
RELIABILITY
& SECURITY
Oversight Monthly Update
June 20, 2024, 2:00 p.m. MT

<Public>

WECC

Reliability & Security Oversight Monthly Update

June 20, 2024

Mailee Cook, Training and Outreach Specialist

WECC Website
SURVEY

Enforcement *FUNDAMENTALS*

POWER SYSTEMS SECURITY CONFERENCE

WECC

RELIABILITY & SECURITY

Workshop - Portland, Oregon

October 29–30, 2024

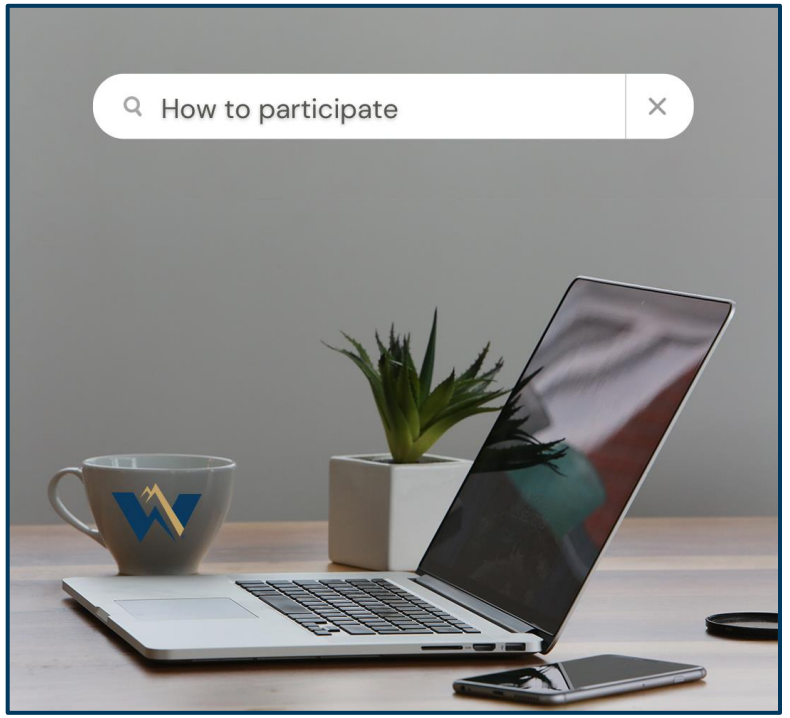
Antitrust Policy

- 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

- R&SO Standards Update
  - Steve Rueckert, Director of Standards, WECC
- Registration Application Expectations
  - Abby Fellinger, Senior Registration & Certification Engineer, O&P, WECC
- Certification Process
  - Carmelina Spina, Senior Registration & Certification Engineer, O&P, WECC
- Inverter-based Resources Initiative Update
  - Mark Rogers, Senior Technical Advisor, Registration & Certification, WECC

<Public>

WECC

R&SO Standards Update

June 20, 2024

Steve Rueckert

Director of Standards

Items Covered

- Current WECC Activities
- Current NERC Activities

Current WECC Projects

- WECC-0142 Retire BAL-002-WECC
  - Kevin Conway added to Drafting Team
  - Tall hurdle
- WECC-0153 Interchange Consolidation Criterion
  - Consolidation of 11 WECC INT Criteria into a single document
  - Approved by the Ballot Pool (100%)
  - Approved by the Board
    - Becomes effective October 1, 2024
- WECC-0155 PRC-006-WECC-CRT-4 Five-year Review
  - WSC accepted the SAR
  - DT being formed

NERC Activities

- NERC has 24 active or new projects
- Prioritized as high, medium, or low
  - Projects with FERC mandated completion dates or NERC BOT directed dates are prioritized as high
- Low and medium projects may not be addressed until 2025 or 2026
- See prioritization on the NERC Standards Under Development page at https://www.nerc.com/pa/Stand/Pages/Standards-Under-Development.aspx

Recent NERC Ballots

- Project 2021-03 CIP-002-Y
  - Received a weighted 47.72% approval
    - WECC voted negative with comments (All regions submitting a vote voted NO)
  - DT will review comments
- Project 2023-07 Transmission Planning Performance Requirements for Extreme Weather TPL-008
  - Only received an 18.69% approval
  - WECC voted negative with comments

NERC Events

- NERC SC meeting held on June 12, 2024
  - Four Action Items
    - Three approved as proposed
    - One SAR rejected (Agenda Item 4)
  - Agenda packet available at: https://www.nerc.com/comm/SC/Agenda%20Highlights%20and%20Minutes/SC_Meeting_Agenda_March_20_2024.pdf
- Project 2022-03 Energy Assurance with Energy-constrained Resources
  - Comment and Ballot close June 20, 2024
- Project 2023-06 Risk Assessment Refinement
  - Comment and Ballot close July 3, 2024

NERC Events

- Project 2023-02 Analysis and mitigation of BES Inverter-Based Resource Performance Issues
  - Comment and Ballot close July 10, 2024
- Four SARs posted for comment
  - Comment periods close between June 24, and July 1, 2024
- Project 2023-04 Modifications to CIP-003
  - Comment and Ballot close July 11, 2024

NERC Events

- All NERC Projects
  - Please submit comments
  - Please vote
- Your voice and opinion matter
  - Helps the drafting teams develop better products

WECC

Electric Reliability and Security for the West

www.wecc.org

WECC

Registration Application Expectations

June 20, 2024

Abby Fellinger

Senior Registration & Certification Engineer, O&P

Focused Registration Activities

- New Entity Registration Requests
- Adding Assets to Existing Registration
  - Footprint Change Addition
- When to Contact WECC Registration
  - registration@wecc.org
- International Registration/Changes
- Resources

Organization Registration Requirements

- Identifies and registers BPS users, owners, and operators who are responsible for performing specified reliability functions to which requirements of mandatory NERC Reliability Standards apply.
  - Registered entities can face penalties or sanctions for noncompliance

- Requirements and activities for the Organization Registration Program are embodied in the FERC-approved NERC Rules of Procedure (ROP):
  - ROP, Section 500 | Organization Registration and Certification
  - Appendix 2 | Definitions Used in the ROP
  - Appendix 5A | Organization Registration and Certification Manual
  - Appendix 5B | Statement of Compliance Criteria
  - Appendix 5C | Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of BES

Inclusions and Exclusions Listed in Appendix 2

Inclusions and Exclusions

Example diagrams of BES inclusions and exclusions are available in:

[BES Definition Reference Document]

[CMEP Practice Guide: Application of the BES Definition to Battery Energy Storage Systems and Hybrid Resources]

Processes exist for submittal and consideration of Exceptions and Materiality:

