



BPM Change Management Meeting

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September 24, 2019

Agenda – BPM Change Management Meeting

September 24, 2018

| Topic | Presenter |
|---|--|
| Introduction / Meeting Overview | Isabella Nicosia |
| Discussion of active proposed changes: Reliability Coordinator Services BPM Market Operations BPM, Energy Imbalance Market BPM, Market Instruments BPM Demand Response BPM Metering BPM Settlements and Billing BPM Generator Interconnection and Deliverability Allocation Procedures BPM, Generator Interconnection Procedures BPM Generator Management BPM Reliability Requirements BPM | Abdulrahman Mohammed-Ali Kokou Agbassekou, Jamal Batakji Pia Sok Michael Ucol Brenda Corona Phelim Tavares Nancy Strouse Kyle Woody |
| Wrap-Up and Next Steps | Isabella Nicosia |

BPM Change Management Process
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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 through 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.*

Reliability Coordinator Services BPM

| PRR | PRR Title | Stage |
|------|---|---------|
| 1196 | Minor updates related to processes and diagrams | Initial |

PRR 1196 – Minor updates related to processes and diagrams

- Reason for revision
 - Minor updates related to processes and diagrams
- Initial comments:
 - No comments submitted to date
- Initial comment period expires:
 - September 24, 2019
- Next step:
 - Post recommendation

Market Operations BPM

| PRR | PRR Title | Stage/Status |
|------|---|----------------|
| 1171 | Load conformance limiter logic in the fifteen-minute market | Recommendation |
| 1176 | Energy storage and distributed energy resources 3A bid option and expected energy calculation charges | Initial |
| 1180 | Participating generator definition | Initial |
| 1191 | Local power market mitigation enhancements mitigation changes | Initial |
| 1194 | Changes due to reliability must run and capacity procurement mechanism enhancement project | Initial |

PRR 1171 – Load conformance limiter logic in the fifteen-minute market

- Reason for revision
 - Added a footnote to clarify the Load Conformance Limiter logic in the Fifteen-minute market.
- Recommendation comments:
 - No comments submitted
- Recommendation comment period expired:
 - September 18, 2019
- Next step:
 - Post final decision

PRR 1176 – Energy storage and distributed energy resources 3A bid option and expected energy calculation charges

- Reason for revision
 - Changes to the bid dispatchable option and expected energy calculation due to the new hourly and 15-minute block dispatchable PDRs from ESDER3A project
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 4, 2019
- Next step:
 - Post recommendation

PRR 1180 – Participating generator definition

- Reason for revision
 - Revision to paragraph 2.1.3 due to the changes to enable storage resources with a capacity rating of 100KW to participate in the CAISO markets, this is related to FERC 841. Effective Date: Fall 2019
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1191 – Local power market mitigation enhancements mitigation changes

- Reason for revision
 - These changes are to support the Local Market Power Mitigation Enhancements 2018 Project (LMPME). These changes include mitigation process enhancements due to flow reversal and economic displacement. Effective date: November 2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

PRR 1194 – Changes due to reliability must run and capacity procurement mechanism enhancement project

- Reason for revision
 - Enhancements are being made to the RMR and CPM procurement mechanisms to “modernize” the RMR agreement, combine all retirement-related backstop procurement under RMR, and to clarify when the ISO would use its RMR versus CPM backstop procurement authority. Expected date of Fall release 2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

Energy Imbalance Market BPM

| PRR | PRR Title | Stage |
|------|--|----------------|
| 1172 | Energy imbalance thresholds | Recommendation |
| 1192 | Local power market mitigation enhancements mitigation changes for energy imbalance market | Initial |

PRR 1172 – Energy imbalance thresholds

- Reason for revision
 - EIM Enhancement 2019 project
- Recommendation comments:
 - No comments submitted
- Recommendation comment period expired:
 - September 18, 2019
- Next step:
 - Post final decision

PRR 1192 – Local power market mitigation enhancements mitigation changes for energy imbalance market

