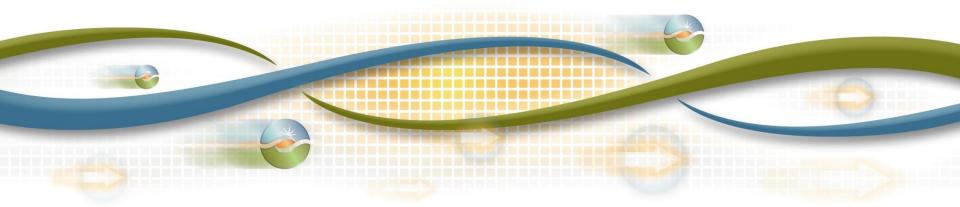


BPM Change Management Meeting

September 26, 2017

Julia Payton BPM Change Management Process BPM_CM@caiso.com



Agenda – BPM Change Management Meeting, September 26, 2017

| Торіс | Presenter |
|---|--|
| Introduction/meeting overview | Julia Payton |
| Discussion of current PRRs: Candidate CRR Holder Registration Scheduling Coordinator Certification & Termination Metering Market Instruments Market Operations Outage Management Settlements and Billing | Julia Payton Julia Payton Julie McCallion Jamal Batakji Jamal Batakji Gautham Katta Bonnie Peacock |
| PRRs to be discussed at later date Wrap up and next steps | Julia Payton |

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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 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.



PRRs for Discussion – Recommendation Phase Candidate CRR Holder Registration BPM

| PRR | PRR Title |
|------|---|
| 1001 | CRR Holder registration clarifications and language updates |



PRR 1001 – CRR Holder registration clarifications and language updates

- Reason for revision:
 - Providing clarification and language edits.
- Recommendation Comments:
 - No recommendation comments received
- Recommendation comment period expired:
 - September 13, 2017
- Next step:
 - ISO Post Final Decision



PRRs for Discussion – Recommendation Phase Scheduling Coordinator Certification and Termination BPM

| PRR | PRR Title |
|------|--|
| 1002 | Scheduling Coordinator certification clarifications and language updates |



PRR 1002 – SC Certification and clarifications and language updates

- Reason for revision:
 - Providing clarification and language edits.
- Recommendation Comments:
 - No recommendation comments submitted
- Recommendation comment period expired:
 - September 13, 2017
- Next step:
 - ISO Post Final Decision



PRRs for Discussion – Recommendation Phase Market Instruments BPM

| PRR | PRR Title |
|------|---|
| 1003 | Updates to scaling factors and scenarios leading to re-negotiation of default energy bid, major maintenance adder, and operations and maintenance |



PRR 1003 – Updates to scaling factors and scenarios leading to re-negotiation of DEB, MMA and O&M

- Reason for revision:
- Two updates; (1) Changing the scaling factors to the gas price index due to Aliso Canyon. Effective August 1st, 2017. (2) Revisions to Attachment D and Attachment L to include possible scenarios leading to re-negotiation of a default energy bid under negotiated rate option, a major maintenance adder and negotiated variable operations and maintenance (O&M) adder.
- Recommendation Comments:
 - Portland General Electric 8/31/17
 - Department of Market Monitoring 8/31/17
- Recommendation comment period expired:
 - September 13, 2017
- Next step:
 - ISO Post Final Decision



PRRs for Discussion – Initial Phase Market Instruments BPM

| PRR | PRR Title |
|------|---|
| 1013 | Bidding rules enhancements initiative, Part B |



PRR 1013 – Bidding rules enhancements initiative, Part B

- Reason for revision:
 - This is part of the Bidding Rules Enhancement part B project. New fuel and electric regions were developed for use in commitment costs.
 Implementation date is November 1, 2017
- Initial Comments:
 - Pacific Gas and Electric Company 9/12/17
 - ISO response posted 9/22/17
- Initial comment period expired:
 - September 15, 2017
- Next step:
 - ISO Post Recommendation



PRRs for Discussion – Initial Phase Market Operations BPM

| PRR | PRR Title |
|------|---------------------------------|
| 1015 | Optimizing controllable devices |



PRR 1015 – Optimizing controllable devices

- Reason for revision:
 - As part of Market & Operational Excellence, the controllable devices (i.e. phase shifters) market setup and optimization will improve transmission line capacity, and ultimately results in a better protection of the lines and transformers from thermal overload
- Initial Comments:
 - LS Power Development, LLC 9/7/17
 - ISO response posted 9/8/17
- Initial comment period expired:
 - September 18, 2017
- Next step:
 - ISO Post Recommendation



PRRs for Discussion – Initial Phase Metering BPM

| PRR | PRR Title |
|------|---|
| 1006 | Language additions and clarifications regarding settlement quality meter data, settlement quality meter data plans, scheduling coordinator self-audit and meter generator output and meter data submissions for proxy demand resources and RDRRs |



PRR 1006 – Language additions and clarifications regarding SQMD, SQMD plans, SC self-audit and meter generator output and meter data submissions for PDRs and RDRRs