- Review Appendix 5A, Appendix 5B, and Appendix 5C

Majority of Applications: Inclusion 4

New Entity Registration Requests

Complete Self-evaluation

- Evaluate applicability of the BES Definition, Appendix 2, and Appendix 5B registration criteria
- Determine whether Organization Certification Process applies (BA, TOP, RC functions)

Contact WECC with Registration Questions

- WECC may advise on applicability of registration criteria and answer process questions
- Email questions to registration@wecc.org

Submit a Registration Request Through CORES

- How to Submit a New Registration Request in CORES | CORES End User Guide
- Add project details and relevant documents in the Comments and Attachments section in CORES

Respond to WECC Requests for Information

- WECC reviews the request and will ask for additional information as needed

Information Collected: GO/GOP Registration

CORES Required Fields

- Registered Entity Name
- Address
- Affiliates and Holding Companies
- Contact Roles
- Entity Scopes (Registered Functions)
- Functional Mapping
- Comments and Attachments:
  - **Comment**: Describe facility project and phase(s)
  - **Attachment**: Zip folder of documentation referenced on this slide

Registration Documentation Required

- Registration Request Form/Questionnaire
- Map/geographic location of facility
- GO GOP Asset Verification Form
- Interconnection Agreements
- Third-Party or Operating Agreements
- Operating One-line Diagrams
  - Depicting the Generation Resource(s) through to the Point of Interconnection w/Transmission Owner (TO)
- Nameplate Data for the individual PV inverters

Note: Provided documentation should include accurate facility profile information (such as gross nameplate rating, capacity in-service agreement limitations, and inverter information).

Example of Registration Request Form Information

Facility Information

New Registration Information | Interconnection Details from Appendix C*
Entity Facility Name is a fuel type generation facility that is located in Name County, State which consists of ## inverters (rated at #.# MVA each), has a gross nameplate rating of ### MVA. This facility has a requested capacity in-service agreement of XXX MW at the Point of Interconnection. The Fuel Type facility is connected to the Name XXXkV Switchyard via a XXX ft generation tie line.

Facility Information for New Registration

- Tentative Registration Effective Date | Commercial Operation Date (COD):
- Physical Address:
  - Latitude and Longitude:
- Point of Interconnection:
- Interconnection Voltage:
- Fuel Type:
- Individual Inverter Rating (MVA):
- Inverter Type:
- Gross Nameplate Rating (MVA and MW):
- Nameplate Rating Limitation at POI | Operational Rating (MVA and MW):

	Phase 1	Phase 2	Total
Total rated (gross) capacity at generator/inverter terminals:			
Total rated (gross) capacity at GSU transformer			
Total net capacity provided under the LGIA at Point of Interconnection:			

Readiness Questions

Facility Ratings

(1) Describe your change control process to ensure Facility Ratings are updated for both emergency and planned changes in the field.
Applicable to GO

Click or tap here to enter text.

(2) What neighboring entities (tie-lines) do you coordinate with to establish Facility Ratings. Please describe your process to do so.
Applicable to GO

Click or tap here to enter text.

Protection Systems

(1) Describe how you track required maintenance activities for Protection System Components. Do you have an integrated inventory and workorder system?
Applicable to GO

Click or tap here to enter text.

(2) Do you have a protection system coordination process or checklist that integrates requirements from other NERC compliance standards, including PRC-019, PRC-024, and PRC-025?
Applicable to GO

Click or tap here to enter text.

(3) What electrically joined Facilities does your entity coordinate protection system settings with? Describe the process(es).
Applicable to GO

Click or tap here to enter text.

Remote Access

(1) Do you allow remote access to your BES Cyber Systems?
Applicable to GO, GOP

Click or tap here to enter text.

(2) If yes, does this include vendors?
Applicable to GO, GOP

Click or tap here to enter text.

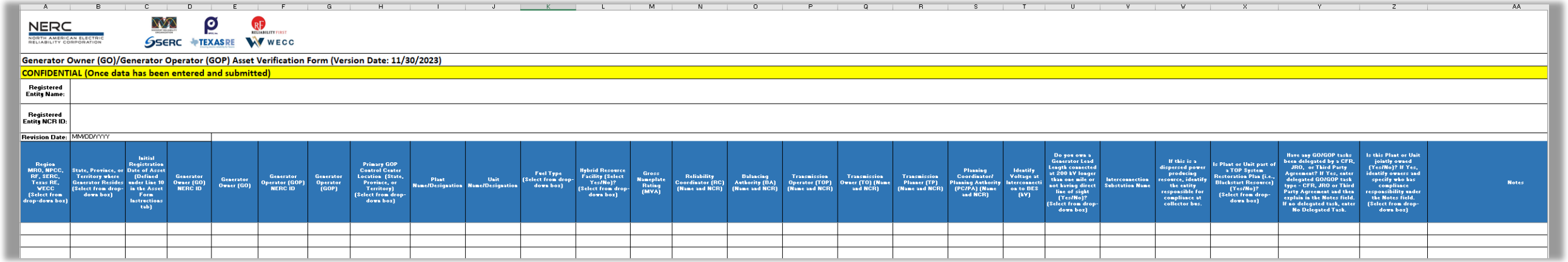
(3) If yes to either, what security steps have you taken to protect your entity (including low-impact systems) from cyber-attack through remote access?
Applicable to GO, GOP

*Explain if there are any discrepancies between documentation provided (such as Interconnection Agreement and One-line Diagram information).

<Public>

GO GOP Asset Verification Form

- [ERO Enterprise GO GOP Asset Verification Form]



NERC NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION — SERC — TEXAS RE — RELIABILITY FIRST — WECC

Generator Owner (GO)/Generator Operator (GOP) Asset Verification Form (Version Date: 11/30/2023)

CONFIDENTIAL (Once data has been entered and submitted)

Registered Entity Name:	
Registered Entity NCR ID:	
Revision Date:	MM/DD/YYYY

Region MRO, NPCC, RF, SERC, Texas RE, WECC (Select from drop-down box)	State, Province, or Territory where Generator Resides (Select from drop-down box)	Initial Registration Date of Asset (Defined under Line 10 in the Asset Form Instructions tab)	Generator Owner (GO) NERC ID	Generator Owner (GO)	Generator Operator (GOP) NERC ID	Generator Operator (GOP)	Primary GOP Control Center Location (State, Province, or Territory) (Select from drop-down box)	Plant Name/Designation	Unit Name/Designation	Fuel Type (Select from drop-down box)	Hybrid Resource Facility (Select Yes/No)? (Select from drop-down box)	Gross Nameplate Rating (MVA)	Reliability Coordinator (RC) (Name and NCR)	Balancing Authority (BA) (Name and NCR)	Transmission Operator (TOP) (Name and NCR)	Transmission Owner (TO) (Name and NCR)	Transmission Planner (TP) (Name and NCR)	Planning Coordinator/ Planning Authority (PC/PA) (Name and NCR)	Identify Voltage at Interconnection to BES (kV)	Do you own a Generator Lead Length connected at 200 kV longer than one mile or not having direct line of sight (Yes/No)? (Select from drop-down box)	Interconnection Substation Name	If this is a dispersed power producing resource, identify the entity responsible for compliance at collector bus.	Is Plant or Unit part of a TOP System Restoration Plan (i.e., Blackstart Resource) (Yes/No)? (Select from drop-down box)	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 Delegated Task.	Is this Plant or Unit jointly owned (Yes/No)? If Yes, identify owners and specify who has compliance responsibility under the Notes field. (Select from drop-down box)	Notes

