Individual or group. (11 Responses)
Name (4 Responses)
Organization (4 Responses)
Group Name (7 Responses)
Lead Contact (7 Responses)
Question 1 (9 Responses)
Question 1 Comments (11 Responses)
Question 2 (9 Responses)
Question 2 Comments (11 Responses)
Question 3 (9 Responses)
Question 3 Comments (11 Responses)
Question 4 (9 Responses)
Question 4 Comments (11 Responses)
Question 5 (9 Responses)
Question 5 Comments (11 Responses)

Individual
Hamid Zakery
Calpine Corp
Yes
Yes
Dynamic model parameters for digital control system do not typically change over time unless parameters are changed by equipment owner. There are only handful of analog controls are active. More frequent validation above and beyond implementation guideline provided in FERC approved continent-wide standards do not add to BES reliability and may cause unintentional unit issues including trips that can adversely impact BES reliability. Additionally, the necessary technical justifications to demonstrate that proposed variances will further improve BES reliability has not been communicated.
No
Yes
As previously indicated, more frequent governor and excitation system validation above and beyond FERC approved continent-wide MOD-026 and MOD-027 standards do not add to BES reliability. It will pose additional unnecessary burden on Independent Power Producers (IPPs) not regulated by rate base.
Yes
There are few specific requirements included in the variance. With the exception of reducing validation periodicity, these specific requirements are acceptable. Nearly all generators in the Western Interconnection have already performed base-line testing under the voluntary WECC

Generator Test Policy. The WECC variance changing validation periodicity from 10 years provided in FERC approved continent-wide standards MD-027 and MOD-027 to 5 years is unnecessary and will pose greater risk and burden. Additionally, the necessary technical justifications to demonstrate that proposed variance to changes validation periodicity from 10 to 5 years will further improve BES reliability has not been communicated.
Group
Talen Energy Corp.
Don Lock
Yes
No
No
Yes
Talen Energy (TALN) appreciates the efforts of the drafting team and offers the following comments: NERC gives Regional Entities the right to issue Regional Standards that are more restrictive than national standards or offer clarity, and we suggest that WECC do so in the following respects: 1. MOD-026-WECC: Accept OEM-calculated rotational inertia data (H values), due to being better than trip test-derived results (i.e. based on manufacturing drawings, and not subject to frictional effects or measurement uncertainty). This is a more restrictive criterion than the NERC standard, taking “restrictive” in the present context to mean “more accurate.” Trip testing also subjects equipment to meaningful wear and tear, thereby degrading its reliability, which would be an inappropriate outcome for a reliability standard. 2. MOD-027-WECC: Limit the actual-vs-predicted period studied to 20 seconds for fossil units. Such equipment responds to disturbances by opening the HP turbine control valves, creating an imbalance between steam-make and steam-take, and the boiler ramp-up rate is very slow to catch-up. Many governor models are based on an “infinite boiler” assumption; and while the NG pipelines feeding gas turbines and the lakes feeding hydro units may indeed be infinite for the purposes of disturbance response, the drop in HP steam pressure for fossil units must soon (i.e. in about 20 seconds) be counteracted or the unit may be destabilized or even trip. This would stand as a clarification to the NERC standard, informing GOs up-front as to the pass/fail criteria that will be applied. 3. MOD-026-WECC and MOD-027-WECC: State that any WECC-approved model type is acceptable (another clarification) 4. TALN does not agree that requiring model validation every 5 years, rather than the 10 years required by the NERC standard, will lead to significant reliability benefit. So, TALN requests that the Attachment 1 be adjusted to reflect the 10 year intervals rather than the 5 years in the WECC model validation policy for both WECC-0101 MOD-027-2 and WECC-0101 MOD-026-2.
Yes

