



California ISO

# RMR and CPM Enhancements

**Working Group Meeting  
November 1, 2018**

Keith Johnson  
Infrastructure & Regulatory Policy Manager

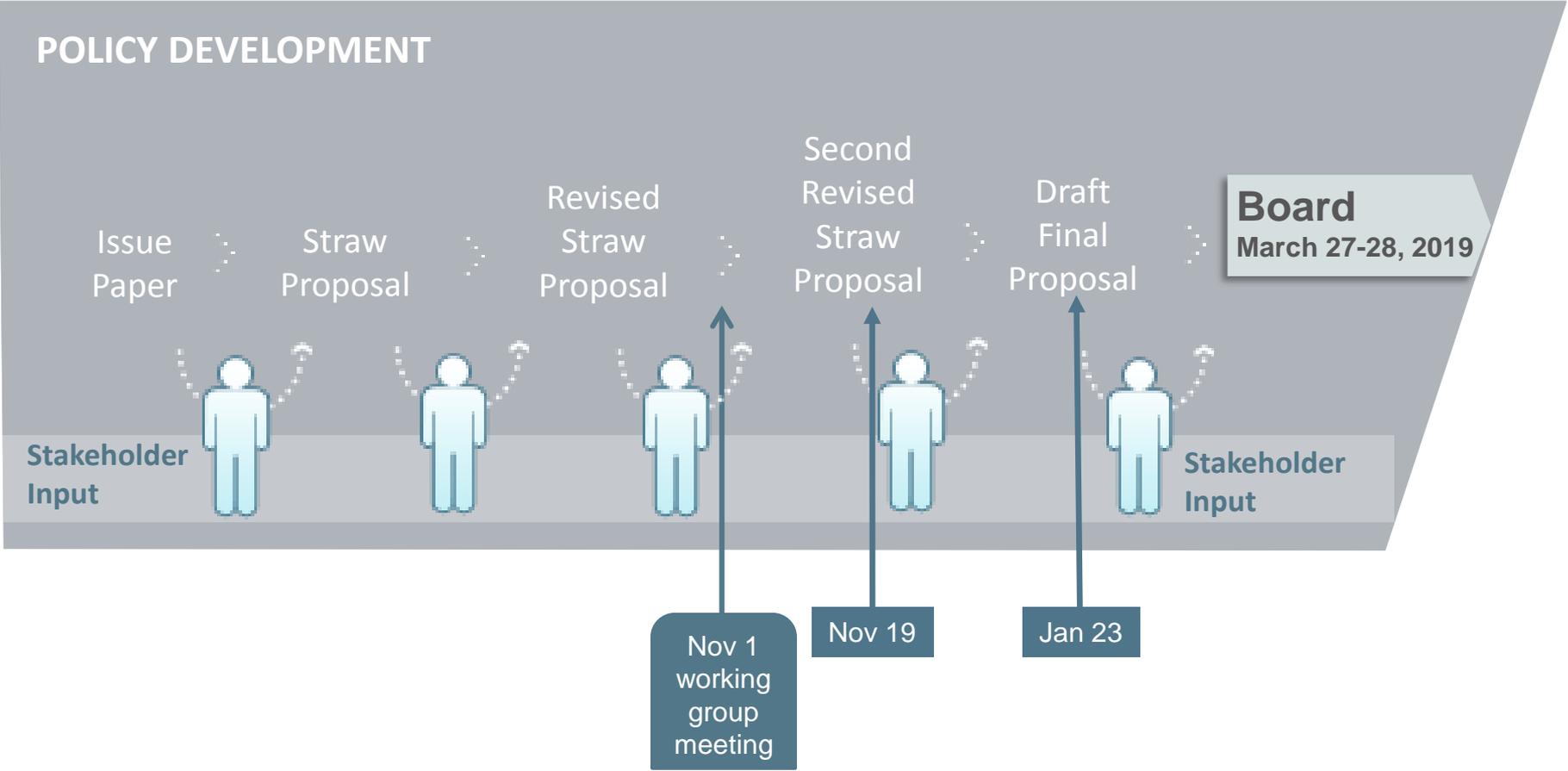
ISO PUBLIC

# Agenda

Time	Item	Presenter
10:00-10:15	1. Stakeholder process and schedule	Jody Cross
10:15-11:30	2. RMR and CPM items <ul style="list-style-type: none"> <li>a. Provide notice to stakeholders of resource retirements and mothballs</li> <li>b. Clarify use of RMR versus CPM procurement</li> <li>c. Merge ROR CPM and RMR procurement into one mechanism</li> </ul>	Catalin Micsa Keith Johnson
11:30-12:00	3. CPM items <ul style="list-style-type: none"> <li>a. Change formula for price above soft-offer cap price</li> </ul>	Keith Johnson
12:00-1:00	Lunch break	(on your own)
1:00-3:55	4. RMR items <ul style="list-style-type: none"> <li>a. Develop an interim pro forma RMR agreement</li> <li>b. Streamline and automate settlement process</li> <li>c. Align agreement and tariff authority for system and flexible needs</li> <li>d. Update rate of return</li> <li>e. Make subject to a MOO</li> <li>f. Make subject to RAAIM</li> <li>g. Consider whether both Condition 1 and 2 options are needed</li> <li>h. Allocate flexible RA credits</li> <li>i. Lower banking costs</li> </ul>	Bob Kott Catalin Micsa Gabe Murtaugh Keith Johnson
3:55-4:00	5. Next steps	Jody Cross

# 1. STAKEHOLDER PROCESS AND SCHEDULE

# Stakeholder Process



# Schedule

	<b>Date</b>	<b>Milestone</b>
<b>Milestones prior to Aug 27</b>	Nov 2, 2017	ISO commits to review RMR and CPM
	Nov 3 – Aug 26	See Sept 19, 2018 revised straw proposal for milestones
<b>Revised straw proposal</b>	Aug 27	Hold working group meeting
