

RELIABILITY & SECURITY

Oversight Update

May 15, 2025 | 2:00 p.m. MT

Reliability & Security Oversight Update

Mailee Cook

Training and Outreach Coordinator

**Electric Reliability
& Security for the West**

May 15, 2025



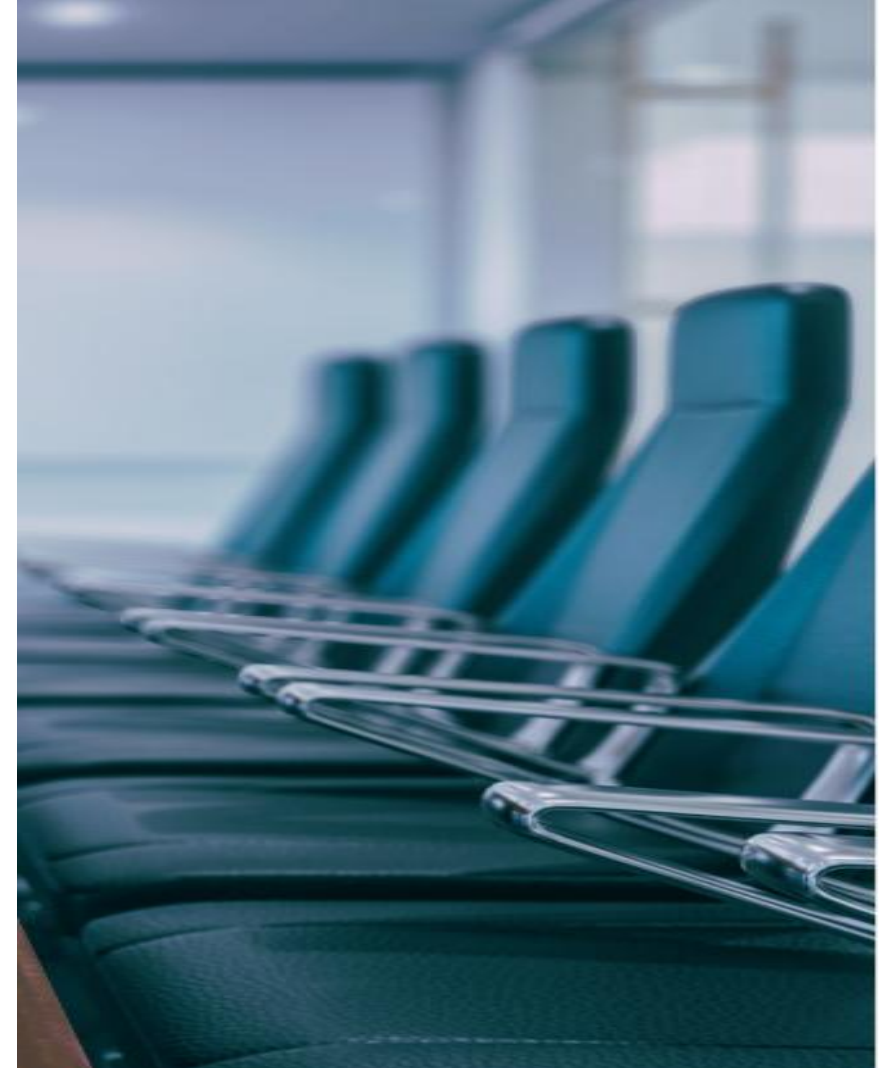
RELIABILITY IN THE WEST

A DISCUSSION SERIES



Board of Directors and Associated Meetings

- June 10–11
- Hybrid
 - WECC Office
 - Salt Lake City, Utah





**Power Systems
Security Conference**

2025
WECC

Antitrust Policy

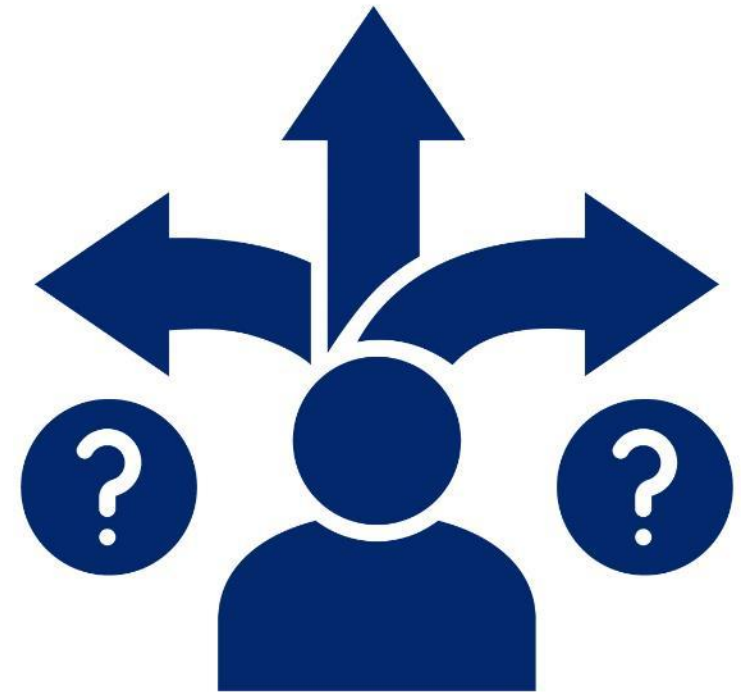
- All WECC meetings are conducted in accordance with the WECC Antitrust Policy and the NERC Antitrust Compliance Guidelines
- All participants must comply with the policy and guidelines
- This meeting is public—confidential or proprietary information should not be discussed in open session

Antitrust Policy

- This webinar is being recorded and will be posted publicly
- By participating, you give your consent for your name, voice, image, and likeness to be included in that recording
- WECC strives to ensure the information presented today is accurate and reflects the views of WECC
- However, all interpretations and positions are subject to change
- If you have any questions, please contact WECC's legal counsel

Participating

- Send questions via chat to WECC Meetings
- Use the “raise hand” feature



Agenda

- NERC & WECC Happenings
 - Fahad Ansari, Senior Technical Advisor, WECC
- Cold Weather Update
- Standards Happenings
- PRC-028 Implementation
