WIRAB Monthly Meeting

April 2, 2026

WIRAB
Western Interconnection
Regional Advisory Body

Meeting Logistics

Recording

This meeting is being recorded and **but will not be posted publicly**.

By participating, you consent to your name, voice, and image being part of the recording.

How to Participate

Members entered as Panelists

All other participants entered as attendees

If you need to be promoted to Panelist, please **"Raise Hand"**

Feel free to use the **chat** for comments or clarifying questions

Audio Etiquette

Anyone can **"Raise Hand"** feature to ask questions or provide input

Please **mute yourself** when not speaking

If joining by phone, please identify yourself in the chat

Materials & Follow-Up

Slides and materials will be shared after the meeting and be made available on the webpage

<Public>

Introductions

WIRAB

Western Interconnection Regional Advisory Body

Agenda

WECC Activities:	WECC History and Purpose Current Activities
WIRAB Activities:	WIRAB History and Purpose 2027 Strategic Initiatives
NERC Activities:	NERC Large Load Activities
Upcoming WIRAB Meetings	

WIRAB and WECC 101

Commissioner Lea Márquez Peterson

WIRAB Chair

WIRAB
Western Interconnection
Regional Advisory Body

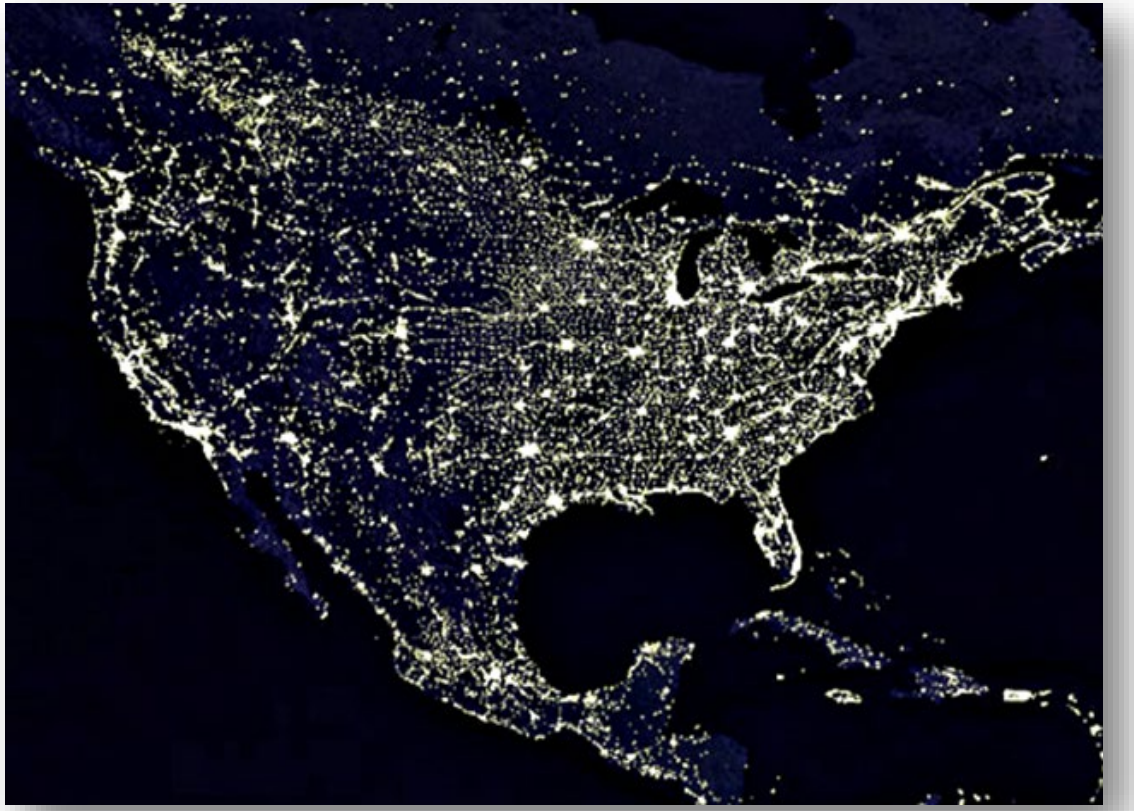
WECC 101

Matt Evans
Stakeholder Engagement Specialist

Electric Reliability
& Security for the West

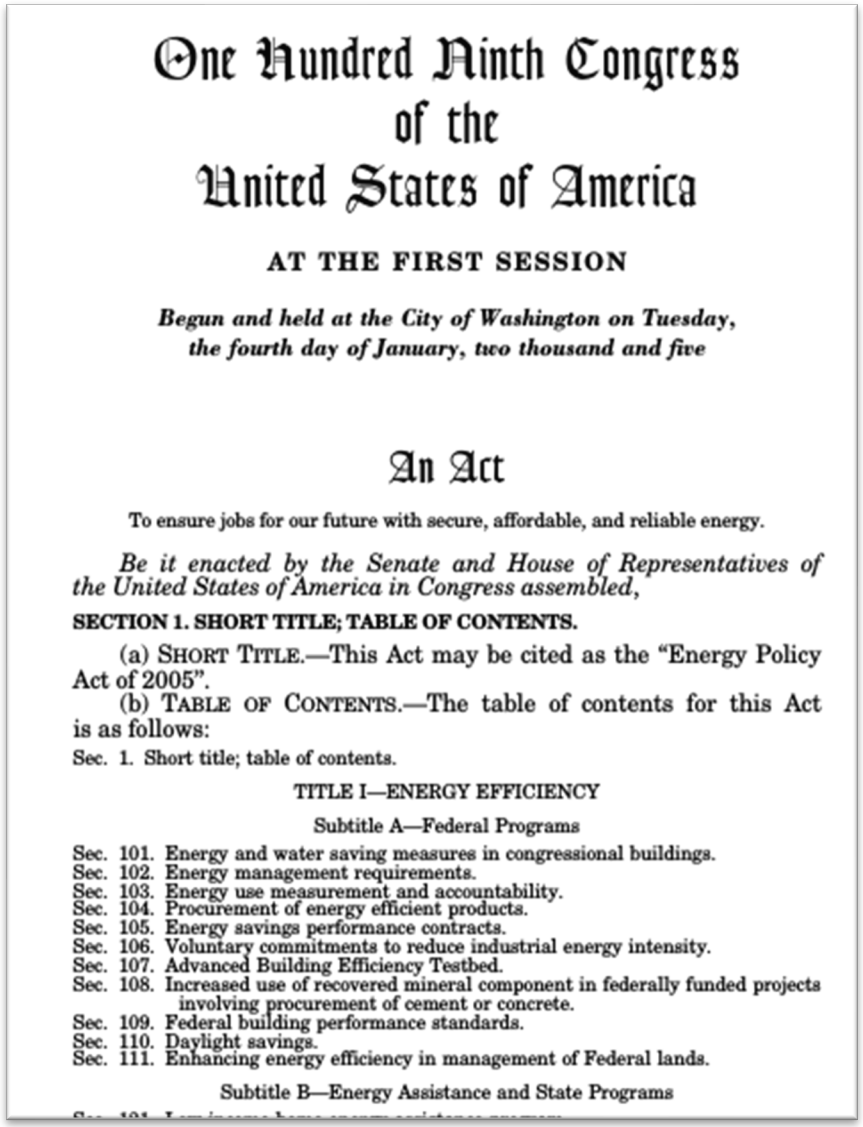
April 2, 2026

2003 — The Great Northeast Blackout



Energy Policy Act of 2005

- Federal Power Act, Section 215 calls for mandatory enforceable standards
- FERC certifies an Electric Reliability Organization — the ERO (NERC)
- NERC may delegate authority to Regional Entities; e.g., WECC
- Industry develops standards, approved by FERC



One Hundred Ninth Congress
of the
United States of America

AT THE FIRST SESSION

Begun and held at the City of Washington on Tuesday, the fourth day of January, two thousand and five

An Act

To ensure jobs for our future with secure, affordable, and reliable energy.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Energy Policy Act of 2005".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—ENERGY EFFICIENCY

