WECC

Electric Reliability and Security for the West

Board of Directors
Meeting Agenda
Henderson, NV

Virtual meeting link, Password: WECC | Dial-in Number: 1-415-655-0003, Attendee Access Code: 2452 540 7154

September 14, 2022, 8:00 a.m. to 12:30 p.m. Pacific Time

1.   Welcome, Call to Order—Ian McKay

2.   Review WECC Antitrust Policy—Jeff Droubay

WECC Antitrust Policy.

Please contact WECC legal counsel if you have any questions.

3.   Approve Agenda

4.   Consent Agenda

Approval Item: June 15, 2022, minutes

Approval Item: Appointment of Jeffrey Droubay as Corporate Secretary and Officer

Approval Item: Reliability Assessment Committee (RAC) Charter

Approval Item: Appointment of Chelsea Loomis as RAC co-chair

Approval Item: 2024 Annual Meeting Location

5.   Review of June 15, 2022, Closed Session—Ian McKay

6.   Board Leadership Election—Kris Hafner

7.   Executive Remarks—Brandon Barkhuff, Senior Vice President and General Counsel, NV Energy

8.   Remarks and Reports

WECC President and CEO—Melanie Frye

Reliability and Security Oversight—Steven Noess

Reliability Planning and Performance Analysis—Branden Sudduth

Break

Draft Board Meeting Agenda—September 14, 2022

Member Advisory Committee—Brenda Ambrosi

Western Interconnection Regional Advisory Body—Mary Throne

9. Interactive Forum Debrief

10. Public Comment

11. Board Committee Reports

Finance and Audit Committee—Gary Leidich

Governance Committee—Shelley Longmuir

Human Resources and Compensation Committee—Kris Hafner

Standards Committee—Jim Avery

Break

12. Technical Committee Reports

Joint Guidance Committee—Jonathan Aust

Reliability Risk Committee—Jonathan Aust

Reliability Assessment Committee—Chifong Thomas

13. Review New Action Items

14. Review Upcoming Meetings

December 6–7, 2022 ....Salt Lake City, UT

March 7–8, 2023..Salt Lake City, UT

June 13–14, 2023 ....Salt Lake City, UT

15. Adjourn

Board of Directors Meeting
Approval Item
Consent Agenda
September 14, 2022

For Board Approval

The consent agenda for this meeting consists of:

Approval Item: June 15, 2022, minutes

Approval Item: Appointment of Jeffrey Droubay as Corporate Secretary and Officer

Approval Item: Reliability Assessment Committee (RAC) Charter

Approval Item: Appointment of Chelsea Loomis as RAC co-chair

Approval Item: 2024 Annual Meeting Location

Recommendation

Staff believes that these items do not require additional Board discussion, and each is non-controversial and appropriate for the consent agenda. Attached is background information on each item.

WECC

Electric Reliability and Security for the West

Board of Directors
DRAFT Meeting Minutes
June 15, 2022
Virtual

1.   Welcome, Call to Order

Ian McKay, Board of Directors (Board) Chair, called the meeting to order at 9:00 a.m. MT on June 15, 2022. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

2.   Review WECC Antitrust Policy

Brittany Huggins, Assistant Corporate Secretary, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

3.   Approve Agenda

Mr. McKay introduced the proposed meeting agenda.

On a motion by Jim Avery, the Board approved the agenda.

4.   Consent Agenda

Mr. McKay introduced the consent agenda.

Shelley Longmuir, Governance Committee Chair, asked that the summary document on Soliciting Stakeholder Input be added as an exhibit in the March 9, 2022, minutes.

On a motion by Jim Avery, the Board approved the consent agenda, with edits to the March 9, 2022, minutes.

5.   Review of March 9, 2022, and April 8, 2022, Closed Sessions

Mr. McKay reported that, during the closed session on March 9, 2022, Mike Connelly, Director of Information Systems and Technology, reviewed the 2022 security initiatives, including access management, firewall implementation, data loss prevention, asset inventory, authentication protocol, data classification, and a web application firewall. Mr. Connelly highlighted current security events and IT activities to improve WECC's security posture, response to geopolitical tensions, progress toward implementing consultant recommendations, phishing and security metrics, and the third-party access landscape.

The closed session also included a quarterly update on enterprise risk management, including 2022 management activities, a Q1 status report, an overview of the inherent and residual risk heat maps, and planned NERC oversight activities.

The Board received a quarterly update on confidential compliance enforcement matters, a discussion on strategic engagement, and approval of a software agreement. Additionally, the Board discussed the return to in-person meetings and approved vice president base pay.

The Board met again in closed session on April 8, 2022, to discuss personnel matters.

6. NERC Trustee Remarks

Jim Robb, NERC President and CEO, provided remarks on NERC's 2023 planning process, which included looking at the risk environment, priorities, and resource plans that will translate to a three-year business plan and budget with a significant increase in funding requirements. Mr. Robb provided comments on 2022 summer reliability and the broader reliability impacts of the future, including the pace of grid transformation, determining the appropriate cost allocation for infrastructure, deploying scalable energy storage technology, continuing to drive energy efficiency, and executing strategy to strengthen supply chains.

Jim Piro, NERC Trustee, remarked on the strong partnership and collaboration of the ERO Enterprise. He supported Mr. Robb's comments and emphasized the challenges of the changing resource mix, extreme weather events, and the cybersecurity threat environment. Mr. Piro highlighted the importance of information sharing and collaboration and the need for NERC's processes to be agile. The goal is to ensure that NERC is effective, efficient, and responsive to change. He applauded WECC for its focus on reliability, and its work on addressing challenges to the bulk power system. Mr. Piro stated that NERC's 2023 Business Plan and Budget (BP&B) is posted and NERC welcomes stakeholder comment. He concluded by commenting on the constant change in industry and the importance of being proactive and continuing to work together.

The Board members asked whether Mr. Robb could elaborate on the Department of Energy and NERC's thinking on interregional transmission lines, whether there is traction in Congress on the Summer Reliability assessment (SRA), and whether NERC will provide more guidance on the Regional Entity (RE) role in addressing cyber threats. Mr. Robb responded that currently, there is no framework in place for interregional transmission lines, that congress has been briefed on the SRA, and that NERC is contemplating the model for REs to help advance cybersecurity efforts.

7. Remarks and Reports

WECC President and CEO

Draft Board Meeting Minutes—June 15, 2022

Melanie Frye, President and CEO, provided an internal update, including an introduction of Steven Noess, the new Vice President, Reliability and Security Oversight, the status of the vice president and general counsel recruitment, and an update on resuming travel and in-person meetings. Ms. Frye followed up on a previous Board action item about how WECC handles stakeholder comments and input. She summarized that, after a thorough review of varied processes for stakeholder involvement and participation, a one-size-fits-all approach is not the most efficient. WECC commits to referencing stakeholder comments in a more deliberate way so that stakeholders are reassured that comments are being discussed and considered. Ms. Frye highlighted activities within FERC, NERC, and the regions, and provided updates on activities in British Columbia, Alberta, and Mexico.

Ms. Frye closed by reviewing the 2022 WECC Scorecard status. She reported that many of the metrics are coded as yellow, which means they are currently at risk of not being complete by the end of the year. The metrics are bringing the desired visibility to the work underway and have highlighted the need for improved work plan development. She is cautiously optimistic that by September these initiatives will be back on track for year-end completion.

Reliability and Security Oversight

Steven Noess, Vice President, Reliability and Security Oversight, provided a high-level summary of the ERO Enterprise proposed changes to the Rules of Procedure (ROP) and which parts were accepted or rejected by FERC in a recent Order. Mr. Noess reviewed actions toward the pandemic wind-down, including resumption of on-site monitoring and the end of self-logging expansion. He closed with an update on Align functionality and collaboration capabilities. Full Align adoption across the ERO Enterprise is expected by 2023.

Directors inquired whether there were technology improvements that could be used to offset costs for the return to on-site audits. Mr. Noess said there are some efficiencies and prioritizations that help with managing the budget, and he feels confident the audit team will stay within budget. The Board asked about the approach to address violation inventory targets. Mr. Noess responded that the Reliability and Security Oversight team is working on a multi-pronged approach that includes working with teams across the Reliability and Security Oversight group to address violation inventory more efficiently, including a root cause analysis and risk mitigation.

Reliability Planning and Performance Analysis

Branden Sudduth, Vice President of Reliability Planning and Performance Analysis, provided an update on WECC's role in transmission planning, including information and models, reliability assessments, and transmission planning coordination and regional processes. Mr. Sudduth reviewed challenges and observations of 2022 summer readiness, including

3

cybersecurity threats and resource adequacy and energy sufficiency. Mr. Sudduth closed by reviewing wildfire threats and potential effects on the system.

Board members asked about mitigating risk introduced from delaying maintenance on retiring facilities. Mr. Sudduth responded that, through generation availability data system tracking efforts, WECC can see who has experienced forced or unexpected outages of those facilities. Currently, there are no red flags or sharp spikes that would cause WECC to dig into the source of the problems, but WECC continues to watch.

Board members suggested WECC perform a gap analysis to identify challenges with existing transmission planning processes and provide a report on potential activities that WECC could initiate to add value and address challenges. Mr. Sudduth agreed that an analysis would be helpful and will report back at the September Board meeting.

Board members closed by asking about extreme weather and federal actions to reduce wildfire risk and whether WECC is involved in that work. Mr. Sudduth responded that there is a lot of activity looking at wildfire risk and WECC is coordinating with several agencies to share lessons learned and ensure there is no duplication of efforts.

Member Advisory Committee

Brenda Ambrosi, MAC Chair, provided an update on 2022 MAC goals and recent activities, including MAC discussions and input on the Reliability Risk Priorities (RRPs), review of WECC's 2023 BP&B, and evaluation of activities from the Studies Subcommittee and Standards Development.

Western Interconnection Regional Advisory Body

Maury Galbraith, Executive Director of Western Interstate Energy Board (WIEB), announced the recent election of Amy Sopinka and Mary Throne as Western Interconnection Regional Advisory Body (WIRAB) chair and vice chair, respectively. He reported on WIRAB's engagement at WECC, including WIRAB advice and support of WECC's proposed RRPs and the 2023 BP&B. He closed by reviewing WIRAB's proposed 2023 strategic initiatives.

8.   Public Comments

No comments were offered.

9.   Reliability Risk Priorities

Kris Raper, Vice President of Strategic Engagement and External Affairs, provided a summary of the current RRPs and refresh process. She highlighted the process development and stated stakeholder input had significant contribution on the final proposed list. Ms. Raper closed by reviewing the four recommended 2022-2024 RRPs.

Directors discussed comments made by the MAC on using the word "extreme" in extreme natural events and a concern on the inclusion of cybersecurity as a top risk. After discussion, the board determined that "extreme" clarifies the difference between regular and extreme events, and cybersecurity was included because of the seriousness of ongoing threats.

The Board thanked everyone for their involvement and the tremendous effort it took to reach the final proposal. There was emphasis placed on the cybersecurity threats and the relevance the four risk priorities have to the West. Though these are the top risks, the Board noted there are many risks, and WECC will continue to monitor and address them.

On a motion by Ric Campbell, the Board approved the following motion.

> *Resolved*, that the WECC Board of Directors (Board), acting at the meeting of the Board on June 15, 2022, approves the 2022 Reliability Risk Priorities as presented and recommended here.

More information is attached as Exhibit B.

10. Board Committee Reports

Finance and Audit Committee

Gary Leidich, Finance and Audit Committee (FAC) Chair, provided highlights from the previous day's meeting, with focus on the 2023 BP&B discussion and feedback. Mr. Leidich commented that he recognizes stakeholder expectations are high and that WECC is committed to ensuring reliability.

Directors discussed assessment stabilization over time and the use of penalties over two versus three years, acknowledged the potential angst associated with the budget increase, and reviewed the potential effect of a three- versus six-month operating reserve. Jillian Lessner, Vice President and Chief Financial and Administrative Officer, responded that there was an analysis done and consideration of stakeholders needs to strike the right balance for use of penalties. The Board members commented on the previous day's FAC discussion regarding the 2023 BP&B and that they do not want to create a risk in staffing shortage that could affect ongoing work, by not increasing staff headcount.

Directors commented that a three-month reserve is sufficient because WECC has a predictable income stream, it would not be in the interests of members to require they fund an additional three months, there is minimal risk justifying a larger reserve, and a three-month reserve is considered sufficient by the WECC auditors. Mr. Leidich commented that the FAC agreed to review the Reserve Policy at an upcoming meeting.

The Board thanked stakeholders for their input and comments, and WIRAB for their advice, on the BP&B.

Draft Board Meeting Minutes—June 15, 2022

On a motion by Gary Leidich, the Board approved the following motion:

> *Resolved*, that the Board of Directors (Board), acting on the recommendation of the Finance and Audit Committee (FAC) at the meeting of the Board on June 15, 2022, approves the 2023 Business Plan and Budget (BP&B) as presented and attached.

> *Further resolved*, that the Board authorizes the CEO to make changes to the BP&B based on the Reliability Risk Priorities approved by the Board on June 15, 2022, and to prepare and file the BP&B for regulatory approval.

More information is attached as Exhibit C.

On a motion by Gary Leidich, the Board approved the following motion:

> *Resolved*, that the WECC Board of Directors (Board), acting on the recommendation of the Finance and Audit Committee (FAC) at the meeting of the Board on June 15, 2022, accepts the 2021 Audited Financial Statements as presented and attached.

More information is attached as Exhibit D.

Governance Committee

Ms. Longmuir, Governance Committee (GC) Chair, reported that the GC reviewed the Board self-evaluation process and timeline.

Human Resources and Compensation Committee

Kris Hafner, Human Resources and Compensation Committee (HRCC) Chair, reviewed the June 14, 2022, closed session. In that session, the HRCC supported an interim solution to leadership on the Plan Administration and Investment Committees pending appointment of a general counsel, heard from the CEO on mid-year goals and priorities, considered a human resources (HR) policy review process, and explored executive compensation and retention strategies. In HRCC open session, there was an HR annual update and review of the WECC Social Media Policy.

Standards Committee

Jim Avery, WECC Standards Committee (WSC) Chair, updated the Board on WSC discussions at the previous day's meeting, including appointing a drafting team member for Standards Voting Segment 9, an update on standard authorization and request WECC-0149, and drafting nomination for WECC-0148.

11. Technical Committee Reports

Joint Guidance Committee

Draft Board Meeting Minutes—June 15, 2022

Mr. Sudduth, Joint Guidance Committee (JGC) Co-chair, provided an update on 2022 goals, including review of the committee categorization process and implementation plan, preview of the JGC approved technical committee metrics, and summary of the three-year work plan strategic engagement.

Reliability Risk Committee

Jonathan Aust, Reliability Risk Committee (RRC) Co-chair, summarized recent activities, including the focus to have cybersecurity expertise on the RRC and the formation of the Reliability Risk Committee Steering Committee (RRCSC) and subsequent strike teams to work on key items. Mr. Aust summarized the strike team activities, including determining work that should be preserved, developing a streamlined template for subcommittees and work groups, creating three-year work plans, and developing a risk intake process.

Directors inquired whether there is a plan to recruit members with cybersecurity expertise. Mr. Aust commented that there is expertise on the subcommittee level, and the RRC is working to have those professionals participate on the RRC.