- Reason for revision
 - These changes are to support the Local Market Power Mitigation Enhancements 2018 Project (LMPME). These changes include mitigation process enhancements for EIM.
 - Effective date: November 2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

Market Instruments BPM

| PRR | PRR Title | Stage |
|------|---|----------------|
| 1173 | Energy imbalance market and CAISO balancing authority area's transmission loss clearing results | Recommendation |
| 1181 | Emergency PRR: Attachment B changes to support Tariff Section 4.6.4 | Initial |
| 1190 | Local power market mitigation enhancements hydro default energy bid option energy imbalance market transfer limit | Initial |
| 1193 | Changes due to reliability must run and capacity procurement mechanism enhancement project | Initial |

PRR 1173 – Energy imbalance market and CAISO balancing authority area’s transmission loss clearing results

- Reason for revision
 - EIM Enhancement 2019 project
- Recommendation comments:
 - No comments submitted
- Recommendation comment period expired:
 - September 18, 2019
- Next step:
 - Post final decision

PRR 1181 – Attachment B changes to support Tariff Section 4.6.4

- Reason for revision
 - The CAISO is adding clarity to the process to support Tariff Section 4.6.4 Identification of Generating Units.
- Initial comments:
 - Portland General Electric; submitted on 9/18/19
 - Western Power Trading Forum; submitted on 9/18/19
 - Middle River Power; submitted on 9/18/19
 - Southern California Edison; submitted on 9/18/19
 - Calpine; submitted on 9/17/19
 - Pacific Gas & Electric; submitted on 9/17/19
 - Idaho Power Company; submitted on 9/17/19
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1190 – Local power market mitigation enhancements hydro default energy bid option energy imbalance market transfer limit

- Reason for revision
 - These changes are to support the Local Market Power Mitigation Enhancements 2018 Project (LMPME), it offers a new Hydro Default Energy Bid Option which is described in Attachment B and Attachment D. The Tariff amendment for LMPME is ER19-2347. Additional changes to Attachment B to support EDSER3 changes for Fall 2019. Effective date: November 13, 2019
- Initial comments:
 - Powerex; submitted on 9/23/19
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

PRR 1193 – Changes due to reliability must run and capacity procurement mechanism enhancement project

- Reason for revision
 - Enhancements are being made to the RMR and CPM procurement mechanisms to “modernize” the RMR agreement, combine all retirement-related backstop procurement under RMR, and to clarify when the ISO would use its RMR versus CPM backstop procurement authority. Expected date of Fall release 2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

Demand Response BPM

| PRR | PRR Title | Stage |
|------|--|----------------|
| 1174 | New Demand Response BPM and language for energy storage and distributed energy resources 3a initiative | Recommendation |

PRR 1174 – New Demand Response BPM and language for energy storage and distributed energy resources 3a initiative

- Reason for revision
 - This is a new Demand Response BPM. The ISO is moving some information from the BPM for Metering, business processes information from the DR User Guide, and adding additional information related to process, and language for ESDER 3a initiative. The BPM for Metering has been updated to remove these sections.
- Recommendation comments:
 - PG&E; submitted on 9/12/19
 - Olivine; submitted on 9/18/19
- Recommendation comment period expired:
 - September 18, 2019
- Next step:
 - Post final decision

Metering BPM

| PRR | PRR Title | Stage |
|------|---|----------------|
| 1175 | Clarify audit period for scheduling coordinator self-audit and move language from Metering BPM to new Demand Response BPM | Recommendation |

PRR 1175 – Clarify audit period for scheduling coordinator self-audit and move language from Metering BPM to new Demand Response BPM

- Reason for revision
 - Clarify audit period for SC Self-Audit and move language from Metering to New Demand Response BPM
- Recommendation comments:
 - No comments submitted
- Recommendation comment period expired:
 - September 18, 2019
- Next step:
 - Post final decision

