

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**North American Electric Reliability
Corporation**

)
)
)

Docket No. RD22-4-001

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
INVERTER-BASED RESOURCES WORK PLAN PROGRESS UPDATE**

On May 18, 2023, the Federal Energy Regulatory Commission (“Commission”) issued an order (“Order”)¹ approving the North American Electric Reliability Corporation (“NERC”) Work Plan filed on February 15, 2023, as amended on March 13, 2023,² to address registration of Inverter-Based Resources (“IBRs”) that are connected to the Bulk-Power System (“BPS”) but not within NERC’s definition of the bulk electric system (referred to hereafter as “Category 2 GO/GOP”). As directed in the Order and prior IBR Order,³ NERC hereby submits its quarterly progress update on activities by the ERO Enterprise (NERC and the Regional Entities⁴) to execute the Work Plan.

On June 27, 2024, the Commission approved the proposed Registry Criteria revisions.⁵ On July 9, 2024, the ERO Enterprise issued a request for information to Balancing Authorities (“BAs”) and Transmission Owners (“TOs”) asking them to submit relevant information on those entities within their footprints that could meet the Category 2 GO and GOP Registry Criteria by

¹ *Order Approving Registration Work Plan*, 183 FERC ¶ 61,116 (2023) [hereinafter *Order*]; and *Registration of Inverter-Based Resources*, 181 FERC ¶ 61,124 (2022) [hereinafter *IBR Order*] (directing the Work Plan).

² *N. Am. Elec. Reliability Corp.*, Docket No. RD22-4-001 (Feb. 15, 2023) [hereinafter *Work Plan Filing*].

³ *IBR Order* at PP 21 and 35; *Order* at P 52 (directing NERC to provide Work Plan updates every 90 days detailing NERC’s progress toward identifying and registering owners and operators of unregistered IBRs).

⁴ The Regional Entities are (i) Midwest Reliability Organization (“MRO”); (ii) Northeast Power Coordinating Council, Inc. (“NPCC”); (iii) ReliabilityFirst Corporation (“RF”); (iv) SERC Reliability Corporation (“SERC”); (v) Texas Reliability Entity, Inc. (“Texas RE”); and (vi) Western Electricity Coordinating Council (“WECC”).

⁵ *Order Approving Revisions to N. Am. Elec. Reliability Corp. Rules of Proc. and Requiring Compliance Filing*, 187 FERC ¶ 61,196 (2024).

September 20, 2024. Since the last Work Plan update,⁶ the ERO Enterprise has reviewed the responses to its request for information to the BAs and TOs and reached out to potential entities that were identified through those responses. The activities described below and in Attachment 1 to the instant filing demonstrate the ERO Enterprise’s progress toward its Work Plan milestones.

I. ERO ENTERPRISE IDENTIFICATION OF REGISTRATION CANDIDATES

As noted in the last update, the ERO Enterprise sent a request for information to the approximately 380 entities that are currently registered as BAs or TOs within the United States. Based on the responses received, the ERO Enterprise calculated an estimate of the number of potential entities eligible to meet the Category 2 GO/GOP criteria in the NERC Rules of Procedure (“ROP”). The ERO Enterprise has been validating the information by contacting the potential entities regarding detailed facility data needed to confirm that the newly identified entities meet the Category 2 criteria. As a result, the numbers provided in this update are estimates and subject to change. Furthermore, these numbers do not necessarily reflect the total number of GOs or GOPs that will be registered based on the Category 2 criteria as the Functional Entity assignment will be determined once the ERO Enterprise receives more information about the entities. As such, any relevant changes will be reported in future quarterly Work Plan updates while the ERO Enterprise continues its work to identify potential registration candidates according to the deadlines directed in the Order.

The following table provides the approximate numbers of resources meeting the Category 2 criteria and the MVA of those resources by Regional Entity footprint. As of April 15, 2025, the ERO Enterprise estimates 781 potential resources totaling 35,184 MVA, subject to further validation that the entities owning or operating those resources meet the Registry Criteria. Since

⁶ *N. Am. Elec. Reliability Corp.*, Docket No. RD22-4-001 (Feb. 5, 2025).

NERC’s last quarterly Work Plan update, the number of IBRs subject to registration has dropped as Regional Entity validation efforts have determined that identified facilities: (1) have been cancelled or have had their expected commercial operations date delayed past May 15, 2026; (2) were Type 1 or Type 2 wind turbines that do not qualify as Category 2 resources; (3) were determined to be Category 1 resources and the affected Regional Entities will register those facilities as such; or (4) were inaccurately reported and should be removed from the list.

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.

