiens, Director System Control & Reliability Coordinator	Hydro-Quebec
	John R. Norden** Director, Operations	ISO New England, Inc.
	Vince Ordax Director of Operations	Florida Reliability Coordination Council
	Linwood Ross Manager, System Operations Engineering Carolinas	Duke Energy

Tim Reynolds
Senior Reliability Engineer

Western Electricity Coordinating
Council

Darren Wilkie**
Manager Real-Time Operations

Alberta Electric System
Operations

Steven C. Sanders*
Operations & Transmission Advisor

Western Area Power
Administration - UGPR

Lacy Skinner
Assistant Chief System Operator

New York Independent System
Operator

Asher Sneed
Manager System Operations

BC Hydro

Christopher Wakefield

Southern Company Services, Inc.

Bryan Wood
Manager System Operations

Southwest Power Pool, Inc.

Terry Williams
Manager Reliability Operations

Tennessee Valley Authority

Raj Venkat Manager RC Operations

Florida Reliability Coordination
Council, Inc.

NERC Staff

Darrell Moore
Associate Director BPSA

North American Electric Reliability
Corporation

Stephan Crutchfield
Senior Manager of Operating Committee
Support

North American Electric Reliability
Corporation

Bill Graham
Principle BPSA Coordinator

North American Electric Reliability
Corporation

Grandfathered members*

Executive Committee members**

Parliamentary Procedures

Based on Robert's Rules of Order, Newly Revised, 1990 Edition

Motions

Unless noted otherwise, all procedures require a "second" to enable discussion.

When you want to...	Procedure	Debatable	Comments
Raise an issue for discussion	Move	Yes	The main action that begins a debate.
Revise a Motion currently under discussion	Amend	Yes	Takes precedence over discussion of main motion. Motions to amend an amendment are allowed, but not any further. The amendment must be germane to the main motion, and cannot reverse the intent of the main motion.
Reconsider a Motion already approved	Reconsider	Yes	Allowed only by member who voted on the prevailing side of the original motion.
End debate	Call for the Question or End Debate	No	If the Chair senses that the committee is ready to vote, he may say, "if there are no objections, we will now vote on the Motion." Otherwise, this motion is debatable and subject to 2/3 majority approval.
Record each member's vote on a Motion	Request a Roll Call Vote	No	Takes precedence over main motion. No debate required, but the members must approve by 2/3 majority.
Postpone discussion until later in the meeting	Lay on the Table	Yes	Takes precedence over main motion. Used only to postpone discussion until later in the meeting.
Postpone discussion until a future date	Postpone until	Yes	Takes precedence over main motion. Debatable only regarding the date (and time) at which to bring the Motion back for further discussion.
Remove the motion for any further consideration	Postpone indefinitely	Yes	Takes precedence over main motion. Debate can extend to the discussion of the main motion. If approved, it effectively "kills" the motion. Useful for disposing of a badly chosen motion that cannot be adopted or rejected without undesirable consequences.
Request a review of procedure	Point of order	No	Second not required. The Chair or secretary shall review the parliamentary procedure used during the discussion of the Motion.