- Reason for revision:
 - Clarification and updates needed regarding settlement quality meter data, SQMD Plans, scheduling coordinator self-audit and meter generator output and meter data submissions for PDRs and RDRRs. Tariff Section: 10.3.7.1
- Initial Comments:
 - PacifiCorp 9/11/17
- Initial comment period expired:
 - September 13, 2017
- Next step:
 - ISO Post Recommendation



PRRs for Discussion – Initial Phase Outage Management BPM

| PR | R | PRR Title |
|-----|----|--|
| 101 | 17 | Nature of work attributes for generation outages |



PRR 1017 – Nature of work attributes for generation outages

- Reason for revision:
 - To provide clarification for nature of work attributes for generation outages
- Initial Comments:
 - CLECA 9/7/17
 - PG&E 9/21/17
- Initial comment period expired:
 - September 21, 2017
- Next step:
 - ISO Post Recommendation



PRRs for Discussion – Initial Phase Settlements and Billing

| PRR | PRR Title | | | |
|------|---|--|--|--|
| 1007 | Update charge code 7896 monthly capacity procurement mechanism allocation configuration for allocating collective deficiency costs | | | |
| 1008 | Update BPM for congestion revenue rights balancing account to clarify xml report ability of an input | | | |
| 1009 | Updated BPM configuration guide pre-calculation real time energy quantity, version 5.15 to incorporate resources which tag without bids or awards | | | |
| 1010 | Update charge code 6460 fifteen minute market instructed imbalance energy settlement configuration to exempt pseudo tie dynamic resources from hour-ahead scheduling process reversal assessment | | | |
| 1011 | Update residual unit commitment related charge codes to ensure residual unit commitment availability settlement is not a charge whenever residual unit commitment has negative price | | | |
| 1012 | Updated BPM configuration guide for pre-calculation resource adequacy availability incentive mechanism to accommodate various fixes | | | |
| 1014 | Updated BPM configuration guide for pre-calculation resource adequacy availability incentive mechanism for reliability services initiative 2017 | | | |
| 1016 | Update the pre-calculation start-up and minimum load cost configuration to allow for the qualification and recovery of IFM or RUC minimum load cost during a resource's minimum down time that follows an ADS shutdown instruction. | | | |
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| PRR | CC/ PC | Comment Expiration / Next Step | ISO Position / Reason for Revision |
|------|--|---|--|
| 1007 | CC 7896 - Monthly CPM Allocation | No Initial comments Initial comment period expired 9/15/17; Next Step: Post Recommendation | A market participant identified the allocation for CPM designation of type collective deficiency (COLDEF) to Scheduling Coordinator's Load within the TAC Area(s) of the CPM designation does not appear consistent with the Tariff section 43.8.3 / 43a.8.3. CAISO agrees with the market participant that Tariff section 43.8.3 / 43a.8.3 calls for allocation of collective deficiency instead to Scheduling Coordinators for LSEs serving Load in the TAC Area(s) in which the deficient Local Capacity Area was located. Further, the allocation will be based on the Scheduling Coordinator's proportionate share of Load in such TAC Area(s) as determined in accordance with Section 40.3.2, excluding Scheduling Coordinators for LSEs that procured additional capacity in accordance with Section 43a.2.1.2 on a proportionate basis, to the extent of their additional procurement. There has not been any collective deficiency CPM designation and more likely will not be any in the future because CPM deficiencies in general can be cured at a later time during the coming CPM year. The configuration change is bundled with Fall 2017 configuration release to be deployed on or about October 25, 2017. The effective trade date of the change is 1/1/2018. |

| PRR | CC/ PC | Comment Expiration / Next Step | ISO Position / Reason for Revision |
|------|---------------------------------------|---|--|
| 1008 | CC 6790 - CRR Balancing Account | No Initial comments Initial comment period expired 9/15/17; Next Step: Post Recommendation | CAISO received some inquiries on CAISOMonthlyCRRAuctionMarketTOUTotalRevenueAmt variable, which is an input in CC 6790 CRR Balancing Account. The bill determinant for CAISOMonthlyCRRAuctionMarketTOUTotalRevenueAmt will not be reportable in Scheduling Coordinator's Settlement xml files. However the equivalent variable that has the same value and attributes, CAISOMonthlyCRRAuctionMarketTOUTotalRevenueAmount, is already reportable. The documentation edit in the form of implementation note clarifies this existing practice. The documentation edit is bundled with the Fall 2017 configuration release to be deployed on or about 10/25/2017. However, the effectivity of the implementation note goes back to Trading Day 7/1/2013. |
| 1009 | PC Real Time Energy Quantity | No Initial comments Initial comment period expired 9/15/17; Next Step: Post Recommendation | The formulation for Operational Adjustments is not currently accounting for interties and non-dynamic units that tag but do not have bids or awards. The Operational Adjustments formula which is currently only accommodating interties or non-dynamic units that tag and do have bids or awards has been updated to also accommodate units that tag but do not have bids or awards. RT Energy Quantity PC is directly impacted. The effective trade date is 11/1/2017 and the anticipated implementation is 10/25/2017. |