II. NEXT STEPS AND CONTINUED OUTREACH

As noted in previous Work Plan filing updates, NERC and the Regional Entities have developed a comprehensive communications plan to coordinate messaging to stakeholders regarding the Work Plan. To aid that effort, NERC has posted a quick reference guide, which includes key activities, IBR Registration milestones, and links to various resources and projects regarding Reliability Standard revisions related to IBRs. To that end, NERC continues to update its publicly posted reference guide on the IBR Registration Initiative and provides links to various materials for candidates for registration, including the IBR webinar series and frequently asked questions, as well as the NERC Registration and NERC Standards pages.⁷ NERC anticipates that this communications plan will aid new entrants with integrating into ERO Enterprise activities

⁷ NERC, Quick Reference Guide: IBR Registration Initiative (Apr. 2025), available at https://www.nerc.com/pa/Documents/IBR_Quick%20Reference%20Guide.pdf.

under section 215 of the Federal Power Act⁸ and assist existing registered entities in understanding next steps.

III. CONCLUSION

The ERO Enterprise looks forward to continuing to work with industry stakeholders and the Commission to: (i) implement the Commission-approved Registry Criteria that address owners and operators of IBRs that are not currently required to register, and (ii) integrate new registrants that meet the revised Registry Criteria into relevant ERO Enterprise efforts. For the reasons set forth above, NERC respectfully requests that the Commission accept this Work Plan update.

Respectfully submitted,

/s/ James McGrane

Senior Counsel

North American Electric Reliability
Corporation

1401 H Street NW, Suite 410

Washington, D.C. 20005

(202) 400-3000

james.mcgrane@nerc.net

*Counsel for the North American Electric
Reliability Corporation*

Date: May 6, 2025

⁸ 16 U.S.C. 824o.

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in the above-referenced proceeding.

Dated at Washington, D.C. this 6th day of May 2025.

/s/ James McGrane

James McGrane
*Counsel for North American
Electric Reliability Corporation*

Attachment 1

Work Plan
May 2025 Update

Registration of Inverter Based Resources – Docket No. RD22-4-001
NERC Work Plan Progress Update
May 6, 2025

On November 17, 2022, in order to respond to concerns regarding the reliability impacts from inverter-based resources (“IBRs”)¹ on the Bulk Power System² (“BPS”), the Federal Energy Regulatory Commission (“FERC” or the “Commission”) directed the North American Electric Reliability Corporation (“NERC”) to submit a work plan to address registration of IBRs.³ Regulatory consideration differs based on whether the IBRs meet NERC’s Bulk Electric System (“BES”) definition and are registered with NERC for compliance purposes (“registered IBRs”), whether the IBRs are connected directly to the BPS but are not registered with NERC (“unregistered IBRs”), or whether the IBRs are distributed energy resources (i.e. connected to the distribution system) (IBR-DER). The Commission directed NERC to file a Work Plan within 90 days detailing how the ERO Enterprise plans to identify and register owners and operators of unregistered IBRs.

The Commission stated that the work plan should include the following:

- Explanation of how NERC will modify its processes to address unregistered IBRs (whether by working with stakeholders to change the BES definition, a change to its registration program, or some other solution) within 12 months of approval of the work plan;
- Implementation milestones ensuring that owners and operators meeting the new registration criteria are identified within 24 months of the approval date of the work plan; and
- Implementation milestones ensuring that owners and operators meeting the new registration criteria are registered and thereby required to comply with applicable Reliability Standards within 36 months of the approval date of the work plan.

On May 18, 2023, the Commission accepted NERC’s Work Plan and directed NERC to provide updates every 90 days detailing progress to date. Consistent with that directive, this Work Plan update provides progress on the activities identified in NERC’s Work Plan. Specifically, NERC and the Regional Entities have advanced efforts to identify unregistered IBRs since the Commission approved the ROP revisions in June 2024. As the Commission has now approved the ROP revisions, this work plan update removes certain background information on the ROP revisions included in prior updates and focuses on the status of the milestones identified in NERC’s Work Plan.

¹ The Order states *“This order uses the term IBRs to include all generating facilities that connect to the electric power system using power electronic devices that change direct current (DC) power produced by a resource to alternating current (AC) power compatible with distribution and transmission systems. This order does not address IBRs connected to the distribution system.”*

² The Bulk Power System (BPS) is defined in the Glossary of Terms Used in NERC Reliability Standards as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. (Note that the terms “Bulk-Power System” or “Bulk Power System” shall have the same meaning.)

³ *Registration of Inverter-Based Resources*, 181 FERC ¶ 61,124 (2022) [hereinafter *IBR Order*].

Milestones to Implement Work Plan⁴

In addition to the milestones below, the ERO Enterprise will also continue to consider whether revisions to the BES Definition might also support continued reliability of the BPS as the grid transforms. NERC will update the milestones as appropriate in future update filings.