Notes on Motions

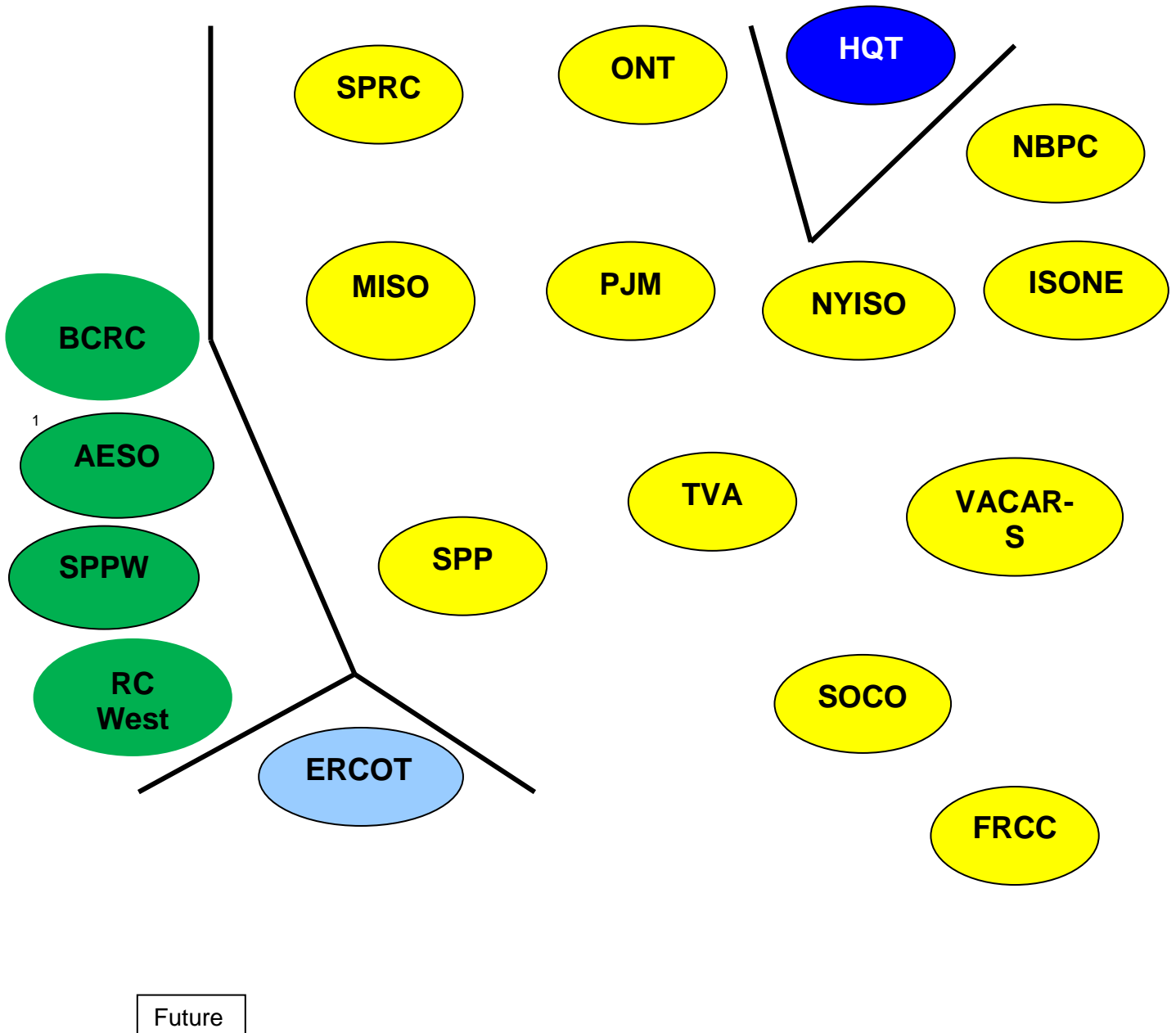
Seconds. A Motion must have a second to ensure that at least two members wish to discuss the issue. The "second" is not recorded in the minutes. Neither are motions that do not receive a second.

Announcement by the Chair. The Chair should announce the Motion before debate begins. This ensures that the wording is understood by the membership. Once the Motion is announced and seconded, the Committee "owns" the motion, and must deal with it according to parliamentary procedure.

Revisions. Technically, revisions to the main motion are accomplished by the Amend procedure. However, immediately after making the motion, and before it is announced by the Chair, another member may ask that the motion be revised. If the original "motion -maker" agrees to the revision, then the revised motion will be the one debated. The original "second" need not be consulted, because the original "motion-maker" plus the "reviser" constitutes a motion and a second.

NERC RELIABILITY COORDINATOR AREAS

Effective: December 3, 2019



¹ AESO is currently providing their own Reliability Coordinator services consistent with Alberta legislation.

