**MEMO**

Date: June 15, 2016

To: WECC Standards Committee (WSC)

Subject: [WECC-0107 VAR-501-WECC-3](https://www.wecc.org/Reliability/WECC-0107%20Posting%209%20VAR-501-WECC-3%20Power%20System%20Stabilizers%20-%20Clean%202-18-2016.doc) (WECC VAR)

Power System Stabilizer and Design Performance

WECC Regional Reliability Standard Voting Record

On May 2, 2016, the WECC VAR, a WECC Regional Reliability Standard (RRS), was approved by the associated Ballot Pool with a 66% affirmative vote. A simple majority is required to approve the project.

Ballot results and comments provided in opposition to the project can be viewed at the Standards Voting Page on the [Review Ballot Results](https://www.wecc.org/Reliability/160502_Ballot%20Summary%20WECC-0107%20For%205-02-16.pdf) accordion[[1]](#footnote-1).

In accordance with the Reliability Standards Development Procedures, the WSC and the WECC Board of Directors (Board) are to be provided with a voting record for consideration as part of the project approval process. The Procedures also state that each member of the Ballot Pool casting a negative vote on a project is required to provide a statement explaining the reason for the negative vote.

The following is the full voting record for the WECC VAR including any explanatory narrative that may have accompanied a negative vote.

At a high level, negative votes were cast because:

* The standard does not need revision, does not offer any greater value than its predecessor, and needs further clarification; entities disagree on Violation Severity Levels; the mandates are overly prescriptive (not needed to enhance reliability); Measure M2 requiring documentation from a period prior to the standard becoming effective is inappropriate; the Requirement R4 mandate to test within a specified period could cause a violation due to scheduling issues without adding any reliability value/detriment; and, the proposed standard requires a Power System Stabilizer (PSS) on units too small to have a negative impact on reliability.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ballot Name: | **WECC-0107** | | | |  |  |  |  |  |
|  | **VAR-501-WECC-03 PSS Design and Performance** | | | |  |  |  |  |  |
| Total Ballot Pool: | 92 |  |  |  |  |  |  |  |  |
| Total Number of Votes: | 85 |  |  |  |  |  |  |  |  |
| Quorum: | 92.4% |  |  |  |  |  |  |  |  |
| Weighted Vote: | 66.0% |  |  |  |  |  |  |  |  |
| Ballot Results | The Document has Passed | | | |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Voting Sectors | Total In Ballot Pool | Votes Non-Abstain | Sector Weight | Yes Votes | Weighted Segment Vote | No Votes | Abstain | Total Votes\* for Quorum | Didn't Vote |
| Distribution | 17 | 15 | 1 | 10 | 66.7% | 5 | 1 | 16 | 1 |
| End User Representative | 0 | 0 | 0 | 0 | 0.0% | 0 | 0 | 0 | 0 |
| Generation | 23 | 20 | 1 | 14 | 70.0% | 6 | 1 | 21 | 2 |
| Marketers and Brokers | 11 | 10 | 1 | 6 | 60.0% | 4 | 1 | 11 | 0 |
| Other Non-Registered WECC Members and Participating Stakeholders | 1 | 0 | 0 | 0 | 0.0% | 0 | 0 | 0 | 1 |
| State and Provincial Representatives | 0 | 0 | 0 | 0 | 0.0% | 0 | 0 | 0 | 0 |
| System Coordination | 19 | 16 | 1 | 10 | 62.5% | 6 | 2 | 18 | 1 |
| Transmission | 21 | 17 | 1 | 12 | 70.6% | 5 | 2 | 19 | 2 |
| Totals | 92 | 78 | 5 | 52 | **66.0%** | 26 | 7 | 85 | 7 |
|  |  |  |  |  |  |  |  |  |  |