The Commission approved the work plan on May 18, 2023. Within 12 months of this date, NERC will do the following to revise its Registration Program:⁵

TIMEFRAME	ACTIVITIES	STATUS
Month 1 (June 2023)	<ul style="list-style-type: none"> ERO Enterprise to complete review and draft proposed revisions of Section 500 and Appendices 5A and 5B of the ROP. 	<ul style="list-style-type: none"> ✓ Completed draft ROP revisions. ✓ Stakeholder meeting with industry volunteers June 2, 2023.
Month 2 (July 2023)	<ul style="list-style-type: none"> ERO Enterprise to coordinate with the Organization Registration and Certification Subcommittee (ORCS) of the Compliance and Certification Committee (CCC) on proposed revisions.⁶ ERO Enterprise to present proposed revisions to the CCC. 	<ul style="list-style-type: none"> ✓ Presented proposed revisions to CCC/ORCS July 19, 2023. ✓ Received comments from ORCS on proposed ROP revisions.
Month 3 (August 2023)	<ul style="list-style-type: none"> ERO Enterprise to present proposed revisions to other key stakeholder organizations in North America. NERC to present proposed revisions to the MRC. NERC to file work plan update with FERC. 	<ul style="list-style-type: none"> ✓ Presented proposed revisions to SEIA leadership on August 3, 2023. ✓ File Work Plan Update August 16, 2023. ✓ Present/Discuss ROP revisions at the Board meeting.
Month 4-5 (September – October 2023)	<ul style="list-style-type: none"> ERO Enterprise to complete revisions to initial draft ROP proposal to address informal stakeholder feedback. NERC to post ROP revisions for public comment period on NERC website for 45 days. 	<ul style="list-style-type: none"> ✓ NERC completed and posted the proposed ROP revisions for comment on September 13, 2023. ✓ NERC received comments on the posted ROP revisions from September 13 through October 30, 2023.

⁴ Please also refer to NERC's filings in Docket No. RM22-12-000 for more information regarding matters pertaining to IBR affiliated Reliability Standards.

⁵ ✓ Indicates the activity status is complete.

⁶ The CCC and ORCS work plans for 2023 contemplate providing comments on proposed revisions to the ROP related to IBRs and the Registration Program.

TIMEFRAME	ACTIVITIES	STATUS
Month 6 (November 2023)	<ul style="list-style-type: none"> • NERC to file work plan update with FERC. 	<ul style="list-style-type: none"> ✓ Filed Work Plan Update November 14, 2023.
Month 7 (December 2023)	<ul style="list-style-type: none"> • ERO Enterprise to incorporate any further revisions to the ROP to the extent determined appropriate to address comments. • ERO Enterprise to prepare matrix summarizing proposal, comments, and responses thereto. • ERO Enterprise to present initial consideration of applicable Reliability Standards at the Reliability and Security Technical Committee December Meeting. 	<ul style="list-style-type: none"> ✓ Posted final draft January 22, 2024. ✓ Posted matrix summarizing proposal, comments, and responses thereto January 22, 2024. ✓ Presented December 7, 2023.
Month 8-10 (January – March 2024)	<ul style="list-style-type: none"> • ERO Enterprise to request NERC Board approval of the ROP revisions. • NERC to file the proposed ROP revisions with FERC, subject to Board approval, and <ul style="list-style-type: none"> ○ Request expedited notice, comment, and review over a 3-month period. • NERC to file work plan update with FERC. 	<ul style="list-style-type: none"> ✓ Discussed at Board meeting February 15-16, 2024. ✓ NERC Board approved proposed ROP revisions February 22, 2024. NERC filed proposed Registry Criteria ROP revisions with FERC March 19, 2024. ✓ Filed Work Plan Update February 12, 2024.
Month 11-12 (April – May 2024)	<ul style="list-style-type: none"> • ERO Enterprise to continue considering applicable Reliability Standards including a possible subset list of Standards, as appropriate with stakeholder feedback.⁷ 	<ul style="list-style-type: none"> ✓ The ERO Enterprise has standards development projects underway addressing applicable Reliability Standards.

⁷ This work will coordinate with broader Reliability Standards revisions.