 - Curtis Crews, Senior Technical Advisor, WECC
- Inverter-based Resources Initiative Update
 - Mark Rogers, Manager, Registration & Certification, WECC
 - Abby Fellingner, Senior Registration & Certification Engineer, WECC
 - Andrew Williamson, Senior Registration & Certification Engineer, WECC

NERC and WECC Happenings

Fahad Ansari

Sr. Technical Advisor, Oversight Planning

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NERC Happenings

- Interregional Transfer Capability Study Canadian Analysis
 - [Final Report](#)
- NERC's 2025 Summer Reliability Assessment
- NERC BOT approved Level 3 Essential Actions to Industry Alert on IBR performance and modeling.
- Compliance and Certification Committee Request for [Nominations](#)
 - From May 3–June 1, 2025
- Recently approved Standard:
 - BAL-004-WECC-4
 - Effective Date of Standard – 10/1/2025

WECC Happenings

- Align Implementation in British Columbia
- [Western Interconnection Weekly Wildfire Update](#)
- [Q2 2025 Oversight Trends Update](#)

Cold Weather Update Standards Happenings PRC-028-1 Implementation Plan

Curtis Crews

Senior Technical Advisor

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Standards—NERC

- 901 Fun Continues with Ballot and Comment Periods
 - 2020-06 Model Validation and Model Verification Definitions
 - Ballot and Comment Period was 05/02/25 - 05/12/25
 - Results
 - 2022-02 MOD-032-2, IRO-010-6, TOP-003-8
 - Ballot and Comment Period End 05/16/25 (Tomorrow)
 - 2021-01 MOD-033-3
 - Ballot and Comment Period End 05/21/25