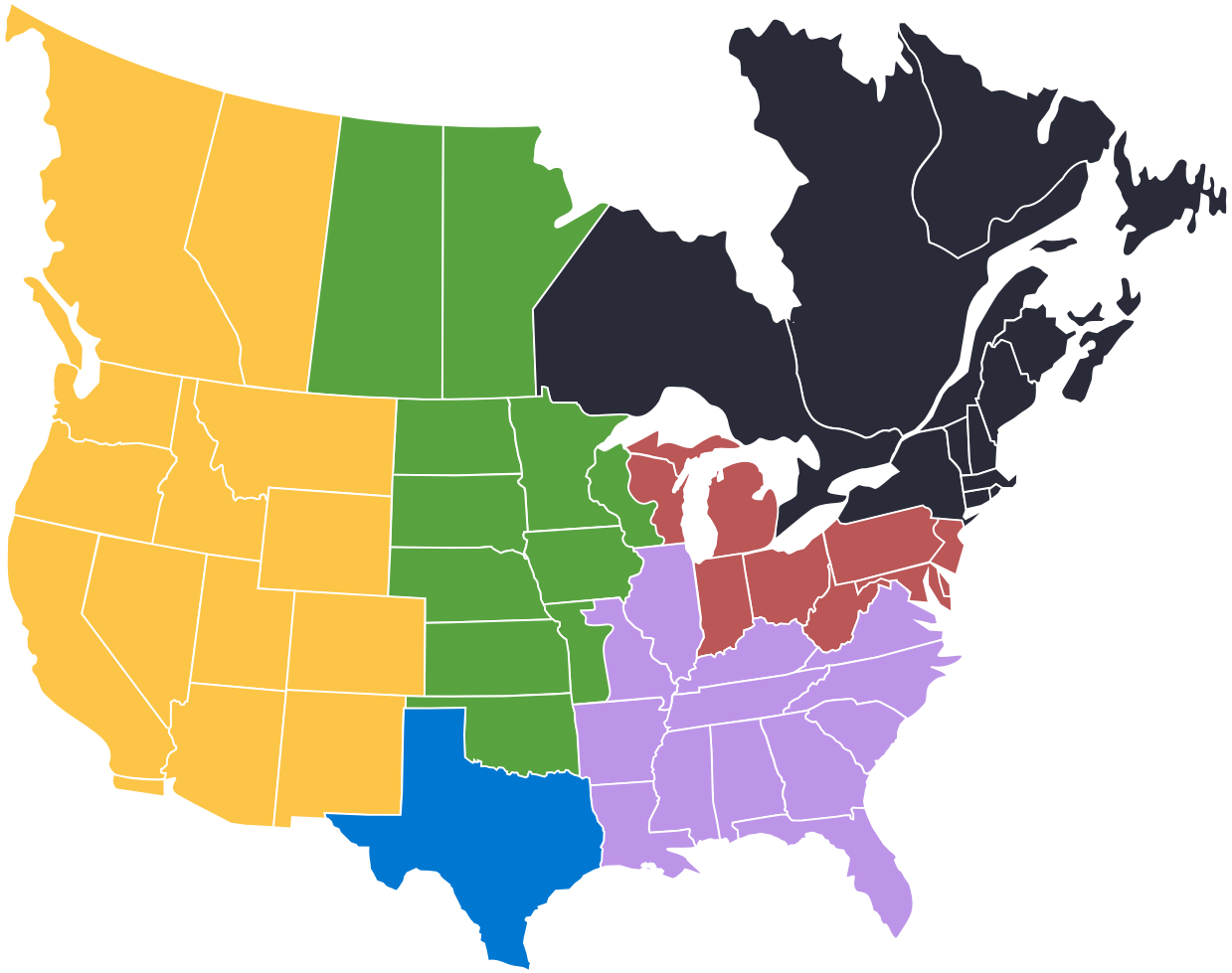
Subtitle A—Federal Programs

Sec. 101. Energy and water saving measures in congressional buildings.
Sec. 102. Energy management requirements.
Sec. 103. Energy use measurement and accountability.
Sec. 104. Procurement of energy efficient products.
Sec. 105. Energy savings performance contracts.
Sec. 106. Voluntary commitments to reduce industrial energy intensity.
Sec. 107. Advanced Building Efficiency Testbed.
Sec. 108. Increased use of recovered mineral component in federally funded projects involving procurement of cement or concrete.
Sec. 109. Federal building performance standards.
Sec. 110. Daylight savings.
Sec. 111. Enhancing energy efficiency in management of Federal lands.

Subtitle B—Energy Assistance and State Programs

Regulatory Agencies

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION



MIDWEST RELIABILITY ORGANIZATION
NPCC, Inc.
RELIABILITY FIRST
SERC
TEXAS RE
Ensuring electric reliability for Texans
WECC

WECC's Mission

WECC'S MISSION

"To effectively and efficiently mitigate risks to the reliability and security of the Western Interconnection's Bulk Power System."

Our Stakeholders

Independence, Perspective, and Partnership

- WECC is a 501(c)(4) social welfare, non-profit corporation that exists to ensure a reliable Bulk Power System in the Western Interconnection
- Funded by Load-Serving Entity (LSE) assessments authorized by FERC under Section 215 of the Federal Power Act
- Governed by a nine-member Board of Directors and the CEO

WECC Through the Years

1967

Formed by 40 power systems, then known as the Western Systems Coordinating Council (WSCC)

2002

The WSCC became WECC when three regional transmission associations merged

2007

NERC made WECC a Regional Entity with authority to create, monitor, and enforce reliability standards

2014

WECC becomes an independent 501(c)(4) organization working to mitigate risks to the reliability and security of the Western Interconnection's bulk power system

WECC


Registration and Certification
Oversight Planning
Entity Monitoring
Standards Development
Enforcement
WECC
Reliability Modeling and Assessment
Administrative Services
Reliability Risk Management and Data Services
Strategic Engagement

WECC Resources

- Assessments
  - Western Assessment of Resource Adequacy
  - Seasonal assessments
  - NERC Assessments
- Reports
  - State of the Interconnection
- Risk Management Program
- Assurance Program
- System Performance Data Portal
- Wildfire Dashboard & Weekly Wildfire Update
- WECC Weekly
- Reliability in the West: Discussion Series

WECC

WWW.WECC.ORG | (801) 582-0353

155 N 400 W, Salt Lake City, UT 84103, USA

WIRAB 101

Eric Baran

Senior Program Manager – Electric System Reliability

WIRAB Formation

Aug. 2003

Northeast Blackout

Aug. 2005

EPAct Signed

Nov. 2005

Western Governors adopt resolution creating WIRAB

Feb. 2006

WINB/WIEB Bylaws amended to acknowledge WIRAB

Governors petition FERC

Apr. 2006

First WIRAB Meeting

July 2006

FERC Approves NERC as the ERO

FERC Approves WIRAB

WIRAB's Statutory Authority: Section 215(j) of the Federal Power Act

Western Interconnection Regional Advisory Body

"(j) REGIONAL ADVISORY BODIES.—The Commission shall establish a regional advisory body on the petition of at least two-thirds of the States within a region that have more than one-half of their electric load served within the region.

A regional advisory body shall be composed of **one member from each participating State in the region, appointed by the Governor of each State**, and may include representatives of agencies, States, and provinces outside the United States.

A regional advisory body may provide advice to the Electric Reliability Organization, a regional entity, or the Commission regarding the **governance** of an existing or proposed regional entity within the same region, whether a **standard** proposed to apply within the region is just, reasonable, not unduly discriminatory or preferential, and in the public interest, whether **fees** proposed to be assessed within the region are just, reasonable, not unduly discriminatory or preferential, and in the public interest and **any other responsibilities requested by the Commission**.

The Commission may give **deference** to the advice of any such regional advisory body if that body is organized on an **Interconnection-wide basis**."