| **Title** | **Company** | **Sector** | **Vote** | **Comments** | **Created By** |
| --- | --- | --- | --- | --- | --- |
| WECC-0107 | British Columbia Hydro & Power Authority (aka BC Hydro) | Transmission | Abstain | No comments. | Patricia Robertson |
| WECC-0107 | British Columbia Hydro & Power Authority (aka BC Hydro) | System Coordination | Abstain | No comments. | Patricia Robertson |
| WECC-0107 | Northern California Power Agency | Generation | No | NCPA does not feel the standard needs revision. | Marty Hostler |
| WECC-0107 | Arizona Public Service Company | System Coordination | No | AZPS recommends the following edit to R2 for clarity: “Each Generator Operator shall have its PSS in service while synchronized, apart from the exclusions detailed in R1, except during any of the following…”   Also, AZPS suggests that the duration for a PSS being out of service without creating a violation be increased to greater than 30 minutes. The lack of a reliability impact of a generator operating without a PSS in service is evidenced by at least R4 of the current draft of the standard which supports the ability to operate without a PSS in service for up to 180 days for commissioning. While AZPS supports the intent of the change to Requirement R2, namely to remove the previous requirement to log in service hours of the PSS, we believe the present period is overly narrow. | Stephanie Little |
| WECC-0107 | Arizona Public Service Company | Distribution | No | AZPS recommends the following edit to R2 for clarity: “Each Generator Operator shall have its PSS in service while synchronized, apart from the exclusions detailed in R1, except during any of the following…”  Also, AZPS suggests that the duration for a PSS being out of service without creating a violation be increased to greater than 30 minutes. The lack of a reliability impact of a generator operating without a PSS in service is evidenced by at least R4 of the current draft of the standard which supports the ability to operate without a PSS in service for up to 180 days for commissioning. While AZPS supports the intent of the change to Requirement R2, namely to remove the previous requirement to log in service hours of the PSS, we believe the present period is overly narrow. | Michelle Amarantos |
| WECC-0107 | Nevada Power Company | System Coordination | No | NV Energy does not believe that the drafting team has proposed an improvement upon the existing standard. | Eric Schwarzrock |
| WECC-0107 | Nevada Power Company | Generation | No | NV Energy does not believe that the drafting team has proposed an improvement upon the existing standard. | Eric Schwarzrock |
| WECC-0107 | Nevada Power Company | Distribution | No | NV Energy does not believe that the drafting team has proposed an improvement upon the existing standard. | Eric Schwarzrock |
| WECC-0107 | Nevada Power Company | Transmission | No | NV Energy does not believe that the drafting team has proposed an improvement upon the existing standard. | Eric Schwarzrock |
| WECC-0107 | Seattle City Light | Transmission | No | Please see Seattle City Light Charles (Bud) Freemans comment | Hao Li |
| WECC-0107 | Arizona Public Service Company | Transmission | No | AZPS recommends the following edit to R2 for clarity: “Each Generator Operator shall have its PSS in service while synchronized, apart from the exclusions detailed in R1, except during any of the following…”   Also, AZPS suggests that the duration for a PSS being out of service without creating a violation be increased to greater than 30 minutes. The lack of a reliability impact of a generator operating without a PSS in service is evidenced by at least R4 of the current draft of the standard which supports the ability to operate without a PSS in service for up to 180 days for commissioning. While AZPS supports the intent of the change to Requirement R2, namely to remove the previous requirement to log in service hours of the PSS, we believe the present period is overly narrow. | Gary Nolan |
| WECC-0107 | Arizona Public Service Company | Marketers and Brokers | No | AZPS recommends the following edit to R2 for clarity: “Each Generator Operator shall have its PSS in service while synchronized, apart from the exclusions detailed in R1, except during any of the following…”   Also, AZPS suggests that the duration for a PSS being out of service without creating a violation be increased to greater than 30 minutes. The lack of a reliability impact of a generator operating without a PSS in service is evidenced by at least R4 of the current draft of the standard which supports the ability to operate without a PSS in service for up to 180 days for commissioning. While AZPS supports the intent of the change to Requirement R2, namely to remove the previous requirement to log in-service hours of the PSS, we believe the present period is overly narrow. | Todd Komaromy |