Other Standards Projects—NERC

- On top of the 901 Milestone 3 Projects, the following projects are or will start meeting regularly
 - Project 2017-01 Modifications to BAL-003 Phase II
 - Project 2021-03 CIP-002
 - Project 2022-04 EMT Modeling
 - Project 2022-05 Modifications to CIP-008 Reporting Threshold
 - Project 2023-01 EOP-004 IBR Event Reporting
 - Project 2023-09 Risk Management for Third-party Cloud Services
 - Project 2024-01 Rules of Procedure Definitions Alignment (Generator Owner and Generator Operator)
 - Project 2024-02 Planning Energy Assurance

Standards—WECC

- WECC-0142: Request to Retire BAL-002-WECC-3, Contingency Reserve
 - Ballot Period ends 5/15/2025 (Today at 6:00 pm Mountain Time)
- WECC-0156: VAR-001-5 Voltage and Reactive Control Modification to the WECC Regional Variance
 - Drafting team to recommend “No Change” at the upcoming WSC meeting
- PRC-006-5 SAR for Regional Variance Modification to be considered at the upcoming WSC meeting
 - If accepted, a drafting team solicitation will go out



PRC-028-1

Implementation

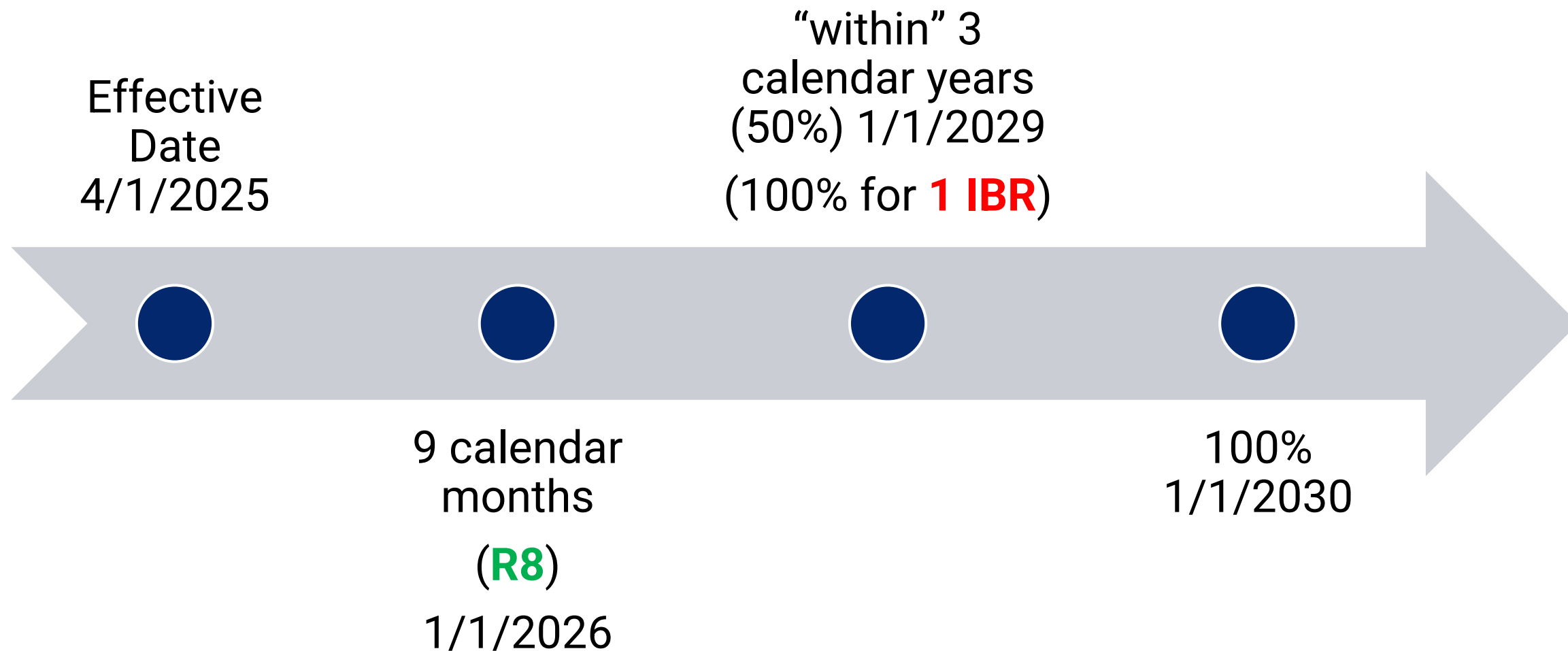
Plan

Commercial Operation

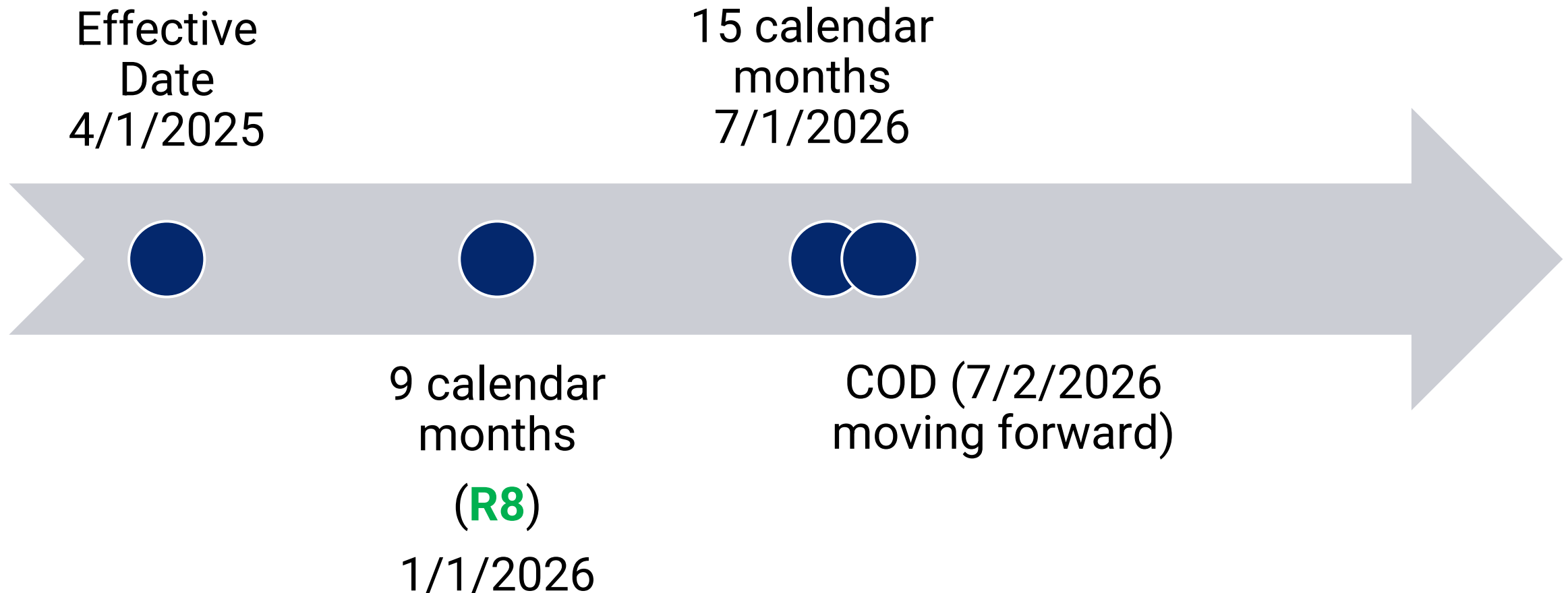
- “Commercial operation means achievement of this designation indicating that the facility has received all approvals necessary for operation after completion of initial start-up testing.”
 - Glossary of Terms—
https://www.nerc.com/pa/stand/glossary%20of%20terms/glossary_of_terms.pdf