Group
SPP Standards Review Group
Shannon V. Mickens
Yes
We agree that the associated Regional Reliability Standards Development Process was used in the preparation of the proposed Variance for MOD-026 and MOD-027. However, we would like the review panel/drafting team to provide some clarity on some concerns that we have in reference to the proposed Variance(s). In reference to MOD-026-2, the Variance for E.A.1 is suggesting to replace the entire applicability section 4.2.2. Our review group has interpreted that E.A.1 is suggesting to include all generation in the Western Interconnection instead of using individual and aggregate units connected to the BES with the nameplate of 75 MVA or greater. Additionally, we would suggest to the review team to add some clarity on sections E.A.3, E.A.4, and E.A.5 in reference to the Regional Standard Requirement R2 part R2.1.1. The E.A section of the Regional Variance suggests adding E.A.3 to Requirement R2 part R2.2.1.1. Through our current observation, the most recent version of the Regional Standard doesn't contain a section labeled R2.2.1.1. However in the E.A.3 section, the drafting team references Requirement R2.1.1 pertaining to recorded response. Again in our observation and opinion, we would suggest to the drafting team to include sections E.A.4 and E.A.5 in the Requirement R2 part R2.1.1 instead of the proposed Requirement R2 part R2.1.1 for there is no Requirement label in the Regional Standard. Also, we would ask the drafting team to provide some clarity on the proposed revisions to Attachment 1 for MOD-026. We understand that there's a suggested change in the replacement to Row 2 however, it is unclear to us if Rows 1 and 3 will be applicable in the Variance Standard or not. As for MOD-027-2, we have the same observation pertaining to E.A.1 in MOD-026 and would ask for the same clarity. Additionally, we would suggest to the review team to add some clarity on sections E.A.3, E.A.4, in reference to the Regional Standard Requirement R2 part R2.1.1. The E.A section of the Regional Variance suggests adding E.A.3 to Requirement R2 part R2.2.1.5. Through our current observation, the most recent version of the Regional Standard doesn't contain a Requirement labeled R2.2.1.5. We're making the assumption that the drafting team is referencing Requirement R2.1.1. Again in our observation and opinion, we would suggest to the drafting team to include sections E.A.3 and E.A.4 in the Requirement R2 part R2.1.1 instead of the proposed Requirement R2 part R2.1.1.5 for there is no Requirement label that way in the Regional Standard. Also, we would ask the drafting team to provide some clarity on the proposed revisions to Attachment 1 for MOD-027. We understand that there's a suggested change in the replacement to Row 2 however, it is unclear to us if the other Rows will be applicable in the Variance Standard or not. Finally, we would suggest to the drafting team that whatever proposed changes are ultimately successfully balloted and approved by the WECC Board of Directors, NERC Board of Trustees and The Federal Energy Regulatory Commission, be carried over to the appropriate RSAW(s) for proper alignment of documentation and consistency.
No

No
No
Group
Dominion
Connie Lowe
No
Dominion is unable to positively determine whether the variance contains more specific criteria or requirements that are not included in the corresponding continent-wide reliability standard. Based upon the verbiage contained in section E. Regional Variance, we believe this may be true, but have the following suggestions to add the clarity necessary for us to make such determination: • It appears that E.A.1 is intended to replace section 4.2.2. However, the redline version does not contain strike out or insertion language. Unless there is Generation in the Western Interconnection, to which the WECC variance does not apply, we suggest that the language in 4.2.2 be replaced with the language in E.A.1. If, on the other hand, there are generators in the Western Interconnection to which the WECC variance does not apply, then there needs to be additional language (perhaps 4.2.2.3) to indicate specific applicability for the WECC variance. • It appears that E.A.2.1 and E.A.2.2 is intended to replace section 5.1 for applicable entities in the WECC region. However, section 5 and its subsections do not explicitly exempt WECC. Suggest section 5 be modified to explicitly exclude WECC and include a specific reference to section E. Regional Variance. • It appears that regional criteria E.A.3, E.A.4 and E.A.5 are intended to be in addition to the sub-requirements of R2. It is suggested that there be explicit language in R2 to include a specific reference that additional sub-requirements are applicable to WECC entities pursuant to section E. Regional Variance. • It appears that E.A.6 replaces R4 for applicable entities in the WECC region. It is suggested that there be explicit language in R4 referencing the requirement that will be applied to WECC entities pursuant to section E. Regional Variance. • It appears that E.A.7 is an additional requirement applicable only to entities in the WECC region. It is suggested that there be explicit language after R6 stating that there is an additional requirement that will be applied to WECC entities pursuant to section E. Regional Variance. As a general comment, we believe that the formatting of a reliability standard should not cause an entity to have to look throughout the entire document in an attempt to identify the requirements to which it must comply. We struggled with this particular standard and have the following suggestions for NERC to consider going forward. Where there is a regional variance, explicitly include such in the Applicability section and include a direct reference to section E - Regional Variance for all