| WECC-0107 | Arizona Public Service Company | Generation | No | AZPS recommends the following edit to R2 for clarity: “Each Generator Operator shall have its PSS in service while synchronized, apart from the exclusions detailed in R1, except during any of the following…”   Also, AZPS suggests that the duration for a PSS being out of service without creating a violation be increased to greater than 30 minutes. The lack of a reliability impact of a generator operating without a PSS in service is evidenced by at least R4 of the current draft of the standard which supports the ability to operate without a PSS in service for up to 180 days for commissioning. While AZPS supports the intent of the change to Requirement R2, namely to remove the previous requirement to log in service hours of the PSS, we believe the present period is overly narrow. | Jeri Freimuth |
| WECC-0107 | Public Service Company of Colorado (Xcel Energy) | Generation | No | PSCo has the following concerns related to the proposed VAR-501-WECC-3 standard:   On M3, the standard states that if an entity wishes to claim the exemption under Part 3.5, that entity must provide documented evidence of the date the voltage regulator was last replaced. This will require documentation from a time prior to the standard going into effect. Requiring documentation from a period prior to the standard becoming effective is inappropriate.  On R4, the standard drafting team has refused to modify the language to allow an entity to have plans to complete the start-up testing of PSS and instead has developed language which requires the test to be completed within 180 days of commercial operation or retrofit of its exciter system. Xcel Energy is concerned that this hard stop date can cause a violation of the standard due to scheduling problems while not providing any impact to reliability. It is noted that this deadline is regardless of whether the unit is online or not so the argument cannot be made that there is a need for the deadline. Finally, it is unclear how this requirement is materially different than MOD-026-1 Requirement R4, other than the hard stop at 180 days that the WECC standard is proposing. | David Lemmons |
| WECC-0107 | Seattle City Light | Distribution | No | “If a unit is small (less than 20 MVA) and does NOT CONNECT DIRECTLY to the BES transmission system (greater than 100 kV), the unit will not have any measurable impact to the stability of the power system, and thus a power system stabilizer on such a unit should not be required.   Please revise the definition of Facility (Introduction Section A, subsection 5) to take this into account.   Thank you for your time and efforts in developing this standard. | Dana Wheelock |
| WECC-0107 | Seattle City Light | Marketers and Brokers | No | If a unit is small (less than 20 MVA) and does NOT CONNECT DIRECTLY to the BES transmission system (greater than 100 kV), the unit will not have any measurable impact to the stability of the power system, and thus a power system stabilizer on such a unit should not be required.   Please revise the definition of Facility (Introduction Section A, subsection 5) to take this into account.  Thank you for your time and efforts in developing this standard. | Charles Freeman |
| WECC-0107 | Public Service Company of Colorado  (Xcel Energy) | Distribution | No | PSCo has the following concerns related to the proposed VAR-501-WECC-3 standard:  On M3, the standard states that if an entity wishes to claim the exemption under Part 3.5, that entity must provide documented evidence of the date the voltage regulator was last replaced. This will require documentation from a time prior to the standard going into effect. Requiring documentation from a period prior to the standard becoming effective is inappropriate.  On R4, the standard drafting team has refused to modify the language to allow an entity to have plans to complete the start-up testing of PSS and instead has developed language which requires the test to be completed within 180 days of commercial operation or retrofit of its exciter system. Xcel Energy is concerned that this hard stop date can cause a violation of the standard due to scheduling problems while not providing any impact to reliability. It is noted that this deadline is regardless of whether the unit is online or not so the argument cannot be made that there is a need for the deadline. Finally, it is unclear how this requirement is materially different than MOD-026-1 Requirement R4, other than the hard stop at 180 days that the WECC standard is proposing.  For these reasons, Xcel Energy/Public Service Company of Colorado votes no on the proposed standard. | Chad Nickell |