On or Before Effective Date (R1-R7, R8)

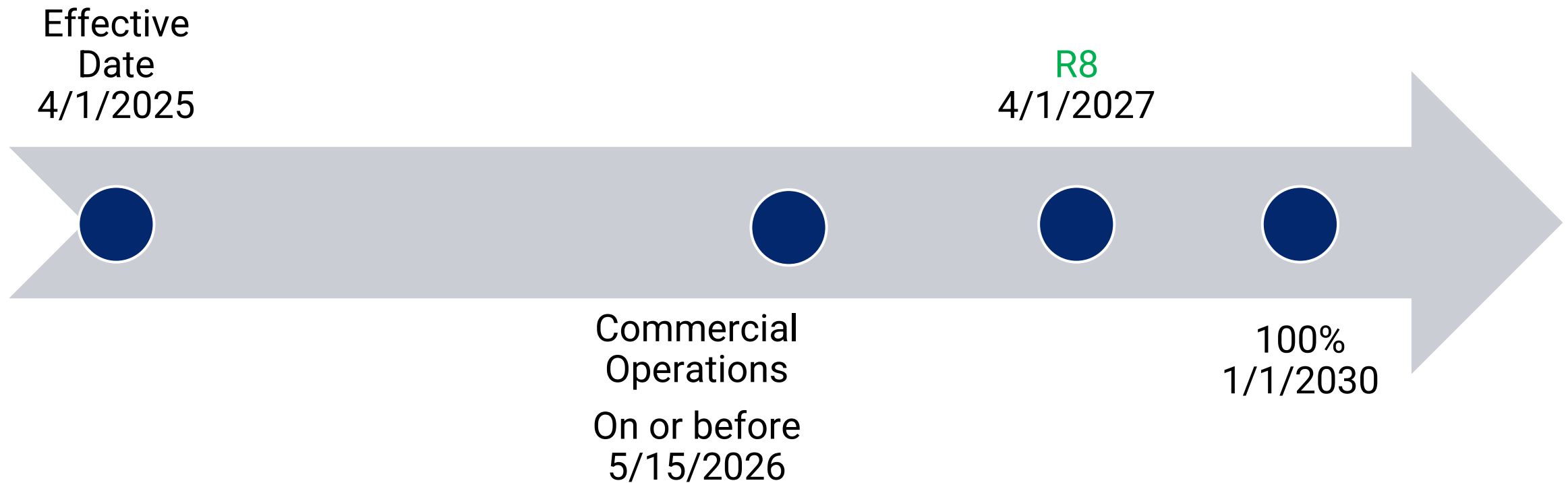


After Effective Date (R1-R7, **R8**)