WIEB's Partner Organizations

Western Interconnection Regional Advisory Body

Western Interstate Energy Board (WIEB)

Committee on Electric Power Cooperation (CREPC)

CREPC Transmission Collaborative (CREPC-TC)

CREPC 1920 Ad Hoc Committee

Western Conference of Public Service Commissioners (WPSC)

Western Interconnection Regional Advisory Body (WIRAB)

Spring & Fall Joint CREPC-WIRAB Meetings

Western Energy Imbalance Market - Body of State Regulators (WEIM-BOSR)

WPP Western Resource Adequacy Program's Committee of State Representatives (WRAP-COSR)

SPP Markets+ State Committee (MSC)

WIEB provides the tools and framework necessary to support cooperative efforts in the energy field and to enhance the economy of the West.

WIRAB Voting

Operates primarily on consensus but official actions of WIRAB:

1. Affirmative vote of at least one-half of the members of the WIRAB

and

2. Votes must represent at least one-half of the electric energy consumed among the states and provinces participating in the WIRAB.

State / Province	MWh	% of Western Interconnection
AB	56,504,900	6.6%
AZ	78,346,302	9.1%
BC	53,541,116	6.2%
CA	303,178,968	35.2%
CO	56,445,328	6.6%
ID	23,753,508	2.8%
MX-BCN	10,823,800	1.3%
MT	16,772,695	1.9%
NE	1,274,713	0.1%
NV	42,598,368	5.0%
NM	15,646,241	1.8%
OR	51,920,022	6.0%
SD	3,169,179	0.4%
TX	6,362,414	0.7%
UT	31,242,408	3.6%
WA	92,034,518	10.7%
WY	16,864,678	2.0%
Total	860,479,158	100%

WIRAB Official Membership

Western Interconnection Regional Advisory Body

Alberta	**Sandy Lee,** Director, Generation, Transmission and Markets Policy, Government of Alberta
Arizona	**Lea Marquez Peterson*,** Commissioner, Arizona Corporation Commission
British Columbia	**Chris Gilmore,** Executive Director, Electricity Policy Branch, Ministry of Energy, Mines and Low Carbon Innovation
California	**Siva Gunda**,** Vice Chair, California Energy Commission
Colorado	**James Lester,** Senior Policy Lead on Transmission, Climate and Energy, Colorado Energy Office
Idaho	**Cally Younger,** Administrator, Idaho Governor's Office of Energy and Mineral Resources
Mexico	**Vacant**
Montana	**Sonja Nawakowski,** Director, Montana Department of Environmental Quality
Nebraska	**Tim Texel,** Executive Director, Nebraska Power Review Board
Nevada	**Vacant**
New Mexico	**Vacant**
Oregon	**Janine Benner,** Director, Oregon Department of Energy
South Dakota	**Jon Thurber,** Utility Analyst, South Dakota Public Utility Commission
Texas	**Vacant**
Utah	**Emy Lesofski,** Director, Utah Governor's Office of Energy Development
Washington	**Elizabeth Osborne,** Senior Energy Policy Analyst, Washington State Energy Office
Wyoming	**Chris Petrie,** Commissioner, Wyoming Public Service Commission

*WIRAB Chair; **WIRAB Vice-Chair

Significant Reliability Activities Since WIRAB Formation

Western Interconnection Regional Advisory Body

2007	2009	2011	2014	2015	2016	2019	2020	2021	2023	2025
WECC designated as the Regional Entity Reliability Standards become Mandatory	Three Reliability Coordinators (RCs) consolidate under WECC-RC	Sep. 8, 2011 Southwest Blackout	WECC Bifurcated Reliability Coordinator Function Peak Reliability Formed CAISO WEIM Begins	FERC Order 1000 – Regional Transmission Planning and Cost Allocation requirements	Blue Cut Fire Inverter-Based Resource Event	CAISO RC West, SPP, BC Hydro, and AESO standup Reliability Coordinators in the West Peak Reliability Terminates Operation	COVID-19 Pandemic August 2020 heat wave and rotating outages in California	Winter Storm Uri impacts Texas SPP WEIS Begins	FERC Approves WPP Western Resource Adequacy Program (WRAP) FERC Directs NERC to Create IBR Standards	Large Load Action Begins at NERC

Highlights of Past WIRAB Advice

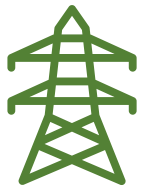
- WECC Business Plan and Budgets (2007-2026)
- Advice to FERC on Implementation of Mandatory Reliability Standards (2006-2007)
- FERC Reliability Technical Conferences (2019, 2021, 2023)
- Advice on WECC Governance, Organizational Reviews, Strategic Plans (2007-2023)
- Advice on Reliability Coordinator Services at WECC, Peak Reliability, and then CAISO RC West and SPP West RC
- Advice to WECC on West Wide Data Sharing, Resource Adequacy, Transmission Planning
- Advice to FERC on Inverter-Based Resources and Primary Frequency Response
- Advice to NERC on Modernization of Standards Processes and Procedures

Multi-State Electric Organization Principles

Western Interconnection Regional Advisory Body

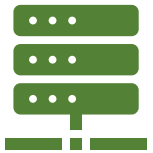
- Board Independence
- Active Stakeholder Engagement
- Role of a States in Policy Development and Decision Making
- States Committee's Access to Data and Information
- States Committee Independent Staffing Model & Funding
- Independent Board Selection

WIRAB's 2026 Strategic Initiatives



Long-term Planning Data and Models

Initiative 1: Advise WECC to work with states, provinces, and planning entities to improve long-term planning assumptions, data, and models to meet evolving regulatory and reliability needs.