NERC RELIABILITY COORDINATOR DESKS

Effective: December 3, 2019

CURRENT RELIABILITY COORDINATOR	FUTURE RELIABILITY COORDINATOR	COMMENT
HQT	Same	
ONT (IESO)	Same	
ISONE	Same	
NBPC	Same	
NYISO	Same	
PJM	Same	
MISO (Carmel, Eagan, Little Rock)	Same	
SPRC	Same	
VACAR-S	Same	
TVA	Same	
SOCO	Same	
FRCC	Same	
SPP/SPPW	Same	
ERCOT	Same	
AESO RC ²	Same	
RC West	Same	
BC Hydro	Same	

² AESO is currently providing their own Reliability Coordinator services consistent with Alberta legislation.

NERC
BALANCING AUTHORITY TO RELIABILITY COORDINATOR MAPPING
December 3, 2019

This table indicates the Reliability Coordinators associated with each Balancing Authority within each Interconnection.

<i>Current Reliability Coordinator</i>	<i>Balancing Authority</i>	<i>Local Balancing Authority</i>	<i>Future Reliability Coordinator</i>	<i>Regional Entity</i>	<i>Expected Date For Change</i>
HQT	HQT			NPCC	
ISONE	ISNE			NPCC	
NBPC	NBPC			NPCC	
	NSPI			NPCC	
NYISO	NYIS			NPCC	
ONT	ONT			NPCC	
PJM	PJM			RF/SERC	
VACAR-S	DUK			SERC	
	SCEG			SERC	
	SC			SERC	
	CPLW			SERC	
	YAD			SERC	
	CPLE			SERC	
TVA	LGEE			SERC	
	TVA			SERC	
	AECI			SERC	
SOCO	SOCO			SERC	
	SEPA			SERC	
	AEC			SERC	
FRCC	FMPP			SERC	
	FPC (DEF)			SERC	
	FPL			SERC	
	GVL			SERC	
	HST			SERC	
	JEA			SERC	
	NSB			SERC	
	SEC			SERC	
	TAL			SERC	
	TEC			SERC	
MISO	MISO			RF/SERC/MRO	
		MECS		RF	

Current Reliability Coordinator	Balancing Authority	Local Balancing Authority	Future Reliability Coordinator	Regional Entity	Expected Date For Change
		CIN		RF	
		HE		RF	
		IPL		RF	
		DECO		RF	
		NIPS		RF	
		SIGE		RF	
		MIUP		RF	
		WEC		RF	
		CONS		RF	
		WPS		RF	
		BREC		SERC	
		AMIL		SERC	
		AMMO		SERC	
		CWLD		SERC	
		CWLP		SERC	
		SIPC		SERC	
		GridLiance Heartland		SERC	
		EES		SERC	
		CLEC		SERC	
		LAFa		SERC	
		LEPA		SERC	
		LAGN		SERC	
		SME		SERC	
		HMPL		SERC	
		ALTE		MRO	
		ALTW		MRO	
		MGE		MRO	
		UPPC		MRO	
		GRE		MRO	
		MEC		MRO	
		MP		MRO	
		MPW		MRO	
		NSP		MRO	
		OTP		MRO	
		SMP		MRO	
		DPC		MRO	
	MHEB			MRO	
AESO ³	AESO			WECC	
BCRC	BC Hydro			WECC	
RC West	BANC			WECC	
	CENACE			WECC	
	IID			WECC	

³ AESO is currently providing their own Reliability Coordinator services consistent with Alberta legislation.

Current Reliability Coordinator	Balancing Authority	Local Balancing Authority	Future Reliability Coordinator	Regional Entity	Expected Date For Change
	LAWP			WECC	
	TID			WECC	
	CAISO			WECC	
	GWA			WECC	
	AVA			WECC	
	BPAT			WECC	
	CHPD			WECC	
	DOPD			WECC	
	GCPD			WECC	
	IPCO			WECC	
	NWMT			WECC	
	PGE			WECC	
	PACW			WECC	
	PSEI			WECC	
	SCL			WECC	
	WWA			WECC	
	TPWR			WECC	
	PACE			WECC	
	AZPS			WECC	
	PNM			WECC	
	NEVP			WECC	
	SRP			WECC	
	GRID			WECC	
AVRN			WECC		
SPRC	SPC			MRO	
ERCOT	ERCO			Texas RE	
SPPW	TEPC			WECC	
	WACM			WECC	
	WALC			WECC	
	HGMA			WECC	
	PSCO			WECC	
	EPE			WECC	
	DEAA			WECC	
	GRIF			WECC	
	WAUW			WECC	
SPP	SWPP			MRO	
	SPA			MRO	