Within 24 months of Commission approval of the work plan NERC will do the following to identify candidates for registration that meet the updated Registry Criteria:

TIMEFRAME	ACTIVITIES	STATUS
Month 12-13 (May – June 2024)	<ul style="list-style-type: none"> • ERO Enterprise to cross reference Energy Information Administration (EIA) Form 860 Database with the NERC Compliance Registry (NCR) to identify unregistered owners of IBRs as potential candidates under revised Registry Criteria. • NERC to initiate information technology (IT) updates to extent necessary. • ERO Enterprise to issue requests for information to Reliability Coordinators, Planning Coordinators, Transmission Owners, Transmission Planners, and Distribution Providers regarding potential Category 2 GOs/GOPs in their footprints. • ERO Enterprise to issue bulletins and other communication materials to support registration. • NERC to file work plan update with FERC. 	<ul style="list-style-type: none"> ✓ The ERO Enterprise examined updates to EIA Form 860 Database. ✓ The ERO Enterprise has initiated the update to CORES for the new Category 2 GOs and GOPs. ✓ On July 8, 2024, the ERO Enterprise issued a request for information to BAs and TOs. Responses were due by September 20, 2024. ✓ Posted a quick reference guide on the IBR Registration Initiative that includes quarterly updates on activities associated with the IBR Registration Initiative.⁸ ✓ Filed Work Plan Update May 10, 2024.
Month 13-14 (June – July 2024)	<ul style="list-style-type: none"> • ERO Enterprise to compare identified unregistered owners and operators of IBRs to the revised Registry Criteria to identify candidates. • ERO Enterprise to develop an approach for implementation of revised Registry Criteria and 	<ul style="list-style-type: none"> • The ERO Enterprise is in the process of validating the information received from the responses to the July 8, 2024 request for information. • NERC Registration, Standards, and Compliance staff have been coordinating on

⁸ The quick reference guide, updated quarterly, is available on NERC's website at https://www.nerc.com/pa/Documents/IBR_Quick%20Reference%20Guide.pdf.

TIMEFRAME	ACTIVITIES	STATUS
	applicable Reliability Standards, including a possible subset list of Standards, as appropriate.	standards that will be applicable to Category 2 GO/GOPs.
Month 14-20 (July 2024 – January 2025)	<ul style="list-style-type: none"> • ERO Enterprise to hold workshops across Regional Entities and at NERC regarding registration and implementation. • NERC to file work plan update(s) with FERC. • ERO Enterprise to issue notice of webinar on Registration. • ERO Enterprise to send communication to candidates for Registration. 	<ul style="list-style-type: none"> ✓ Regional Entity workshops have included IBR registration as a topic. ✓ Filed Work Plan Update August 9, 2024 and November 7, 2024. ✓ On October 14, 2024, the ERO Enterprise issued a notice that it would host a webinar on the IBR Registration Initiative on November 13, 2024. The ERO Enterprise conducted the webinar on November 13, 2024. ✓ In progress. The ERO Enterprise initiated communications with newly identified entities that may be candidates for registration as Category 2 GO/GOPs.
Month 20-22 (January – March 2025)	<ul style="list-style-type: none"> • ERO Enterprise to examine any updates to EIA Form 860 Database. • NERC to file work plan update with FERC. • ERO Enterprise to hold outreach events. 	<ul style="list-style-type: none"> ✓ Filed Work Plan Update February 5, 2025. ✓ On January 31, 2025, the ERO Enterprise posted the ERO Enterprise CMEP Practice Guide: Application of the Registration Criteria for Category 2 Generator Owner and Generator Operator Inverter-Based Resources. ✓ On March 3, 2025, the ERO Enterprise held an informational webinar to address the CMEP

TIMEFRAME	ACTIVITIES	STATUS
		Practice Guide and answer questions from stakeholders.
Month 23-24 (April – May 2025)	<ul style="list-style-type: none"> • ERO Enterprise to send communication to any newly identified candidates for registration, as needed. • NERC to continue IT transitions as necessary. 	<ul style="list-style-type: none"> • In progress.

Within 36 months of Commission approval of the work plan, NERC will do the following to register new candidates:

TIMEFRAME	ACTIVITIES
Month 25-26 (June – July 2025)	<ul style="list-style-type: none"> • ERO Enterprise to hold training for newly registering entities on the Centralized Organization Registration ERO System (CORES).⁹ • ERO Enterprise to provide ERO Enterprise 101 Informational Package, ERO Enterprise Entity Onboarding Checklist, and guidance.¹⁰ • NERC to file work plan update with FERC.
Month 26-27 (July – August 2025)	<ul style="list-style-type: none"> • NERC to complete IT transition for expansion of registration for new entities.
Month 27-36 (August 2025 – May 2026)	<ul style="list-style-type: none"> • NERC to file work plan update(s) with FERC. • ERO Enterprise to issue notification letters to newly registered entities that will provide notice of registration and responsibility for compliance with applicable NERC Reliability Standards.

⁹ The ERO Enterprise anticipates the need to update its IT, external facing communications, and systems to accommodate the registration of the new entities. This may impact the milestones reported on during 90-day progress reports.

¹⁰ The ERO Enterprise has already been providing such materials to stakeholder groups and is examining further opportunities for dissemination and update to facilitate a smooth transition now that Registry Criteria revisions are approved.