| WECC-0107 | Seattle City Light | Generation | No | Refer to Charles Freeman, Seattle City Light. | Mike Haynes |
| WECC-0107 | Public Service Company of Colorado (Xcel Energy) | Transmission | No | PSCo has the following concerns related to the proposed VAR-501-WECC-3 standard:  On M3, the standard states that if an entity wishes to claim the exemption under Part 3.5, that entity must provide documented evidence of the date the voltage regulator was last replaced. This will require documentation from a time prior to the standard going into effect. Requiring documentation from a period prior to the standard becoming effective is inappropriate.  On R4, the standard drafting team has refused to modify the language to allow an entity to have plans to complete the start-up testing of PSS and instead has developed language which requires the test to be completed within 180 days of commercial operation or retrofit of its exciter system. Xcel Energy is concerned that this hard stop date can cause a violation of the standard due to scheduling problems while not providing any impact to reliability. It is noted that this deadline is regardless of whether the unit is online or not so the argument cannot be made that there is a need for the deadline. Finally, it is unclear how this requirement is materially different than MOD-026-1 Requirement R4, other than the hard stop at 180 days that the WECC standard is proposing.  For these reasons, Xcel Energy/Public Service Company of Colorado votes no on the proposed standard. | Robert Staton |
| WECC-0107 | Public Service Company of Colorado (Xcel Energy) | System Coordination | No | PSCo has the following concerns related to the proposed VAR-501-WECC-3 standard:  On M3, the standard states that if an entity wishes to claim the exemption under Part 3.5, that entity must provide documented evidence of the date the voltage regulator was last replaced. This will require documentation from a time prior to the standard going into effect. Requiring documentation from a period prior to the standard becoming effective is inappropriate.  On R4, the standard drafting team has refused to modify the language to allow an entity to have plans to complete the start-up testing of PSS and instead has developed language which requires the test to be completed within 180 days of commercial operation or retrofit of its exciter system. Xcel Energy is concerned that this hard stop date can cause a violation of the standard due to scheduling problems while not providing any impact to reliability. It is noted that this deadline is regardless of whether the unit is online or not so the argument cannot be made that there is a need for the deadline. Finally, it is unclear how this requirement is materially different than MOD-026-1 Requirement R4, other than the hard stop at 180 days that the WECC standard is proposing.  For these reasons, Xcel Energy/Public Service Company of Colorado votes no on the proposed standard. | Robert Staton |
| WECC-0107 | US Bureau of Reclamation | Generation | Yes |  | Erika Doot |
| WECC-0107 | US Bureau of Reclamation | Transmission | Yes |  | Erika Doot |
| WECC-0107 | Pacific Gas and Electric Company | Generation | Yes |  | Alex Chua |
| WECC-0107 | Salt River Project | Generation | Yes |  | Kevin Nielsen |
| WECC-0107 | Salt River Project | Marketers and Brokers | Yes |  | William Abraham |
| WECC-0107 | Tacoma Power | Distribution | Yes |  | Chad Edinger |
| WECC-0107 | Idaho Power Company | Transmission | Yes |  | Laura Nelson |
| WECC-0107 | Idaho Power Company | Distribution | Yes |  | Laura Nelson |
| WECC-0107 | Idaho Power Company | Generation | Yes |  | Laura Nelson |
| WECC-0107 | Idaho Power Company | System Coordination | Yes |  | Laura Nelson |
| WECC-0107 | Black Hills Corporation | Transmission | Yes |  | Wes Wingen |
| WECC-0107 | Talen Montana, LLC | Generation | Yes |  | Leland McMillan |
| WECC-0107 | Inland Empire Energy Center LLC | Generation | Yes |  | Ben Kling |
| WECC-0107 | Platte River Power Authority | System Coordination | Yes |  | John Collins |
| WECC-0107 | Tri-State Generation & Transmission (Reliability) | System Coordination | Yes |  | Tracy Sliman |
| WECC-0107 | Tri-State Generation & Transmission (Reliability) | Transmission | Yes |  | Tracy Sliman |
| WECC-0107 | Platte River Power Authority | Transmission | Yes |  | Jeff Landis |
| WECC-0107 | Platte River Power Authority | Generation | Yes |  | Tyson Archie |
| WECC-0107 | Tacoma Power | Generation | Yes |  | Karen Hedlund |
| WECC-0107 | Tacoma Power | Transmission | Yes |  | Joseph Wilson |