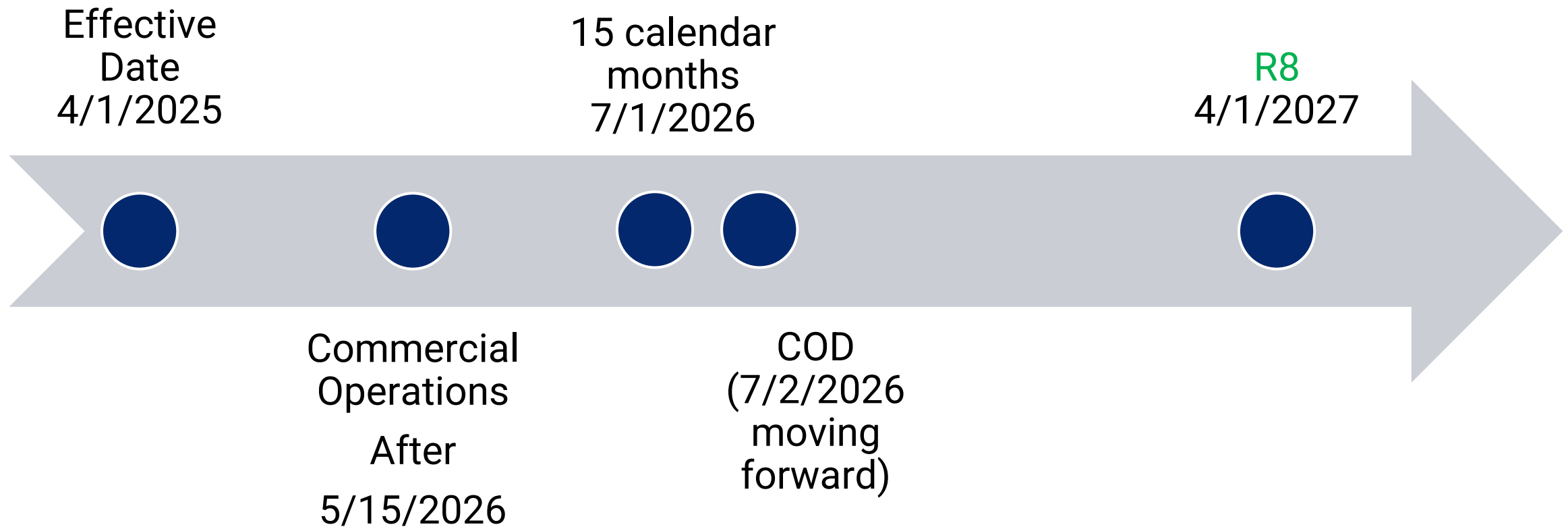




On or Before May 15, 2026 (R1-R7, R8)



After May 15, 2026 (R1-R7, R8)



Inverter-based Resources Initiative Updates

Mark Rogers

Manager, Registration & Certification

Abby Fellingner

Senior Registration & Certification Engineer

Andrew Williamson

Senior Registration & Certification Engineer

**Electric Reliability
& Security for the West**

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Inverter-based Resources Initiative Updates

Agenda

Today's discussion

- NERC IBR Work Plan Progress Update—May 6, 2025
- IBR Registration Timeline
- Updates on RFIs and evaluations related to possible Category 2 Generator Owners
- Outreach Activities
- Resources

NERC IBR Work Plan Progress Update

- **May 6, 2025**—NERC filed a [work plan progress](#) update with FERC, included approximate numbers of resources that may meet Category 2 criteria as GOs and the MVA of those resources by Regional Entity footprint
 - Overall, ERO Enterprise estimates 781 potential resources, totaling 35,184

REGIONAL ENTITY	NUMBER OF IBRS	MVA
MRO	118	5,130
NPCC	57	1,862
ReliabilityFirst	77	3,513
SERC	171	9,881
Texas RE	39	1,998
WECC	319	12,800
TOTAL	781	35,184

*The numbers in this table are subject to change based on further validation.

IBR Registration Timeline



Category 1 vs. Category 2

Category 1 GO/GOP

- >75 MVA connected at 100 kV or above
- BES IBRs

Category 2 GO/GOP

- ≥ 20 MVA connected at ≥ 60 kV
- Non-BES IBRs

Project 2020-06: Definition of Inverter-based Resource (IBR)

Definition of IBR

A plant/facility consisting of individual devices that are capable of exporting Real Power through a power electronic interface(s) such as an inverter or converter, and that are operated together as a single resource at a common point of interconnection to the electric system. **Examples include, but are not limited to, plants/facilities with solar photovoltaic (PV), Type 3 and Type 4 wind, battery energy storage system (BESS), and fuel cell devices.**

Request for Information

Documentation Information

- Consistent process of collecting data
 - Operational one-line diagram(s) depicting the IBR Resource(s) **(including the Collector System – Feeders + Resources) and the POI to the BPS**
 - O&M agreements or third-party agreements **(if applicable)**
 - Generator interconnection agreements **(original and amendments)**
 - Gross Nameplate and Inverter information
 - GO/GOP asset verification spreadsheet
- Requested information must be returned to the sending region within 45 days