Guideline for Approving Regional and Reliability Coordinator Reliability Plans

The framework for approving Regional and Reliability Coordinator
Reliability Plans

Version 1

Approved by the Operating Committee: March 21, 2007

Prepared by the
Operating Reliability Subcommittee

Introduction

The Regional Reliability Plan Guideline provides a framework for the Regional Reliability Organization to use when developing its regional reliability plan (RRP). This guideline document outlines the process to be followed by the Regional Reliability Organization or by a Reliability Coordinator for submitting its RRP or Reliability Coordinator reliability plan (RCP) to NERC for approval.

The Regional Reliability Organization will submit its RRP or the Reliability Coordinator will submit its RCP to NERC for review and acceptance. The NERC Operating Committee will review for acceptance the operating section of the RRP and the RCP and the NERC Planning Committee will review for acceptance the planning sections. This process for the standing committees will focus on the completeness, feasibility, and adequacy of the Regional Reliability Organization's or Reliability Coordinator's reliability plan.

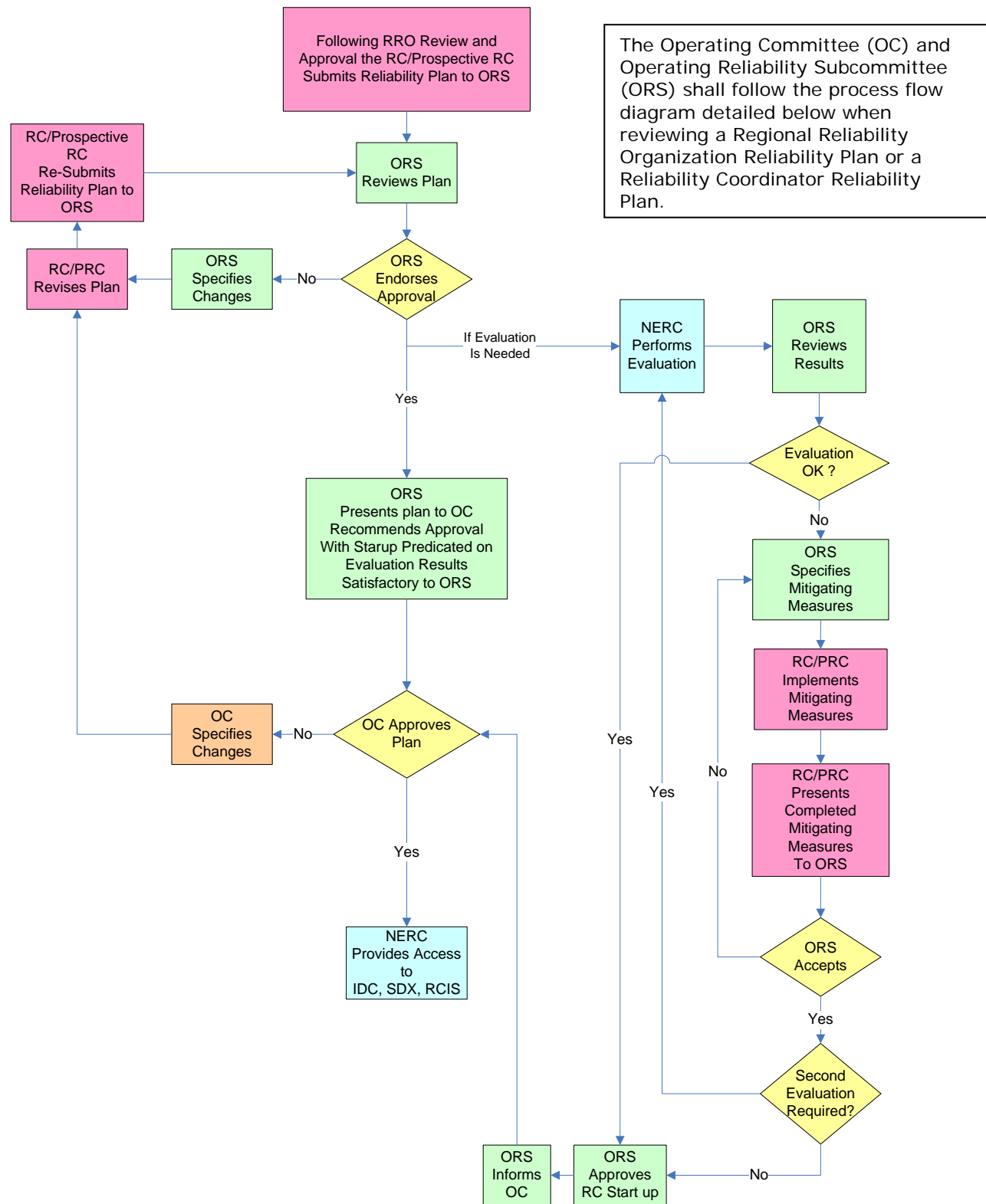
Approval Process

Each Regional Reliability Organization or Reliability Coordination will submit its respective RRP or RCP to the Operating Committee's Operating Reliability Subcommittee (ORS) for initial review and approval. The ORS shall follow the process as outlined below and as illustrated in the "Approval Process Flow Chart" section when reviewing a RRP or a RCP:

- 1. Regional Reliability Organization Review and Approval of RRP or RCP.** The Regional Reliability Organization (RRO) shall review and approve its Regional Reliability Plan before it is submitted to NERC for review and approval. The Reliability Coordinator shall submit its Reliability Plan to all Regional Reliability Organizations within which it operates for their respective review and approval before such plan is submitted to NERC for review and approval.