Board members asked whether the three-year work plans could provide information into the thinking behind a longer budget outlook. Ms. Frye commented that WECC is looking at a top-down planning process, and the work plans will provide a bottom-up perspective from subject matter experts.

Reliability Assessment Committee

Chifong Thomas, Reliability Assessment Committee (RAC) Chair, highlighted completion of the 2021 Study Program and initial discussion about future study opportunities and approaches. Ms. Thomas summarized changes to the RAC charter, including alignment with the RRC, inclusion of reliability assessments going beyond planning, and a co-chair versus chair and vice chair structure. She summarized activities of the RAC on improving equipment representation, including behind-the-meter resources and enhanced inverter-based resource models.

Board members asked whether Ms. Thomas had thoughts regarding the previous day's technical session on transmission planning. She responded that WECC is a great place to coordinate transmission plans for the regions and provide a participatory process for an open and transparent way to look at the effects of projects but was hesitant to say WECC should develop transmission plans.

Board members inquired about challenges in finding a leader for the Underfrequency Load Shedding Work Group. Ms. Thomas responded that it has to do with how busy people are, and it is a lot to ask to take on more work. The RAC is working with the planning coordinators to see whether they can find a volunteer.

12. Review New Action Items

- Perform a gap analysis to identify challenges with existing transmission planning processes and report back on potential activities on how to add value to transmission planning in the West.
    - o Assigned To: WECC Staff
    - o Due Date: September 14, 2022

13. Upcoming Meetings

Mr. McKay noted the September 13–14, 2022, meetings are currently planned as hybrid meetings in Lake Las Vegas, NV.

September 13–14, 2022 ....Lake Las Vegas, NV*

December 6–7, 2022 ....Salt Lake City, UT*

March 7–8, 2023...Salt Lake City, UT*

Meeting may be virtual due to the COVID-19 pandemic.

14. Adjourn

On a motion by Ric Campbell, the Board voted to move into closed session. Mr. McKay adjourned the open session without objection at 12:25 p.m.

Exhibit A: Attendance List

Members in Attendance

James Avery .... Director

Ric Campbell .... Vice Chair

Melanie Frye .... CEO

Kris Hafner .... Director

Gary Leidich .... Director

Felicia Marcus .... Director

Joe McArthur .... Director

Ian McKay .... Chair

Shelley Longmuir .... Director

Richard Woodward .... Director

Exhibit B: 2022 Reliability Risk Priorities

Board Resolution

Resolved, that the WECC Board of Directors (Board), acting at the meeting of the Board on June 15, 2022, approves the 2022 Reliability Risk Priorities as presented and recommended here.

Background

Every two years, WECC engages in a stakeholder-focused process to determine the most pressing reliability risks facing the Western Interconnection so WECC staff, technical committees, and stakeholders can study, assess, and address those risks. These Reliability Risk Priorities (RRP) are areas of strategic focus for WECC, intended to guide its work in the coming years. This process was last undertaken in 2020, resulting in identification of, and work to address, the following RRPs:

1. Resource Adequacy and Performance
2. Changing Resource Mix
3. Distribution System and Customer Load Impacts on the BPS
4. Extreme Natural Events

On February 15, 2022, the process to refresh this RRP list began with a virtual workshop to gather stakeholder input. Using NERC's reliability risk profiles as a starting point, WECC staff, along with MAC and technical committee leaders, facilitated an in-depth discussion of each risk profile. Stakeholders were asked to rank their interest in or concern with the myriad risks identified in each profile.

The workshop resulted in a preliminary list of risk priorities. The list was posted for comment from March 1 to April 1, 2022. Based on public and stakeholder input, and an evaluation of specific criteria, WECC narrowed the list to six proposed risks for consideration and comment by the Board.

On April 26, 2022, the Board, panelists from WECC's major stakeholder groups, and other interested stakeholders discussed the six proposed risks. WECC staff used input from the Board workshop and from the discussion during the Reliability Risk Priority refresh process to narrow down the final list of risk priorities for Board approval at its meeting on June 15, 2022.

Recommendation

Based on an evaluation of probability and impact, and considering WECC's ability to materially contribute to mitigation of the risk, after examining input from the Board and stakeholders, the 2022 proposed RRP list has been narrowed to the following four risks:

1. Cybersecurity
2. Extreme Natural Events

Draft Board Meeting Minutes—June 15, 2022

3. Resource Adequacy
4. Addressing the Impact of Emerging Technology

We recommend that the Board approves the 2022 RRPs as proposed.

Exhibit C: 2023 Business Plan and Budget

Background

A draft of the 2023 BP&B was presented to the FAC in March 2022 for preliminary review. On April 25, an updated draft of the 2023 BP&B was posted on the website for a comment period of 15 business days. WECC received two sets of comments from Public Utility District #1 of Chelan, Washington, and the Class 2 membership. WECC held two webinars to give stakeholders an overview of the budget and key drivers during the comment period. WECC executives also participated in several teleconferences with the Member Advisory Committee Budget Subcommittee (MBS) between February and May. The Western Interconnection Regional Advisory Body (WIRAB) and the MBS finalized comments after the stakeholder comment period closed. All comments are included in the June 2022 FAC meeting materials.

Recommendation

The FAC recommends the Board approve the 2023 BP&B.

Issues and Risks

Failure to approve the 2023 BP&B in time to meet regulatory milestones could result in a special Board meeting and a delay in funding. The remaining major milestones in the 2023 budgeting process are:

- July 8: Final Board-approved 2023 BP&B due to NERC;
- August 17–18: Regional Entity (RE) BP&Bs presented to NERC Board of Trustees for approval;
- Late August: RE BP&Bs submitted to FERC for approval; and
- October/November: FERC Order approving 2023 BP&Bs anticipated.

Exhibit D: 2021 Financial Audited Financial Statements

Board Resolution

Resolved, that the WECC Board of Directors (Board), acting on the recommendation of the Finance and Audit Committee (FAC) at the meeting of the Board on June 15, 2022, accepts the 2021 Audited Financial Statements as presented and attached.

Background

WECC received a clean opinion on its 2021 financial statements from Eide Bailly, which did not note any material weaknesses or significant deficiencies related to internal controls.

Recommendation

The FAC chair recommends Board acceptance of the 2021 Audited Financial Statements.

Issues and Risks

The financial statements present fairly, in all material respects, WECC's financial position as of December 31, 2021. There are no organizational issues or risks related to the Board's acceptance of the attached financial statements.

Board Resolution

Resolved, that the WECC Board of Directors (Board), acting on the recommendation of the Human Resources and Compensation Committee (HRCC) at the meeting of the Board on September 14, 2022, approves the appointment of Jeff Droubay, Vice President and General Counsel, to the position of Secretary.

Background

The WECC Bylaws specify two officers: Chief Executive Officer and Secretary. Following the departure of Mr. Goodwill in April, 2022, WECC has not had an incumbent in the role of Secretary and relied on outside counsel to provide guidance and advice. The CEO and Board see an urgency in appointing a Secretary at the earliest convenience.

The Secretary is an invaluable resource to the Board and critical member of the executive team. The Secretary is responsible for ensuring the Board has the resources to fulfill its fiduciary duties to the organization.

Recommendation

The HRCC recommends the appointment of Mr. Droubay to the role of Secretary as presented in the meeting on September 13, 2022, and attached.

Issues and Risks

The Secretary acts as a key consultant to the Board, providing legal advice regarding Board responsibilities, logistics, corporate governance, and the design and ongoing maintenance of a sustainable governance framework. It is a best practice for an organization's Board to appoint a corporate secretary to minimize risk.

If appointed, Mr. Droubay will remain Secretary until further action is taken by the Board.

W WECC

Electric Reliability and Security for the West

Board of Directors Meeting
Approval Item Reliability Assessment
Committee Charter
September 14, 2022

Board Resolution

Resolved, that the WECC Board of Directors (Board), acting on the recommendation of the Reliability Assessment Committee (RAC) at the meeting of the RAC on June 29 and 30, 2022, approves the RAC Charter as presented.

Further resolved, that the Board appoints Chelsea Loomis to serve as a co-chair of the RAC.

Background

The RAC Charter was due for a biennial review. The charter was reviewed and updated as follows:

- Responsibilities updated to align with the Reliability Risk Committee (RRC)
- Removal of planning references to include all assessment time frames
- Leadership section updated to move to a co-chair leadership approach

Recommendation

The RAC recommends approval of the revisions to the RAC Charter and appointment of Chelsea Loomis as a co-chair of the RAC.

Issues and Risks

There are no known issues or risks.

155 North 400 West | Suite 200 | Salt Lake City, Utah 84103
www.wecc.org

WECC

Electric Reliability and Security for the West

Establishment and Authority

The Reliability Assessment Committee (RAC) was established by the Board of Directors (Board) in December 2016.

Purpose and Responsibilities

The purpose of the RAC is to provide coordinated reliability assessments[1] of the Western Interconnection Bulk Power System (BPS) and to provide related advice and recommendations to the WECC CEO and Board.

The RAC will:

1. Create and promote a common understanding and broad view of reliability and identify potential reliability risks to the Western Interconnection.

2. Review, assess, and report on the overall electric generation and transmission reliability (including resource adequacy) of the interconnected BPS, both existing and as planned.

3. Assess and report on the key issues, risks, and uncertainties that affect, or have the potential to affect, the reliability of existing and future electric supply and transmission.

4. Work with WECC staff and the Reliability Risk Committee (RRC) to develop and maintain an ongoing, prioritized list of known and emerging reliability and security risks facing the Western Interconnection.

5. Coordinate and collaborate with WECC staff and the RRC to perform reliability assessments.

6. Identify, analyze and project trends in electric customer demand, supply, and transmission and their impacts on BPS reliability.

7. Investigate, analyze, and report on potential impacts of new and evolving electricity market practices, and new or proposed regulatory and policy framework as appropriate.

8. Develop and maintain reliability assessment models and data for use by WECC and Western Interconnection utility planners, planning regions, and stakeholders. This includes those related

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[1] Reliability Assessment means any technical assessment, consistent with the NERC Rules of Procedure and NERC Delegation Agreement, that provides insight into potential future reliability risks and the ability to maintain uninterrupted electric service to customers in the Western Interconnection associated with various technical, economic, or policy-related assumptions.

to future infrastructure needs and current and future trends affecting the reliability of the Western Interconnection.

9. Recommend the development of Reliability Standards and Regional Criteria based on reliability assessments.

10. Develop and approve RAC protocols as necessary.

11. Coordinate the activities of and resolve any conflicts between its subcommittees.

12. Review reports and recommendations concerning reliability and provide timely comments and/or recommendations to the WECC CEO and Board.

13. Oversee the process necessary to create and maintain the Anchor Data Set (ADS).

14. Provide a forum for discussing potential reliability issues, including but not limited to those resulting from efficiency/economics, socio-political considerations and system resource and transmission adequacy.

15. Work collaboratively with WECC management in providing input to the WECC strategic plan and in developing the three-year operating plan including consideration of resource needs.

16. Coordinate with the JGC to ensure RAC efforts and work products are supportive of the WECC Board strategic objectives.

17. Provide information to the WECC CEO and Board on RAC activities and work products.

18. Perform other tasks as assigned by the WECC CEO or Board.

Committee Composition and Governance

1. **Membership**

   a. The RAC will be composed of members and alternates.

   b. Members will be selected by their organization's WECC Member Representative.

   c. Members will serve until they resign, or a successor has been selected.

   d. Members will be appointed by notice to the chair (or designee).

2. **Leadership**

   a. The Board will approve two representatives from the RAC to serve as the co-chairs.

      i. The co-chairs will manage the committee and its meetings.

   b. The co-chairs will hold office for staggered terms of two years, or until a successor co-chair has been duly appointed. The co-chairs may serve multiple terms.

   c.   WECC staff will partner with the co-chairs to manage the committee and its meetings, plan the agenda, and coordinate efforts with other technical committees to ensure alignment with WECC staff work plans and priorities.

   d.   WECC staff will prepare minutes of RAC meetings for the committee's approval.

   e.   The committee co-chairs may appoint a steering committee, which will include the WECC liaison, subgroup chairs, and may include other members, who will assist with meeting agendas and action recommendations.

3. Meetings

   a.   The RAC will meet at least three times per year, or more often, as required to carry out its responsibilities. Meetings will be held according to the WECC Meeting Policy.

   b.   A quorum for meetings will be 15 members.

   c.   The RAC will strive to make all decisions by consensus (the decision is one that all members present can agree to accept, even if their preference would be for a different decision). If consensus is not possible, action taken by RAC will require a majority vote of the members present. Voting may be by any means the chair determines appropriate. RAC members may not vote by proxy or absentee ballot.

   d.   RAC meetings may be in person, by webinar, or by conference call, as determined by the chair.

   e.   The chair (or designee) will give notice by email to each member of the RAC of the time and place of all meetings and will post notice of all meetings on the WECC website. Notice will be given no less than:

- 30 days before in-person meetings.
- 10 days before a webinar.

   f.   An agenda, containing the items for which action may be taken, will be provided no less than 10 days before meetings.

   g.   Any person who wants notice of RAC meetings may notify the chair by email. The chair (or designee) will then email a copy of the notice and agenda of future meetings to that person when the committee members receive the notice and agenda.

Reporting

The RAC will report to the Board on its activities and any recommendations.

The RAC will biennially review each task force that reports to the RAC to determine whether that group is still necessary or should be dissolved.

The RAC will review each subcommittee or work group that reports to the RAC every five years to determine whether that group is still necessary or should be dissolved.

Review and Changes to the Charter

The RAC will review this charter biennially and recommend any changes to the Board.

Approved by the Board: June 17, 2020

WECC

Electric Reliability and Security for the West

Reliability Assessment Committee
Charter

Establishment and Authority

The Reliability Assessment Committee (RAC) was established by the Board of Directors (Board) in December 2016.

Purpose and Responsibilities

The purpose of the RAC is to provide coordinated reliability assessments[1] of the Western Interconnection Bulk Power System (BPS) ~~over the planning horizon~~ and to provide related advice and recommendations to the WECC CEO and Board.

The RAC will:

1. Create and promote a common understanding and broad view of ~~planning horizon~~ reliability and identify potential ~~planning horizon~~ reliability risks to the Western Interconnection.

2. Review, assess, and report on the overall electric generation and transmission reliability (including resource adequacy) of the interconnected BPS, both existing and as planned.

3. Assess and report on the key issues, risks, and uncertainties that affect, or have the potential to affect, the reliability of existing and future electric supply and transmission.

4. Work with WECC staff and the Reliability Risk Committee (RRC) to develop and maintain an ongoing, prioritized list of known and emerging reliability and security risks facing the Western Interconnection.

~~3.~~5. Coordinate and collaborate with WECC staff and the RRC to perform reliability assessments.

~~4.~~6. Identify, analyze and project trends in electric customer demand, supply, and transmission and their impacts on BPS reliability.

~~5.~~7. Investigate, ~~assess~~analyze, and report on potential impacts of new and evolving electricity market practices, and new or proposed regulatory and policy framework as appropriate~~report on the potential impacts of new and evolving electricity market practices, new or proposed~~

---

[1] Reliability Assessment means any technical assessment, consistent with the NERC Rules of Procedure and NERC Delegation Agreement, that provides insight into potential future reliability risks and the ability to maintain uninterrupted electric service to customers in the Western Interconnection associated with various technical, economic, or policy-related assumptions.

