

Project 2007-09 Generator Verification Implementation Plan

Implementation Plan for MOD-026-1, Verification of Models and Data for Generator Excitation Control System and Plant Volt/Var Control Functions

Approvals Requested

MOD-026-1 - Verification of Models and Data for Generator Excitation Control System and Plant Volt/Var Control Functions

Prerequisite Approvals

None

Revisions to Approved Standards and Definitions

None

Compliance with the Standard

The following entities are responsible for being compliant with all requirements of MOD-026-1:

- Transmission Planner
- Generator Owner

- Facilities

For the purpose of this standard, the following Facilities are considered, “applicable units.” Units or plants with an average capacity¹ factor greater than 5% over the last three calendar years that meet the following:

¹ Once a capacity factor exemption is declared by notifying the Transmission Planner, verification is not required for 10 calendar years from the date eligibility occurs. At the end of this 10 calendar year timeframe, the current average 3 year capacity factor (for years 8, 9, and 10) is examined to determine if the capacity factor exemption can be declared for the next 10 calendar year period. If not eligible for the capacity factor exemption, then model verification must be completed within one year of the date the capacity factor exemption expired with the 10 calendar year periodicity requirement reset based on the verification date.

Generating units connected to the Eastern or Quebec Interconnection with the following characteristics:

- Each generating unit with a gross nameplate rating greater than or equal to 100 MVA, connected at the point of interconnection² with rating greater than or equal to 100 kV.
- For each plant with a gross aggregate nameplate rating greater than or equal to 100 MVA, connected at the same point of interconnection with rating greater than or equal to 100 kV:
 - Each unit with a gross nameplate rating greater than or equal to 20 MVA; and
 - The remainder of the plant as an aggregate.

Generating units connected to the Western Interconnection with the following characteristics:

- Each generating unit with a gross nameplate rating greater than or equal to 75 MVA, connected at the point of interconnection² with rating greater than or equal to 100 kV.
- For each plant with a gross aggregate nameplate rating greater than or equal to 75 MVA, connected at the same point of interconnection with rating greater than or equal to 100 kV:
 - Each unit with a gross nameplate rating greater than or equal to 20 MVA; and
 - The remainder of the plant as an aggregate.

Generating units connected to the ERCOT Interconnection with the following characteristics:

- Each generating unit with a gross nameplate rating greater than or equal to 50 MVA, connected at the point of interconnection² with rating greater than or equal to 100 kV.
- For each plant with a gross aggregate nameplate rating greater than or equal to 75 MVA, connected at the same point of interconnection with rating greater than or equal to 100 kV:
 - Each unit with a gross nameplate rating greater than or equal to 20 MVA; and
 - The remainder of the plant as an aggregate.

For all interconnections:

- Any technically justified³ unit requested by the Planning Coordinator.

² The common transmission bus voltage level at which the generator step up transformer is connected.

Effective Date

In those jurisdictions where regulatory approval is required:

By the first day of the first calendar quarter, four years following applicable regulatory approval:

- Each Generator Owner shall ensure at least 30% of its applicable units per Interconnection on an MVA basis are compliant with Requirement R2.
- Each responsible entity shall ensure compliance with Requirements R1, and R3 through R6.

By the first day of the first calendar quarter, six years following applicable regulatory approval:

- Each Generator Owner shall ensure at least 50% of its applicable units per Interconnection on an MVA basis are compliant with Requirement R2.

By the first day of the first calendar quarter, ten years following applicable regulatory approval:

- Each Generator Owner shall ensure 100% of its applicable units are compliant with Requirement R2.

In those jurisdictions where no regulatory approval is required:

By the first day of the first calendar quarter, four years following Board of Trustees adoption:

- Each Generator Owner shall ensure at least 30% of its applicable units per Interconnection on an MVA basis are compliant with Requirement R2.
- Each responsible entity shall ensure compliance with Requirements R1, and R3 through R6.

By the first day of the first calendar quarter, six years following Board of Trustees adoption:

- Each Generator Owner shall ensure at least 50% of its applicable units per Interconnection on an MVA basis are compliant with Requirement R2.

By the first day of the first calendar quarter, ten years following Board of Trustees adoption:

- Each Generator Owner shall ensure 100% of its applicable units are compliant with Requirement R2.

³ A technical justification for verifying each of those units or plant(s) that demonstrates through simulation and/or measured response that the unit or plant affects a stability limit, or evidence that the simulated unit or plant response does not match measured unit or plant response.

Justification

This phased implementation supports the ten year cycle for the collection of generator response data necessary for required verifications and typical generating unit outage schedules.

When a Generator Owner has verified its Excitation Control System and Plant Volt/Var Control model(s) in compliance with its regional entity requirements ten years or less prior to the approval date of this Standard, these verifications are deemed sufficient for demonstrating compliance with this Standard for a ten year period from the date of the aforementioned verification.