Basic Registration Data

- GO/GOP/NCR ID
- Plant/Unit Type/Size
- Connection Voltage/Location
- Generator Lead Line

Relationships

- Functional Relationships
- Responsibilities
- JRO/CFR
- Ownership

Notes

- Examples of information to explain:
  - Multiple fuel types
  - Limitations of nameplate rating
  - Describe agreements in place

<Public>

Operating One-line Diagrams

One-line Diagrams should depict the Generation Resource(s) through to the Point of Interconnection w/TO.

Specifically, diagrams should include the Interconnection Point and Collector System with feeders and individual ratings.

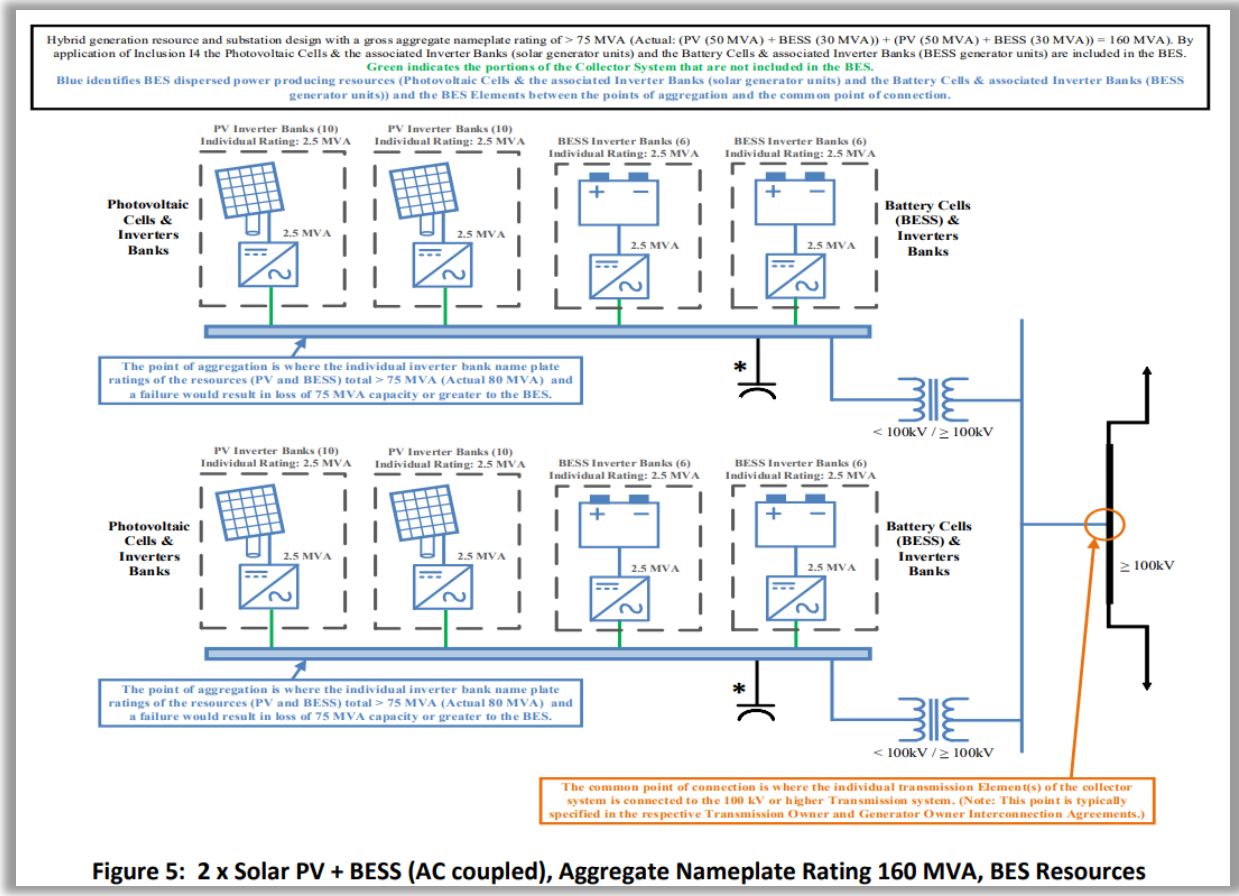


Figure 5: 2 x Solar PV + BESS (AC coupled), Aggregate Nameplate Rating 160 MVA, BES Resources