| WECC-0107 | Tacoma Power | Marketers and Brokers | Yes |  | Todd Lloyd |
| WECC-0107 | Puget Sound Energy, Inc. | Marketers and Brokers | Yes |  | Andrea Basinski |
| WECC-0107 | Sacramento Municipal Utility District | System Coordination | Yes |  | Joe Tarantino |
| WECC-0107 | Sacramento Municipal Utility District | Generation | Yes |  | Joe Tarantino |
| WECC-0107 | Sacramento Municipal Utility District | Distribution | Yes |  | Joe Tarantino |
| WECC-0107 | Sacramento Municipal Utility District | Transmission | Yes |  | Joe Tarantino |
| WECC-0107 | Sacramento Municipal Utility District | Marketers and Brokers | Yes |  | Joe Tarantino |
| WECC-0107 | Balancing Authority of Northern California | System Coordination | Yes |  | Joe Tarantino |
| WECC-0107 | Puget Sound Energy, Inc. | System Coordination | Yes |  | Theresa Rakowsky |
| WECC-0107 | Puget Sound Energy, Inc. | Distribution | Yes |  | Theresa Rakowsky |
| WECC-0107 | Puget Sound Energy, Inc. | Transmission | Yes |  | Theresa Rakowsky |
| WECC-0107 | Southern California Edison Company (Transmission & Distribution) | Distribution | Yes |  | Steven Mavis |
| WECC-0107 | Southern California Edison Company (Transmission & Distribution) | Transmission | Yes |  | Steven Mavis |
| WECC-0107 | Powerex, Inc. | Marketers and Brokers | Yes |  | Gordon Dobson-Mack |
| WECC-0107 | British Columbia Hydro & Power Authority (aka BC Hydro) | Generation | Yes |  | Helen Hamilton Harding |
| WECC-0107 | British Columbia Hydro & Power Authority (aka BC Hydro) | Distribution | Yes |  | Faramarz Amjadi |
| WECC-0107 | Tri-State Generation & Transmission (Reliability) | Distribution |  |  | Janelle Gill |
| WECC-0107 | Southern California Edison Company | Generation |  |  | Earle Saunders |
| WECC-0107 | Tacoma Power | System Coordination |  |  | Twila Hofer |
| WECC-0107 | Smart Wire Grid | Other Non-Registered WECC Members and Participating Stakeholders |  |  | Chifong Thomas |
| WECC-0107 | Public Service Company of New Mexico | Marketers and Brokers |  |  | Laurie Williams |
| WECC-0107 | Public Service Company of New Mexico | Transmission |  |  | Laurie Williams |
| WECC-0107 | Public Service Company of New Mexico | Distribution |  |  | Laurie Williams |
| WECC-0107 | Public Service Company of New Mexico | Generation |  |  | Laurie Williams |
| WECC-0107 | Public Service Company of New Mexico | System Coordination |  |  | Laurie Williams |
| WECC-0107 | Gridforce Energy Management, LLC | System Coordination |  |  | David Blackshear |
| WECC-0107 | Bonneville Power Administration | Transmission |  |  | Donald Watkins |
| WECC-0107 | Bonneville Power Administration | System Coordination |  |  | Francis Halpin |
| WECC-0107 | Bonneville Power Administration | Distribution |  |  | Rebecca Berdahl |
| WECC-0107 | PacifiCorp | Marketers and Brokers |  |  | Sandra Shaffer |
| WECC-0107 | Puget Sound Energy, Inc. | Generation |  |  | Lynda Kupfer |
| WECC-0107 | NextEra Energy Resources, LLC | Generation |  |  | Mark Mango |
| WECC-0107 | Salt River Project | Transmission |  |  | Steven Cobb |
| WECC-0107 | Colorado Springs Utilities | Transmission |  |  | Shawna Speer |
| WECC-0107 | Colorado Springs Utilities | Generation |  |  | Shawna Speer |
| WECC-0107 | Colorado Springs Utilities | Distribution |  |  | Shawna Speer |
| WECC-0107 | Colorado Springs Utilities | System Coordination |  |  | Shawna Speer |
| WECC-0107 | PacifiCorp | Transmission |  |  | Sandra Shaffer |
| WECC-0107 | PacifiCorp | Distribution |  |  | Sandra Shaffer |
| WECC-0107 | PacifiCorp | Generation |  |  | Sandra Shaffer |
| WECC-0107 | PacifiCorp | System Coordination |  |  | Sandra Shaffer |
| WECC-0107 | Avista Corporation | Transmission |  |  | Bryan Cox |
| WECC-0107 | Avista Corporation | Distribution |  |  | Bryan Cox |
| WECC-0107 | Avista Corporation | Generation |  |  | Bryan Cox |
| WECC-0107 | Avista Corporation | System Coordination |  |  | Bryan Cox |
| WECC-0107 | Avista Corporation | Marketers and Brokers |  |  | Scott Kinney |
| WECC-0107 | Seattle City Light | System Coordination |  |  | Pawel Krupa |
| WECC-0107 | Portland General Electric Company | System Coordination |  |  | Angela Gaines |
| WECC-0107 | Portland General Electric Company | Marketers and Brokers |  |  | Angela Gaines |
| WECC-0107 | Portland General Electric Company | Transmission |  |  | Angela Gaines |
| WECC-0107 | Portland General Electric Company | Distribution |  |  | Angela Gaines |
| WECC-0107 | Portland General Electric Company | Generation |  |  | Angela Gaines |

1. The Ballot Results Link provides explanatory narrative provided with each negative vote as required In the Reliability Standards Development Procedures, Step 9 – Form the Ballot Pool and Ballot the Standards. [↑](#footnote-ref-1)