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~~regulatory procedures, and new or proposed legislation (e.g. environmental requirements) on the reliability of the BPS~~.

6.8. Develop and maintain reliability assessment models and data for use by WECC and Western Interconnection utility planners, planning regions, and stakeholders. This includes those related to future infrastructure needs and current and future trends affecting the reliability of the Western Interconnection.

7.9. Recommend the development of Reliability Standards and Regional Criteria based on reliability assessments.

8.10.	Develop and approve RAC protocols as necessary.

9.11.	Coordinate the activities of and resolve any conflicts between its subcommittees.

10.12.	Review reports and recommendations ~~prepared by RAC subcommittees and others~~ concerning reliability ~~and the adequacy of power supply~~ and provide timely comments and/or recommendations to the WECC CEO and Board.

11.13.	Oversee the process necessary to create and maintain the Anchor Data Set (ADS).

12.14.	Provide a forum for discussing potential reliability issues, including but not limited to those resulting from efficiency/economics, socio-political considerations and system resource and transmission adequacy.

15. Work collaboratively with WECC management in providing input to the WECC strategic plan and in developing the three-year operating plan including consideration of resource needs.

13.16.	Coordinate with the JGC to ensure RAC efforts and work products are supportive of the WECC Board strategic objectives.

14.17.	Provide information to the WECC CEO and Board on RAC activities and work products.

15.18.	Perform other tasks as assigned by the WECC CEO or Board.

Committee Composition and Governance

1. **Membership**

   a. The RAC will be composed of members and alternates.

   b. Members will be selected by their organization's WECC Member Representative.

   c. Members will serve until they resign, or a successor has been selected.

   d. Members will be appointed by notice to the chair (or designee).

2. **Leadership**

2

a. The Board will approve two representatives from the RAC to serve as the co-chairs.

    i. The co-chairs will manage the committee and its meetings.

b. The co-chairs will hold office for staggered terms of two years, or until a successor co-chair has been duly appointed. The co-chairs may serve multiple terms.

c. WECC staff will partner with the co-chairs to manage the committee and its meetings, plan the agenda, and coordinate efforts with other technical committees to ensure alignment with WECC staff work plans and priorities.

d. WECC staff will prepare minutes of RAC meetings for the committee's approval.

e. The committee co-chairs may appoint a steering committee, which will include the WECC liaison, subgroup chairs, and may include other members, who will assist with meeting agendas and action recommendations.

. The Board will appoint one of the RAC members to serve as the chair.

a. The RAC will meet at least three times per year, or more often, as required to carry out its responsibilities. Meetings will be held according to the WECC Meeting Policy.

b. A quorum for meetings will be 15 members.

c. The RAC will strive to make all decisions by consensus (the decision is one that all members present can agree to accept, even if their preference would be for a different decision). If consensus is not possible, action taken by RAC will require a majority vote of the members present clear majority vote (over 60% of the members present). Voting may be by any means the chair determines appropriate. RAC members may not vote by proxy or absentee ballot.

d. RAC meetings may be in person, by webinar, or by conference call, as determined by the chair.

e. The chair (or designee) will give notice by email to each member of the RAC of the time and place of all meetings and will post notice of all meetings on the WECC website. Notice will be given no less than:

- 30 days before in-person meetings.
- 10 days before a webinar.

f. An agenda, containing the items for which action may be taken, will be provided no less than 10 days before meetings.

g. Any person who wants notice of RAC meetings may notify the chair by email. The chair (or designee) will then email a copy of the notice and agenda of future meetings to that person when the committee members receive the notice and agenda.

Reporting

The RAC will report to the Board on its activities and any recommendations.

The RAC will biennially review each task force that reports to the RAC to determine whether that group is still necessary or should be dissolved.

The RAC will review each subcommittee or work group that reports to the RAC every five years to determine whether that group is still necessary or should be dissolved.

Review and Changes to the Charter

The RAC will review this charter biennially and recommend any changes to the Board.

Approved by the Board: June 17, 2020

4

Board of Directors Meeting
2024 Annual Meeting Location
September 14, 2022

Recommendation

WECC staff recommends approving San Diego, California as the 2024 Board meeting location. WECC staff will work to secure a venue and if there are issues with securing a venue will present alternate options for locations or a date change in early-to mid-2023.

WECC Board of Directors
Review of June 15, 2022, Closed Session

Verbal Update

Ian McKay, Chair

September 14, 2022

WECC Board of Directors
Board Leadership Election

Verbal Update and Election

Kris Hafner, Director

September 14, 2022

EXECUTIVE PROFILE

Brandon Barkhuff
Senior Vice President, General Counsel,
Secretary, Chief Compliance Officer

Brandon Barkhuff is a native of Las Vegas, Nevada, and currently resides there with his wife and four children. As General Counsel and Chief Compliance Officer, Brandon oversees all of the company's legal activities and compliance obligations while also providing strategic legal and business guidance as part of the senior leadership team.

Prior to joining NV Energy, Brandon worked for McDonald Carano, LLP, where he focused on commercial litigation. Brandon served clients in a broad range of industries, successfully trying cases to verdict in both jury and bench trials, as well as conducting oral argument before the Nevada Supreme Court.

Brandon is actively involved in community organizations, particularly youth organizations. He currently serves on the board of directors for one of the largest youth sports organizations in Clark County. In addition, Brandon is currently a trustee for the National Judicial College as well as the Las Vegas Chamber of Commerce, and previously served on the board of directors for Nevada Childhood Cancer Foundation and The Shade Tree.

Brandon holds a Bachelor of Arts from the University of California, Los Angeles (UCLA) and a Juris Doctor from Boston College Law School.

CEO Report

September 14, 2022

Melanie Frye, President and CEO

Internal

- **Welcome Jeffrey Droubay, VP and General Counsel**

- **Employee engagement**

  - In-person All-Hands meeting

  - Employee appreciation event

WECC

2

FERC, NERC, and Regional Updates

FERC

- Advance NOPR to address generator interconnection—issued in July
- Transmission planning and cost allocation NOPR—joined in comments filed by NERC and ERO regions
- David Ortiz named Director of the FERC Office of Electric Reliability
- Annual Commissioner-led Reliability Technical Conference—November 10

NERC/National

- Regional Entity budgets approved by NERC Board of Trustees and filed with FERC
- Joint meeting with NERC Canadian Regulators, NERC BOT, and international Regional Entities (WECC, MRO, NPCC)

Regional

- Western Resource Adequacy Program tariff approved by WPP Board and filed at FERC on August 31

WECC

3

Strategic Engagement
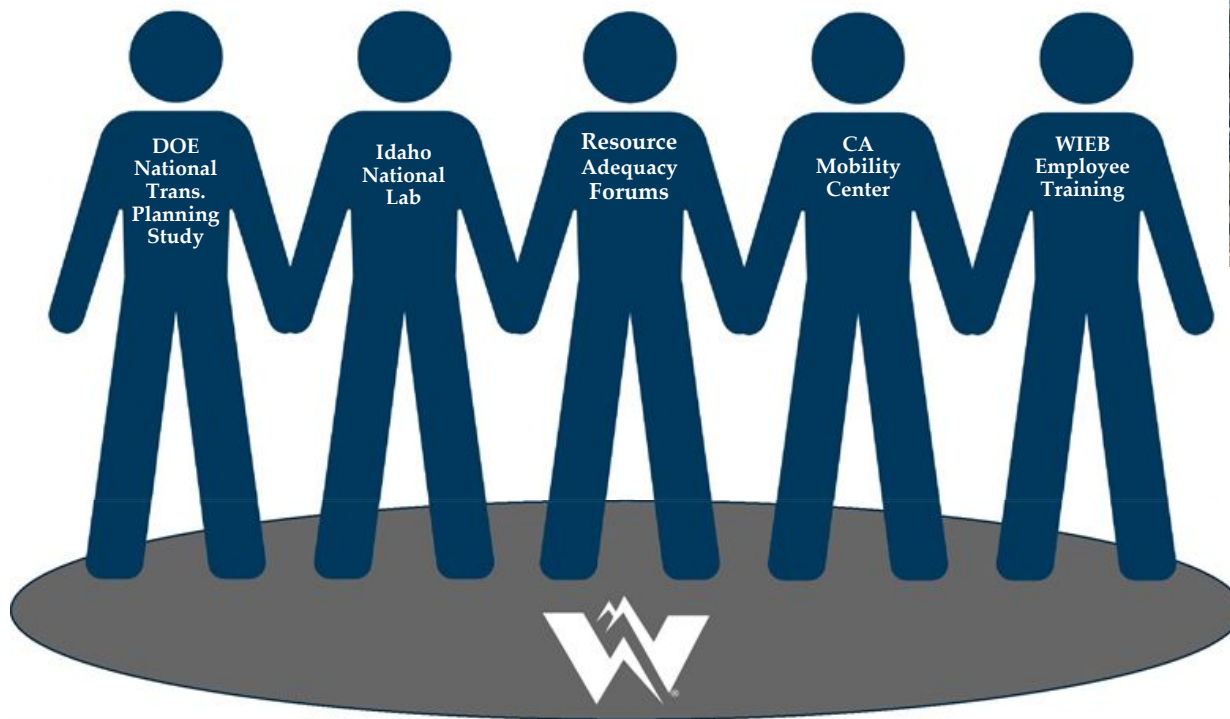
International Updates

British Columbia

- WECC is conducting four virtual audits in 2022 and continues to work closely with the BCUC on monitoring activities

Alberta

- No scheduled audits in Alberta in 2022

Mexico

- WECC is leading a two-pronged approach to address issues with payment from Mexico
  - WECC to engage and seek payment from CENACE/GCRBC at the local level
  - WECC to lead engagement efforts with CRE and CFE at the national level with support from NERC
- No scheduled audits in Mexico in 2022

WECC

5

2022 Scorecard Dashboard

Metrics Legend

The metric fully reached its target

The metric is on track to reach its target in 2022

The metric is behind schedule or at risk of not reaching its target in 2022

The metric will not reach its target in 2022

WECC

7

FOCUS AREA	METRICS	INITIATIVES			

FA1: Innovate and expand risk-based focus in all standards, compliance monitoring, and enforcement actions

ON TRACK	COMPLETED	AT RISK	NOT COMPLETED
2	3	1	-

FA2: Assess and initiate action to mitigate known and emerging risks to the reliability and security of the Western Interconnection

ON TRACK	COMPLETED	AT RISK	NOT COMPLETED
6	2	-	-

FA3: Strengthen engagement with the reliability and security community in the Western Interconnection

ON TRACK	COMPLETED	AT RISK	NOT COMPLETED
3	-	-	-

FA4: Seize opportunities for effectiveness, efficiency, and continuous improvements

ON TRACK	COMPLETED	AT RISK	NOT COMPLETED
2	-	-	-

FA5: Build the capability and culture that enable WECC to deliver on its critical reliability mission

ON TRACK	COMPLETED	AT RISK	NOT COMPLETED
6	-	-	-

Focus Area 1 | Innovate and expand risk-based focus in all standards, compliance monitoring, and enforcement actions

Outcome 1: Western viewpoints represented and incorporated in standards development

Outcome 2: Effective and efficient implementation of risk-based monitoring and enforcement activities

Initiatives

1. Standards drafting teams that have Western representation
   Target: 100%

50%
25% 75%
0% 100%
100%

1. Change in violation inventory over two years old
   Target: -30%

-0%
-15% +15%
-30% +30%
+35%

Outcome 1

✓ Refine tracking of drafting team representation

✓ Execute outreach to attract industry expertise in West

◔ Provide input where standards are inadequate, unclear, unenforceable, or unnecessary

Outcome 2

✓ Develop metrics to help address processing bottlenecks

✓ Execute outreach and assistance to address entity roadblocks

2. Standards under development on which WECC comments
   Target: 100%

50%
25% 75%
0% 100%
100%

2. COP refreshes completed within six months
   Target: 80%

100%

Focus Area 2 | Assess and initiate action to mitigate known and emerging risks to the reliability and security of the Western Interconnection

Outcome 1: Clear understanding of emerging risks and mitigation strategies. High-precision information and models

1. Completion of vetted mitigation strategies to address RRPs
   Target: 25%

   25%

   0%

   22%
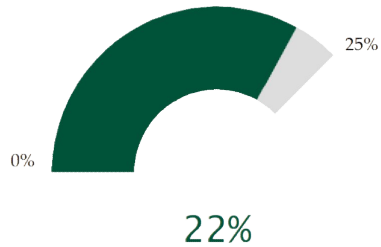
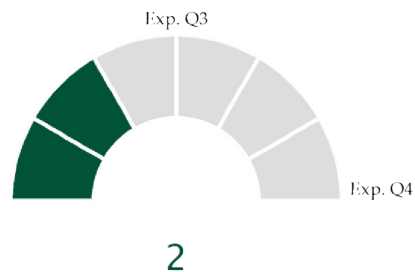2. Power flow model shortcomings resolved vs. total identified
   Target: 10%

   10%

   0%

   --%

Outcome 2: Use of advanced tools, techniques, and industry subject matter experts to identify system performance trends and vulnerabilities

1. Best practices/guidelines created, and risk forums held
   Target: 6

   6

   0

   15
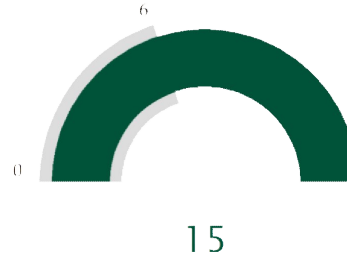
2. Reliability assessments performed
   Target: 6

   Exp. Q3

   Exp. Q4

   2

Initiatives

Outcome 1

✓ Develop, implement, and socialize 2022 RRP work plan

✓ Implement a process to identify and address risks through RRC

✓ Prioritize and reduce power flow model shortcomings

✓ Hold two model improvement workshops

Outcome 2

✓ Host two industry forum webinars to address 2022 RRPs

✓ Incorporate subregional and stakeholder RA input

✓ Implement priority Enhancement Initiative recommendations

✓ Re-imagine future of State of the Interconnection report

Focus Area 3 | Strengthen engagement with the reliability and security community in the Western Interconnection
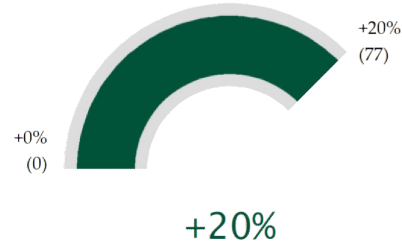
Outcome 1: Effective relationships with industry, committees, ERO Enterprise, regulators, policy- and decision-makers, national labs and educational institutions, and the broader reliability and security community

Initiatives

1. Requests for input/advice/ opinion
   Target: +10% (25)

   +10%
   (25)

   +0%
   (0)

   +18%
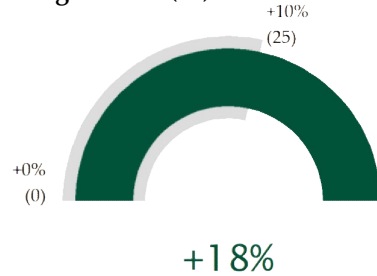
2. Strategic connections/touchpoints
   Target: +20% (77)

   +20%
   (77)

   +0%
   (0)