Large-load Performance Requirements

Initiative 2: Advise WECC, NERC, and stakeholders to develop common interconnection and performance requirements for large loads—especially data centers—to ensure reliable and secure integration into the Bulk Power System.

Resource Adequacy with Electrification and Large Loads

Initiative 3: Advise WECC to study the impacts of rapid electrification and large load growth on reliability, including regional and seasonal resource adequacy trends.

Energy Storage Reliability Standards

Initiative 4: Advise WECC and the ERO to assess whether reliability standards adequately reflect the growing role of energy storage technologies in supporting grid stability and essential reliability services

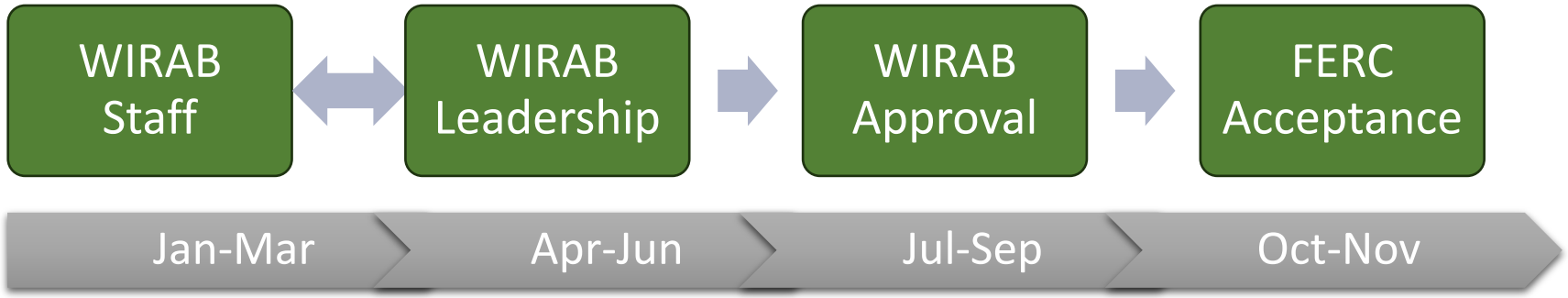
WIRAB Business Plan and Budget: Purpose of Strategic Initiatives

Western Interconnection Regional Advisory Body

Why does WIRAB have Strategic Initiatives in the BP&B?

- BP&B to serve as a policy document
- Regional Entity delegated responsibilities vs WIRAB Strategic Initiatives
- FERC highlights WIRAB initiatives in its Order accepting all ERO BP&B

How do the Strategic Initiatives get created?



2027 Strategic Initiative Selection

- The slate of candidate strategic initiatives for the 2027 BP&B are organized into three categories:
  - **Supporting** – Initiatives that support new or ongoing work at WECC or within the industry.
  - **Aligning** – Initiatives that align with WECC's work but encourage additional actions to address known challenges.
  - **Leading** – Initiatives that lead or push WECC or industry into new territory to address emerging challenges.
- Members are asked to select **four to five initiatives overall**, aiming for 0–2 in the Supporting category, 1–3 in the Aligning category, and 1–2 in the Leading category.

Potential Supporting Initiatives

- **Initiative S-1 (Gas-Electric Coordination):** Advise WECC on Interdependencies Between the Natural Gas and Electric Systems in the West and the Implications for the Reliable Operation of the Western Interconnection
- **Initiative S-2 (Workforce Development):** Advise WECC and the ERO to Address the Reliability Workforce and Institutional Knowledge Crisis Facing the Western Utility Sector
- **Initiative S-3 (Long-term Planning):** Advise WECC and States to Strengthen Consistency in Long-Term Transmission Planning Assumptions Across FERC Order 1920 Implementation

Potential Aligning Initiatives

- **Initiative A-1 (Resource Development Accountability):** Advise WECC to Establish Reliability Accountability Mechanisms for Speculative Resources in Resource Adequacy Assessments
- **Initiative A-2 (Large Load Integration):** Advise WECC to Assess the Reliability Risks of Concentrated Resource Development and Resource Procurement Competition Between Utilities and Large Loads
- **Initiative A-3 (System Inertia):** Advise WECC to Address System Inertia Decline as an Emerging Essential Reliability Services Crisis in the Western Interconnection
- **Initiative A-4 (Extreme Weather):** Advise WECC to Incorporate Extreme Weather and Climate-Driven Scenarios into Reliability Assessments and Planning Standards

Potential Leading Initiatives

- **Initiative L-1 (Large Load Integration):** Advise WECC to Close the Regulatory Gap on Large Load Demand Response and Emergency Protocols in the Western Interconnection
- **Initiative L-2 (Co-location of Large Loads):** Advise WECC and States to Develop Frameworks for Reliability Oversight of Behind-the-Meter and Co-Located Resources at Large Load Facilities
- **Initiative L-3 (Long-Duration Energy Storage):** Advise WECC and the ERO to Develop Reliability Standards for Long-Duration Energy Storage as It Scales in the Western Interconnection
- **Initiative L-4 (Grid Modernization):** Advise WECC and the ERO to Strengthen the Reliability Implications of Grid Modernization
- **Initiative L-5 (Reliability Governance):** Advise WECC, States, and NERC to Evaluate Whether the Western Interconnection's Reliability Governance Frameworks Are Adequate for the Scale and Pace of Grid Transformation