- 2. ORS Review.** ORS endorsement of the RRP or RCP is based upon its assessment of the Regional Reliability Organization's or the Reliability Coordinator's ability to meet NERC reliability standards. To aid in this assessment, the ORS may request an operational review (reliability readiness evaluation) of the Reliability Coordinator.
- 3. Reliability Readiness Evaluation.** At the request of the ORS, NERC will conduct a reliability readiness evaluation of an existing or prospective Reliability Coordinator. The reliability readiness evaluation may contain recommendations which the RC must implement prior to the Reliability Coordinator beginning operations. In this instance the Reliability Coordinator will develop a mitigation plan that addresses the recommendations. The reliability readiness evaluation team will present the evaluation and mitigation plan, if any, to the ORS.
- 4. ORS Endorsement of RRP or RCP.** Following its review of the RRP or RCP (and the reliability readiness evaluation), the ORS will decide whether to endorse the RRP or RCP for presentation to the Operating Committee. If the ORS cannot endorse the RRP or RCP, the subcommittee will indicate its objections to the Regional Reliability Organization or the Reliability Coordinator.
- 5. Operating Committee Approval of RRP or RCP.** The ORS will present its endorsement of the RRP or RCP to the Operating Committee for action.
- 6. Approval of Minor Revisions to a RRP or RCP.** The Operating Committee delegates the approval of minor revisions to a RRP or RCP (e.g., reliability plan "footprint" change) to the ORS.
- 7. Posting of an Approved RRP or RCP.** NERC shall post approved Regional Reliability Plans and Reliability Coordinator Reliability Plans on its Web site.
- 8. Access to NERC Reliability Tools.** Reliability Coordinators are required to sign the Reliability Coordinator Standards of Conduct and the Confidentiality Agreement for Electric System Operating Reliability Data before NERC can grant access to the Reliability Coordinator reliability tools. Furthermore, NERC shall not grant access to some reliability tools (e.g., the Interchange Distribution Calculator), with the exception of granting access to the training environment of such tools, until the Reliability Coordinator receives approval to begin operation.