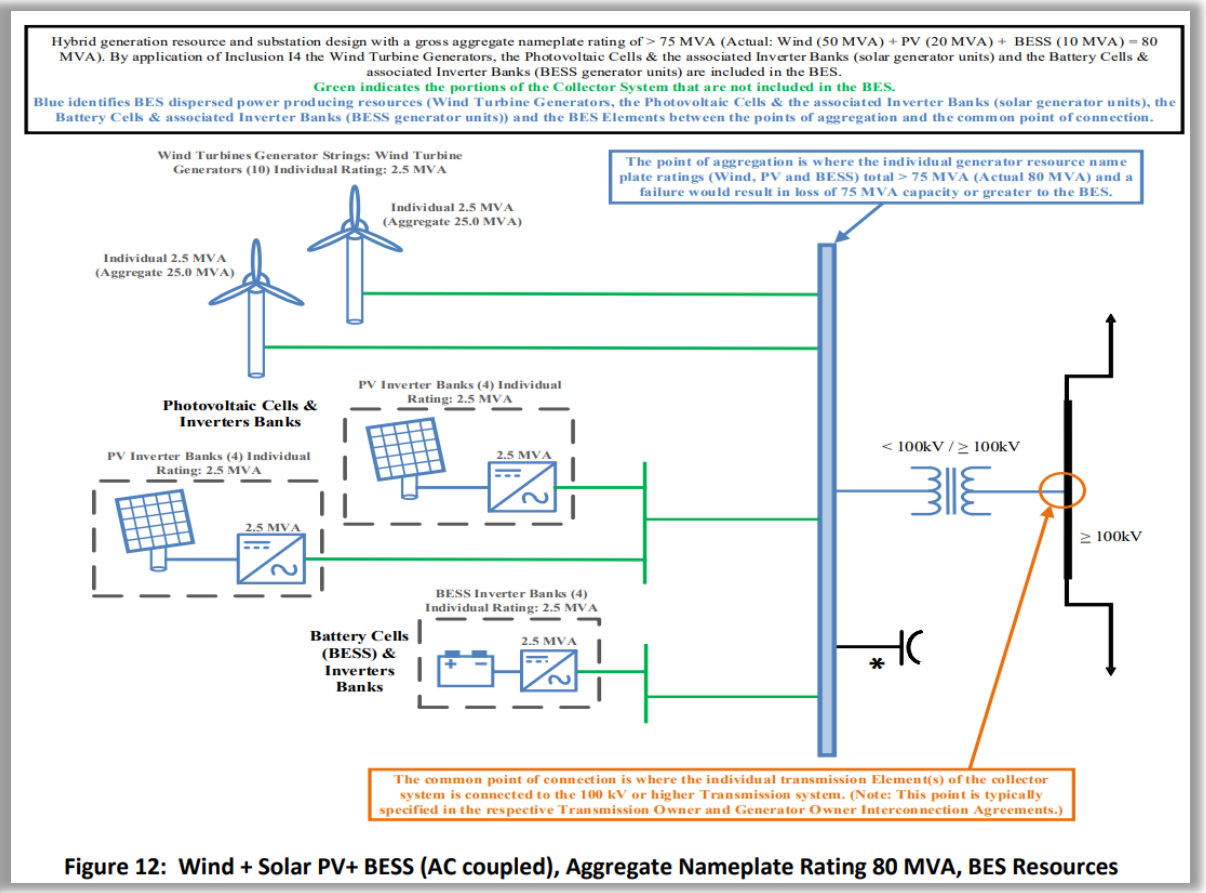


Figure 12: Wind + Solar PV+ BESS (AC coupled), Aggregate Nameplate Rating 80 MVA, BES Resources

[Application of the BES Definition to BESS and Hybrid Resources]

<Public>

Operating One-line Diagrams—Inverter Nameplate

	MODULE #1	MODULE #2	MODULE #3
MODULE MFR			
MODULE MODEL			
MODULE STC RATING			
MODULE QUANTITY			
DC CAPACITY			
STRING SIZE			
STRING QUANTITY			
3-STR TABLE QTY			
2-STR TABLE QTY			
MAX DC SYSTEM VOLTAGE			
TOTAL DC SYSTEM SIZE			
INVERTER MFR			
INVERTER MODEL			
INVERTER OUTPUT VOLTAGE			
INVERTER AC OUPUT			
INVERTER QUANTITY			
AC SYSTEM SIZE (@ POI)			
DC/AC RATIO (@ POI)			
RACKING MFR			
RACKING MODEL			
RACK TYPE			
MODULE ORIENTATION			
ARRAY TILT ANGLE			
ARRAY AZIMUTH			
ARRAY PITCH , (GCR)			
ASHRAE WEATHER STATION			
ASHRAE HIGH TEMP (0.4%)			
OWNER SPECIFIED HIGH TEMP			
ASHRAE MIN EXTREME TEMP			
OWNER SPECIFIED MIN TEMP			
SITE ELEVATION			

Redacted Site Map with Individual Inverters

<Public>

Manufacturer's Data Specifications—Solar/BESS Inverters

Example of Datasheet Information

SUNGROW
Clean power for all

Type designation	SG3425UD-MV	SG3600UD-MV
Input (DC)		
Max. PV input voltage	1500 V	
Min. PV input voltage / Start-up input voltage	875 V / 915 V	915 V / 955 V
Available DC fuse sizes	250 A - 630 A	
MPP Voltage Range	875 V - 1500 V	915 V - 1500 V
Full power MPP voltage range @ 45 ℃	875 V - 1300 V *	915 V - 1300 V *
No. of DC inputs	24 (optional: 28)	
Max. DC short-circuit current	10000 A	
PV array configuration	Negative grounding or floating	
Output (AC)		
AC output power	3425 kVA @ 45 ℃(113 ℉), 3083 kVA @ 50 ℃(122 ℉) **	3600 kVA @ 45℃(113 ℉), 3240 kVA @ 50℃(122 ℉) **
Max. AC output current	165 A	173 A
AC voltage	12 kV - 34.5 kV	
Nominal grid frequency / Grid frequency range	60 Hz / 57 Hz – 63 Hz	
THD	< 3 % (at nominal power)	
Power factor at nominal power / Ajustable power factor	> 0.99 / 0.8 leading - 0.8 lagging	
Efficiency		
Inverter max. efficiency	98.9 %	
Inverter CEC efficiency	98.5 %	
Transformer		
Transformer rated power	3425 kVA	3600 kVA
Transformer max. power	3425 kVA	3600 kVA
LV / MV voltage	0.6 kV / (12 – 35) kV	0.63 kV / (12 – 35) kV
Transformer vector	Dy1 (Optional: Dy11, Yny0)	
Transformer cooling type	KNAN (Optional: ONAN)	

Protection	
DC input protection	Load switch + fuse
Inverter output protection	Circuit breaker
AC MV output protection	Load switch + fuse
Overvoltage protection	DC Type II / AC Type II
Grid monitoring / Ground fault monitoring	Yes / Yes
Insulation monitoring	Yes
Overheat protection	Yes
General data	
Dimensions (W*H*D)	6058 mm * 2896 mm * 2438 mm 238.5'' * 114.0'' * 96.0''
Weight	18000 kg 39683.2 lbs
Degree of protection	NEMA 4X (Electronic for Inverter) /NEMA 3R (Others)
Auxiliary power supply	5 kVA, 120 Vac; Optional: 30 KVA 480 Vac + 5 KVA 120 Vac
Operating ambient temperature range(it refers to the ambient temperature of 1m around the inverter.)	-35 ℃ to 60 ℃ (> 45 ℃ derating) / optional: -40 ℃ to 60 ℃ (> 45 ℃ derating) -31 ℉ to 140 ℉ (> 113 ℉ derating) / optional: -40 ℉ to 140 ℉ (> 113 ℉ derating)
Allowable relative humidity range	0 % - 100 %
Cooling method	Temperature controlled forced air cooling
Max. operating altitude	1000 m (Standard) / > 1000 m (Customized) (3280.8 ft (standard) / > 3280.8 ft (Customized))
DC-Coupled storage interface	Optional
Night reactive power function	Optional
Charging power from the grid	Optional
Communication	Standard: RS485, Ethernet
Compliance	UL 1741, IEEE 1547, UL 1741 SA, NEC 2017, CSA C22.2 No.107.1-01
Grid support	Q at night function (optional), L/HVRT, L/HFRT, Active & reactive power control and power ramp rate control, Volt-var, Frequency-watt

