

Modeling and Validation Subcommittee

Meeting Agenda

Virtual

[Link](#), Password: WECC

Dial-in Number: 1-415-655-0003

Attendee Access Code: 2868 756 1724

Day 1—September 10, 2025

2:00 to 5:00 p.m. Mountain Time

1. **Welcome, Call to Order—Song Wang, PGE**
2. **Review WECC Antitrust Policy—Doug Tucker**

The WECC Antitrust Policy can be found on [wecc.org](https://www.wecc.org).
Please contact WECC legal counsel if you have any questions.
3. **Approve Agenda**
4. **Review and Approve Previous Meeting Minutes**

Approval Item: Minutes of the meeting on May 07–10, 2025
5. **Review Previous Action Items—Maya Brimhall, WECC**
6. **Review Unapproved Dynamic Model List—Doug Tucker, WECC**
7. **Establishing a Naming Convention for WECC Generic Models—Song Wang, PGE**
8. **MVS Governance and Process Update—Song Wang, PGE**
9. **Wide-Area Oscillation Damping & IBR Power Oscillation Damper: Field Results and Development Roadmap—Lin Zhu, EPRI**
10. **MOD-33 Update**
 - RC West update—Licheng Jin, CAISO
 - SPP update—Doug Tucker, WECC
11. **Prioritizing the Next Set of Model Development**
 - VHVDC2
 - IBR Controls—REEC_E
 - Grid-forming Inverter Model—Hybrid
 - Large Load

- EV Charging Model
- Data Center
- Electrolyzer model
- VHVDC3—Offshore Wind
- Advanced Pump Storage Model
- SVSMO4 Model
- Multi-terminal VSC-HVDC

12. Program Updates

- PSLF program updates—Mengxi Chen, GE
- PSSE program updates—Jay Senthil, PTI
- PowerWorld program updates—Jamie Weber, PowerWorld
- Powertech Labs TSAT program updates—Jeff Bloemink, Powertech Labs

13. Review Upcoming Meetings

January 28–30, 2026	Virtual
May 6–8, 2026	Hybrid
September 9–11, 2026	Virtual

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Day 2—September 11, 2025

9:00 a.m. to 12:00 p.m.

14. Renewable Energy Modeling

- Grid-Forming Hybrid Inverter Control Model and Plant Controller Model—REGFM_C1 and REPCGFM_C1—Wei Du, PNNL
Approval Item: REGFM_C1 and REPCGFM_C1 models
- Proposed Renewable Plant-Controller Model—Pouyan Pourbeik, PEACE
Approval Item: REPC_E Model Specification
- Updates on IBR model development—Pouyan Pourbeik, PEACE
Approval Item: REEC_E Model
- IBR Model and Validation Guideline—Songzhe Zhu, Qualus
- Discussion on REPC_D Endorsement, and Legacy REPC_B Treatment—All



- Development and Validation of Unbalanced RMS Models—Vijay Vittal, ASU

15. Active Transmission System Modeling Update

- Overview of active transmission system modeling—Pouyan Pourbeik, PEACE
 - hvdc2
 - hvdc3
 - svsmo4
- Update on Standard Library HVDC and MTDC model development—Wei Du and Quan Nguyen, PNNL

Lunch

12:00 to 2:00 p.m.

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Day 2—continued

2:00 p.m. to 5:00 p.m.

16. Load Modeling

- Modular-based Composite Load Model—All
Approval Item: WECC base-case Switch to the Modular Model
- Grid Oscillations from Large-Scale AI Workloads—Hao Zhu, Minseung Ko, UT-Austin
- Modeling Data Centers using CMLD—Dmitry Kosterev, BPA
- Discussion on DER vs. Load Trip Behavior in CMPLDW/LSDT9: Expected vs. Actual—Nick Hatton, WECC
- Load modeling work plan—Andreas Schmitt, BPA; Song Wang, PGE
 - Transition the load model to a modular-based structure
 - Parameter calibration
 - Testing/verification: including equipment testing and model performance verification based on system events or other methods
 - WECC load model composition data
 - System-wide simulation
 - EV and data center control and protection
 - Support NERC emerging load plans

17. Power Plant Modeling

- APSH Specification Development updates—Jin Tan, NERL; Zerui Dong, OPAL-RT



Approval Item: APSH Model Specification

- Introduce GENQEJ Model Development—Greg Brooks, USACE Walla Walla District

18. Public Comment

19. Review New Action Items

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Attendee Access Code: 2630 283 7807

Day 3—September 12, 2025

9:00 a.m. to 12:00 p.m.

20. Generation Modeling Validation Workshop

- Introduction—Slaven Kincic, PNNL, 10 min
- Hy-DAT—overview and demo Dewei Wang, PNNL, 15–20 min
- Representation and Impact of Water Head on Power System Planning and Operation—Soumyadeep Nag and Shafiul Alam, INL, 20 min
- Hydrological Modeling Impact on Western Interconnection Frequency Response Studies—Sameer Nekkhalapu, PNNL, 15 min
- Developing Hydrologically Accurate Power Flow and Dynamics Cases for Stress Events, Sohom Datta, PNNL, 20 min
- Multi-Timescale Hydro Modeling with Integrated Hydrological Conditions: Flexibility Analysis and its Impact on Grid Stability—Ningchao Gao and Jin Tan, NREL, 20 min
- Dynamic Modeling of Advanced Pumped Storage Hydro Technology—Jin Tan and Ningchao Gao, NREL, 20 min
- How grid oscillations impact and are impacted by hydropower operations—Shuchismita Biswas, PNNL, 25 min
- Industry experience with forced oscillations originating from hydropower units—David Daigle, CAISO, 25 min (TBD)
- Measurement-based analysis of the properties of the British Columbia modes in the Western Interconnection—Jim Follum, PNNL, and Dan Trudnowski, Montana Tech, 25–30 min

21. Adjourn