   +20%

Outcome 1

✓ Develop and implement a Strategic Engagement Strategy

✓ Develop and implement formalized Stakeholder Engagement Framework

✓ Re-invent how we develop a reliability and security product

Focus Area 4 | Seize opportunities for effectiveness, efficiency, and continuous improvements

Outcome 1: Delivery of scorecard results, and development of methods/metrics for ongoing evaluation of effectiveness and efficiency

1. % of budget at year-end
Target: +/-3%

-0.9%
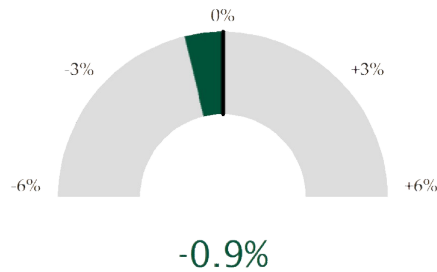
Outcome 2: Continuous improvement of organizational processes and tools to adapt to changes in the industry

1. New WECC products focused on current RRPs
Target: 75%

100%
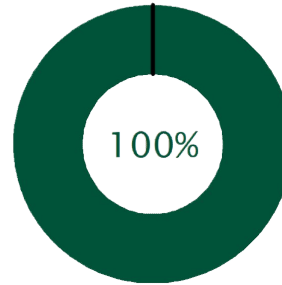
2. Processes improved
Target: 5

5

Initiatives

Outcome 1

Expand use of software and improve budgeting and forecasting skills

Outcome 2

Formalize organization-wide continuous improvement process

Focus Area 5 | Assess and initiate action to mitigate known and emerging risks to the reliability and security of the Western Interconnection

Outcome 1: WECC is employer of choice, with highly skilled, collaborative, and engaged employees committed to WECC's mission

1. **Employee turnover**
   Target: < 15%

   24%

2. **Critical skills covered by staff expertise**
   Target: 90%

   92%

3. **Denison culture survey categories**
   Target: > 80%

   --%

4. **Successors and development plans for critical positions**
   Target: 85%

   --%

Outcome 2: WECC respected as a partner and trusted to produce high-quality, credible, and influential work

1. **New collaborative projects with external partners**
   Target: 4

   >4

2. **Staff fulfilling training requirements in technical areas**
   Target: 75%

   --%
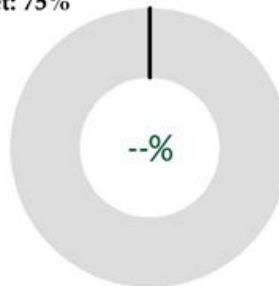
Initiatives

Outcome 1

- Expand knowledge transfer for bench strength and succession planning
- Develop plan to maintain Denison scores above 80%
- Complete Denison 360-reviews of management team
- Launch a diversity, equity, and inclusion effort

Outcome 2

- Prioritize relationship building with external partners
- Create formalized structure to support continuous learning and technical expertise

WECC

Electric Reliability and Security for the West

Contact:

Melanie Frye

President and CEO

14

WECC

Reliability and Security Oversight
Report to the WECC Board of Directors

Steven Noess, Vice President, Reliability and Security Oversight

September 14, 2022

Reliability and Security Oversight Report to the Board—September 14, 2022

CMEP Priorities

WECC's Long-Term Strategy identifies five priorities for the Compliance Monitoring and Enforcement Program (CMEP). These priorities drive and inform Reliability and Security Oversight work to innovate and expand its risk-based focus.

The CMEP strategic priorities are—

- Strengthen analysis of entity risks, controls, and programs.
- Tailor oversight frequency, depth, and tools to assess past compliance and future reliability.
- Deploy innovative tactics, techniques, and procedures to increase effectiveness and efficiency.
- Share actionable information and expertise with entities as they evaluate and mitigate risk.
- Seek opportunities for ERO Enterprise alignment and coordination of practices and outcomes.

This report highlights Reliability and Security Oversight achievements, findings, and plans aligned with these priorities during the quarter.

Strengthen Analysis of Entity Risks, Controls, and Programs

Changes in risk: In August, WECC kicked off the second year of the Entity Data Questionnaire. This data collection process asks entities to identify recent changes to physical and cyber assets or operations that may impact risk. The information helps prioritize monitoring and is an input to Compliance Oversight Plan (COP) updates. Entities are selected for annual or triannual questionnaire participation based on footprint size.

Internal Compliance Program Assessments (ICPA): An effort to redesign the ICPA, informed by implementation experience, will bring better integration with the risk-based CMEP by strengthening analytical rigor and refining data collection. The redesigned ICPA will inform oversight planning, enforcement penalties, self-logging eligibility, and mitigation assistance efforts. It will also bring new insights into entity compliance culture. The team expects to finish work by the end of 2022.

Internal controls: The Internal Controls Data Collection Template (ICDCT) continues to facilitate transparency and consistent controls analysis for compliance monitoring processes. Information gathered helps audit and risk analysis teams understand registered entities' program design and implementation, which helps WECC tailor CMEP activities and supports feedback to entities for their own improvements. Entities demonstrating best practices in internal controls are invited to share with other entities through WECC outreach programs.

Tailor Oversight Frequency, Depth, and Tools

Facility ratings: In response to the ERO Enterprise Call to Action, WECC has increased its focus on facility ratings (FAC-008-5) compliance and controls. This includes amending audit scopes and initiating guided self-certifications, depending on entity risk. Engagements for Generator Owners (GO)

are timed with those for the associated Transmission Owners (TO) to increase visibility into ratings coordination. The engagements also provide a knowledge transfer opportunity for auditors to improve bench strength on high-risk standards. WECC will complete all engagements by 2024, in alignment with the Call to Action's risk-tiered timeline.

Self-logging: An effort to revitalize the self-logging program began in July. The effort seeks continuous improvement for the program and enrollment expansion to increase enforcement. Self-logging is intended to produce efficiencies for entities that are properly enrolled in the program and for WECC enforcement staff, and the effort is to support those efficiencies. WECC will also identify opportunities to better align with other Regional Entities and to streamline the application process. The effort includes an outreach initiative, which will kick off at the Reliability & Security Workshop in October.

Deploy Innovative Tactics, Techniques, and Procedures

Continuous improvement: WECC has initiated enhancements for CMEP activities among the Reliability and Security Oversight teams and with NERC, particularly in how enforcement processes interface with monitoring and other CMEP activities in support of reducing the enforcement backlog. As these enhancements evolve, WECC anticipates increased continuity and efficiency throughout the CMEP and reduction in enforcement processing time.

Auditor training: In July, WECC expanded audit team lead (ATL) training for its monitoring staff. The training, which incorporates feedback from the Western Interconnection Compliance Forum (WICF), will improve audit effectiveness and efficiency. It complements NERC's ATL training program to ensure practices and procedures are consistent across the team. It clarifies roles and coordination between team members. It also includes expanded material to enhance communication with entities, including at opening and closing presentations, to explain the CMEP process, risks, controls, and findings.

Preparing for Align: WECC monitoring teams undertook significant training and outreach in anticipation of pilot audits in Align beginning in late August. This included six hands-on training sessions, development of comprehensive reference materials, and regular outreach to troubleshoot issues and functionality in the new tools. These efforts will support internal readiness for the pilots and full adoption of Align for all U.S. engagements early in 2023.

On-site engagements: Limited on-site field work resumed in May. WECC has developed a travel strategy to identify when and how to conduct on-site work. The strategy uses lessons learned during the suspension to reduce travel requirements and costs, while continuing innovation in effective off-site tools. WECC believes that on-site field work is an important tool in the CMEP process, and it is balancing continued off-site work with on-site activities in a risk-informed manner. Recent revisions to the NERC Rules of Procedure governing the CMEP that previously required on-site work for certain types of engagements further support flexibility in tool selection.

Reliability and Security Oversight Report to the Board—**September 14, 2022**

Oversight planning: Revisions to COP development for small and recently registered entities have brought new efficiencies to the oversight planning process. These revisions include standardizing how COPs are documented and increasing consistency in language between entities who have similar functions and footprints. This reduces the time required to produce COPs for new entities while freeing department resources to focus on priority risks. It also increases alignment across COPs for entities sharing common management or ownership.

Share Actionable Information and Expertise

Audit follow-up: To better understand how entities are responding to audit recommendations and Areas of Concern, WECC has begun offering 90-day follow-up discussions to entities. These discussions, which include entity representatives and WECC audit and risk analysis staff, have had excellent participation to date. They provide a forum for reviewing the observations and entity actions in response, build relationships, and foster transparent discussion outside the audit environment.

Entity engagement: WECC solicits technical questions from entities through dedicated email addresses and other channels. This helps address compliance concerns and risks proactively before they become enforcement issues, share best practices for reliability and security, and build trust with entities. WECC has seen a strong response to this outreach, with the number of inquiries doubling so far this year compared to 2021.

Seek Opportunities for Alignment

Physical security: WECC recently observed two SERC physical security (CIP-014-3) audits, while other Regional Entity staff plan to observe WECC spot-checks later this year. These observations are in support of a coordinated ERO Enterprise effort as on-site monitoring of CIP-014-3 resumes, facilitating cross-training, consistency among Regional Entities, and knowledge transfer. They have been an opportunity for WECC to collaborate in the ERO Enterprise on this high-risk standard. The spot-checks address monitoring deferred during the suspension of on-site field work.

Data protection: A new standard also presented opportunities for WECC collaboration in the ERO Enterprise. CIP-012-1, which came into effect on July 1, 2022, protects real-time data shared between control centers. In April, WECC joined NERC, other Regional Entities, and representatives from 30 entities in small-group advisory sessions. These sessions were a platform for open discussion and sharing implementation guidance. WECC has also worked directly with Western entities to assess readiness, including reviewing 15 entity programs and working with entities to address factors affecting implementation. Four Regional Entities and NERC plan to observe a WECC CIP-012-1 audit later in 2022, further cementing ERO Enterprise alignment.

Reliability and Security Oversight Report to the Board—September 14, 2022

Analysis and Metrics

Data as of August 1, 2022
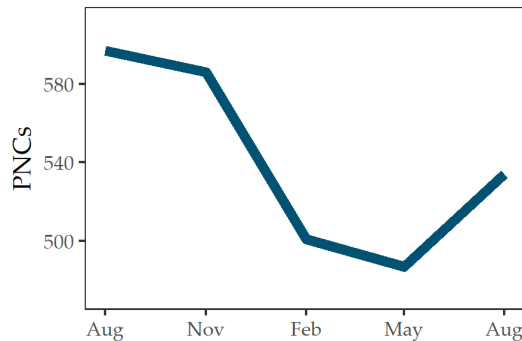
1. Inventory Size
Description—Number of PNCs received and not yet processed by issuing disposition to entity.
**Purpose**—Reducing inventory can help timely processing and workload efficiency.
Trend—Inventory is down 10% over the last 12 months.

2. Inventory Age
Description—Number of PNCs by year received.
Purpose—The ERO Enterprise works to minimize open noncompliance more than two years old.
Trend—28% of the inventory is now over two years old. WECC is working to reduce the number of these PNCs by 30% from the start of the year.
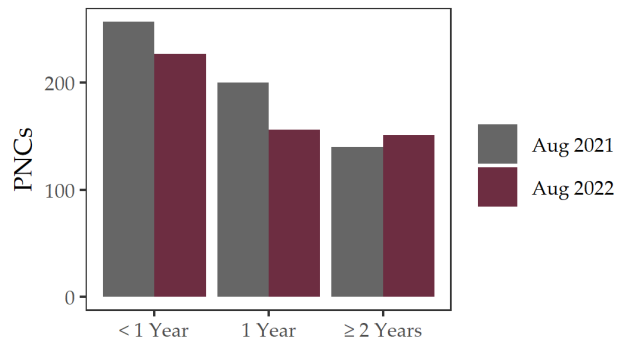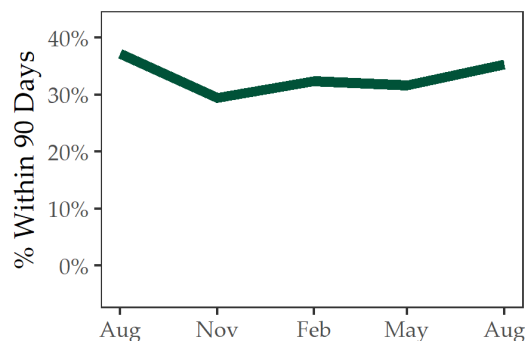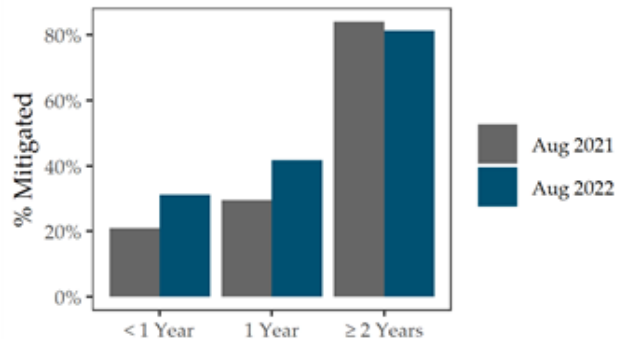

3. Mitigation Status by Year Received
Description—Proportion of PNCs with completed mitigation by year received.
Purpose—WECC monitors the status of mitigation efforts and verifies their completion.
Trend—The share mitigated within a year of intake has increased. WECC works with entities to ensure mitigation is timely and thorough.


4. Time to Discover Self-Reports
Description—Proportion of self-reports discovered by the entity within 90 days of when noncompliance began.
Purpose—Prompt identification and assessment reflects the quality of internal detective controls.
Trend—Time to discover noncompliance remains flat but below desired levels.

Reliability and Security Oversight Report to the Board—September 14, 2022
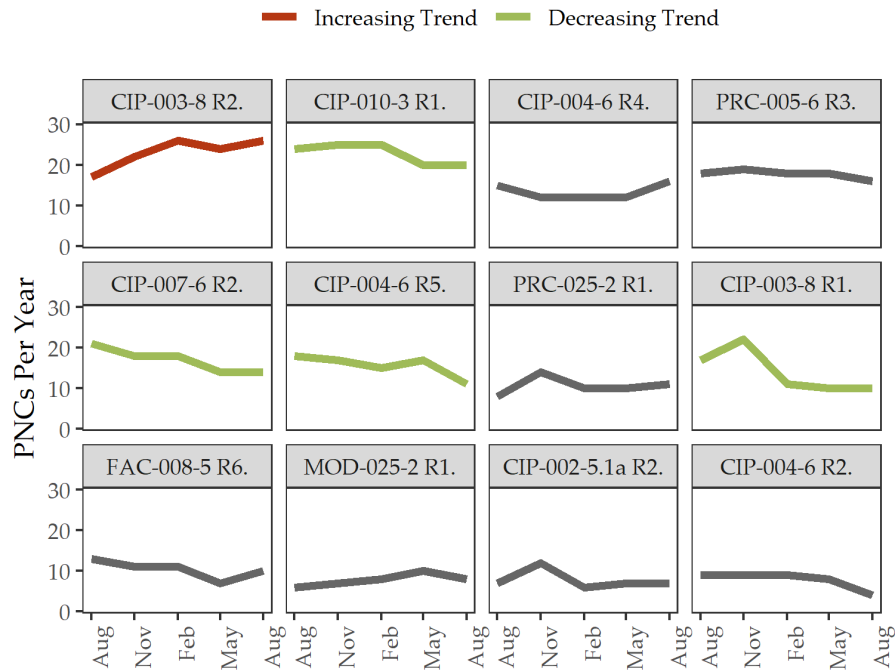
5. Most-Violated Requirements

Description—Number of PNCs self-reported by entities annually.