* Full power MPP range is temperature dependent, check the characteristic curve of the inverter for more information
** For sustained operation above 40°C, an optional 60 °C temperature rise transformer is recommended

SG3425UD-MV SG3600UD-MV_Datasheet_V17_SUNGROW

Adding Assets to Existing Registration

- Footprint Change Process
  - Sign in to ERO Portal
  - Access CORES for your entity
  - Click on "Comments and Attachments" to add a description of change
  - Send an email to registration@wecc.org
  - Respond to information requests

Example of Footprint Change in CORES

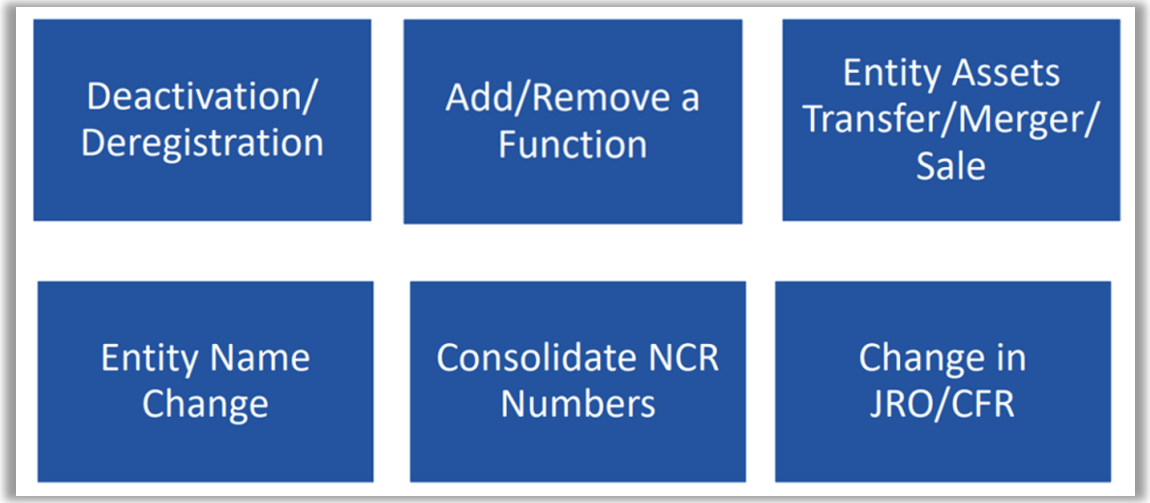
Please accept this as notification of Registered Entity Name's request add the Name facility to its registration under NCR##### as a GO/GOP with a tentative effective registration date of MM/DD/YYYY. The facility has a gross nameplate rating of XXX.X MVA and is connected to the grid at ### kV in the WECC Region.

Entity Name is submitting the following documents pertaining to facility name for WECC's review:

- Generator Registration Questionnaire
- ERO Enterprise GO GOP Asset Verification Form
- As-built one-line diagram(s)
- Interconnection Agreement(s)
- O&M Agreement

Timeline of Reporting Registration Changes

- Please submit registration activity requests 60 days ahead of the expected effective date of change.
- The request should be sent to registration@wecc.org.
- If the planned effective date changes, please email an update to registration@wecc.org.



- Please notify WECC when the registration activity is complete (when the effective date is reached).

International Registration/Changes

- All new international registrations should be submitted via WECC's international registration form
- All requests to change a functional registration must use the international registration form
  - Example: an entity that believes it no longer meets the criteria of a Distribution Provider (DP) must first complete the registration form and send it to registration@wecc.org to start the evaluation process by WECC
- WECC registration will then notify the WECC International Relations Manager of the request

Resources

WECC Registration Page

- WECC Entity-Registration

NERC Registration Page

- NERC Organization Registration

Onboarding Information

ERO Enterprise 101 Informational Package

ERO Enterprise Entity Onboarding Checklist

WECC Generator Welcome Package

<Public>

WECC

Certification Process

June 20, 2024

Carmelina Spina

Senior Registration & Certification Engineer, O&P

Objectives

1. Certification Applicability
2. Types of Certifications
3. Initiating Certifications Activities
4. Full Certification process
5. Certification Review process
6. Notification
7. Resources

Certification Applicability

- Who does a Certification apply to?
  - Existing BA, RC, or TOP
  - New BA, RC, or TOP
- Why must these entities go through Certification?
  - To assess the processes, procedures, tools, personnel, and training entities used to perform their respective function
  - Attain a reasonable level of assurance that the entity has the capacity to meet the compliance obligations of its registration

Types of Certifications

Full Certifications

- Prospective entity looking to become a NERC registered BA, TOP, or RC

Certification reviews

- Already registered entity (RC, TOP, and BA)
- Changes to the registered entity's footprint (CFR assignments as well), relocation of a control center, or modification of an energy management system (EMS)

Lesser Activities

- Discretion of Regional Entity and NERC

Initiation of Certification Activities

When to notify WECC

- At least 12 months out from expected certification completion

How to notify WECC

- WECC.org -> registration and certification -> organization certification
- Fill out the “ERO Certification Application”

Who to notify at WECC

- Send notification of application to certification@wecc.org
- Send application through WECC’s secure workspace

Full Certification Process

Before on-site visit

- Entity submits application to WECC
- WECC assigns CTL
- Kick-off call set with WECC Certification Team
- CTL sends Certification package to entity (w/ scope), schedule onsite visit (90 days before onsite)
- WECC team reviews documentation