Settlements and Billing BPM

| PRR | PRR Title | Stage |
|------|--|---------|
| 1177 | Updated BPM configuration guide for pre-calculation high voltage access charge metered load 5.5 to accommodate FERC Order 841 | Initial |
| 1178 | Update the pre-calculation MSS deviation penalty quantity configuration to properly calculate the MSS expected imbalance energy as per the metered subsystem agreement definition and configuration to accommodate the changes as per MIAF 2019-26 MSSA gaps | Initial |
| 1179 | Updated BPM configuration guide for charge code 8830 monthly resource adequacy availability incentive mechanism settlement to accommodate pass through bill calculation visibility to scheduling coordinators | Initial |
| 1182 | Update the pre-calculation real time energy quantity configuration to accommodate the changes for EIM enhancements 2019 | Initial |
| 1183 | Updated BPM configuration guide for CC 6806 day ahead residual unit commitment (RUC) tier 1 association 5.11 and PC real time energy quantity 5.20 and PC RTM net amount 5.33 and PC spin non-spin no pay quantity 5.21 to accommodate ESDER 3A initiative | Initial |
| 1184 | Update settlement charge codes for reliability must run and capacity procurement mechanism enhancements initiative | Initial |
| 1185 | Update settlement charge codes for real time market neutrality settlement initiative | Initial |
| 1197 | Emergency PRR: Updates due to termination of Peak RC settlement and invoicing | Initial |

PRR 1177 – Updated BPM configuration guide for pre-calculation high voltage access charge metered load 5.5 to accommodate FERC Order 841

- Reason for revision
 - With the implementation of FERC 841, Settlements must remove TAC for Pumped-Storage Hydro Units as of December 3, 2019. In order to comply with this requirement, a filter was added to remove Pumped-Storage Hydro Units from the PC HVAC Metered Load. The effective trade date of the change is December 1, 2019, and the anticipated implementation date is October 30, 2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 4, 2019
- Next step:
 - Post recommendation

PRR 1178 – Update the pre-calculation MSS deviation penalty quantity configuration to properly calculate the MSS expected imbalance energy as per the metered subsystem agreement definition and configuration to accommodate the changes as per MIAF 2019-26 MSSA gaps

- Reason for revision

- BPM – MSS Deviation Penalty Quantity Precalculation 5.5.1
- Multiple disputes have been submitted by NPCA regarding the calculation of their forced outage quantity
- BPM – MSS Deviation Penalty Quantity Precalculation 5.6
- MIAF 2019-26 MSSA Agreement Gaps requires settlements to identify market disruption intervals and exempt these intervals from any MSS LF Deviation Penalty assessments
- The planned production deployment date is 10/25/2019, and the effective dates are as follows:

5.5.1 – 1/1/2018 – 10/31/2019

5.6 – 11/1/2019 – Open

- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 4, 2019
- Next step:
 - Post recommendation

PRR 1179 – Updated BPM configuration guide for charge code 8830 monthly resource adequacy availability incentive mechanism settlement to accommodate pass through bill calculation visibility to scheduling coordinators

- Reason for revision
 - HPQC # 62733 required reconfiguring the PTB calculation so as to make the process more visible to SCs. This required moving the PTB input from a CAISO level charge type to a BA level charge type. CC 8830 Monthly Resource Adequacy Availability Incentive Mechanism Settlement was directly impacted. The effective trade date is 5/1/2018 and the anticipated implementation date is 10/30/2019. CC 8831 remove existing PTB Hierarchy back to effective trade date 5/1/2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 4, 2019
- Next step:
 - Post recommendation

PRR 1182 – Update the pre-calculation real time energy quantity configuration to accommodate the changes for EIM enhancements 2019

- Reason for revision
 - CAISO will settle the EIM resource deviation amount that's within the resource regulation or available balancing capacity (ABC) range as instructed regulation energy.
 - The planned production deployment date is 10/25/2019 with an effective date of 11/13/2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1183 – Updated BPM configuration guide for CC 6806 day ahead residual unit commitment (RUC) tier 1 association 5.11 and PC real time energy quantity 5.20 and PC RTM net amount 5.33 and PC spin non-spin no pay quantity 5.21 to accommodate ESDER 3A initiative