Purpose—Trends inform risk assessments and opportunities for training and outreach.

Trend—Implementation issues with CIP-003-8 R2 remain a major source of noncompliance, even as preventive controls improve for other CIP requirements across the interconnection.

Legend—

1. CIP-003-8 R2. Cybersecurity plans for low-impact BES Cyber Systems
2. CIP-010-3 R1. Configuration monitoring
3. CIP-004-6 R4. Access management programs
4. PRC-005-6 R3. Protection system maintenance intervals
5. CIP-007-6 R2. Security patch management
6. CIP-004-6 R5. Access revocation
7. PRC-025-2 R1. Generator relay loadability
8. CIP-003-8 R1. Cybersecurity plans for BES Cyber Systems
9. FAC-008-3 R6. Consistent implementation of facility ratings
10. MOD-025-2 R1. Real-power capability verification
11. CIP-002-5.1a R2. BES Cyber System identification review and approval
12. CIP-004-6 R2. Cybersecurity training programs

Reliability and Security Oversight Update

September 14, 2022

Steven Noess

Vice President, Reliability and Security Oversight

Align Update

- Completed first Compliance Audit

- R4.5 (IRA/COP) adoption in Q4

- Enforcement migration in progress
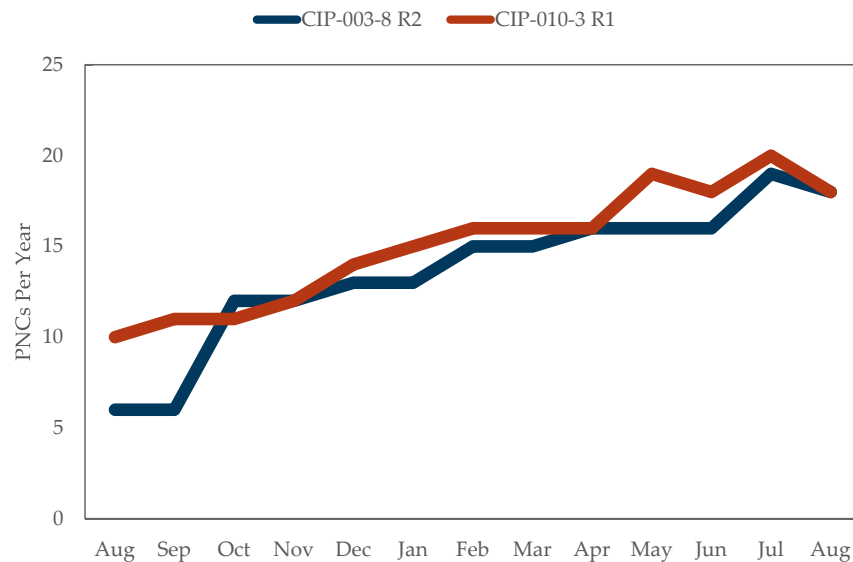
- Developing release in Canada

WECC

2

Sharing Compliance Trends

- Quarterly updates on compliance data highlighting—

  - Most-reported standards and requirements

  - Audit and self-certification trends

  - Enforcement processing metrics

- Collaboration with WICF
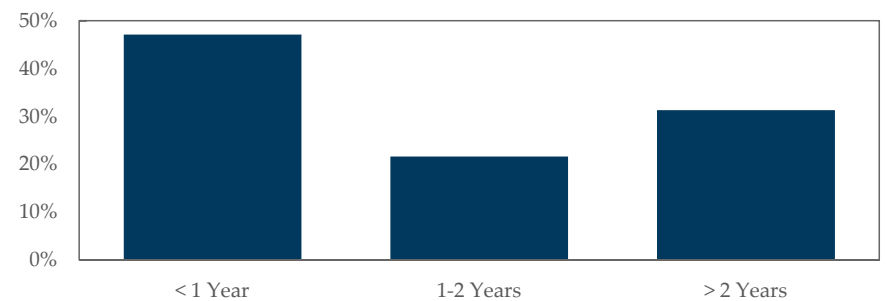
- Launching in Q4 2022 on wecc.org
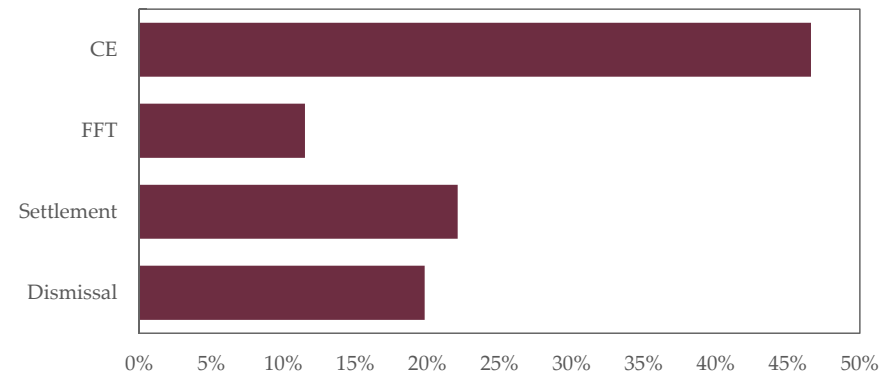
Sharing Compliance Trends

Self-Reports

Legend: CIP-003-8 R2, CIP-010-3 R1

Violation Processing Time

Disposition Methods

4

Focus on Enforcement Processing Enhancements

- Addressing the backlog

- Creating sustainable efficiencies

- Integration with monitoring activities

- Near-term impacts

WECC

5

WECC

Electric Reliability and Security for the West

Contact:

Steven Noess

Vice President Reliability and Security Oversight

snoess@wecc.org

6

WECC

Reliability Planning and Performance Analysis Report to the WECC Board of Directors

Branden Sudduth, Vice President of Reliability Planning
and Performance Analysis

September 14, 2022

Reliability Risk Priorities

The priorities of the Reliability Planning and Performance Analysis (RPPA) department are driven by WECC's Reliability Risk Priorities and fulfil the responsibilities under its delegation agreement.

1. Cybersecurity
2. Extreme Natural Events
3. Resource Adequacy
4. Impact of Changing Resources and Customer Loads on the BPS

The following sections address significant work supporting these priorities that was initiated or completed since the previous Board meeting.

Reliability Risk Priority Initiatives

2022 Assurance Visits

The WECC Event Analysis and Situational Awareness Department is leading a cross-departmental team to perform Reliability Assurance Visits that focus on cybersecurity practices. The topics selected for the visits are organizational structure for cybersecurity, building resiliency, cloud services, insider threats, supply-chain and third-party risk, and cybersecurity training. For each topic, a set of reliability assurance goals was established with one or more questions developed to help the team determine whether each entity organization has met the goal. The aim is to have six organizations that vary in organizational size and function to participate in the visits, and the team has been successful with meeting it. The virtual visits are planned to take place this year in August and September. After the visits are complete, the team will provide feedback to each entity and create, and socialize as needed, a public document that includes general suggestions and best practices that were observed during the visits.

Winter Weather Preparedness Workshop

On September 15, WECC will host a Winter Weather Preparedness Workshop. The agenda will include presentations on lessons learned and best practices associated with winter readiness, the importance of Generator Owner and Generator Operator communications to Reliability Coordinators (RC), Transmission Operators (TOP), and Balancing Authorities (BA) during extreme cold weather. NERC will also provide an update on revisions to its Generating Unit Winter Readiness Reliability Guideline. Representatives from Reliability First and the Texas Regional Entity will present on activities they are doing to address the recommendations from the FERC–NERC report on the February 2021 Winter Event. The California Independent System Operator (CAISO) will provide an update on its Cold and Extreme Weather Contingency Planning Task Force, and attendees will hear from WECC stakeholders on their internal controls programs to ensure winter preparation work is addressed and on the value of

having a winter readiness checklist. Also, members of FERC and NERC staff will speak about their work tracking Regional Entity progress on mitigation efforts that address the recommendations from the February 2021 Winter Event Report.

2022 Wildfire Data Request

On July 11, 2022, WECC issued a Wildfire Data Request that included collecting data from 44 TOPs in the Western Interconnection. TOPs were asked to provide information on the extent to which wildfires affected the reliable operation of the Bulk Power System within their footprint and a history of events involving preemptive actions taken to minimize the risk of facilities igniting wildfires. WECC has worked with the participating entities to collect, analyze, and compile findings, lessons learned, and other applicable recommendations. The results of the analysis will be shared toward the end of the fourth quarter with FERC, NERC, and Western stakeholders.

Resource Adequacy Discussion Series

On July 6, WECC began hosting a monthly virtual interactive resource adequacy series to share challenges, understand analytical approaches, and explore current and emerging issues with stakeholders. The series is intended to help WECC gather stakeholder input on its Western Assessment of Resource Adequacy (Western Assessment) and other resource adequacy analyses. The first discussion, on July 6, set the groundwork for the series by exploring the varying analytical boundaries and roles in the region's Resource Adequacy landscape. On August 3, the second discussion featured a panel of resource adequacy experts from around the Western Interconnection and focused on understanding various resource adequacy reports, reconciling perceived or actual differences, and discussing analytical approaches and findings. Future discussions will focus on potential risks and obstacles to meeting future 2032 resource demands and a discussion about technology gaps and other challenges in achieving clean energy targets.

Partnership with the California Mobility Center and NERC

In June, the California Mobility Center, NERC, and WECC signed a Memorandum of Understanding and formed a working group to help identify and mitigate potential reliability risks because of the rising deployment of electric vehicle (EV) charging loads. The working group consists of experts from utilities, vehicle manufacturers, national labs, and other EV stakeholders. To date, the working group has met monthly to explore the various perspectives and experiences of its members and to discuss next steps related to mitigating Bulk Power System risks.

Western Transmission Planning Processes

At its June meeting, the Board suggested that WECC perform a gap analysis to identify challenges with existing transmission planning processes and provide a report on potential activities that WECC could initiate to add value and address challenges. Following the Board meeting, staff has had one-on-one

3

discussions with 26 stakeholders of varying experience in transmission planning processes to explore the questions posed by the Board. A presentation discussing the high-level takeaways from these discussions, as well as recommended actions for WECC, will be presented during the Board meeting.

Program Area Updates

The following section contains updates on the activities of the program areas within the RPPA department.

Certification

In coordination with NERC, WECC performs certifications for new RCs, BAs, and TOPs. WECC also performs certification reviews or lesser activities for those entities already registered that have experienced a significant change (e.g., expansion of footprint or control center relocation). These activities ensure that entities have the appropriate processes, procedures, tools, training, and personnel in place to perform their required functions.

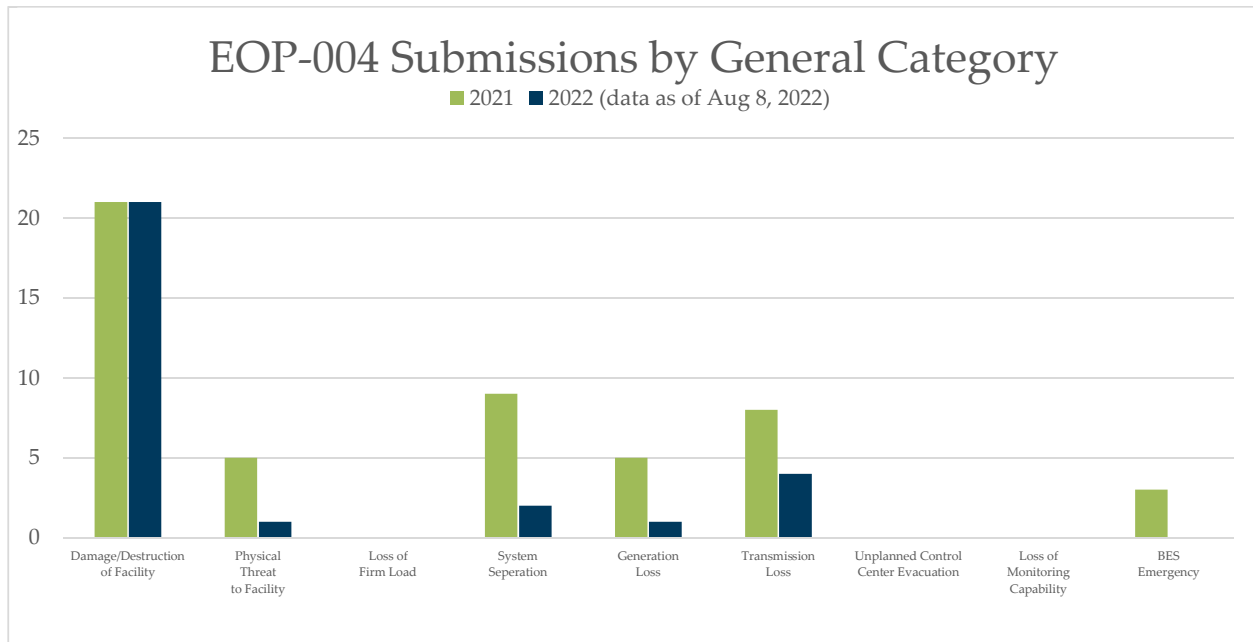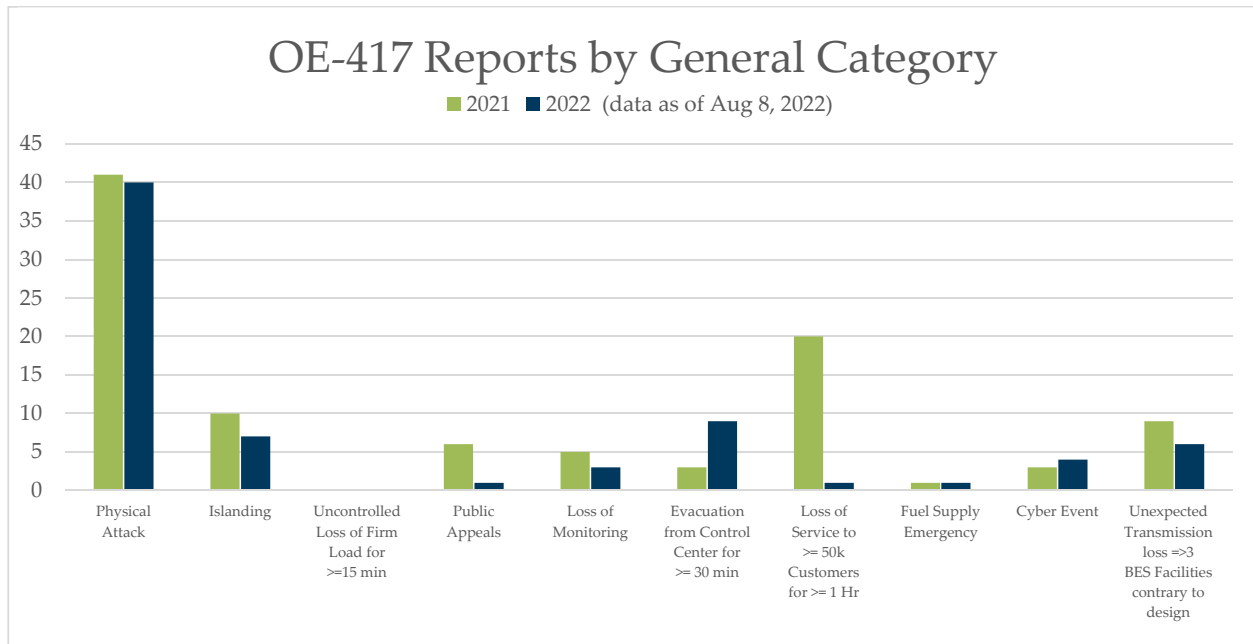| 2022 Certification Activity	Completed	In Progress	Upcoming
New Certification	-	2	-
Certification Activity: Footprint Expansion	2	-	-
Certification Activity: Control Center Relocation	1	1	-
Certification Activity: EMS Modifications	1	4	1

Situation Awareness

Entities are required to report certain types of events through the Department of Energy's OE-417 and the NERC Reliability Standard's EOP-004-4 process.