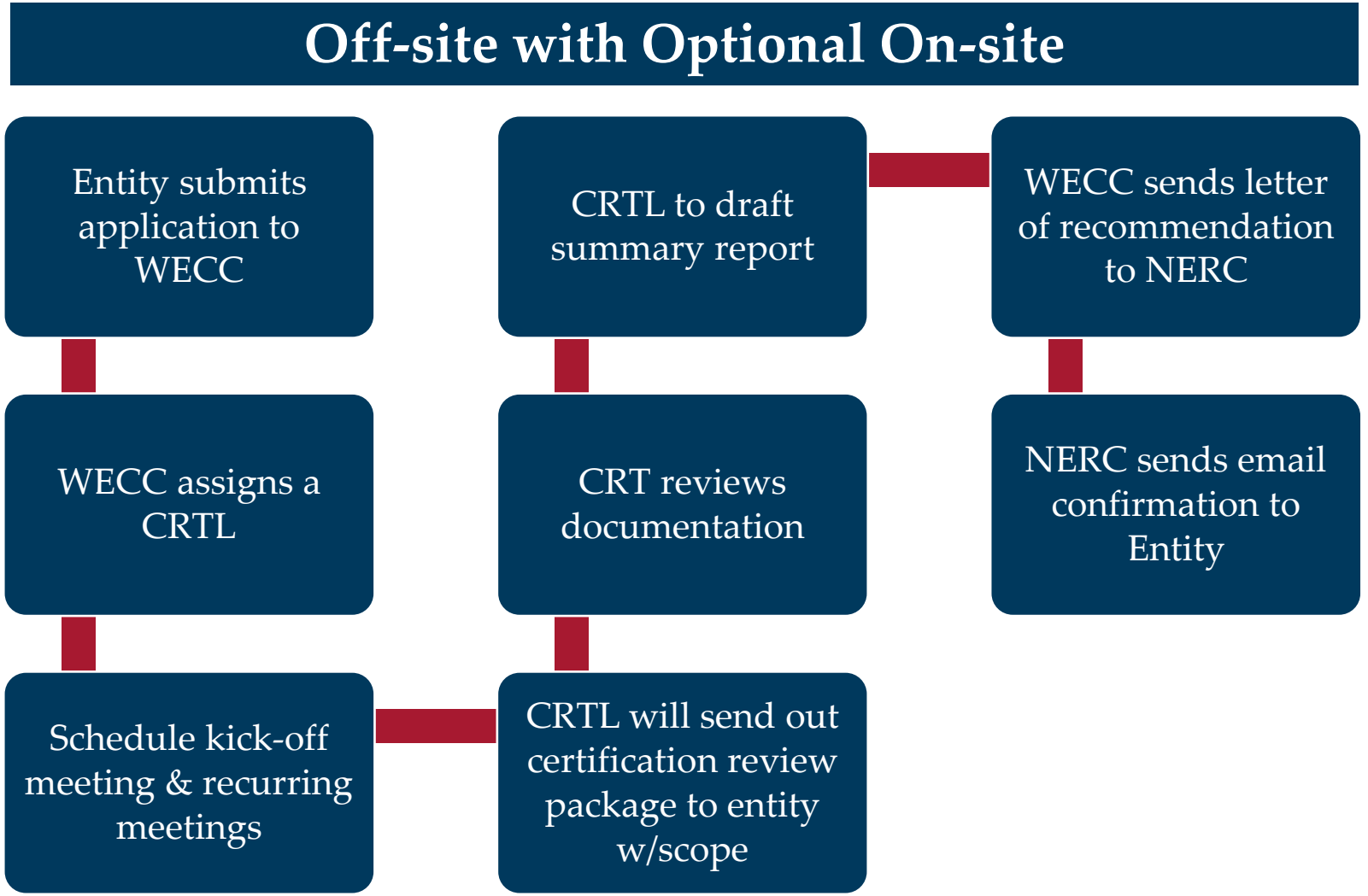
On-site visit

- Primary and backup control center
- Opening presentation
- Review items only available on site
- Conduct interviews
- Daily debriefs
- Closing presentation
- Entity feedback form

After on-site visit

- Review documentation provided by the entity
- Certification draft and final reports
- WECC sends letter of recommendation
- NERC sends official notification and certificate to entity
- Entity must commence operations within 12 months of certification

Certification Review Process



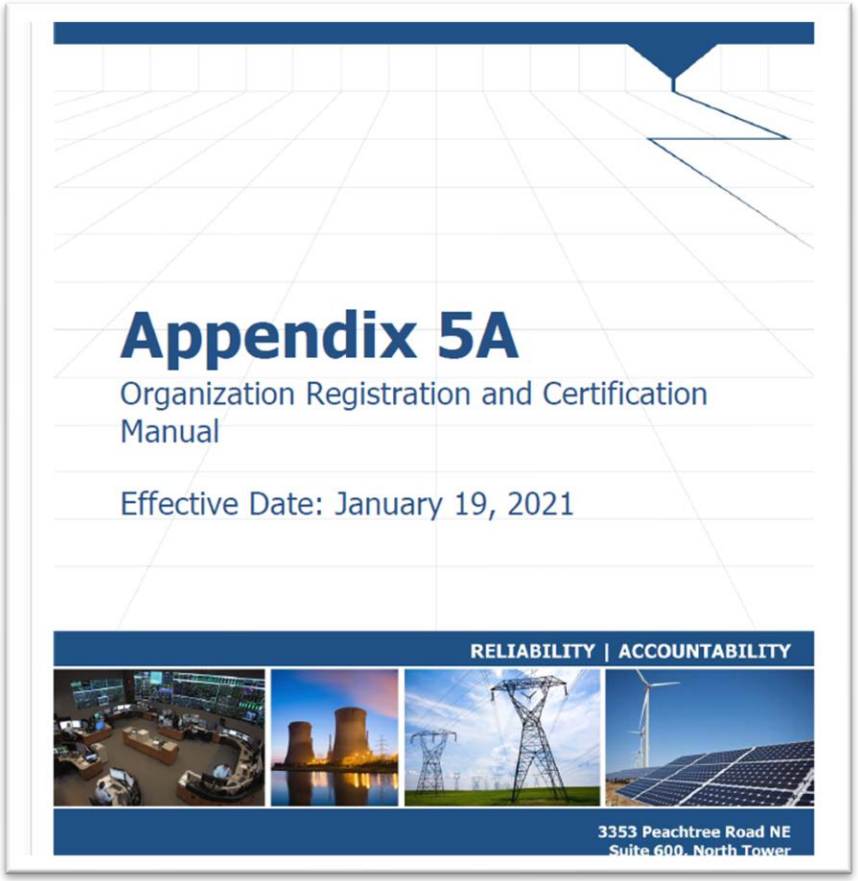
Notification

What if an entity fails to notify WECC of changes applicable to a Certification review or Full Certification?

- Compliance oversight team will be notified
- Will be included in the entity's compliance oversight plan
- May affect future audit scopes or entity engagements
- WECC may conduct a spot-check

Resources

- WECC's Organization Certification Page
  - Certification Application
  - Email: Certification@wecc.org
  - NERC's Organization Certification Page
    - Final Certification Reports
    - Certification Process documents



