



California ISO

Section 10 of BPM for TPP- Generator modeling webinar

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Market and Infrastructure Development
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Presentation overview

- Section 10 of the BPM for TPP
- Generator data template discussion
- Generator data request process
- Submission and validation process
- Helpful links

Section 10 of the BPM for TPP

- Section 10 sets the categorization of generating units, applicable technical and data requirements, deadline for data submission, submission process, and applicable penalties for non-compliance
- Data submission is the responsibility of the participating generator owner, i.e. the entity holding the Participating Generating Agreement for the Resource ID
- Modifications made to Section 10 in April, 2019, to allow for 60 day cure period, and extended submission deadline for test reports from new COD units

Generator Data Template

- The generator data template will be an attachment to the data request letter sent to the generator owner.
- Generator data templates have been posted on the CAISO website, with link provided later in the presentation
- The CAISO will walk participants through a sample generator data template to provide guidance on filling out the template as per instructions

EMT Models for Asynchronous Generators

- The CAISO in conjunction with the PTOs has developed and posted a white paper on developing EMT models for asynchronous generators

<http://www.caiso.com/Documents/ElectromagneticTransientModelingGuide-InverterBasedGenerators.pdf>

FAQs

- Generators are not required to provide PTO facility data
- If OEM data not available, use performance testing to modify generic WECC models for facility type
- For new COD generators required to submit test reports- provide as-built PSLF models and equipment data even if test reports are not available
- Protection settings to be provided even if corresponding dynamic models are not available in WECC library

Data Request Process-Existing Generators

- CAISO will send a letter to the generator owner with a cc to the appropriate SC, 6-8 months in advance of the required data submission deadline, providing data submission instructions
- There will be a generator data request template attached, pre-populated with data on record with the CAISO and PTO, along with existing models files
- Letter will contain instructions for generator owner to validate the existing data and meet the submission requirements set in the generator data request template

Data Request Process-New Generators

- CAISO will send a letter to the generator owner with a cc to the appropriate SC, after the generator has achieved commercial operation date(COD), providing data submission instructions
- New COD generators have up to 365 CD from request date to provide test reports. All other data requested in the letter need to be submitted within 120 CD from the request date

Generator Category List

- The generator category list is a spreadsheet mapping each resource ID to: 1) Category of data submission, and 2) Phase of data submission
- Generator owners should use the generator category list to identify the appropriate category and phase for their generator
- Data requirements and submission deadline will be as described in section 10 of the BPM for TPP, and the attached generator data request template sent by the CAISO

Generator Category Overview

Category	Nameplate capacity	Voltage
Category 1	Individual: ≥ 20 MVA Aggregate: ≥ 75 MVA	≥ 100 kV
Category 2	Individual: > 10 MVA Aggregate: > 20 MVA	≥ 60 kV
Category 3	Individual: ≤ 10 MVA Aggregate: ≤ 20 MVA	≥ 60 kV
Category 4	Explicitly modeled in basecase	< 60 kV
Category 5	Modeled as aggregate resource in basecase	

Submission Process

- Generator owner will email the completed generator data request template and the associated supplemental documents to the email addresses identified in the data request letter
- The subject line format for the email has been provided in Section 10.4.1 of the BPM for TPP
- The CAISO will provide a sample email submission at the webinar
- On submitting the data request email response, the generator owner will receive a confirmation of receipt with 10 calendar days from submission

Submission Format- Sample Submission to PG&E

Email subject line:

BLPARA_5_SOLAR_Blue Paradise Solar Farm_ BPM model submission

Recipient:

GridModelingData@caiso.com

GenModel@pge.com < replace email id with appropriate PTO >

Attachments:

Updated generator data request template

Test reports (as required)

Other identified documentation

Determination of Data Submission Compliance

Following factors listed in BPM for determination of data submission compliance:

- Completed generator data template as per instructions provided in “Instructions” tab;
- All supplemental data documents requested;
- Show .epc and .dyd files initialize in PSLF program (provide snapshot of initialization); and
- Spread of real power output (P_g) and reactive power output (Q_g) in GE-PSLF simulation results for a 10 second no-fault run at full real power output should be less than 1 or 1% (provide in table format).
- Data submission is made as outlined in Section 10.4.1 of the BPM for TPP

Validation and Cure Period

- Once a valid submission from a generator owner has been received, the CAISO and PTO have upto 90 CD from date of submission to review the data and identify any deficiencies
- The CAISO will send a list of deficiencies to the generator owner, which need to be cured within 60 CD from the date of such request
- If the generator owner fails to cure the deficiencies identified, it may lead to penalties under CAISO Tariff Section 37.6.2

Helpful Links

- BPM for TPP

<https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Transmission%20Planning%20Process>

- Generator category list & Generator data request template (Under Submittal requirements- data for power system modeling and analysis (TPP) BPM)

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=95422303-C0DD-43DF-9470-5492167A5EC5>

- Please submit questions to gridmodelingdata@caiso.com with "BPM model submission" in the subject line.

Helpful Links-cont'd

- E-mail mailbox addresses for CAISO and PTOs

CAISO: GridModelingData@caiso.com

PG&E: GenModel@pge.com

SCE: basecase@sce.com

SDG&E: basecase@semprautilities.com

VEA: veaengineering@vea.coop

Gridliance: GLW-planning@gridliance.com