The highest number of events for the OE-417 and the EOP-004-4 reports occur in the category of physical attacks and damage to facilities. Many of these events involved breaking into substations to steal copper grounding wire, construction equipment, and (in one instance) backup batteries at a communication site. All events have been coordinated with NERC and E-ISAC, as well as brought to the attention of the WECC Physical Security Work Group.

4

OE-417 Reports by General Category

■ 2021 ■ 2022 (data as of Aug 8, 2022)

EOP-004 Submissions by General Category

■ 2021 ■ 2022 (data as of Aug 8, 2022)
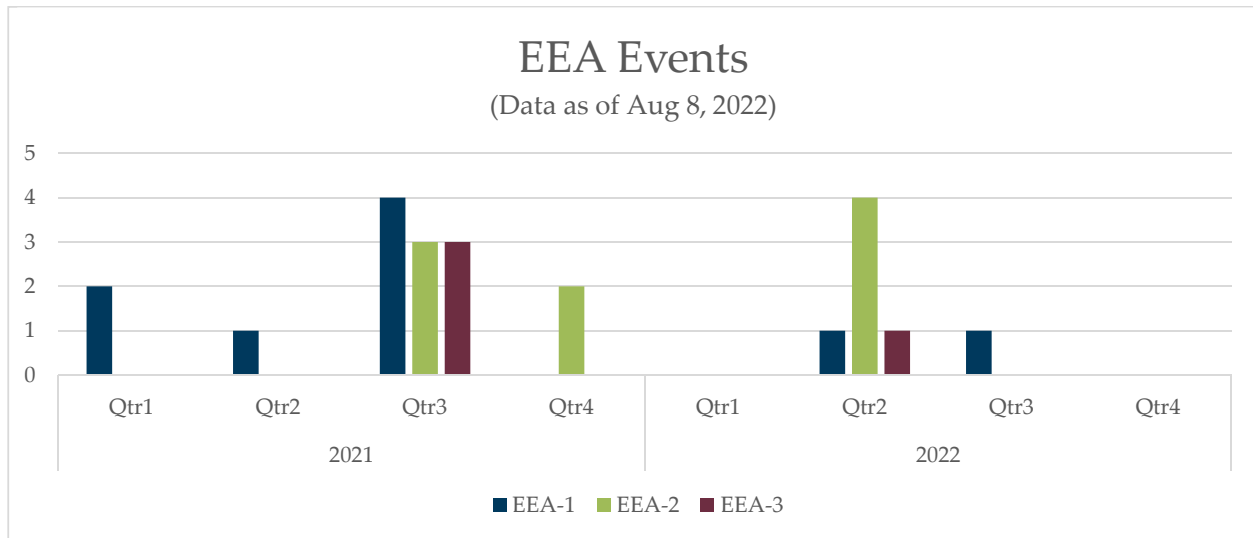

Energy Emergency Alerts

Energy Emergency Alerts (EEA) are issued by RCs to help mitigate operating emergencies. So far in 2022, the Western Interconnection has experienced fewer EEA events compared to this time last year.

RPPA Report to the Board—September 14, 2022

EEA Events
(Data as of Aug 8, 2022)

EEA-1　EEA-2　EEA-3

Event Analysis

There was a total of 15 qualifying events in 2022. Nine of the events are Category 1.a—An outage, contrary to the design of three or more BES facilities that were caused by a common disturbance. The WECC Event Analysis (EA) team, with NERC, has been performing root cause analysis of these events and developing pertinent lessons learned for the industry to prevent a reoccurrence.

Qualified Events
(Data as of Aug 8, 2022)

1.a
1.c
1.h
1.i

6
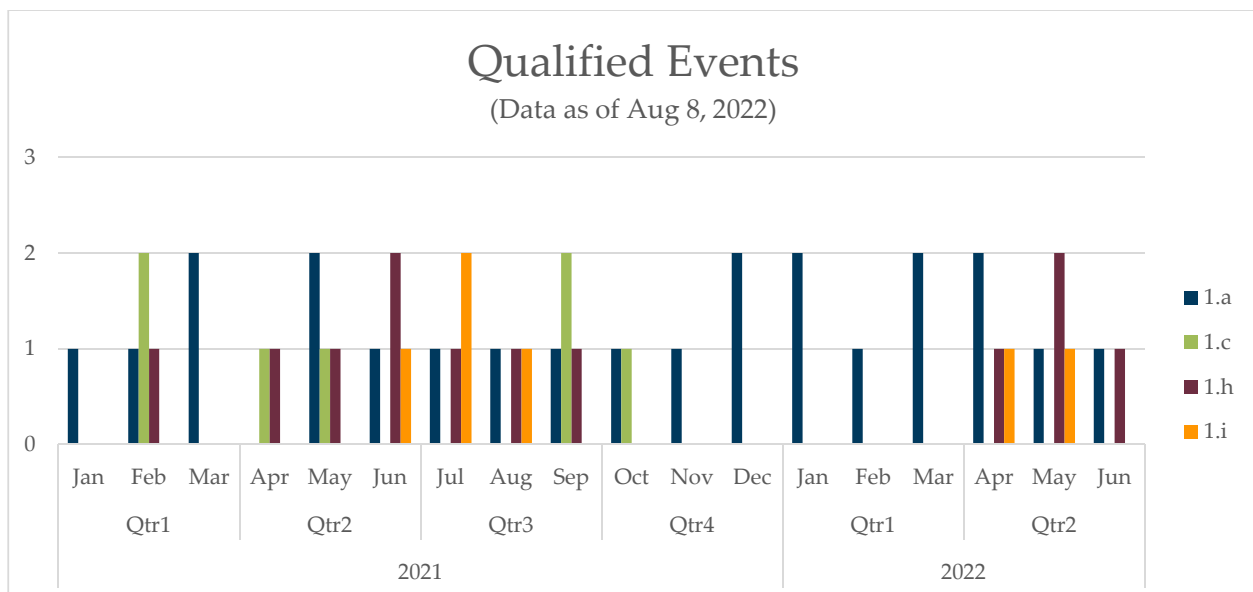
Performance Analysis and Resource Adequacy

The Resource Adequacy department submitted WECC's response to NERC's Long-Term Reliability Assessment (LTRA) data request, which included the base Prob-A (probabilistic) analysis results. Work has begun with NERC and the ERO to draft the LTRA report. NERC has mentioned the desire to align the LTRA data visuals with the Western Assessment data visuals. More changes to the LTRA are expected in the years to come.

The 2022 Western Assessment is being developed. The Western Assessment scenario has been completed in the MAVRIC model and results have been cached. The outline has also been defined and work has begun to develop data visuals that help answer the questions posed in the outline. A presentation of the preliminary results was given to stakeholders on August 15, 2022.

The Resource Adequacy Assessment Task Force (RAATF) continues to meet to discuss WECC's role on the resource adequacy front. A matrix of data assumptions and methodological differences has been drafted and discussion is underway to determine where alignment is needed.

Stakeholders have raised concerns with resource construction delays resulting from supply-chain or other issues. In response to this concern, the Resource Adequacy department has done some analysis that compares historical projected resource construction plans with actual resource construction dates. Preliminary results have been reviewed and are being discussed in numerous conversations. Stakeholders have mentioned the need for WECC to monitor this over the next 5–10 years, as most of the plans show the West is entering a rapid building phase in many new technologies. WECC will develop internal dashboards to be able to monitor this data and the Resource Adequacy team will determine how best to showcase this information for stakeholders.

The Performance Analysis department is working on a suite of internal dashboards. The team has begun meeting with internal teams, including Communications and IT to highlight the value of these dashboards and ensure a well-established framework and design concept. The team is also meeting with other ERO regions to determine consistent calculations and to provide possibilities for alignment.

Reliability and Security Indicators

The Reliability and Security Indicators have been in place since 2022 and are updated quarterly with the most recent available data, with the current update occurring in late August to include data for Q1 of 2022. Overall, the Reliability and Security Indicators have not highlighted any areas of significant concern. The health of the system, as measured by these indicators, shows that the system is generally performing well and, in some areas, is performing exceptionally well.

Since the Board of Directors meeting in June, WECC staff has met with several stakeholder groups, including the Reliability Risk Committee (RRC), Member Advisory Committee, and the Western Interconnection Compliance Forum, to provide an overview and a demonstration of the Reliability and Security Indicators and to discuss aspirations and goals for future development and enhancement of

these indicators. During those presentations, WECC made it clear that these indicators represent an initial step in the journey—they are not a destination. WECC wants to continuously improve the indicators and the indicator dashboard to increase the value of this work. WECC strives to achieve that improvement in collaboration with the stakeholder community.

The RRC's charter states that it will assist WECC in certain delegated functions, one of which is WECC's performance analysis function. Because the Reliability and Security Indicators fall under the auspices of performance analysis, WECC plans to follow up with the RRC to determine how best to enhance and improve these indicators collaboratively with WECC stakeholders.

State of the Interconnection

The State of the Interconnection (SOTI) comprises two parts: an online historical data dashboard and a written report that shares the historical information contained in the online dashboard and other relevant industry happenings. WECC released the 2022 SOTI report and dashboard in mid-August. WECC is reimagining the SOTI to help make the report and dashboard more useful and relevant to our stakeholders. To that end, WECC is reinventing the SOTI report—expanding it to cover current events, reliability and security risks, and key performance indicators. The goal is to create an annual digest highlighting the previous year and outlining challenges and opportunities ahead. WECC is currently seeking stakeholder input to scope the new report.

Reliability Planning

Anchor Data Set

On August 22, 2022, WECC posted version 2.0 of the 2032 Anchor Data Set (ADS) production cost model, approved by the Production Cost Data Subcommittee on August 17, 2022. The posting included a public version of the data set and a version available to stakeholders who have executed a non-disclosure agreement with WECC, along with a list of observations about the case. WECC staff, in collaboration with stakeholders, will hold a lessons learned exercise to highlight some of the efficiencies that need to be gained with the process for future on-time releases of the ADS.

Staffing

The System Adequacy Planning department hired a senior engineer in July 2022 and a staff engineer in August 2022. While the department is currently fully staffed, one senior engineer retired in August. The department is hiring for one more senior engineer.

Long-Duration Energy Storage Study Assessment

The 2040 Clean Energy Scenarios Study Assessment helped WECC determine that there is an underlying correlation between emerging flexible technologies and the reliability challenges WECC foresees for the Western Interconnection. Subsequently, WECC, in partnership with the Western Green

8

Hydrogen Coalition (GHC) and an advisory group of stakeholders, has initiated a Long-Duration Energy Storage Study, which will help analyze how long-duration storage technologies could help address some of the reliability issues identified in the 2040 Clean Energy Scenarios Assessment.

The assessment will examine the potential benefits of energy storage technologies with storage durations from 12 hours to two weeks at clean energy penetration levels of 80%, 90%, and 100%. The analytic phase of this assessment is underway, and WECC plans to post a final report in December 2022.

Data Management Solution Project

For its system planning and modeling analysis, WECC collects a wide variety of data in many formats. WECC has begun a project to develop a data management system that supports consistent data formats, reduces processing time for WECC staff, and allows entities throughout the Western Interconnection to view the submitted data.

A Request for Proposals (RFP) was released in June with responses due July 18, 2022. Through the end of the year, WECC will execute Phase I of the project with the goal of hiring a consultant to help WECC define high-level requirements for a data management solution.

Underfrequency Load Shedding Assessment

Staff and the Underfrequency Load Shedding Work Group (UFLSWG) have been working to develop a UFLS assessment for the past year and a half. This assessment simulates an extremely severe contingency up to and including loss of 25% of the generation in an electrical island. The assessment has found that at least one island does not meet performance requirements under such a resource loss. The assessment considered two load scenarios: one was a heavy summer, the other a light spring. The performance requirements were not met in the heavy summer scenario. The work group is finalizing the simulations results and drafting the report. The report will be presented to the technical committees for review and approval through the end of the year. The next step will be for the UFLS to consider what changes can be made to the assessment or to the UFLS plan to meet the performance requirements.

WECC

Reliability Planning and Performance Analysis Update

September 14, 2022

Branden Sudduth

Vice President, RPPA

Transmission Planning

June 2022 Board Meeting Action Item

Perform a gap analysis to identify challenges with existing transmission planning processes and report back on potential activities on how to add value to transmission planning in the West.