<Public>

WECC

IBR Registration Initiative Update

June 20, 2024

Abby Fellinger

Senior Registration & Certification Engineer, O&P

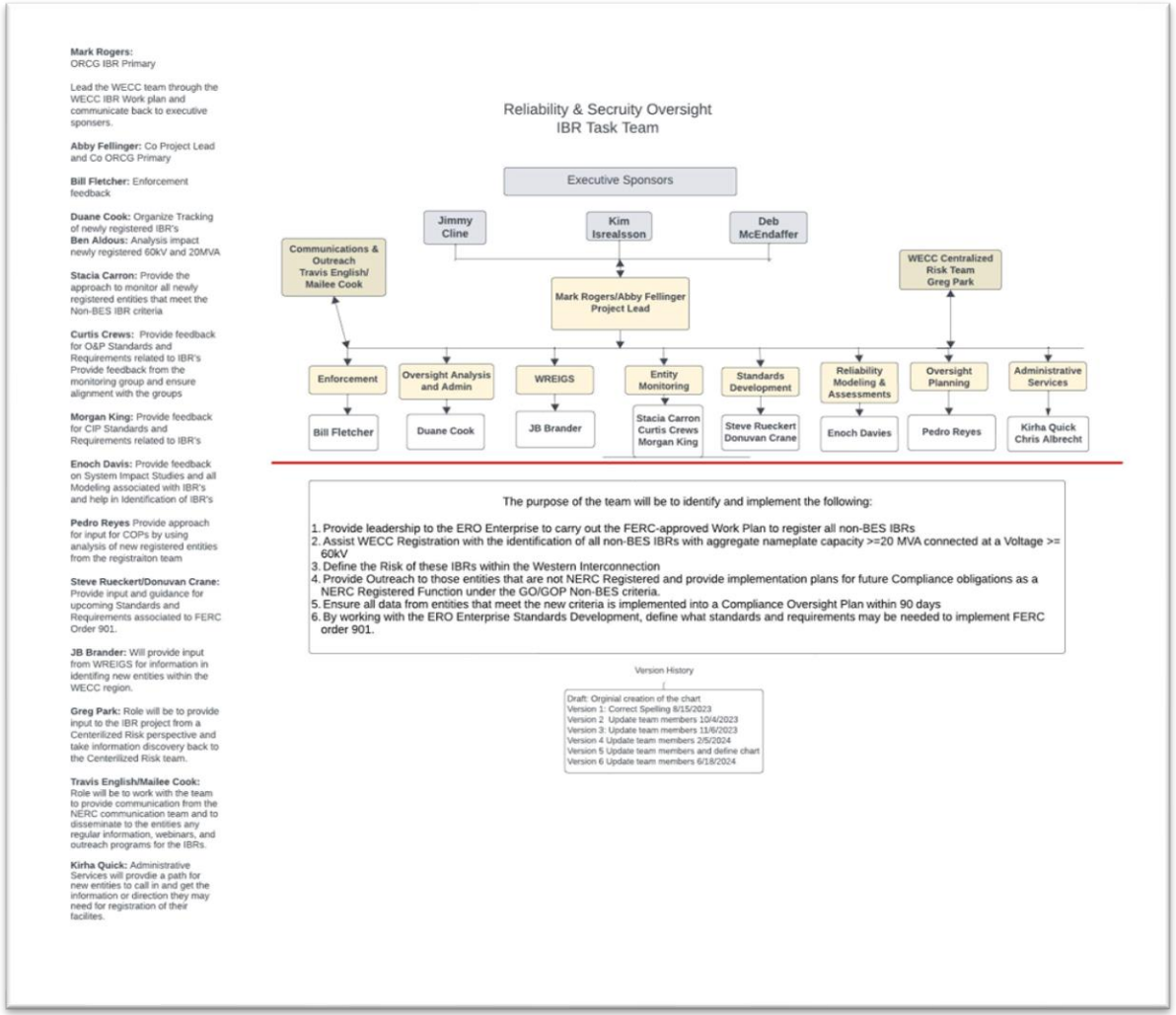
IBR Registration Initiative Update

- NERC Rules of Procedure Changes (proposed revisions)
  - Anticipated FERC approval: June 27, 2024
- ERO Enterprise efforts
  - Preparing training for the new entities
  - Outreach with road shows across the regions

<Public>

WECC Registration Team Efforts

- WECC Registration team
  - Analyzing the numbers for the new entity data
  - Working with subgroups from the WECC IBR Task Team



Mark Rogers: ORCG IBR Primary

Lead the WECC team through the WECC IBR Work plan and communicate back to executive sponsers.

Abby Fellinger: Co Project Lead and Co ORCG Primary

Bill Fletcher: Enforcement feedback

Duane Cook: Organize Tracking of newly registered IBR's
Ben Aldous: Analysis impact newly registered 60kV and 20MVA

Stacia Carron: Provide the approach to monitor all newly registered entities that meet the Non-BES IBR criteria

Curtis Crews: Provide feedback for O&P Standards and Requirements related to IBR's Provide feedback from the monitoring group and ensure alignment with the groups

Morgan King: Provide feedback for CIP Standards and Requirements related to IBR's

Enoch Davis: Provide feedback on System Impact Studies and all Modeling associated with IBR's and help in Identification of IBR's

Pedro Reyes Provide approach for input for COPs by using analysis of new registered entities from the registralton team

Steve Rueckert/Donuvan Crane: Provide input and guidance for upcoming Standards and Requirements associated to FERC Order 901.

JB Brander: Will provide input from WREIGS for information in identifing new entities within the WECC region.

Greg Park: Role will be to provide input to the IBR project from a Centerilized Risk perspective and take information discovery back to the Centerilized Risk team.

Travis English/Mailee Cook: Role will be to work with the team to provide communication from the NERC communication team and to disseminate to the entities any regular information, webinars, and outreach programs for the IBRs.

Kirha Quick: Administrative Services will provdie a path for new entities to call in and get the information or direction they may need for registration of their facilites.

Reliability & Secruity Oversight
IBR Task Team

Executive Sponsors

Jimmy Cline | Kim Isrealsson | Deb McEndaffer

Communications & Outreach: Travis English/ Mailee Cook

Mark Rogers/Abby Fellinger: Project Lead

WECC Centralized Risk Team: Greg Park

Enforcement	Oversight Analysis and Admin	WREIGS	Entity Monitoring	Standards Development	Reliability Modeling & Assessments	Oversight Planning	Administrative Services
Bill Fletcher	Duane Cook	JB Brander	Stacia Carron, Curtis Crews, Morgan King	Steve Rueckert, Donuvan Crane	Enoch Davies	Pedro Reyes	Kirha Quick, Chris Albrecht

The purpose of the team will be to identify and implement the following:

