Unofficial Comment Form

Project 2022-02 Uniform Modeling Framework for IBR

**Do not** use this form for submitting comments. Use the [Standards Balloting and Commenting System (SBS)](https://sbs.nerc.net/) to submit comments on **Project 2022-02 Uniform Modeling Framework for IBR** by **8 p.m. Eastern, Wednesday, September 10, 2025.   
 20, 2015**

Additional information is available on the [project page](https://www.nerc.com/pa/Stand/Pages/Project2022-02ModificationstoTPL-001-5-1andMOD-032-1.aspx). If you have questions, contact Senior Standards Developer, [Jordan Mallory](mailto:jordan.mallory@nerc.net) (via email) or at 470-479-7538.

## Background Information

As the penetration of distributed energy resources (DERs) continues to increase across the many distribution systems connected both directly and indirectly to the North American Bulk-Power System (BPS), it is necessary to account for the potential impacts of DERs on reliability in the planning, operation, and design of the Bulk Electric System (BES). The North American Electric Reliability Corporation (NERC) System Planning Impacts of Distributed Energy Resources Working Group (SPIDERWG) has identified the need for improved modeling of aggregate DER for planning studies (including both utility-scale and retail-scale DER) conducted by Transmission Planners (TPs) and Planning Coordinators (PCs), including updated modeling data requirements specific to DER.

Further, in Order No. 901 issued October 2023, The Federal Energy Regulatory Commission (FERC) directed the development of Reliability Standards to address concerns “related to Inverter-based Resources (IBRs) at all stages of Interconnection, planning, and operations.” (Id. at P 25). Among other things, FERC directed NERC to develop requirements addressing the provision of IBR and DER data to the entities responsible for the planning and operation of the BPS. More information on the specific FERC Order No. 901 directives addressed through this project is available in the Project 2022-02 Consideration of Order No. 901 Directives.

Based on comments received from Draft 1 posting, the drafting team (DT) updated MOD-032-2 to incorporate requirement language from the ERO Acceptable Models List Criteria Document. The ERO Acceptable Model Lists Criteria Document has been renamed ERO Unacceptable Models List, and the process as to how documents are added or removed has been added to the MOD-032-2 Standard as a Supporting Document. The ERO Unacceptable Models List itself will be posted on the NERC website for entities to locate whenever needed. Requirement R1, Part 1.4 was added to draft 2 for the PC and TP to specify submission of standard library dynamic models, user-written models, or both. Allowing the specification of standard library models incorporated within modeling software is responsive to FERC concerns about usability and allows PCs to maintain current requirements for generic models that may be necessary for the creation of large interconnection-wide base cases. Allowing the specification of user-written models is responsive to industry feedback expressed during the NERC Industry Engagement workshops. The DT also explicitly ensured the PC and TP authority require submission of both model types, if deemed necessary. Requirement R1, Part 1.4.2 is responsive to FERC concerns about model usability and non-convergence by requiring PCs and TPs that accept user-written models to specify usability requirements and require appropriate model documentation and instructions.

In addition, the DT worked on Requirement R2, Part 2.1 estimation language based on feedback received. Requirement R2 was modified to require estimation of modeling data if the Responsible entity (typically the Transmission Owner or Distribution Provider) is unable to gather required data. FERC Order 901 requires the provision of data related to unregistered-IBR and IBR-DER that in the aggregate have a material impact on the BPS.[[1]](#footnote-1) If the data is estimated, Requirement R2, Part 2.1 also requires the entity to provide an explanation of the limitations of the estimated data and the method used for estimation in line with the Order 901 directives[[2]](#footnote-2). The requirement language intentionally uses the phrase “unable to gather” to mirror the FERC Order 901 language. Limitations of the estimated data is intended to capture both limitations of the availability of data (including instances where there are legal or contractual prohibitions on requesting certain data, no mechanism to enforce collection, or incomplete records of what is connected), and limitations of any data provided (including partially missing or suspect data). Further, the addition of compliance abeyance language for the estimation process provides entities the opportunity to hone their estimation process without risk of penalty (provided they proceed in good faith). The approach directed by FERC is flexible as to whether the underlying unregistered IBR and DER data originates from interconnection documentation, measured quantities, estimated quantities, or other sources. Data availability or sufficiency issues, among other factors, may lead to the Distribution Provider and Transmission Owner applying a combination of approaches to source the data. The PC and TP modeling data requirements and reporting procedures should identify acceptable methods and their application.

Lastly, revisions in the Reliability Standards TOP-003-8 and IRO-010-6 data specification standards specify that entities responsible for developing and distributing data specifications shall include requirements for model submissions consistent with the model submitted for planning purposes, as applicable.

## Questions

1. Do you agree with the proposed MOD-032-2 modifications? If you do not support the modifications made, please provide rationale and proposed language on how you would address the FERC Order 901 directives.

Yes

No

Comments:

1. Do you agree with the proposed IRO-010-6 and TOP-003-8 modifications? If you do not support the modifications made, please provide rationale and proposed language on how you would address the FERC Order 901 directives.

Yes

No

Comments:

1. Do you agree that the modifications for the proposed reliability standards (MOD-032-2, IRO-010-6, and TOP-003-8) address the scope of the standard authorization request (SAR) in a cost-effective manner? If you do not agree, please provide alternatives that would address the SAR scope in a more cost-effective manner.

Yes

No

Comments:

1. Do you agree with the proposed ERO Unacceptable Models List? If you do not agree, please provide alternative language and explain the rationale that, if made, would result in your support.

Yes

No

Comments:

1. Provide any additional comments for the drafting team to consider, if desired.

Comments:

1. FERC Order 901 at P104 and P105 [↑](#footnote-ref-1)
2. FERC Order 901 P104: “if unable to gather accurate unregistered IBR data or unable to gather unregistered IBR data at all, to provide instead to the Bulk-Power System planners and operators in their areas: (1) an estimate of the unregistered IBR modeling data and parameters, (2) an explanation of the limitations of the availability of data, (3) an explanation of the limitations of any data provided by unregistered IBRs, and (4) the method used for estimation.” [↑](#footnote-ref-2)