Transmission Planning—26 Stakeholders Interviewed
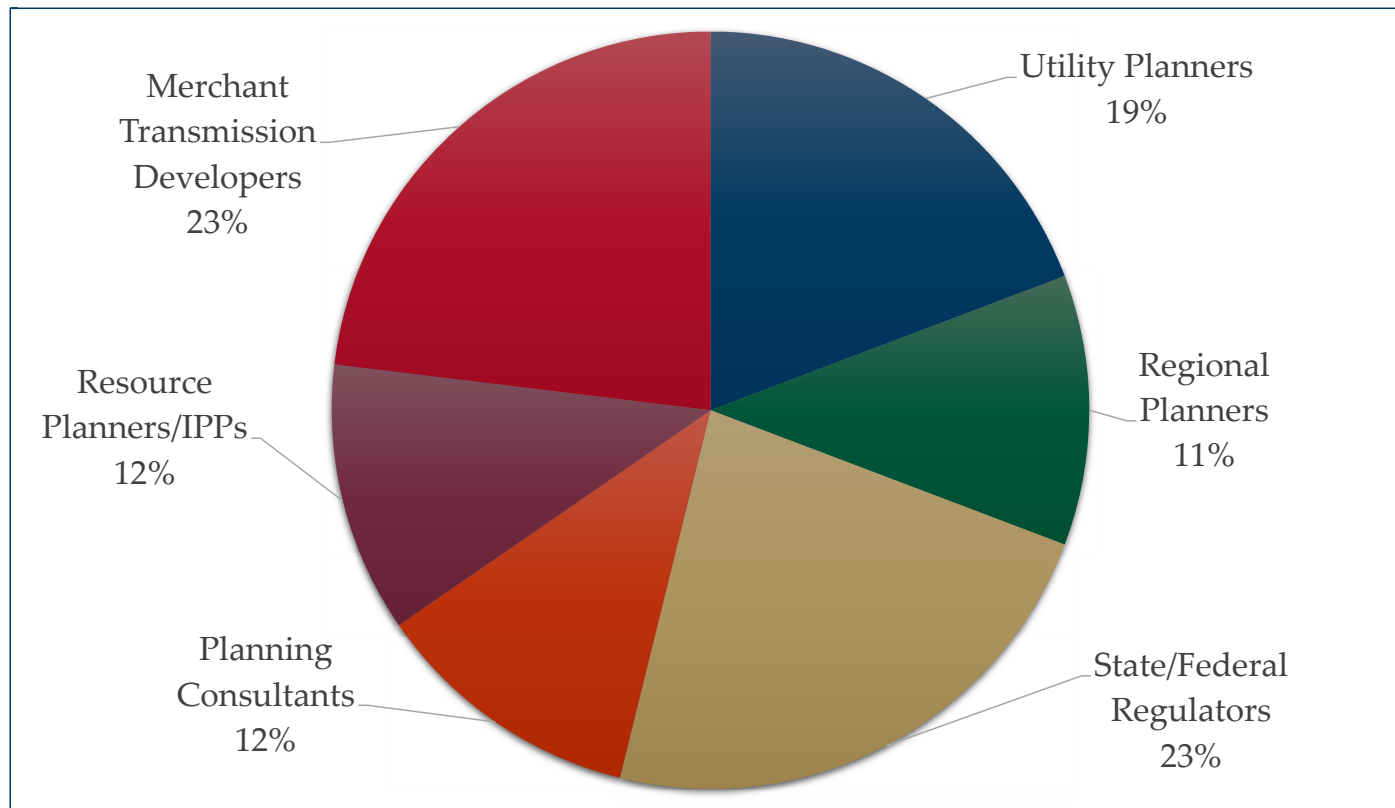
Interview Key Insights and Recommendations

Transmission Planning Challenges	Potential Industry/Regulatory Solutions	Recommendations for WECC
• Complexity and time • Inter-regional project success • Proposed FERC rules • Transmission and resource planning silos • Generator interconnection • Siting, permitting, and cost allocation • Workforce shortages	• RTO/Central planning coordination • Integrated resource and transmission planning • Simplified and expedited approval processes • Optimization before cost allocation	• Expanded tools, models, and data (e.g., 20-year models) • High-level, interconnection-wide needs analysis • Coordination at key planning touchpoints • Stronger centralized regulation • Independent voice on planning issues

WECC

4

Next Steps

- Documentation of key insights and recommendations

- Evaluation of legal limitations

- Stakeholder vetting with the technical committees and Regional Planning Groups

- Staff resource analysis and needs for 2024 Business Plan and Budget

- Update to Board in December

WECC

5

WECC

Electric Reliability and Security for the West

Contact:

Branden Sudduth

Vice President, RPPA

bsudduth@wecc.org

6

Member Advisory Committee
Report to the WECC Board of Directors

Brenda Ambrosi, Chair

September 14, 2022

Highlights

- Member Advisory Committee (MAC) evaluation of activities from the Studies Subcommittee (StS), Energy Storage Task Force (ESTF), and Path Task Force (PTF).
- MAC perspective on the 2022 NERC Reliability Assessment, and RC West Primary Frequency Response Tool and Results.
- MAC insights on WECC's Reliability and Security Indicators, and PLEXOS Software Tool.
- MAC Membership and Leadership Elections.

Strategic Purpose

The Member Advisory Committee (MAC) advises the Board of Directors (Board) on any matters the Board requests the committee to evaluate or consider, and advises the Board on policy, business planning, and budgetary matters as the committee deems appropriate.

WECC Board Action Items

The MAC is not requesting Board approval of any items at this meeting.

Current Year Goals

- Provide input on WECC's resource adequacy efforts;
- Provide input on WECC's Reliability Risk Priorities (RRP);
- Identify priorities from the work of the StS;
- Review recommendations and provide feedback to the Path Task Force;
- Assess the Net Energy for Load (NEL) data;
- Review and provide insights on various industry reports;
- Review and provide recommendations on the WECC budget; and
- Participate in the Nominating Committee.

Major Accomplishments and Planned Activities

1. **MAC Input to the StS**

   WECC staff summarized the five, 2020-2021 approved and published study program reports: 1) Year 2030 Extreme Natural Events, 2) Variability in Loads and Resources, 3) Impact of High Distributed Energy Resources, 4) Changes in System Inertia, and 5) 2040 Clean Energy Sensitivities. The MAC was supportive of the studies and their results. However, there was a comment that 100% clean energy generation is an extreme goal, and perhaps more plausible cases should be considered. In addition, there was a query about WECC's ability to contribute to transmission planning efforts, since WECC is already procuring data and performing analyses from its modelling work.

2

2. **MAC Input to the ESTF**

The ESTF provided an update to the MAC. One of the key items that remains to be completed by the ESTF is the Energy Storage Services white paper, which will define energy products and services that will be provided for the new technologies. The MAC supported the continued existence of the ESTF, particularly with respect to the effective modelling of the system as it relates to grid transformation, its role going forward with respect to determining the amount of storage that will be needed for a clean energy future, and the need for understanding the behavior of inverter-based resources on the bulk power system as integration and dependence on them continues to grow. Furthermore, the MAC encouraged the ESTF to submit the white paper formally—for example, to national labs, ESIG, and state energy agencies—and ask for a scholarly review.

3. **MAC Input to the PTF**

The PTF provided an update to the MAC, which included high-level observations from the work to date. There were comments about the inclusivity and success the PTF has had in engaging with the industry and subject matter experts. The MAC looks forward to reviewing the report once written.

4. **2022 NERC Summer Reliability Assessment**

WECC staff presented the 2022 NERC Summer Reliability Assessment Report to the MAC. The MAC raised concerns about mitigating reliability risk with respect to clean energy objectives, the undetermined quantity of battery storage required for the grid, the need for better data and models to better understand how inverter-based resources will behave with respect to frequency and performance, and the widening assessment on the demand side. WECC's response to these concerns included the continuation of driving assessments to better understanding and focusing on demand forecast in future studies. The MAC encouraged WECC to continue to explain the uniqueness of the Western Interconnection and provide more detailed results in its Western Assessment of Resource Adequacy (Western Assessment) report.

5. **Reliability and Security Indicators**

WECC staff provided an overview of the eight Reliability and Security Indicators and stated that a uniform approach will be applied where each quarter will be compared to the rolling average. The MAC suggested that the overall trend be examined as opposed to focusing only on one quarter, since that quarter could be misleading if it is an anomaly.

6. **RC West Primary Frequency Response Tool and Results**

RC West provided an update on the ongoing work of the Frequency Response Monitoring and Mitigation Task Force, including background, scope, objectives, and current status. RC West

provided examples of frequency response results and trending and how they are tracking in the right direction to be able to use the tool as a post-contingency indicator. RC West also discussed how a tool could be used to assess frequency response in real time and even allow Reliability Coordinators to redispatch generating resources to enhance frequency response if the tool shows there would be insufficient frequency response following certain contingencies to avoid underfrequency load shedding. The MAC felt that this tool is a great example of how to proactively identify and mitigate risk in real time.

7. **PLEXOS Software Trial**

WECC staff presented the trial approach it will be taking for a new production cost modeling tool, PLEXOS, including a business case, why WECC is considering this software change, the evaluation approach, and the likely timeline. The MAC supported the use of Peak funds to improve WECC's modelling capability with PLEXOS, which has powerful features. However, a cautionary note was shared regarding the complex nature of the PLEXOS package of tools, and developing a prudent approach is encouraged for operational purposes.

8. **MAC Membership and Leadership**

Candidates were nominated for all 2022 MAC vacancies, and the MAC membership will vote on its new leadership in the September 2022 meeting.

MAC Membership

- Class 1
    - Cherilyn Randall (Bonneville Power Administration)
    - Dana Cabbell (Southern California Edison)
    - Gary Nolan (Arizona Public Service)
- Class 2
    - Russ Noble (Cowlitz County Public Utility District #1)
    - Richard (Dick) Ferreira (California Department of Water Resources)
    - Linda Jacobson-Quinn (Farmington Electric Utility System)
- Class 3
    - Duncan Brown (Class 3 Representative)
    - Brian Evans-Mongeon (Utility Services, Inc.)
    - Brian Theaker (Middle River Power)
- Class 4
    - Michele Beck (Utah Office of Consumer Services)
    - Fred Heutte (Northwest Energy Coalition)
    - Sophie Hayes (Western Resource Advocates)
- Class 5
    - Grace Anderson (California Energy Commission)
    - Kara Fornstrom (Southwest Power Pool)
    - Thad LeVar, MAC Vice Chair (Utah Public Service Commission)
- International Representation
    - Brenda Ambrosi, MAC Chair (British Columbia Hydro and Power Authority)
    - Diana Wilson (Alberta Electric System Operator)
    - Ernesto Olivas (Comisión Federal de Electricidad)

Member Advisory Committee Update

September 14, 2022

Brenda Ambrosi, Chair

2022 MAC Goals

Participate in and provide input on WECC's resource adequacy efforts

Provide input on WECC's RRPs

Identify priorities from the work of the StS

Review recommendations and provide feedback to PTF

Review and provide insights on industry reports

Assess the Net Energy for Load data

Review and make recommendation on WECC's budget

Participate in the Nominating Committee

WECC

2

Recent MAC Accomplishments

- MAC evaluation of activities from StS, ESTF, and PTF

- MAC perspective on the 2022 NERC Reliability Assessment and RC West Primary Frequency Response Tool and Results

- MAC insights on WECC's Reliability and Security Indicators and PLEXOS Software Tool

- MAC Membership and Leadership Elections

- Other activities

WECC

3

WECC

Electric Reliability and Security for the West

Contact:

Brenda Ambrosi

MAC Chair

Brenda.Ambrosi@bchydro.com

4

WIRAB Report to the WECC Board of Directors

Mary Throne

WIRAB Vice Chair

Commissioner,

Wyoming Public Service Commission

September 14, 2022

Outline

- **Interconnection-Wide Transmission Planning**

- **Reimaging the State of the Interconnection Report**

- **WECC Wildfire Information Request**

- **Incorporating Temperature and Precipitation Trends in Long-Term Planning**

- **Upcoming WIRAB Meetings**

Western Interconnection Regional Advisory Body

2

Interconnection-Wide Transmission Planning

FERC NOPR on Long-term Transmission Planning and Cost Allocation

- Western Representative Comments
- NERC and WECC Comments

WECC's Potential Role

- Identify transmission need from an interconnection-wide perspective
- Leverage state and provincial policymakers to ensure transmission accounts for state and provincial energy policy

Western Interconnection Regional Advisory Body

3

Reimaging the State of the Interconnection Report

State of the Interconnection Data Portal

- Summary data serves a limited purpose
  - Maintain State level data and expand to Canadian Provinces

State of the Interconnection Report

- Should serve as an early warning system to reliability risks
  - Leverage Reliability and Security Indicator Dashboard and other metrics
  - Requires WECC make a determination of the State, or "Health", of the Western Interconnection
  - Target audience should be decisionmakers (CEOs, Regulators, and Policymakers)

Wildfire Information Request

WECC Data Request

- 9 Entities (2021 Request) -> 45 Entities (2022 Request)

- Summarized events by line voltage level, and did not reveal significant impact to the BES facilities

Potential Next Steps:

- Identify near-miss events and successful mitigation

- Share success stories that minimize risk and impacts to customers

- Continue data collection over time to help determine best practices or challenges with Reliability Standards

WIEB Webinar: Incorporating Temperature and Precipitation Trends in Long-Term Planning

Stanford University 2022 Shultz Energy Fellows at WIEB:

- Jake Hofgard, B.S. candidate Mathematics, Minor in Electrical Engineering
- Evan Savage, M.S. candidate Atmosphere/Energy in Civil and Environmental Engineering

Webinar and Open-Source Forecasting Tool:

- Analyzed trends in temperature and precipitation data in the West.
- Made recommendations on how utilities, regulators, and policymakers can better account for climate change in long-term planning.
- Created a tool that planners can use to forecast long-term temperature trends.

https://www.westernenergyboard.org/wieb-webinar-incorporating-temperature-and-precipitation-trends-in-long-term-planning/

6

Upcoming Meetings

WIRAB Monthly Teleconference Meeting
First Thursday of every month at 11:00 AM MT
Next Meeting: November 3, 2022 at 11:00 AM MT

Fall 2022 Joint CREPC-WIRAB Meeting

September 28-30, 2022 in Tempe, AZ

https://westernenergyboard.org/

Western Interconnection Regional Advisory Body

7

Thank You!

Mary Throne

mary.throne@wyo.gov

WECC Board of Directors
Interactive Forum Debrief

Board of Directors

September 13, 2022

WECC Board of Directors
Finance and Audit Committee

Verbal Update

Gary Leidich, Chair

September 14, 2022

WECC Board of Directors
Governance Committee

Verbal Update

Shelley Longmuir, Chair

September 14, 2022

WECC Board of Directors
Human Resources and Compensation Committee

Verbal Update

Kris Hafner, Chair

September 14, 2022

WECC Standards Committee
Report to the WECC Board of Directors

James Avery, Chair

Steve Rueckert, Director of Standards

September 14, 2022

Highlights

There have been 11 drafting team meetings since the June 2022 Board meeting—page 2.

Project WECC-0146—TPL-001-WECC-CRT-3.2 Five-Year Review meet twice since the June 2022 Board meeting—page 3.

Project WECC-0147—BAL-004-WECC-3 Automatic Time Error Correction Five-Year Review meet five times since the June 2022 Board meeting—page 3.

Project WECC-0148—VAR-501-WECC-4 Five-Year Review meet three times since the June 2022 Board meeting—page 3.

Project WECC-0149—FAC-501-WECC-3 Revision Process meet once since the June 2022 Board meeting—page 3.

Strategic Purpose

The purpose of the WECC Standards Committee (WSC) is to oversee the implementation of the WECC Reliability Standards Development Procedures (Procedures).

The WSC will—

1. Maintain and administer the Procedures, including:
    a. Due process,
    b. Balloting,
    c. Annual review of the WECC Glossary of Terms and Naming Conventions, and
    d. Meeting the quality control attributes of FERC Order 672.
2. Administer each Standard Authorization Request (SAR) to ensure the project:
    a. Is within WECC's authority to develop,
    b. Is appropriate for development by WECC, and that it
    c. Remains within the scope of the SAR, as may be changed by the WSC.
3. Monitor and manage drafting teams, including:
    a. Team selection, and
    b. Provision of general oversight and guidance to include a description and explanation of the project to be drafted and time prioritization where needed.
4. Monitor and manage the development of projects created per the Procedures, including prioritization.
5. Perform other duties assigned by the Board of Directors (Board).

WECC Board Action Items

The WSC does not have any approval items for the Board at the September 2022 Board meeting. However, there are four active drafting teams that have held a combined 11 meetings since the June 2022 Board meeting.

Current Year Goals

- Keep the WECC Standards Development Process moving forward by overseeing the drafting teams.
- Act on requests and recommendations from the drafting teams.
- Review the WSC Charter and WECC Procedures to revise and improve them.

Major Accomplishments and Planned Activities

1. **Project WECC-0146—TPL-001-WECC-CRT-3.2 Five-Year Review.**

   The purpose of this project is a required five-year review of the WECC Regional Criterion. The team has been very active and has posted the draft revisions five times for stakeholder comment. The team is currently reviewing stakeholder comments from the fifth posting and deciding whether additional revisions are necessary, or whether the draft should be posted for ballot.