information relative to applicability to entities registered in that region. Format section E to follow the continent-wide standard but have separate section(s) for each region that has a variance. List each requirement and measure applicable to the regional entity in this section; whether a duplicate of that in continent-wide standard, a variation of that continent-wide standard as well as an addition to the continent-wide standard. If the variance exempts the region from compliance with all requirements of the continent wide standard state that there are no requirements applicable to the regional entity as a result of this variance. If the variance exempts the region from compliance with all requirements of the continent wide standard but instead requires compliance with one or more regional standards, either bring the regional standard requirements and measures into this section of the continent wide standard or explicitly reference the regional standard(s) that are to used in lieu of the continent wide standard.
Individual
Erika Doot
US Bureau of Reclamation
Yes
No
No
No
Yes
Reclamation supports the proposed regional variance because it maintains existing WECC Model Validation practices for NERC-qualifying generation facilities. WECC's Model Validation Policy has greatly improved system performance modeling in WECC. Reclamation appreciates the drafting team's modification to MOD-026 and MOD-027 Attachment 1, Row 2, which allows a Generator Owner to request a one-year extension to the proposed 5-year model validation upon notification to the Transmission Planner that the provision of the required data is unavailable due to forced outages or pending modifications. Nevertheless, Reclamation continues to believe that the WECC regional variance should 1) allow for extensions of up to five years depending on the circumstances of the extension request, and 2) extensions should be allowed for "circumstances such as" forced outages or pending equipment modifications because other circumstances such as overhauls or repairs may also necessitate an extension. Finally, Reclamation believes that the proposed regional variance is necessitated by physical differences in the bulk power system, which is explained in drafting team technical documents posted on the WECC Standards Development page for project WECC-0101, Generator Validation Conversion.
Group
Bonneville Power Administration

Cain Braveheart
Yes
No
No
No
Yes
The WECC variance in both MOD-026 and MOD-027 revised the verification period in row two of Attachment 1 from 10 years to five years. However, the rest of Attachment 1 has references to the 10 year period. BPA suggests that the 5 year period be referenced consistently throughout the WECC Variance within the MOD-026 and MOD-027 standards.
Group
BC Hydro
Patricia Robertson
Yes
BC Hydro does not believe that the WECC MOD-026 and -027 regional variance standards to the approved NERC MOD-026 and MOD-027 standards are necessary. The WECC regional standards have more specific/additional criteria (Applicability section - threshold) and include requirements to revalidate every 5 years that are not included in the NERC MOD standards, which require revalidation every 10 years. BC Hydro does not believe that these regional variances to require revalidation more frequently than the corresponding continent-wide NERC MOD standards have been established as reasonable or technically justified by WECC. BC Hydro also notes that the majority of the Generation voting sector voted against these WECC MOD regional standards in the WECC regional ballot process.
Individual
Laura Nelson
Idaho Power Company
Yes
No
No

No
Yes
Group
PacifiCorp
Sandra Shaffer
Yes
No
No
Yes
PacifiCorp has the following concerns--- 1. Despite the fact that WECC has maintained the five-year interval for some time , and the region is complaint with the time interval, the value of more frequent has not been proven or justified. 2. The five year versus ten year interval currently in place for WECC requires twice the resources to maintain and the value of more frequent testing has not been proven or justified. WECC lists a need for more accurate information in the models, however, the WECC regional need for more exact information has not been explained. 3. If there is a justifiable reason for more frequent testing, why doesn't the need apply to the entire continent. If WECC's reasoning is valid, this five year time internal should apply to all regions. However, the data resulting from more frequent testing of an online, non-modified generator is negligible. Testing modified generators and new connections occur as soon as the generator is functional and models are updated. This is sufficient. WECC’s variance could lead to unnecessary modification of the NERC standard and increased testing frequency which does not improve the models.
Yes
See response to #4.
Group
Peak Reliability
Jared Shakespeare
Yes
No
No

No
Individual
Patrick Farrell
Southern California Edison Company
Yes
No
No
No
Yes
The proposed regional variance meets all three criteria above.