GO/GOP Asset Verification Spreadsheet—Tab 4b

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

SERC TEXAS RE WECC

Generator Owner (GO)/Generator Operator (GOP) Asset Verification Form for Category 2 Entities (Version Date: 11/22/2024)

Limited Disclosure (Once data has been entered and submitted)

Entity Name: _____

Registered Entity NCR ID: _____

Revision Date: MM/DD/YYYY _____

Type: **Category 2**

Region (MISO, SPP, WECC, etc.) [Select from drop-down box]	State, Province, or Territory where Generator Resides [Select from drop-down box]	Initial Registration Date of Asset	Generator Owner (GO) NERC ID	Generator Owner (GO) [Select from drop-down box]	Generator Operator (GOP) NERC ID	Generator Operator (GOP) [Select from drop-down box]	Primary GOP Control Center Location (State, Province, or Territory) [Select from drop-down box]	Plant Name/Designation	Unit Name/Designation	Unit Type [Select from drop-down box]	Hybrid Resource Facility Details [Select from drop-down box]	Class Name/Type Rating (MW)	Reliability Coordinator (RC) (Name and NCR)	Balancing Authority (BA) (Name and NCR)	Transmission Operator (TO) (Name and NCR)	Transmission Owner (TO) (Name and NCR)	Transmission Planner (TP) (Name and NCR)	Planning Coordinator/ Planning Authority (PC/PA) (Name and NCR)	Distribution Provider (DP) or Interconnection Entity (Name and NCR)	Interconnection to NERC (kV)	Interconnection Substation No.	If this is a dispersed generator producing resources, identify the entity responsible for compliance at collector level.	Have any GO/GOP tasks been delegated by a CFR, JRO, or Third Party Agreement? If Yes, enter delegated GO/GOP task type - CFR, JRO or Third Party Agreement and then explain in the Notes field. If no delegated task, enter No Delegation Task.	Is this Plant or Unit owned (Yes/No)? If Yes, identify owner and who has completed the responsibility and the Notes field. [Select from drop-down box]	Notes
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Entity Information

- Registered Entity Name
- Registered Entity NCR ID
- Revision Date

Effective Date (Commercial Operations Date)

Relationships

- Functional Relationships
- Responsibilities
- JRO / CFR / Third-Party Agreements
- Ownership

Basic Registration Data

- Region
- GO / GOP / NCRs
- Plant / Location (Region / State) / Unit / Type / Size / Hybrid
- GOP Control Center Location
- Connection Voltage / Location
- Generator Lead Line

Tracking Information

Main Tracking Information

- WECC is making special note of the following:
 - Determined Registration Category Type: Cat 1, Cat 2, Does Not Meet Criteria for Registration
 - New Registration or Existing NCR ID (footprint change)
 - Asset Name and Owner/Holding Company
 - Fuel Type
 - Gross MVA
 - Voltage at POI (kV)
 - BA, TO, PC, GOP
 - COD

What to Know | Recent Questions

- We have an entity that is performing GOP responsibilities for our generation facility, but we are thinking of transferring those obligations to ourselves or to another entity. How do I report that information as part of my RFI response?
 - Please use the comment section (last field) within the GO GOP Asset Form to explain that the current GOP has been provided, but a new GOP may be selected in the future. This information should also be shared when you provide your response email.
- When does my entity need to begin to report GADS information on Category 2 IBRs?
 - GADS reporting applies to NERC-registered entities. Any existing (Category 1) GO that owns solar plants that are 20 MW or greater, regardless of interconnection, is required to report in GADS.
 - Category 2 entities will not be registered until May 15, 2026, and will need to report in GADS following their registration date.

What to Know | Recent Questions (Continued)

- What additional information would be helpful for WECC's review?
 - Holding company/ownership of asset(s).
 - The physical address of the facility.
 - Voltage schedule information.
 - For WECC to determine the gross nameplate rating of the facility, please ensure the documentation you provide includes the correct type and number of inverters and the individual nameplate rating of the inverters.