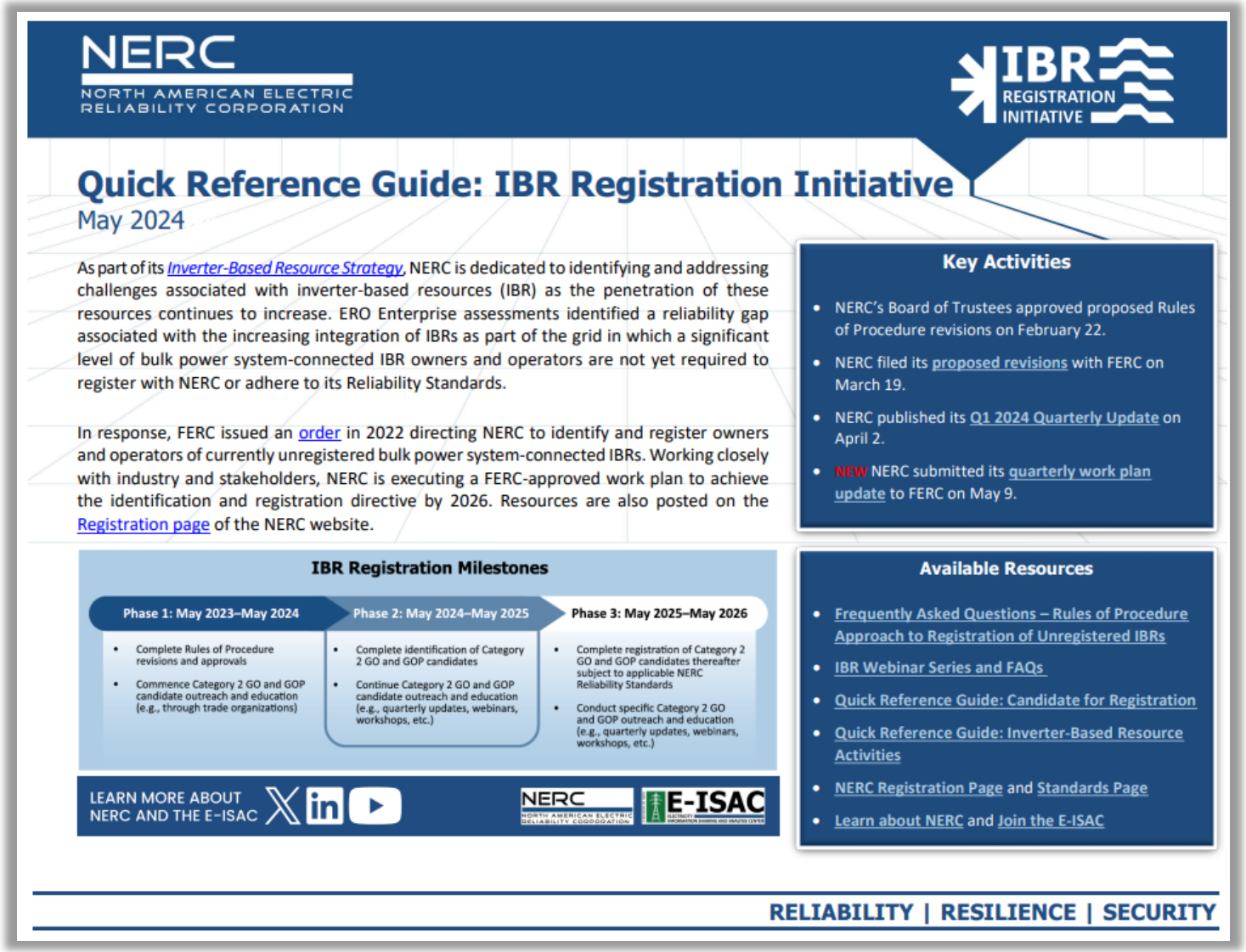
1. Provide leadership to the ERO Enterprise to carry out the FERC-approved Work Plan to register all non-BES IBRs
2. Assist WECC Registration with the identification of all non-BES IBRs with aggregate nameplate capacity >=20 MVA connected at a Voltage >= 60kV
3. Define the Risk of these IBRs within the Western Interconnection
4. Provide Outreach to those entities that are not NERC Registered and provide implementation plans for future Compliance obligations as a NERC Registered Function under the GO/GOP Non-BES criteria.
5. Ensure all data from entities that meet the new criteria is implemented into a Compliance Oversight Plan within 90 days
6. By working with the ERO Enterprise Standards Development, define what standards and requirements may be needed to implement FERC order 901.

Version History

Draft: Orginial creation of the chart
Version 1: Correct Spelling 8/15/2023
Version 2 Update team members 10/4/2023
Version 3: Update team members 11/6/2023
Version 4 Update team members 2/5/2024
Version 5 Update team members and define chart
Version 6 Update team members 6/18/2024

Communications Efforts

- Current Communications Products:
  - Strategic Communications Plan
  - Quick Reference Guides
  - FAQs
  - Fact Sheets
  - Quarterly Updates
  - WECC IBR website posts



NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

IBR REGISTRATION INITIATIVE

Quick Reference Guide: IBR Registration Initiative

May 2024

As part of its *Inverter-Based Resource Strategy*, NERC is dedicated to identifying and addressing challenges associated with inverter-based resources (IBR) as the penetration of these resources continues to increase. ERO Enterprise assessments identified a reliability gap associated with the increasing integration of IBRs as part of the grid in which a significant level of bulk power system-connected IBR owners and operators are not yet required to register with NERC or adhere to its Reliability Standards.

In response, FERC issued an order in 2022 directing NERC to identify and register owners and operators of currently unregistered bulk power system-connected IBRs. Working closely with industry and stakeholders, NERC is executing a FERC-approved work plan to achieve the identification and registration directive by 2026. Resources are also posted on the Registration page of the NERC website.

Key Activities

- NERC's Board of Trustees approved proposed Rules of Procedure revisions on February 22.
- NERC filed its proposed revisions with FERC on March 19.
- NERC published its Q1 2024 Quarterly Update on April 2.
- NEW NERC submitted its quarterly work plan update to FERC on May 9.

IBR Registration Milestones

Phase 1: May 2023–May 2024
- Complete Rules of Procedure revisions and approvals
- Commence Category 2 GO and GOP candidate outreach and education (e.g., through trade organizations)

Phase 2: May 2024–May 2025
- Complete identification of Category 2 GO and GOP candidates
- Continue Category 2 GO and GOP candidate outreach and education (e.g., quarterly updates, webinars, workshops, etc.)

Phase 3: May 2025–May 2026
- Complete registration of Category 2 GO and GOP candidates thereafter subject to applicable NERC Reliability Standards
- Conduct specific Category 2 GO and GOP outreach and education (e.g., quarterly updates, webinars, workshops, etc.)

Available Resources

- Frequently Asked Questions – Rules of Procedure Approach to Registration of Unregistered IBRs
- IBR Webinar Series and FAQs
- Quick Reference Guide: Candidate for Registration
- Quick Reference Guide: Inverter-Based Resource Activities
- NERC Registration Page and Standards Page
- Learn about NERC and Join the E-ISAC

LEARN MORE ABOUT NERC AND THE E-ISAC

RELIABILITY | RESILIENCE | SECURITY

WECC

Electric Reliability and Security for the West

www.wecc.org


RELIABILITY
& SECURITY
Oversight Monthly Update
July 18, 2024, 2:00 p.m. MT

Follow and engage!
@weccreliability