9. **RRP or RCP Periodic Review.** The Regional Reliability Organization or Reliability Coordinator shall review its respective RRP or RCP at least every three years and notify the ORS of the results of such review.

Approval Process Flow Chart



Synchronized Measurement Working Group Scope Document

Purpose

The purpose of the NERC Synchronized Measurement Working Group (SMWG) is to provide technical guidance and support for the use of synchronized and high-resolution measurements of the bulk power system (BPS) across North America.

Activities

The working group will support the development, implementation, and utilization of synchronized and high-resolution measurement systems. This includes engineering analysis techniques and real-time tools for improved planning, operation, and reliability of the North American BPS. This includes the following tasks:

1. Formulate and guide the NERC vision and activities to promote the advancement of wide-area time synchronized and high resolution measurement systems and applications, including standards where and when needed.
2. Support the development and use of standardized data sharing, data quality, and data cleaning protocols and practices for time synchronized and high resolution measurement data.
3. Support any data collection or analysis of power system performance following selected events and significant disturbances. Coordinate with other NERC groups such as the Event Analysis Subcommittee and the System Analysis and Modeling Subcommittee, as applicable.
4. Maintain recommendations, guidelines, technical reference documents, and training materials to help advance the use of applications driven by time synchronized and high resolution measurements across the industry.
5. Develop and maintain appropriate procedures and guidelines for base line power system performance analysis using time synchronized and high resolution measurement data.
6. Provide a forum for operating entities to discuss activities and experiences related to the development, deployment, and use of measurement data for the purposes of improving reliability of the bulk power system.
7. Coordinate with other industry organizations related to high resolution and synchronized measurement data, including the North American Synchrophasor Initiative (NASPI), WECC Joint Synchronized Information Subcommittee (JSIS), IEEE, and IEC, as applicable.
8. Review and coordinate proposed new synchrophasor applications with any appropriate NERC committees to support coordinated advancement of synchronized measurement technologies to assure effectiveness and to limit duplication of efforts.

Deliverables

The SMWG will develop guidelines, technical reports, white papers, and recommendations to the NERC Operating Reliability Subcommittee on the following topics:

1. Ongoing review and analysis of existing and new BPS oscillation events; other technical assessments of power system reliability using time synchronized measurement data
2. Enhanced operating procedures using synchronized measurement data; improved operator and real-time tools and applications
3. Innovative engineering analysis tools and applications
4. Baseline power system performance
5. Effective and efficient data sharing, data quality, and data cleaning methods
6. Design and operation of time synchronized measurement network and data architectures, leveraging other technical groups such as IEEE and NASPI
7. Use of industry technology standards (IEEE, IEC, etc.) and NERC Reliability Standards
8. Other topics as prioritized by the NERC SMWG and NERC Operating Reliability Subcommittee (ORS) membership

Membership

SMWG will include industry members who have technical expertise in the following areas:

- Development and deployment of high-resolution, time-synchronized measurement systems
- Use of real-time and off-line advanced applications
- Analysis of high resolution disturbance data for event analysis

A NERC staff member will be assigned as a coordinator. The working group will consist of a chair and vice chair appointed by the ORS leadership for one two-year term. The vice chair should be available to succeed the chair. Decisions will be consensus-based, led by the chairperson(s) and coordinator. Minority views can be included in an addendum.

Reporting

The NERC SMWG administratively reports to the NERC Operating Reliability Subcommittee (ORS). SMWG will coordinate with other subcommittees and working groups within the Reliability and Security Technical Committee (RSTC), as appropriate.

Meetings

Two to four open meetings per year, as needed. Meetings may be either in-person or remote.

Synchronized Measurement ~~Subcommittee~~ ~~Working Group (SMWGS)~~ Scope Document

Purpose

The purpose of the [NERC Synchronized Measurement Working Group \(SMWG\) subcommittee working group](#) is to provide technical guidance and support for the use of synchronized and high-resolution measurements of the bulk power system (BPS) across North America.

