

# WECC

#### Common Information Model Data Exchange

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#### Agenda

- Common Information Model (CIM) Data Exchange Goal
- CIM work so far
- CIM work that needs to happen
- CIM going forward
- Volunteers



# **CIM Data Exchange Goal**

- Why should we care?
  - At this time, there is no "universal" format in short circuit modeling that will meet WECC's need for coordination.
- CIM is the latest candidate for having a more "universal" format
  - IEC 61970-501 & IEC 61970-452 are the standards that dictate the XML format for network model exchanges
  - Both Aspen and Siemens Gridscale X (Electrocon) has made strides to implement CIM format exchange per the standard
- Goal is to test, tabulate, and write the necessary changes so that CIM will exchange data reliably

# **CIM Work So Far**

- Test procedure for each software developer:
  - Take case from utility: CAPE SCE, OneLiner BPA and perform 3 Phase and SLG bus faults
  - Take case and convert to CIM format and convert back to native case format and perform and compare the 3 Phase and SLG bus faults
  - Take CIM format case from the other software and convert to the other native format and perform and compare the 3 Phase and SLG bus faults and Thevenin Equivalent



#### **Testing Diagram**





### **Testing Diagram (cont.)**





# **Comparison SCD Results 1 & 2**

- Differences
  - 3PH SCD needs clean up (too many DIV by 0)
  - SLG SCD needs clean up (too many DIV by 0)
- Data is there but needs to summarize better



# **Comparison SCD Results 4 & 5**

- Differences
  - 3PH SCD = -5.3% to 0.19% difference (linear and non-linear)
  - SLG SCD = -0.11% to 0.05% difference (non-linear)
  - SLG SCD = -0.4% to 0.1% difference (linear)
  - Z Thevenin = -17.5% to 4950% difference (linear)



# Help in Comparison

- Help comparing SCD Results 1 & 3
- Help cleaning up SCD Results 1 & 2
- Help comparing SCD Results 4 & 6
- Please keep the data confidential per WECC NDA



### **Going Forward**

- After comparison: report to the rest of the group in January 2025
- Consolidate the difference and work on improvements in data quality conversion – i.e., CIM "WECC" format





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