BPM Change Management Meeting

Isabella Nicosia
BPM Change Management Process Administrator
BPM_CM@caiso.com

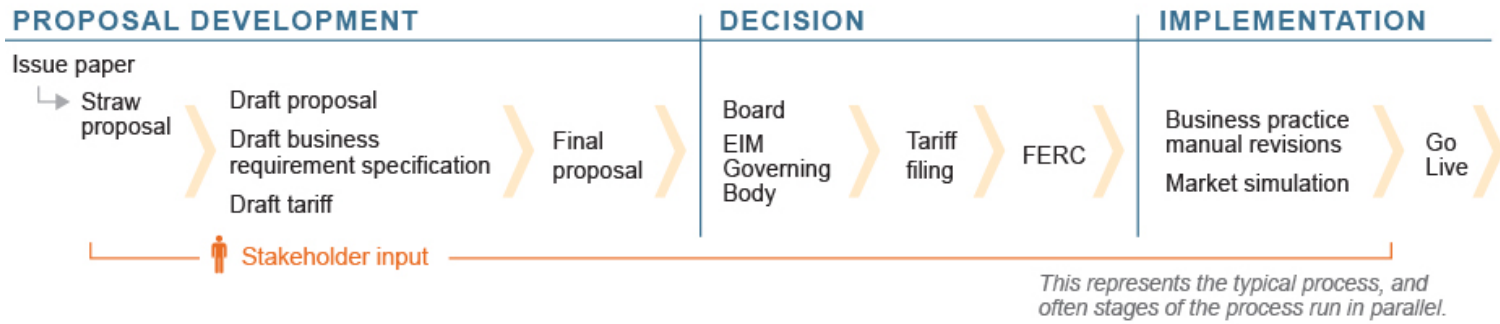
July 28, 2020

Agenda – BPM Change Management Meeting
July 28, 2020

Topic	Presenter
Introduction / Meeting Overview	Isabella Nicosia
Discussion of active proposed changes: Generator Interconnection and Deliverability Allocation Procedures BPM Market Operations BPM Generator Management BPM Reliability Requirements BPM Outage Management BPM	 Linda Wright, Songzhe Zhu Jamal Batakji Debi Le Vine Melanie Bogen Kalyani Abhyankar
Wrap-Up and Next Steps	Isabella Nicosia

BPM Change Management Process
916-608-5829 BPM_CM@caiso.com

California ISO Stakeholder Initiative Process



- Business Practice Manuals
  - The purpose of BPMs is to set forth business practices that implement the ISO tariff.
  - The ISO conducts a yearly policy initiative roadmap process to consider and rank initiatives.
    - *Policy changes submitted though the PRR process will be referred to the policy initiative road map process.*
  - Each subject area in a BPM is based on enabling language in the ISO tariff.
    - *The PRR process cannot be used to introduce changes that are not supported by existing tariff authority.*

Generator Interconnection and Deliverability Allocation Procedures BPM

PRR	PRR Title	Stage
1259	Detailed descriptions of network upgrades	Initial

PRR 1259 – Detailed descriptions of network upgrades

- Reason for revision
  - Implement the area and local off-peak network upgrades in the deliverability methodology enhancement approved by FERC.
- Initial comments:
  - SDG&E; submitted July 14, 2020
  - LSA & SEIA; submitted July 14, 2020
- Initial comment period expired:
  - July 14, 2020
- Next step:
  - Post recommendation

Updated Area Deliverability Constraint Criteria

- ADC-C1: A transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint listed above.
- ADC-C2: more than 20 generating units contributing to the constraint AND contributing MW > base portfolio MW
- ADC-C3: contributing MW > base portfolio MW AND mitigation would cost more than $50M
- ADC-C4: more than 10 generating units contribution to the constraint AND contributing MW > base portfolio MW AND caused by BES contingency AND mitigation would cost more than $20M

New Area Off-Peak Constraint Criteria

- AOPC-C1: The same transmission constraint has already been identified as an Area Deliverability Constraint in the on-peak deliverability assessment.
- AOPC-C2: more than 20 locational constrained resource interconnection generators contributing to the constraint AND contributing MW > base portfolio MW
- AOPC-C3: contributing MW > base portfolio MW AND mitigation would cost more than $50M
- AOPC-C4: cost of the mitigation > estimated avoided curtailment cost

AOPC-C4

- AOPC-C4: The cost of the mitigation exceeds estimated avoided curtailment cost.

Example: 100 MW solar PV is behind the constraint.	
Step 1 Deliverable MW w/o upgrade	Reduce output to 70 MW to eliminate the overload.
Step 2 Deliverable MW w upgrade	If reconductoring the line, 100MW output is deliverable.
Step 3 Incremental deliverable MW	100 – 70 = 30 MW
Step 4 Incremental deliverable annual energy	Annual energy for output between 70 MW and 100 MW and the CAISO load is above 50% of the peak load 90,487MWh.
Step 5 Potential avoided curtailment	Assume this is a radially connected gen-only pocket. Select the discount factor of 0.75. 90,487 * 0.75 = 67,865MWh.

AOPC-C4

Example: 100 MW solar PV is behind the constraint.	
Step 6 Potential avoided curtailment cost	Assume solar PV energy cost = $30/MWh (source: CPUC 2019-2020 Integrated Resource Planning Inputs and Assumptions): 67,865 MWh x $30/MWh = $2.036M
Step 7 NPV of potential avoided curtailment cost	Assume 40 years of transmission line lifetime and a 7% discount rate (real): $2.036M x 13.33 = $27.14M
Step 8 NPV of revenue requirement of the upgrade	Assume capital cost of the upgrade = $20M NPV factor of revenue requirement = 1.30: $20M x 1.30 = $26M
Step 9 Area or local	Upgrade cost $26M < avoided curtailment cost $27.14M This is a local constraint. The reconductoring upgrade is a Local Off-Peak Network Upgrade.

