



# Resource Adequacy Form of Confirmation

WSPP Contract Sub-Committee

Webinar

July 17, 2018

# California Resource Adequacy

- Goals:
  - Provide sufficient resources to CAISO for reliable RT grid ops
  - Incentivize siting and construction of new resources
- All LSEs under CPUC jurisdiction have RA obligations.
  - LSEs must procure capacity to be available to CAISO when and where needed
- Three requirements:
  - System RA (6/1/06)
  - Local RA (1/1/07)
  - Flexible RA (1/1/15)
- See Appendix prepared by Customized Energy Solutions for the Spring 2018 Operating Committee Meeting Training Presentation

# Resource Adequacy Reform

- Reform driven by challenges with decentralized procurement (more LSEs), conventional fleet risk of retirement, local generation in key areas not getting RA contracts.
  - Increase in RMR contracts and CPM
- CPUC RA Proceeding Decision in Phase 1 – 2019 RA Year
  - New CCAs now required to participate in annual RA process
  - CPUC requests in Track 2 (see below) testimony, parties should include proposals with 100% forward local RA procurement for the first year and at least 95% for the second year.
  - Decision does not preclude LSEs from procuring flexible attributes of capacity that is procured to meet the local RA requirements
- CPUC RA Proceeding – Phase 2 - Potential for significant reforms for 2020 RA year
  - Evaluation of multiple-Year (2-5 year) procurement for local RA and potentially all RA products.
    - Potential for “Central Buyer”
  - Changes to flexible RA – (DA, 15-minute, 5-minute products).
    - External resource participation
    - Potential changes to RAAIM, movement towards performance based metrics.
    - Unbundling flex RA from system RA product (likely later implementation)

# RA Current Developments

- CAISO RSI 1B and RSI 2
- Reliability Services Initiative (RSI) Phases 1B and 2
  - FERC accepted tariff revisions
  - 162 FERC ¶ 61,042 (2018) <https://www.ferc.gov/whats-new/comm-meet/2018/011818/E-1.pdf>
- See also CAISO trainings
  - <http://www.caiso.com/Documents/CIRAUUserGuideforMarketParticipants.pdf>
  - [https://www.caiso.com/Documents/Presentation-ReliabilityServicesInitiative\\_OutageSubstitution\\_RAAIMPreCalc.pdf](https://www.caiso.com/Documents/Presentation-ReliabilityServicesInitiative_OutageSubstitution_RAAIMPreCalc.pdf)
  - [http://www.caiso.com/Documents/Presentation-ReliabilityServicesInitiativeTraining-Phase1B\\_2.pdf](http://www.caiso.com/Documents/Presentation-ReliabilityServicesInitiativeTraining-Phase1B_2.pdf)

# RA Current Developments affecting contracting- RA “cover” and damages for non-VER resources

- “The substitution obligation will fall in all cases on the supplier and not the LSE” (para. 43).
- CAISO charges supplier the RAAIM if RA is missing
  - buyer does not “cover” RA –no need for cover damages after T minus 45.
  - Most current IOU and marketer RA forms provide for cover damages to LSE if supplier fails to supply RA; this is now partially outdated.
- What does the LSE suffer if the supplier does not deliver?

# RA Current Developments affecting contracting

- VERs don't pay RAAIM for system or local, just (maybe) flex.
- FOs v MOs for VERs
- How does the fact of the sale to a 3<sup>rd</sup> party render the 3<sup>rd</sup> party liable for obligations for which the SC would not have been liable?
- “Replacement capacity” for MO and “substitute capacity” for FO now both “substitute capacity.”
- What do we do differently to document Flex RA?
  - e.g., refer to whether it is 5 min, 15 min, or DA?
- What do we do differently to document imported?
- What do we do differently to document EIM?