2. **Project WECC-0147—BAL-004-WECC-3 Automatic Time Error Correction Five-Year Review.**

   The purpose of this project is two-fold. The Standards department received a Standard Authorization Request (SAR) from the WECC Operations and Planning Entity Monitoring group identifying a problem with enforcement as currently worded. It is also close enough for the mandatory five-year review cycle that the two projects were combined. The drafting team has met five times and has two meetings scheduled in August.

3. **Project WECC-0148—VAR-501-WECC-4 Five-Year Review.**

   The purpose of this project is a required five-year review of the WECC Regional Standard. One of the results of the mandatory five-year review is a conclusion by the drafting team that no changes are necessary. After meeting three times, the drafting team concluded that no revisions were necessary. This recommendation was posted for stakeholder comment and will be presented to the WSC at the next meeting.

4. **Project WECC-0149—FAC-501-WECC-3 Revision Process.**

   The purpose of this project is to develop an alternative process for revising the Paths included in the Major WECC Transfer Paths Table 2, which identifies the applicability for FAC-501-WECC-3 Transmission Maintenance WECC Regional Standard. On December 8, 2021, the

3

WSC Report to the Board—September 14, 2022

WECC Board approved WECC-0141 FAC-501-WECC-3, Transmission Maintenance, with a request for approval and subsequent regulatory disposition, as needed.

On April 11, 2022, NERC informed WECC Standards staff that, although NERC raised no specific concerns with WECC-0141, implementation at NERC could take a long time due to pre-existing NERC projects. The table for which revisions were being sought is also referenced in several NERC Reliability Standards and the NERC Glossary of Terms.

To remedy the concern, NERC and WECC agreed that WECC should file a subsequent SAR shifting the burden of implementation from NERC to WECC.

4

WECC

Joint Guidance Committee
Report to the WECC Board of Directors

Jonathan Aust, Co-Chair

Branden Sudduth, Co-Chair

September 14, 2022

JGC Report to the Board—September 14, 2022

Purpose

The Joint Guidance Committee (JGC) ensures the work of the Reliability Assessment Committee (RAC), Reliability Risk Committee (RRC), and their subgroups is aligned with WECC's strategic direction, objectives, and the priorities approved by the Board.

WECC Board Action Items

JGC is not requesting any action from the Board.

Current Year Goals

- Develop and track metrics for the technical committees;
- Implement changes to the coordination between JGC, RAC, and RRC;
- Determine a method for categorizing existing subgroups under the new committee structure;
- Develop the process and begin the rolling review of the technical committees;
- Participate in the Reliability Risk Priorities (RRP) development; and
- Analyze the strategic alignment between committee work and WECC's strategic priorities.

Major Accomplishments and Planned Activities

1. **Co-Chair Rotation**

   The JGC Charter calls for a yearly rotation of the co-chair, selected from the leaders of the RAC, RRC, and Member Advisory Committee (MAC). Jonathan Aust, Western Area Power Administration, has been serving as the co-chair since September 2020. In September 2021, Mr. Aust was asked to continue as the JGC co-chair for an additional year as part of the Technical Committee Structure implementation to help lead the JGC through its restructure.

   The MAC is next in the rotation. Pending the results of the MAC leadership vote, the position of JGC co-chair will be assigned to the new MAC chair.

2. **Committee Categorization**

   The JGC is currently recategorizing the technical committee subgroups and reviewing the existing committee structure to align it with the Technical Committee Categorization Process, approved by the JGC in March 2022. The JGC has received input from the chairs of the groups and is currently sharing the preliminary recommendations with the leaders of the respective groups. The full structure will be shared with stakeholders in October. The approved structure will be shared with the Board in December 2022 and the new structure will take effect in January 2023.

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3. **Metrics**

The metrics have been updated for 2022 quarter two. Tracking for some metrics is still being built. Notable changes include:

- Average attendance is lower than 2022 quarter one;
- Participation of Class 2 in the committees has gone up;
- Action item on time completion is 2% lower than quarter one; and
- Frequency Response Sharing Groups, Interchange Authorities, and Reserve Sharing Groups increased their representation in the committees.

4. **Strategic Alignment of Three-Year Work Plans**

The JGC will host a Strategic Alignment meeting with the chairs, vice chairs, and co-chairs of the committees under the RAC, RRC, and JGC. The group will discuss the new initiatives or existing initiatives that address the 2022 RRPs.

The JGC will then meet to discuss whether the RRPs are being addressed, areas for collaboration, additional work needed to address the RRPs, and whether the projects are going to be beneficial to WECC stakeholders. Recommendations will be shared with the leadership of the RAC and RRC to help improve their work plans.

The JGC will report to the Board in December on how each RRP will be addressed.

3

Joint Guidance Committee

Update

September 14, 2022

Jonathan Aust

Branden Sudduth

Co-chairs

2022 Goals

- Develop and track metrics for the technical committees

- Implement changes to the coordination among JGC, RAC, and RRC

- Determine a method for categorizing the existing subgroups under the new committee structure

- Establish and implement a process for rolling review of the technical committees

- Participate in the Reliability Risk Priorities (RRP) development

- Analyze the strategic alignment between committee work and WECC's strategic priorities

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Recent Changes

- Co-chair rotation

  - Moves to MAC leadership

- Metrics since Q1

  - Average attendance is lower

  - Action item completion on time is 2% lower

  - Increased Class 2 participation on committees,

  - Increased Frequency Response Sharing Group, Interchange Authorities, and Reserve Sharing Group participation on committees

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3

Committee Categorization

- Committee leaders were surveyed

- JGC has reviewed the responses and made a recommendation

- Structure will be shared at October RAC and RRC meetings

- JGC will approve in November

- Share new structure at December Board meeting

- Changes go into effect in January

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Three-year Work Plan Strategic Alignment

- Strategic Alignment meeting—October 19

- Ensure RRPs are being addressed

- Identify collaboration opportunities

- Recommend improvements to RAC and RRC leaders

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5

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Electric Reliability and Security for the West

Contact:

Branden Sudduth

bsudduth@wecc.org

Jonathan Aust

aust@wapa.gov

6

Reliability Risk Committee
Report to the WECC Board of Directors

Dede Subakti, Co-Chair

Jonathan Aust, Co-Chair

September 14, 2022

Highlights

The Reliability Risk Committee (RRC) has met twice and is becoming established as a new WECC committee. The next RRC meeting is scheduled for October 20, 2022.

Strategic Purpose

The purpose of the RRC is to identify and address known and emerging risks to the reliability and security of the Western Interconnection.

Current Year Goals

The RRC Steering Committee (RRCSC) is meeting roughly once a month to address the current year goals below.

Goal	Progress
Become established as a new committee—ensure members of the RRC know why the committee exists: to clarify responsibilities and expectations, and generate excitement and enrollment.	Largely done at the inaugural meeting in February. As RRC develops and implements its risk management process, responsibilities and expectations will become clearer.
Successfully transition from the Operating Committee (OC) and Market Interface Committee (MIC) to the RRC.	Steering committee created a strike team to determine OC and MIC products, processes, and practices that must be adopted or maintained in RRC, and to develop a paper of strategic and tactical recommendations.
Develop a three-year work plan supporting the 2022 Risk Priorities, RRC objectives, and WECC's overall reliability and security objectives.	Three-year work plan has been developed and will be reviewed at the Strategic Alignment meeting with RAC, RRC, and WECC staff on October 19, 2022.
Support the JGC restructure and implement the RRC structure in collaboration with the JGC and RAC.	RRC has a three-year work plan item to support JGC and WECC in implementing and transitioning to the new structure.
Develop and implement a risk intake process to help identify, prioritize, and address reliability and security risks.	Strike team presented framework at the June 28 meeting, asked for feedback. Framework includes principles, structure, elements, and attributes of risk management process. Goal to present draft process at October 20 RRC meeting.

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RRC Report to the Board—September 14, 2022

Next Steps

Next steps for the RRC include:

1. Holding regular monthly meetings with the steering committee to track progress on its work related to the 2022 goals described above in preparation for the October 20, 2022, RRC meeting.

2. Collaborating with the RAC and WECC staff at the October 19, 2022, Strategic Alignment meeting to finalize the RRC three-year work plan.

3. Completing the development of the draft RRC risk management process for review at the October 20 RRC meeting.

3

Reliability Risk Committee Update

September 14, 2022

Jonathan Aust
RRC Co-chair

RRC Activities

- Developed initial three-year work plan

- Identified enhancements for subgroup updates to RRC

- Completed RRC risk management framework to identify, prioritize, and address reliability and security risks

  - Framework includes principles, structure, elements, and attributes

  - Reviewed with RRC at June 28 meeting, solicited and incorporated feedback

  - Will be used as a foundation for developing the RRC risk management process

- Initial RRC risk management process development underway

  - To be reviewed with RRC at October 20 meeting

- Goal to begin using the new process in January 2023

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2

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Contact:

Jonathan Aust

RRC Co-chair

Aust@wapa.gov

3

Reliability Assessment Committee Report to the WECC Board of Directors

Chifong Thomas, RAC Chair

September 14, 2022

Purpose

The purpose of the Reliability Assessment Committee (RAC) is to provide coordinated reliability assessments of the Western Interconnection Bulk Power System (BPS) and to provide related advice and recommendations to the WECC CEO and Board.

WECC Board Action Items

- Approval of the revised RAC Charter.
- Approval to change Chelsea Loomis's leadership position from vice chair to co-chair of the RAC.

Current Year Goals

- Coordinate and align efforts with the Reliability Risk Committee (RRC);
- Develop the 2032 Anchor Data Set (ADS); and
- Perform reliability assessments.

Major Accomplishments and Planned Activities

1. **Long Duration Energy Storage (LDES) Assessment**

   After last year's 2040 Clean Energy Scenarios study identified potential need for an emerging clean technology, this assessment is scoped to answer the following four questions:

   - What performance characteristics (e.g., energy availability, peak availability, dispatchability, multi-day availability, recharging time, standby losses, storage losses) are needed for the portfolio of LDES resources to reliably support 100% decarbonization of the electric grid?
   - Which LDES technologies could reasonably be expected to be commercially available within a 20-year planning horizon?
   - How would each of these technologies be expected to perform with respect to a set of preferred performance metrics?
   - How do resource flexibility needs change as the resource mix changes?

   The LDES advisory group has been meeting since April 2022 and has begun the modeling and analysis process. This assessment is scheduled to be completed by the end of 2022.

2. **RAC Discussion of FERC Notices of Proposed Rulemaking**

   FERC released three notices of proposed rulemaking (NOPR) that the RAC believes could affect reliability assessments going forward. The NOPRs address regional transmission planning reforms, an expedited generation interconnection process, and transmission planning for

performance for extreme weather. Each could affect the data collected from generators, the datasets needed for a Year 20 scenario, and assessments that need to be completed for extreme weather conditions. The RAC held a roundtable for stakeholders on August 16, 2022. Information discussed was taken back to RAC member organizations.

3. **RAC Work Plan**

    RAC subcommittee chairs developed the 2022-2024 RAC Work Plan to manage current priority planning activities. Originally, the work plan was developed by reviewing all activities underway within RAC and its committees. Some chairs provided work plan items that were general items from their charters. Working with the chairs, the work plan was adjusted to capture activities that will result in tangible work products. Subcommittees are discussing new activities, and the work plan will continue to evolve. The RAC will be considering the 2022 Reliability Risk Priorities (RRP) and identify any other work plan items that need to be implemented.

4. **2032 Anchor Data Set (ADS) Update**

    The RAC has created the 2032 ADS, which includes production cost model (PCM) and power flow datasets. The starting point for the 2032 ADS is the 2032 Heavy Summer power flow case. A new approach has been used for the 2032 ADS to map all the resource additions in the Loads and Resources submission from the Balancing Authorities to the reference power flow case. This new approach will enhance data quality and improve the ability to export a power flow case from the PCM. The Anchor Power Flow Work Group has compiled the reference power flow case. The RAC's Production Cost Data Subcommittee (PCDS) has been working since July 2021 to develop and validate other data needed to complete the 2032 ADS PCM.

    On August 22, 2022, WECC posted version 2.0 of the 2032 Anchor Data Set (ADS) production cost model, approved by the Production Cost Data Subcommittee on August 17, 2022. The posting included a public version of the data set and a version available to stakeholders who have executed a non-disclosure agreement with WECC, along with a list of observations about the case. WECC staff, in collaboration with stakeholders, will hold a lessons learned exercise to highlight some of the efficiencies that need to be gained with the process for future on--time releases of the ADS.

5. **Data Management Project**

    The RAC continues to be updated on the project. A request for proposals was distributed in July, and one proposal was received. In the interest of selecting the best possible proposal, WECC staff contacted consultants who had shown interest initially but could not submit a proposal by the deadline. They have been given another chance to submit proposals. Once

proposals have been received, the advisory group created for this project will provide input to the selection process.

6. **Data Quality Enhancement**

The System Review Subcommittee (SRS) is working with WECC staff to continually improve the quality of the power flow base cases. The SRS approved a data improvement strategy and is working with the staff to implement it this year to support the WECC Corporate Scorecard initiative. As part of this effort the SRS held a data-focused workshop in conjunction with its August meeting. A second workshop focusing on the high priority data shortcomings is scheduled for October. The focus of the workshops is to allow data submitters to use the tools available to evaluate and correct data shortcomings.

7. **Underfrequency Load Shedding Assessment**

The Underfrequency Load Shedding Work Group (UFLSWG), under the Studies Subcommittee (StS), has been developing an assessment of the Western Interconnection's underfrequency load shedding program. The assessment is progressing, with approval of the report planned for September 30, 2022. Study results are presented and reviewed as they are available by the Western Interconnection Planning Coordinators represented at the UFLSWG.

Outreach by the chairs of the RAC and the StS for a new chair of the UFLSWG was successful. Puget Sound Energy's Robby Anderst is now the chair of the UFSLWG. We look forward to Mr. Anderst's leadership to help the UFLSWG achieve its responsibilities. WECC staff is working with the chair to develop the assessment report and "next steps."

For future assessments, WECC staff's role will be reduced to a supporting role due to the compliance nature of the assessment. This change has been communicated widely to the technical committees.

8. **2022-2023 Study Program**

The StS and WECC staff are ramping up the next iteration of the study program in coordination with other stakeholders. Staff has documented the process and is working with StS to ensure that all the elements of the process are captured. The documented process also includes efficiencies that will make better use of stakeholder time and effort and still achieve high-quality results. The StS is reviewing the RRPs, as well as other inputs, to identify the assessments to include in the 2022-23 Study Program by the end of 2022.

RAC Report

September 14, 2022

Chifong Thomas

RAC Chair

Anchor Data Set

2032 ADS Approved and Posted

Working with key stakeholders to identify opportunities for improvement for next cycle

2

Assessments

Study Program

- Address the 2022 Reliability Risk Priorities
- Additional work identified during the last cycle

UFLS Assessment

- Performance requirements not met
- UFLSWG is working on next steps

RAC is looking for other places to focus on the RRPs

- Exploring opportunities from FERC action

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3

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Contact:

Chifong Thomas

RAC Chair

chifong.thomas@outlook.com

4