Market Operations BPM

PRR	PRR Title	Stage
1258	Energy imbalance market incremental flow and energy imbalance market total flow penalty price	Initial
1257	Run-of-river registration process	Initial

PRR 1258 – Energy imbalance market incremental flow and energy imbalance market total flow penalty price

- Reason for revision
  - The penalty prices for Energy imbalance market incremental flow and energy imbalance market area total flow constraints will be revised to align them with the EIM Entitlement Rate of change constraints. This is effective 6/17/2020.
- Initial comments:
  - No comments submitted
- Initial comment period expired:
  - July 14, 2020
- Next step:
  - Post recommendation

PRR 1257 – Run-of-river registration process

- Reason for revision
  - This update is due to Commitment Cost Enhancements Tariff Clarifications initiative. One of the main drivers in this update is to provide definition for run-of-river resources and list the registration process. The effective date will be July 1,2020.
- Initial comments:
  - No comments submitted
- Initial comment period expired:
  - July 14, 2020
- Next step:
  - Post recommendation

Generator Management BPM

PRR	PRR Title	Stage
1256	Implementation of FERC Order on Deliverability Transfers	Recommendation

PRR 1256 – Implementation of FERC Order on Deliverability Transfers

- Reason for revision
  - FERC issued an order on May 19, 2020, effective March 3, 2020, accepting the CAISO's deliverability enhancements associated with the CPUC's changes in calculating the qualifying capacity for resource adequacy and additional changes the CAISO made to its transmission planning methodology due to the time-shift of the peak hours. This change results in the CAISO calculating off-peak deliverability status for generator interconnection requests and determining if deliverability network upgrades are required for the project. The change to the BPM for Generator Management provides the customer with the information on the steps and timing needed to transfer deliverability.
- Recommendation comments:
  - No comments submitted
- Recommendation comment period expired:
  - July 14, 2020
- Next step:
  - Post final decision

Reliability Requirements BPM

PRR	PRR Title	Stage
1255	2021 Availability Assessment Hours	Recommendation

PRR 1255 – 2021 Availability Assessment Hours

- Reason for revision
  - Added availability assessment hours for 2021
- Recommendation comments:
  - No comments submitted
- Recommendation comment period expired:
  - July 14, 2020
- Next step:
  - Post final decision

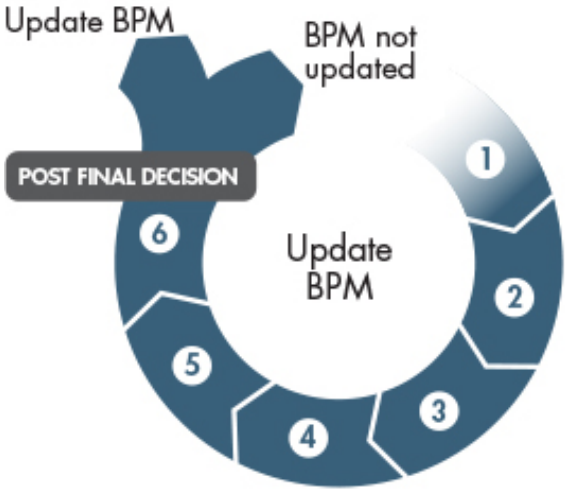
Outage Management BPM

PRR	PRR Title	Stage
1254	Variable Energy Resources Off Peak Opportunity Outage	Recommendation

PRR 1254 – Variable Energy Resources Off Peak Opportunity Outage

- Reason for revision
  - The current POSO requirement is not aligned correctly for Solar VER resources and creates instances of Solar VERs being subject to POSO, strictly as a result of a calculation due to an outage submittal. The status of the solar resource after production hours has no impact on reliability as the resource could not generate once the sun goes down or "after production hours".
  - Currently, at 10pm, VERs can request an “Off Peak Opportunity Outage (OPOO)” that requires the resource’s return to service by 5:59 AM, the following day. A solar VER cannot produce during these hours. In spite of that, if the SC is short RA, the resource may get a Planned Outage Substitution Obligation (POSO). In order to mitigate superfluous POSO requirements, the creation of a "VER Off Peak Opportunity" selection on outage submittals would eliminate the inessential POSO once selected for Solar Resources (VER) performing overnight maintenance. The CAISO’s VER forecast itself will validate that the use of "VER Off Peak Opportunity" outage is correctly applied.
- Recommendation comments:
  - PG&E; submitted July 14, 2020
  - SCE; submitted late (July 20, 2020)
- Recommendation comment period expired:
  - July 14, 2020
- Next step:
  - Post final decision

Next BPM PRR Review Monthly Meeting:
August 25, 2020 @ 11 a.m.



1. **SUBMIT PRR**
   Proposed Revision Request (PRR) submitted to the ISO
2. **COMMENTS PERIOD**
   Upon ISO acceptance, PRR becomes public and 10-business day comment period starts
3. **STAKEHOLDER MEETING**
   PRR details and comments reviewed and discussed
4. **RECOMMENDATION**
   ISO recommendation issued on PRR
5. **COMMENTS ON RECOMMENDATION**
   10-business day comment period open on recommendation
6. **STAKEHOLDER MEETING ON RECOMMENDATION**
   PRR recommendation and comments reviewed

BPM change management process questions:
Isabella Nicosia
916-608-5829
BPM_CM@caiso.com