Activities

The [subcommittee working group](#) will support the development, implementation, and utilization of synchronized and high-resolution measurement systems. This includes engineering analysis techniques and real-time tools for improved planning, operation, and reliability of the North American BPS. This includes the following tasks:

1. Formulate and guide the NERC vision and activities to promote the advancement of wide-area time synchronized and high resolution measurement systems and applications, including standards where and when needed.
2. Support the development and use of standardized data sharing, data quality, and data cleaning protocols and practices for time synchronized and high resolution measurement data.
3. Support any data collection or analysis of power system performance following selected events and significant disturbances. Coordinate with other NERC groups such as the Event Analysis Subcommittee and the System Analysis and Modeling Subcommittee, as applicable.
4. Maintain recommendations, guidelines, technical reference documents, and training materials to help advance the use of applications driven by time synchronized and high resolution measurements across the industry.
5. Develop and maintain appropriate procedures and guidelines for base line power system performance analysis using time synchronized and high resolution measurement data.
6. Provide a forum for operating entities to discuss activities and experiences related to the development, deployment, and use of measurement data for the purposes of improving reliability of the bulk power system.
7. Coordinate with other industry organizations related to high resolution and synchronized measurement data, including the North American Synchrophasor Initiative (NASPI), WECC Joint Synchronized Information Subcommittee (JSIS), IEEE, and IEC, as applicable.
8. Review and coordinate proposed new synchrophasor applications with any appropriate NERC committees to support coordinated advancement of synchronized measurement technologies to assure effectiveness and to limit duplication of efforts.

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Deliverables

The ~~SMWGS~~ will develop guidelines, technical reports, white papers, and recommendations to the ~~NERC Operating Reliability Subcommittee C-Planning Committee (PC)~~ on the following topics:

Ongoing review and analysis of

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- ~~1. Updates on existing and new BPS grid-oscillation excursion events; other technical assessments of power system reliability using time synchronized measurement data~~
2. Enhanced operating procedures using synchronized measurement data; improved operator and real-time tools and applications
3. Innovative engineering analysis tools and applications
4. Baseline power system performance
5. Effective and efficient data sharing, data quality, and data cleaning methods
- ~~2-6. Design and operation of time synchronized measurement network and data architectures, leveraging other technical groups such as IEEE and NASPI~~
- ~~3-7. Use of industry technology standards (IEEE, IEC, etc.) and NERC Reliability Standards~~
- ~~4-1. Effective and efficient data sharing, data quality, and data cleaning methods~~
- ~~5. Operator and real-time tools and applications~~
- ~~6. Engineering analysis tools and applications~~
- ~~7. Baseline power system performance~~
- ~~8. Technical assessments of power system reliability using time synchronized measurements~~
- 9-8. Other topics as prioritized by the NERC ~~SMSSMWG~~ and NERC ~~PCORS~~ membership

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Membership

The NERC ~~SMSSMWG~~ will include industry members who have technical expertise in the following areas:

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- Development and deployment of high-resolution, time-synchronized measurement systems
- Use of real-time and off-line advanced applications
- Analysis of high resolution disturbance data for event analysis

A NERC staff member will be assigned as a Coordinator. The ~~subcommittee working group~~ will consist of a chair and vice chair appointed by the NERC ~~PC-Operating Reliability Subcommittee (ORS)~~ leadership for one two-year term. The vice chair should be available to succeed the chair. Decisions will be consensus-based ~~of the membership~~, led by the chair ~~person(s)men~~ and ~~staff~~ Coordinators. ~~Any minority~~ views can be included in an addendum.

Reporting

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The NERC ~~SMWGS~~ administratively reports to the NERC Operating Reliability Subcommittee (ORS) PC, ~~with liaisons to the NERC Operating Committee~~. ~~SMWGS~~ will coordinate with ~~the NERC Critical Infrastructure Protection Committee and its associated sub-group~~ other subcommittees and working groups within the Reliability and Security Technical Committee (RSTC), as appropriate.

Meetings

Two to four open meetings per year, as needed. Meetings may be either in-person or remote.

Approved by the NERC Reliability and Security Technical Committee ~~Planning Committee~~: _____,

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