Additional Comments:

Michelle Amarantos
APS

Arizona Public Service (APS) does not support action by WECC to seek regulatory approval of the MOD-026-2 and MOD-027-2 – Modeling, Data, and Analysis (WECC Variance) regional variances (Regional Variances) as it does not meet the threshold criteria set forth in either the SAR or the criteria set forth by the Federal Energy Regulatory Commission (FERC) for approval of regional variances. As an initial matter, these Regional Variances exceed the scope of their joint Standard Authorization Request (SAR). More specifically, the SAR explicitly provides that the Drafting Team's (DT) approach is to be "study first – draft second," and "One outcome of the technical study could be that MODs 26 and 27 are sufficient. If so, drafting should not proceed." Additionally, the SAR instructs the Drafting Team (DT) to "use existing policy … along with the technical study results and MOD-26/27 to determine the content" of the Regional Variances. A review of the study results indicates that the only area of inconsistency between the current MOD standards and the proposed Regional Variances was related to performance of baseline testing and that – because the current, approved MOD reliability standards require a 10-year re-validation period ***and*** revalidation upon changes that could impact the model – the institution of a 5-year revalidation period would only "catch drift" resulting from un-reported changes. Such "drift" is already required to be reported pursuant to MOD-012, as noted in the

reported study results. Moreover, the DT's technical study(ies) observe that many generators within WECC were not adhering to a 5-year validation/revalidation time period; however, the reported results make clear that this lack of participation in a 5-year validation/revalidation cycle has not harmed reliability or otherwise resulted in inaccurate, inadequate, or insufficient models. Thus, as a five-year validation/revalidation cycle will only "catch drift" already addressed by other reliability standards, and current practices which do not require a 5-year validation/revalidation cycle have been shown to be effective, it is clear that the technical study(ies) utilized by the DT do not provide the technical justification that was necessary under the SAR to proceed with the drafting of the Regional Variances currently proposed. This was explicitly noted by at least eight voting entities and is further implicitly suggested by the ballot results. Because the technical studies commissioned by the DT do not provide adequate technical justification for the drafting of Regional Variances of MOD-26 and MOD-27, the drafting of these Regional Variances exceed the authority conveyed to the DT by the SAR and of the SAR generally.

Additionally, as set forth by FERC in the ERO Certification Order, Regional Variances are intended to be a small set of supplementary requirements that address unique situations where a continent-wide requirement is not appropriate. The ERO Certification Order at paragraph 274 provides for the acceptance of Regional Variances by FERC if they meet the following criteria: "(1) a **regional difference** that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a **physical difference** in the Bulk-Power System," (emphasis added). Relative to criterion 1, while the proposed 5-year validation/re-validation appears more stringent than the current, approved NERC standards, as the DT observed, it will merely "catch drift," which would also ultimately get reported through other reliability standards such as MOD-012 as well as be identified at the next validation/revalidation also required by the current NERC standard – only on a different periodicity. The current NERC standards address both changes and re-validation to generation parameters and characteristics. Thus, the Regional Variances, as proposed, do not address a regional difference that "the continent-wide Reliability Standard does not." The only matter identified by the DT that is not expressly addressed in the current, approved NERC reliability standards is the baseline validation of generation units; however, it is notable that the Regional Variances, as proposed, do not explicitly address this identified difference and, further, that the DT acknowledged that such baseline data sharing and reporting is addressed by other reliability standards and requirements as are changes or "drift" to generation parameters and characteristics. Further, relative to criterion 2, the DT does not identify a physical difference that would necessitate a Regional Variance. Hence, the proposed Regional Variances are not targeted or drafted to "cure" unaddressed regional or physical difference as none have been identified. The DT has not, therefore, provided sufficient evidence that the proposed Regional Variance meet the criteria set forth for Regional Variances by FERC. Indeed, even if technical justification was achieved for more frequent testing, such justification would

need to be unique to the WECC region to support the use of a regional variance such as the presently proposed Regional Variances. Absent a regional variance meeting the criteria identified by FERC, the proper avenue for the modifications these variances seek are revisions to the current, approved continent-wide standards (MOD-26 and MOD-27).

APS urges WECC to reconsider further action on these Regional Variances for the reasons set forth above. The narrow 60.7% and 60.9% passage ratings for these Regional Variances, including a 40% and 38.1% approval rating of the Generation Voting Sector, technically satisfy the WECC simple majority approval rules, but clearly indicate that these variances have not achieved the level of consensus typical of passing a project from a Regional Entity to NERC.