# WSPP CSC – Next Steps

- Create a CSC Task Force (similar to what was used for Specified Source) comprised of dedicated RA market participants.
- Task Force to meet in person, as necessary, and finalize RA Confirmation.
- Present final product to the CSC.
- Present final product to the OC.
- Once final, create EEI and ISDA Power Annex versions of final WSPP version for market release and use prior to October 1, 2018.
- **COMMENTS DUE ON CONFIRMATION DRAFT  
JULY 31**

# Appendix



# RA Showings

- Annual filings
  - Oct 31
  - system, local, and flex compliance showings for coming year.
  - must show 90% of flex and 100% of local for each month
  
- Monthly filings
  - 45 days before each compliance month
  - must show 100% of system and flex
  - May-Dec, LSEs also must show revised local obligation

# Resource Adequacy Products

| Type of Requirement     | Procurement need determination based on:  | Year Ahead<br>(required Annually by<br>October 31st) | Month Ahead<br>(required Monthly- 45<br>days prior to the<br>compliance month) |
|-------------------------|---|--|--|
| System RA Requirement   | 115% of Peak Forecast demand (1 in 2 peak forecast).  | 90% showing of 115% RAR<br>(5 summer months)         | 100% showing of 115%<br>RAR  |
| Local RA Requirement    | CAISO Local Capacity Technical study results for transmission constrained areas. (1 in 10 peak forecast)                          | 100% showing of Local<br>RAR (12 months)             | 100% showing of Local<br>RAR   |
| Flexible RA Requirement | CAISO Flexible Capacity Technical Study where results are based on maximum monthly 3 hour ramp needed to manage the grid reliably | 90% showing of Flexible<br>RAR (12 months)           | 100% showing of Flexible<br>RAR  |

# Flexible RA – Current versus Proposed

|                                 | Flexible RA Today   | CAISO's Flex RA Proposal  |
|---------------------------------|---|---|
| Structure                       | Three categories procured (1,2,3)   | Three products -Day-Ahead, 15-minute and 5-minute   |
| Overall Requirement             | Three-hour net load ramp in the CAISO's system plus contingency reserves                  | Overall requirement - Same as today (largest three-hour net load ramp + contingency reserves) but now adding curtailed renewables back to three-hour net load ramp.<br>Requirement for 5-minute product – Based on range of historic uncertainty between the 15-minute market and real-time dispatch.<br>Requirement for 15-minute product - based on historic uncertainty between day-ahead and 15-minute market.<br><i>The term "uncertainty" refers to the potential amount of imbalances that must be met by dispatchable resources in the real-time market</i> |
| Qualification Criteria          | Varies between categories, include continuous energy requirements, # of start-ups per day | For Real-time products must have < 60 minute start-up time.   |
| Counting Criteria (EFC)         | Ability to ramp and sustain output for three-hour period                                  | Real-Time products = ability to ramp in 5 or 15 minute period. Day- Ahead criteria same as today.   |
| External Resource Participation | Not allowed   | EIM Participating Resources and External Resources (Imports) can qualify  |
| Variable Energy Resources       | EFC capped at NQC   | Increased Opportunity – CAISO proposes to modify calculation of EFC   |
| Must-Offer Obligation           | Different across categories   | Requirements are 24 X 7 with variation for variable energy resources  |
| Bundled Product                 | Yes with system and local RA  | Potential for unbundling of flexible RA from system and local   |

# Existing Flexible RA Categories

| Parameter   | Category 1 (Base Ramping)   | Category 2 (Peak Ramping)   | Category 3 (Super-Peak Ramping)<br>Non-Regulation Energy Management Resources |
|---|---|---|---|
| Day-Ahead and Real-Time Market Economic Bid Must-Offer Obligation | 5:00am – 10:00pm  | 5 hour block (determined seasonally)  | 5 hour block (determined seasonally) 2018 hours same as Peak Ramping          |
| Energy Requirement  | Minimum 6 hours at EFC  | Minimum 3 hours at EFC  | Minimum 3 hours at EFC  |
| Daily Availability  | 7days/week  | 7days/week  | Non-holiday weekdays  |
| Daily Start-up Capabilities                                       | The minimum of two starts per day or the number of starts allowed by operational limits as determined by minimum up and down time | At least one start per day  | At least one start per day  |
| Maximum or Minimum Quantity of Capacity Allowed in Category       | Minimum set monthly based on largest secondary net load ramp  | Maximum set based on difference between 100% of the identified need and Category 1                                      | Maximum of 5% per month of the total need for the month                       |
| Other Limitations   | No monthly or annual limitation on number of starts or energy limits that translate to less than the daily requirements           | No monthly or annual limitation on number of starts or energy limits that translate to less than the daily requirements | Must be capable of responding to at least 5 dispatches per month              |