# Establishment and Authority

The Modeling and Validation Subcommittee (MVS) was established by the Reliability Assessment Committee (RAC).

# Purpose and Responsibilities

The purpose of the MVS is to review, recommend, develop, and validate system models used to support reliability assessments and other modeling tools that advance the mission of WECC.

The MVS is responsible for:

1. Reviewing dynamic models used to represent existing and evolving power system equipment in the stability programs used by WECC and recommend updates as appropriate.
2. Designing, developing specifications for generic, non-proprietary, positive-sequence power flow and dynamic simulation models to simulate actual equipment on the system and documenting the new models, as required. Specifying validation testing criteria and procedures. Validating model implementation in the stability programs used by WECC.
3. Developing documentation, user guides, and data preparation tools for new models as needed.
4. Exploring, evaluating, and recommending new system modeling techniques that may be of interest to WECC.
5. Developing methods, guidelines, and requirements for validation of power system equipment models.
6. Maintaining and updating the WECC Approved Dynamic Models Library as directed by the RAC.
7. Validating system modeling and performance by comparing real system events and system tests against simulations.
8. Maintaining and reviewing a master dynamic model database and maintain the log of model data issues.
9. Collaborating with other RAC groups and other stakeholders as needed.
10. Organizing workshops to train WECC members regarding power system modeling and representation practices.
11. Creating tools or processes to improve the quality of the existing power plant modeling data in the power flow and dynamics databases.
12. Providing a forum for discussion of best practices or in modeling that would lead to more accurate and up to date modeling in the positive sequence power flow and dynamics simulations.
13. Maintaining and reviewing the Generator Unit Model Validation Guidelines and developing processes and tools to improve coordination between Generator Owners and Transmission Planners for submitting data.
14. Performing other tasks as assigned by RAC.

# Committee Composition and Governance

1. **Membership**
   1. The MVS will be composed of members from WECC Member organizations with subject matter expertise in interconnected power systems modeling and simulation, modeling and simulation of power generation, transmission and distribution equipment, end-use loads, development of commercial power system simulation software, and manufacturing of power generation and transmission equipment.
   2. Members will be selected by their organization’s RAC representative or by their organization’s WECC Member Representative if no RAC representative exists.
      1. WECC Member organizations may have multiple members on the MVS.
      2. Notice of selection should be sent to the chair (or designee).
   3. Members will serve until they resign or until a successor has been selected.
   4. The MVS will also include a liaison, appointed by WECC management, as a member.
2. **Leadership**
   1. The co-chairs of the RAC will approve one of the MVS members to serve as the chair.
      1. The chair will manage the committee and its meetings.
   2. The chair of the MVS will appoint a MVS member to serve as the vice chair for MVS approval.
      1. The vice chair will perform the duties of the chair in the chair’s absence or in case of a vacancy in the office of chair.
   3. The chair and vice chair will each hold office for a term of two years, or until a successor has been duly appointed. The chair and vice chair may serve multiple terms.
   4. The chair will appoint one of the MVS members to serve as a lead for any specific modeling area needed.
   5. WECC staff will partner with the chair and vice chair to manage the committee and its meetings, plan the agenda, and coordinate efforts with the other technical committees to ensure alignment with WECC staff work plans and priorities.
   6. WECC staff will prepare minutes of MVS meetings for the committee’s approval.
   7. The chair may appoint a steering committee, which will include the vice chair, WECC liaison, subgroup chairs, and may include other members, that will assist with meeting agendas and action recommendations.
3. **Meetings**
   1. The MVS will meet as often as required to carry out its responsibilities.
      1. Meetings will be held according to the WECC Meeting Policy.
      2. MVS meetings may be in-person, virtual, a combination of the two (hybrid), or by conference call, as determined by the chair.
      3. Meetings will be open to the public except as otherwise approved according to Board policy.
   2. A quorum for meetings will be a third of committee members.
   3. The MVS will strive to make all decisions by consensus. If consensus is not possible, action taken by the MVS will require a majority vote of the members present.
      1. Voting may be by any means the chair determines appropriate.
      2. Voting must take place in a noticed meeting.
      3. MVS members may not vote by proxy or absentee ballot.
      4. Each WECC Member organization may only have one vote.
      5. Members who vote in the minority regarding an approval item should provide an explanation for their vote. This explanation or a summary will be included in the minutes.
   4. WECC will give notice to each member of the MVS of the time and place of all meetings and will post notice of all meetings on the WECC website. Notice will be given no less than:

* 30 calendar days before in-person and hybrid meetings.
* 10 calendar days before virtual meetings and conference calls.
  1. An agenda and the items for which action may be taken, will be posted no less than:
* 10 calendar days before in-person and hybrid meetings.
* 3 calendar days before virtual meetings and conference calls.
  1. Any person who wants notice of MVS meetings may notify the WECC liaison. WECC will then email the notice of future meetings to that person when the committee members receive the notice.

# Reporting

The MVS will report to the RAC on its activities and any recommendations.

# Review and Changes to the Charter

The MVS will review this charter every three years or as needed and discuss any changes with the Joint Guidance Committee (JGC). The MVS will then make a recommendation to the RAC for approval.

|  |  |  |
| --- | --- | --- |
|  | ****Committee**** | ****Date**** |
| **Approved** | RAC | **Month Day, Year** |
| **Endorsed** | JGC | **Month Day, Year** |
| **Reviewed** | MVS | **Month Day, Year** |