- Reason for revision
 - ISO ESDER 3 initiative triggered changes to the settlements system to remove barriers to effective market participation of storage and distributed energy resources. The changes include: PDRs 5 minute bid option to bid dispatchable options of 5, 15, and 60 minute, with 60 minute excluded from bid cost recovery and removal of LSE requirement and DLA application.
 - This impacts CC 6806 Day Ahead Residual Unit Commitment (RUC) Tier 1 Association 5.11 and PC Real Time Energy Quantity 5.20 and PC RTM Net Amount 5.33 and PC SPIN Non-Spin No Pay Quantity 5.21 has an effective trade date of 11/13/2019 and an anticipated implementation date around 10/30/2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1184 – Update settlement charge codes for reliability must run and capacity procurement mechanism enhancements initiative

- Reason for revision
 - These are the Settlement configuration changes needed to support the RMR and CPM Enhancements initiative. The objective of the RMR and CPM Enhancements initiative is to enhance existing ISO backstop procurement mechanisms, specifically the Capacity Procurement Mechanism (CPM) and Reliability Must-Run (RMR) agreement, as the use of backstop procurement by the ISO increases. RMR contracts shall only be used when a resource owner has notified the ISO of its intention to enter retirement (merging risk-of-retirement into this mechanism). Short of retirement notice, CPM will serve as the procurement backstop for resource adequacy.
 - The ISO anticipates implementation of the BPM changes on or about October 30, 2019, with effective date 1/1/2019.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1185 – Update settlement charge codes for real time market neutrality settlement initiative

- Reason for revision
 - The Settlement configuration changes are needed to support the RTM Neutrality Settlement initiative. The objective of the initiative is to:
 - Eliminate EIM transfer adjustment from RT Imbalance Energy Offset,
 - Add GHG Financial credit for the portion of EIM transfers that do not correspond to a GHG compliance obligation, and
 - Use 5-minute ATF tag of EIM transfers in settlement
 - The ISO anticipates implementation of the BPM changes on or about October 30, 2019, with a retroactive effective date 8/1/2019.
- Initial comments:
 - Arizona Public Service; submitted on 9/18/19
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1197 – Emergency PRR: Updates due to termination of Peak RC settlement and invoicing

- Reason for revision
 - RC West Services implementation of settlements and billing requires the termination of the Peak RC charge code to allow for the appropriate calculations and generation of invoices and statements by Settlements for the RC customers internal to the CAISO BAA.
 - BPM for Settlements and Billing has been revised to support the implementation.
- Initial comments:
 - No comments submitted
- Initial comment period expired:
 - September 23, 2019
- Next step:
 - Post recommendation

Generator Interconnection and Deliverability Allocation Procedures BPM

| PRR | PRR Title | Stage |
|------|--|---------|
| 1186 | 2018 Interconnection process enhancements- change in deliverability status, study agreements, shared SANUs, Interconnection Request criteria | Initial |

PRR 1186 – 2018 Interconnection process enhancements- change in deliverability status, study agreements, shared SANUs, interconnection request criteria and acceptance

- Reason for revision
 - 2018 Interconnection Process Enhancements initiative including change in deliverability status, study agreements, shared SANUs, Interconnection Request criteria
- Initial comments:
 - Joint comments from EDF-Renewables; Large-scale Solar Association, and SPower; submitted on 9/18/19
 - San Diego Gas & Electric; submitted on 9/18/19
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

Generator Interconnection Procedures BPM

| PRR | PRR Title | Stage |
|------|--|---------|
| 1187 | 2018 Interconnection process enhancements - change in deliverability status, elections made after Phase II studies | Initial |

PRR 1187 – 2018 Interconnection process enhancements - change in deliverability status, elections made after phase II studies

- Reason for revision
 - 2018 Interconnection Process Enhancements initiative including change in deliverability status, elections made after Phase II studies
- Initial comments:
 - San Diego Gas & Electric; submitted on 9/18/19
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