Next Steps

Western Interconnection Regional Advisory Body

Survey Now Open for WIRAB Members	Reponses Due April 10
April 16 - Circulate WIRAB Business Plan & Budget for WIRAB Review	Comments due April 30
June 4 - WIRAB Monthly Meeting with Presentation of Final Version for Approval	Final vote due June 18

NERC Activities Update

- WIRAB Staff next steps:
  - Monitor **NERC's large load SAR** posting (expected April 1, 2026) and review the computational load Glossary definitions and proposed standard requirements for implications for Western entities.
  - Track the **Level 3 Alert issuance** (expected May 2026) and assess whether its interim guidance adequately addresses Western Interconnection reliability conditions.
  - Review **NERC's wildfire report** upon filing on or before May 1, 2026, and brief WIRAB members on its Western relevance.
    - Draft is now available and has been reviewed by Staff.
  - Continue monitoring **NERC's IBR registration work plan** progress (next update due April 29, 2026) and the development of Milestone 4 planning and operational study standards.

Upcoming Meetings

WIRAB Monthly Meeting

First Thursday of the Month at 2:00 PM MT

Next Meeting: May 7, 2026 at 2:00 PM MT

Spring 2026 Joint CREPC-WIRAB Meeting

May 12-14, 2026 in San Diego, CA

WIRAB Member Lunch on May 12

https://www.westernenergyboard.org/meeting-calendar/

Thank You!

Eric Baran

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720-897-4600 x 207

WIRAB
Western Interconnection
Regional Advisory Body

Initiative S-1: Gas-Electric Coordination

Initiative S-1 (Gas-Electric Coordination): Advise WECC on Interdependencies Between the Natural Gas and Electric Systems in the West and the Implications for the Reliable Operation of the Western Interconnection.

In 2018, WECC conducted a study of the interdependencies of the natural gas system and electric system that found increased gas demand emerging in the Western Interconnection. Since then, the resource mix in the west has changed substantially, and the operation characteristics of the electric system have shifted as more intermittent resources have come online. Recent winter events in the Pacific Northwest have illustrated how vulnerable both systems are to catastrophic disruptions that could impact wide areas of the Western Interconnection. WECC plans to conduct a new natural gas interdependency study to determine what has changed over the last 10 years and what new approaches need to be made to maintain system-wide reliability. WIRAB will engage with WECC's process to ensure the study addresses the questions most relevant to state and provincial policymakers and reliability planning.

Goals include:

- Supporting WECC's updated interdependency study and ensuring it reflects current system conditions, including high IBR penetration and accelerating thermal retirements.
- Ensuring findings are translated into actionable guidance for state and provincial energy offices on gas-electric planning coordination.
- Identifying reliability risks at the gas-electric interface that may warrant new or updated NERC standards or regional guidance.

Initiative S-2: Workforce Development

Initiative S-2 (Workforce Development): Advise WECC and the ERO to Address the Reliability Workforce and Institutional Knowledge Crisis Facing the Western Utility Sector.

A reliable grid runs on people as much as infrastructure. The Western utility sector is facing compounding workforce pressures: a wave of experienced operators and planners approaching retirement, new technical competencies required for IBR-heavy systems that current training pipelines have not yet caught up to, and direct competition from hyperscale technology companies for the same engineering talent. NERC and WECC have both flagged operator competency in high-IBR environments as an emerging risk. WIRAB will advise WECC and the ERO to assess the reliability implications of these workforce gaps, including operator training standards, succession planning at utilities, and the adequacy of WECC's own technical capacity, and recommend actions that the ERO, states, and industry can take collectively.

Goals include:

- Assessing whether NERC operator training and certification standards adequately reflect the competencies required for IBR-heavy grid environments.
- Identifying workforce development gaps at Western utilities and recommending collaborative approaches to address them.
- Encouraging WECC to convene utilities, states, and workforce development organizations to share best practices and coordinate regional approaches.

Initiative S-3: Long-term Planning

Initiative A-4 (Long-term Planning): Advise WECC and States to Strengthen Consistency in Long-Term Transmission Planning Assumptions Across FERC Order 1920 Implementation.

FERC Orders 1920/1920A/1920B require 20-year transmission planning with meaningful state consultation, and WestTEC's long-term portfolio analysis is expected in early 2027. However, across the three Western FERC Order 1000 planning regions – CAISO, NorthernGrid, and WestConnect – foundational planning assumptions including load growth scenarios, state policy inputs, and resource retirement projections remain inconsistent. This creates a fragmented long-term transmission plan for what is a physically unified interconnection. WIRAB will advise WECC to lead a cross-regional harmonization effort on long-term planning assumptions.

Goals include:

- Encouraging WECC to facilitate improved harmonization of load growth, resource, and policy assumptions in models across the three Order 1920 planning regions.
- Supporting state and provincial engagement in the WestTEC process and Order 1920 implementation to ensure Western policy goals are reflected in long-term plans.
- Identifying gaps in regional coordination that could result in reliability needs being missed at planning region seams.