| PRR | CC/ PC | Comment Expiration / Next Step | ISO Position / Reason for Revision |
|------|---|---|--|
| 1010 | CC 6460 - FMM Energy Settlement | No Initial comments Initial comment period expired 9/15/17; Next Step: Post Recommendation | Pseudo tie dynamic resources are not considered imports; do not have associated intertie locations; and install ISO meter. These resources do not fall under the CAISO Tariff section 11.32 (i) and (ii) requirement to assess HASP reversal to imports and exports. However, settlement configuration currently assess HASP reversal in the import and export direction for these pseudo tie dynamic resources. The proposed change is to exempt these pseudo tie dynamic resources from HASP reversal assessment in CC 6460. The configuration change is bundled with Fall 2017 configuration release to be deployed on or about 10/25/2017. The effective trade date of the change is retroactive to 2/10/2015. |
| 1011 | CC 6800 - Day Ahead Residual Unit Commitment (RUC) Availability Settlement CC 6824 - No Pay Residual Unit Commitment (RUC) Settlement PC RUC Net Amount | No Initial comments Initial comment period expired 9/15/17; Next Step: Post Recommendation | Tariff section 11.2.2.1 mentions that RUC availability is to be settled as Payment and not a charge. In the case of RUC negative pricing, potentially this would not be enforced. So a configuration change is proposed to ensure RUC availability (CC 6800) will never be a charge even when RUC price is negative. This also means RUC No Pay (CC 6824) cannot rescind more than the payment in CC 6800, and thus CC 6824 is updated. Further, RUC Net Amount precalculation needed to incorporate these changes in RUC availability and RUC No Pay settlement. The ISO anticipates implementation of the BPM changes on or about 10/25/2017, with effective date 11/1/2017. |



| PRR | CC/ PC | Comment Expiration / Next Step | ISO Position / Reason for Revision |
|------|---|---|---|
| 1012 | PC RA Availability Incentive Mechanism | No Initial comments Initial comment period expired 9/20/17; Next Step: Post Recommendation | The proposed changes for pre-calculation resource adequacy availability incentive mechanism are to accommodate various fixes below: *Apply correct outage exemption calculations for non-Resource Specific System Resources:- A dispute was made where a non-Resource Specific System RA Resource, that was derated with a nature of work that qualifies for RAAIM outage exemption, did not receive such exemption. The settlements configuration uses a resource's pmax in intermediary calculations to apply outage exemptions. However, non-Resource Specific System Resources do not necessarily have a pmax, which led to the outage exemption not being applied correctly. *Update Day Ahead Total & Economic Bid, and Real Time Total & Economic Bid sections for NGR REM:- An NGR REM resource received RAAIM penalties. Investigation revealed that the resource's pmin which was negative, was being added to its availability. Also the must offer obligation rules for NGR REM resources were not being applied correctly in the RAAIM calculations. *Exempt RMR resources from RAAIM:- Internal investigation found that RMR resources were not being exempted from RAAIM calculations. RAAIM calculations. Fixes will be made to exempt RMR resources in the RAAIM calculations. RAAIM settlement is advisory between November 2016 and March 2017, and financially binding starting April 2017. The rules and associated formula changes are anticipated for implementation by 11/1/2017 with a 11/1/2016 effective date. |

| PRR | CC/ PC | Comment Expiration / Next Step | ISO Position / Reason for Revision |
|------|--|---|--|
| 1014 | PC RA Availability Incentive Mechanism | No Initial comments Initial comment period expired 9/20/17; Next Step: Post Recommendation | Reliability Services Initiative 2017 introduces an outage impact assessment for planned outages where the ISO will run the outage impact assessment and allocate responsibility as planned outage substitute obligation (POSO) on the supplier in last in, first out ("LIFO") order. If the ISO required substitution for the planned outage due to impacts on system RA requirements, and the supplier did not provide the substitution, the outage capacity will be subject to RAAIM for generic RA but remains excluded from RAAIM for flexible RA. If the ISO does not require substitution for the planned outage, the outage capacity will be excluded from RAAIM for both generic and flexible RA. |
| 1016 | PC Start-Up and Minimum Load Cost | No Initial comments Initial comment period expired 9/21/17; Next Step: Post Recommendation | The proposed revision should allow the configuration to rectify a defect where the Market Settlement Software is unnecessarily disqualifying IFM and RUC Minimum Load Cost (MLC) when a resource's Minimum Down Time (MDT) following an ADS Shutdown instruction. It is proposed that the changes be implemented and applied retroactively, effective starting with Trading Day 2/10/2015 to capture all Trading Days over which the defect applies. Trading Days outside of the T+33 month window will not be re-settled. The ISO anticipates implementation of the BPM changes on or about 10/25/2017. |

Next Steps

Next Meeting: October 24, 2017

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