Outreach Activities—Occurred May 2025 and Future Schedules



- Monthly outreach activities
 - First monthly training session occurred May 6, 2025
- Current training is geared toward Category 2 entities that are new to WECC or the ERO Enterprise
- Additional training sessions will be offered for Category 2 entities

WECC Entity Registration

Registration Reference Documents and Forms

Application of the BES Definition to BESS and Hybrid Resources

Application of the Registration Criteria for Category 2 GO/GOP IBRs

Information to Consider Regarding IBRs

File Type	Title
PDF	ERO Enterprise 101 Informational Package
PDF	ERO Enterprise Entity Onboarding Checklist
Excel	ERO Enterprise GO GOP Asset Verification Form
PDF	ERO Enterprise Registration Procedure
PDF	ERO Portal Access and Application Information
PDF	Generator Welcome Package
PDF	IBR Registration Initiative February 2025
PDF	Submitting a GO GOP Registration Request to WECC
Word	WECC Generation Registration Request Form

WECC Generation Registration Request Form

Registered Entity Information

Entity Name: Click or tap here to enter text.

NCR ID#: Click or tap here to enter text.

Type of Registration Request

New Registration ☐ Yes ☐ No

Footprint Change¹ ☐ Yes ☐ No

Function(s): Click or tap here to enter text.

Facility Information

Asset Description Information

Describe the generation asset(s) being registered or added to an existing registration.

Click or tap here to enter text.

Asset Description Information Examples

New Registration

Imaginary Solar Entity, LLC is a solar facility that is comprised of 24 Power Electronics Freesun HEM FS3430, 3.55 MVA Inverters for a total gross nameplate rating of 85.20 MVA (24 x 3.55 MVA = 85.20 MVA). The generation aggregates to a single 34.5 kV bus, stepped up through Transformer T1 to 230 kV. This facility has a nameplate rating net output limitation at POI of 75 MW and is interconnected to the Long Lasting Transmission 230 kV Substation. The facility is located at 123 Electrification Way, Electron County, CA.

Adding Asset(s) to Existing Registration.

Bright Light, LLC would like to add Cactus Storage to its registration under NCR00000 as a GO/GOP once COD is reached for this asset. This BESS facility has a gross nameplate rating of 184.8 MVA and consists of the following two battery units that are interconnected to the Everlasting Transmission:

- BESS1 = Gross Nameplate Rating of 75.6 MVA (18 Power Electronics, PCSM Gen 3 FP4200M2 inverters x 4.2 MVA)
 - Nameplate Rating Net Output Limitation at POI: 50 MW
- BESS2 = Gross Nameplate Rating of 109.2 MVA (26 Power Electronics, PCSM Gen 3 FP4200M2 inverters x 4.2 MVA)
 - Nameplate Rating Net Output Limitation at POI: 75 MW

The two units aggregate to two 34.5 kV buses, stepped up through Transformers T1 and T2 to a common 230 kV bus. The facility is located at 111 Battery Road, Current County, CO.

Resources (Continued)

NERC Information

- [NERC Organization Registration](#)
- [Letter from Howard Gugel: Introduction to NERC, the E-ISAC, and the ERO Enterprise](#)
- [Quick Reference Guide: IBR Registration Initiative](#)

Onboarding Information

- [ERO Enterprise 101 Informational Package](#)
- [ERO Enterprise Entity Onboarding Checklist](#)
- [WECC Generator Welcome Package](#)

Contacts

Registration | Registration@wecc.org

- Mark Rogers | Manager, Registration & Certification | mrogers@wecc.org
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- Andrew Williamson | Senior Registration & Certification Engineer | awilliamson@wecc.org
- Sarah Mitchell | Staff Engineer, Registration | smitchell@wecc.org



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June 19, 2025 | 2:00 p.m. MT