Initiative A-1: Resource Development Accountability

Initiative A-1 (Resource Development Accountability): Advise WECC to Establish Reliability Accountability Mechanisms for Speculative Resources in Resource Adequacy Assessments

The 2025 Western Assessment of Resource Adequacy (WARA) found that speculative ("Tier 3") resources – those with no signed interconnection or power purchase agreement – comprise the overwhelming majority of planned additions in the highest-risk Western subregions. The 2025 NERC Long-Term Reliability Assessment (LTRA) identified WECC-Northwest and WECC-Basin as facing the highest resource adequacy risk in North America. Yet current adequacy assessments (conducted by WECC and States) treat speculative resources with the same planning weight as contracted or permitted resources. WIRAB will advise WECC to develop differentiated treatment of resource tiers in reliability assessments, creating accountability for the gap between what is planned and what actually gets built.

Goals include:

- Encouraging WECC to publish resource adequacy findings that distinguish between contracted, permitted, and speculative resource additions.
- Promoting scenario analysis that tests adequacy outcomes under different resource materialization rates, particularly in high-risk subregions.
- Providing state and provincial policymakers with clearer information on the reliability risk exposure attributable to speculative resource plans.

Initiative A-2: Large Load Integration

Initiative A-2 (Large Load Integration): Advise WECC to Assess the Reliability Risks of Concentrated Resource Development and Resource Procurement Competition Between Utilities and Large Loads

The competition between regulated utilities and large technology companies for limited resources—especially renewables—exemplified by cases like Amazon outbidding Puget Sound Energy for the Sunstone solar project in Oregon, represents an emerging structural challenge that existing reliability standards were not designed to address. When utilities lose procurement competitions, their customers' resource adequacy degrades while the interconnection simultaneously gains load and loses planned supply. WIRAB will advise WECC to study the reliability implications of this dynamic and to assess whether procurement transparency, resource adequacy reporting requirements, and resource and transmission planning should evolve to account for it.

Goals include:

- Encouraging WECC to assess the frequency and magnitude of procurement competition dynamics in the Western interconnection queue.
- Advising WECC to develop monitoring or reporting approaches that give state regulators visibility into how large load procurement affects utility resource adequacy plans.
- Identifying whether existing reliability standards or state regulatory tools need to be updated to address this structural gap.

Initiative A-3: System Inertia

Initiative A-3 (System Inertia): Advise WECC to Address System Inertia Decline as an Emerging Essential Reliability Services Crisis in the Western Interconnection

WECC's Reliability Assessment Committee presentations document cumulative inertia reductions in the Western Interconnection of more than 100,000 MWs through 2034 under forecast resource additions and retirements. NERC's evolving reliability assessment framework is incorporating Essential Reliability Services (ERS) assessments, including inertia, frequency response, and ramping, beginning in 2026. The Western Interconnection is the leading edge of this transition nationally, with IBR penetration far outpacing other interconnections. WIRAB will advise WECC to develop a Western-specific ERS adequacy framework, including minimum inertia benchmarks, grid-forming inverter deployment targets, and regional coordination protocols, to ensure Western-specific risks are identified and addressed appropriately.

Goals include:

- Advising WECC to quantify Western-specific inertia and frequency response adequacy thresholds and assess the trajectory of ERS sufficiency through 2034.
- Encouraging WECC to develop regional guidance on grid-forming inverter deployment expectations in high-IBR subregions.
- Ensuring Western state and provincial policymakers understand the reliability implications of inertia loss as IBR penetration grows.

Initiative A-4: Extreme Weather

Initiative A-4 (Extreme Weather): Advise WECC to Incorporate Extreme Weather and Climate-Driven Scenarios into Reliability Assessments and Planning Standards.

NERC is adding extreme weather and fuel supply scenario analysis to its Long-term Reliability Assessment (LTRA) beginning in 2026. The Western Interconnection faces compounding climate risks – prolonged drought reducing hydro availability, simultaneous regional heat domes exceeding historical peak loads, and wildfire-driven transmission disruptions – that are underrepresented in current deterministic planning frameworks. Recent widespread winter events across the Northwest, Alberta, and British Columbia demonstrated that current planning scenarios underestimate the geographic extent and duration of correlated stress events. WIRAB will advise WECC to develop Western-specific compound climate scenarios that capture multi-stressor events (such as low hydro combined with extreme heat and simultaneous wildfire impacts on transmission) and to integrate these scenarios into both resource adequacy assessments and long-term transmission planning.

Goals include:

- Encouraging WECC to develop and regularly update a suite of Western-specific compound climate scenarios for use in reliability assessments.
- Promoting integration of multi-stressor scenario analysis into the WARA and long-term transmission planning processes.
- Providing state and provincial policymakers with reliability risk findings that reflect the actual compound climate risks facing the Western Interconnection.

Initiative L-1: Large Load Integration

Initiative L-1 (Large Load Integration): Advise WECC to Close the Regulatory Gap on Large Load Demand Response and Emergency Protocols in the Western Interconnection

The NERC Large Load Working Group Level 2 Alert (September 2025) identified inadequate operating protocols for large loads during emergencies as a significant reliability gap. The Western Interconnection currently lacks a consistent framework for large load demand response and emergency curtailment, leaving a reliability gap that national processes and reliability standards development alone will not close. WIRAB will advise WECC and states to develop Western-specific best practices for large load emergency protocols as a complement to NERC's ongoing standards work, ensuring that the region is not waiting on the national process to act on risks that are acute here now.