Generator Management BPM

| PRR | PRR Title | Stage |
|------|--|---------|
| 1188 | Implementing interconnection process enhancements and funds submittal requirement change | Initial |
| 1189 | Incorporate tariff changes from the Reliability Must Run / Capacity Procurement Mechanism policy initiative, regarding retirement scenarios, and RMR designation | Initial |

PRR 1188 – Implementing interconnection process enhancements and funds submittal requirement change

- Reason for revision
 - Implementing Interconnection Process Enhancements (IPE) 2018
 - Funds Submittal Requirement
- Initial comments:
 - San Diego Gas & Electric; submitted on 9/18/19
 - Joint comments from EDF-Renewables, Large-scale Solar Association, and SPower; submitted on 9/18/19
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

PRR 1189 – Incorporate tariff changes from the Reliability Must Run / Capacity Procurement Mechanism policy initiative, regarding retirement scenarios, and RMR designation

- Reason for revision
 - Updating Section 12 to incorporate Tariff changes from the RMR/CPM policy initiative, regarding retirement scenarios, and RMR designation.
- Initial comments:
 - No comments submitted to date
- Initial comment period expired:
 - September 18, 2019
- Next step:
 - Post recommendation

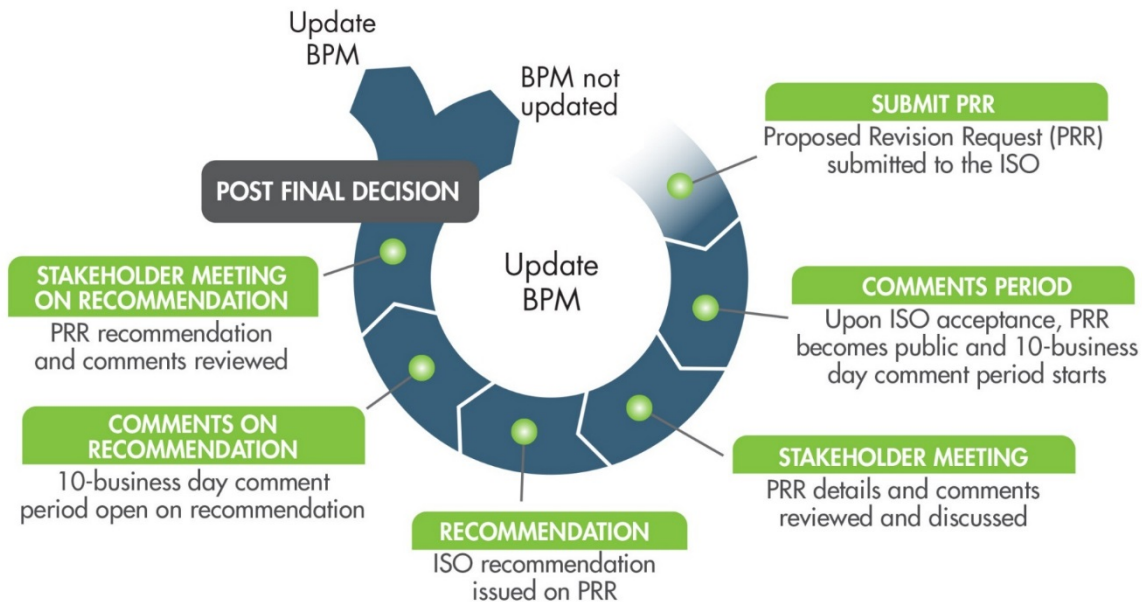
Reliability Requirements BPM

| PRR | PRR Title | Stage |
|------|--|---------|
| 1195 | Reliability must run capacity procurement market policy initiative changes | Initial |

PRR 1195 – Reliability must run capacity procurement market policy initiative changes

- Reason for revision
 - RMR-CPM Policy Initiative Changes
- Initial comments:
 - No comments submitted to date
- Initial comment period expires:
 - September 24, 2019
- Next step:
 - Post recommendation

Next BPM PRR Review Monthly Meeting: October 22, 2019 @ 11 a.m.



BPM change management
process questions:

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