Goals include:

- Advising WECC to develop a Western framework for large load demand response and emergency curtailment expectations, informed by NERC's Phase 1 standards and level 3 Alert guidance.
- Ensuring Western state regulators are equipped to establish clear reliability expectations for large load customers in interconnection and operating agreements.
- Promoting consistency in how Western utilities and balancing authorities communicate with and manage large loads during declared emergency conditions.

Initiative L-2: Co-location of Large Loads

Initiative L-2 (Co-location of Large Loads): Advise WECC and States to Develop Frameworks for Reliability Oversight of Behind-the-Meter and Co-Located Resources at Large Load Facilities

Data centers and large industrial loads are increasingly self-supplying through behind-the-meter (BTM) generation, on-site battery storage (or “BESS”), and co-located renewable projects. These configurations create complex interactions with the bulk power system (BPS) that are difficult to model, monitor, and plan around, particularly when BTM resources curtail without visibility to system operators. NERC has identified this as an unresolved reliability gap. WIRAB will advise WECC to work with states and the ERO to define what visibility, registration, and performance requirements should apply to BTM and co-located resources at load facilities above a material BPS impact threshold.

Goals include:

- Advising WECC and states to identify what visibility and data sharing requirements should apply to BTM and co-located resources above a material BPS impact threshold.
- Encouraging WECC to develop interconnection and operational guidance that accounts for the reliability implications of co-located generation and storage at large load facilities.
- Supporting state regulators in establishing appropriate oversight mechanisms for large load facilities with complex on-site configurations.

Initiative L-3: Long-Duration Energy Storage

Initiative L-3 (Long-Duration Energy Storage): Advise WECC and the ERO to Develop Reliability Standards for Long-Duration Energy Storage as It Scales in the Western Interconnection

Battery storage projections now show batteries nearly equal to solar in the Western Interconnection queue. Meanwhile, long-duration storage (LDES) – resources capable of eight or more hours of discharge – is beginning to move from demonstration to deployment. Existing NERC standards hardly consider 2–4 hour battery systems ("BESS"). LDES resources have fundamentally different operating characteristics, dispatch patterns, and state-of-charge management requirements that create new planning and operations challenges not addressed in the current standards framework. WIRAB will advise WECC and NERC to proactively address the standards gap for LDES specifically.

Goals include:

- Advising WECC to assess whether current reliability criteria and NERC standards adequately address LDES operating characteristics, including multi-day discharge cycles and state-of-charge management under system stress.
- Encouraging NERC to initiate standards development work that anticipates LDES deployment at scale, rather than responding after the fact.
- Ensuring Western planners and operators have access to regional guidance on LDES modeling and performance expectations as commercial deployments begin.

Initiative L-4: Grid Modernization

Initiative L-4 (Grid Modernization): Advise WECC and the ERO to Strengthen the Reliability Implications of Grid Modernization.

The Western grid is no longer a one-way system from bulk generation to end users. Distributed energy resources – rooftop solar, vehicle-to-grid programs, smart water heaters, and community storage – are increasingly material to bulk power system (BPS) operations, particularly as they aggregate into virtual power plants (VPPs) or respond to price signals at scale. Yet the regulatory seam between bulk reliability standards and distribution system operations remains underexamined. WIRAB will advise WECC and the ERO to assess how the growing two-way flow of power and data at the transmission-distribution interface affects BPS reliability planning, monitoring, and standards, and to identify where coordination between bulk and distribution operators needs to mature to reflect current and projected DER deployment in the West.

Goals include:

- Advising WECC to assess whether current standards and regional criteria adequately address the operational complexity introduced by large-scale two-way power and data flows, including risks of distribution-level events propagating to the bulk system.
- Encouraging WECC to develop regional guidance on coordination protocols between bulk and distribution operators that reflects current and projected DER deployment levels in the West, including aggregated virtual power plants.
- Providing Western state and provincial policymakers with analysis of how grid modernization investments, including advanced metering infrastructure, distribution automation, and demand-side management technologies, interact with bulk reliability, so that state infrastructure decisions account for interconnection-wide consequences.

Initiative L-5: Reliability Governance

Initiative L-5 (Reliability Governance): Advise WECC, States, and NERC to Evaluate Whether the Western Interconnection's Reliability Governance Frameworks Are Adequate for the Scale and Pace of Grid Transformation.

The Western grid is transforming faster than at any point since its original buildout. The institutions, standards, assessment frameworks, and coordination mechanisms governing it – many established under very different conditions – are being asked to manage simultaneous transitions in resource mix, load character, market structure, and technology at unprecedented pace. WIRAB will support a broader inquiry into whether the institutional architecture of Western reliability governance is keeping pace with these changes: Are WECC's technical committees structured to address the right problems? Are FERC and NERC's reporting and assessment timelines aligned with how quickly grid conditions are changing? Are states and provinces adequately integrated into reliability decision-making early enough to shape outcomes rather than respond to them?

Goals include:

- Conducting or commissioning a structured assessment of whether current Western reliability governance structures are adequately responsive to the pace and complexity of grid transformation.
- Identifying specific governance gaps in committee structure, standards timelines, state engagement mechanisms, or interagency coordination and developing recommendations for WECC, NERC, and FERC.
- Positioning WIRAB as a proactive voice on the institutional dimensions of reliability, not only the technical ones.