	Sept 19	Post revised straw proposal
	Sept 27	Hold stakeholder meeting
	Sept 28	Discuss initiative at MSC meeting
<b>Second revised straw proposal</b>	Oct 23	Stakeholder comments due on revised straw proposal
	Nov 1	Hold working group meeting
	Nov 19	Post second revised straw proposal
	Nov 26	Hold stakeholder meeting
<b>Draft final proposal</b>	Dec 21	Stakeholder comments due on second revised straw proposal
	Jan 2019	Post draft tariff language and draft pro forma agreement
	Jan 23	Post draft final proposal
	Jan 30	Hold stakeholder meeting
<b>Final proposal</b>	Feb 22	Stakeholder comments due on draft final proposal
	Mar 27-28	Present proposal to Board of Governors

# List of Acronyms

AFRR	Annual Fixed Revenue Requirement
AS	Ancillary Services
BCR	Bid Cost Recovery
CAISO	California Independent System Operator Corporation
CIRA	Customer Interface for Resource Adequacy
CPM	Capacity Procurement Mechanism
CPUC	California Public Utilities Commission
CSP	Competitive Solicitation Process
DEB	Default Energy Bid
ERR	Essential Reliability Resource
FERC	Federal Energy Regulatory Commission
GFFC	Going-forward fixed costs
GHG	Greenhouse gas
GMC	Grid Management Charge
ISO	California Independent System Operator Corporation
LSE	Load serving entity
MSC	Market Surveillance Committee
MSG	Multi-stage generator
MMA	Major maintenance adder
MOO	Must-offer obligation
O&M	Operation and maintenance
PGA	Participating Generator Agreement
RA	Resource Adequacy
RAAIM	Resource Adequacy Availability Incentive Mechanism
RAVE	Reliability Must-Run Application Validation Engine
RMR	Reliability Must-Run
ROR	Risk of retirement
RTO	Regional Transmission Organization
RUC	Residual Unit Commitment

## 2. RMR AND CPM ITEMS

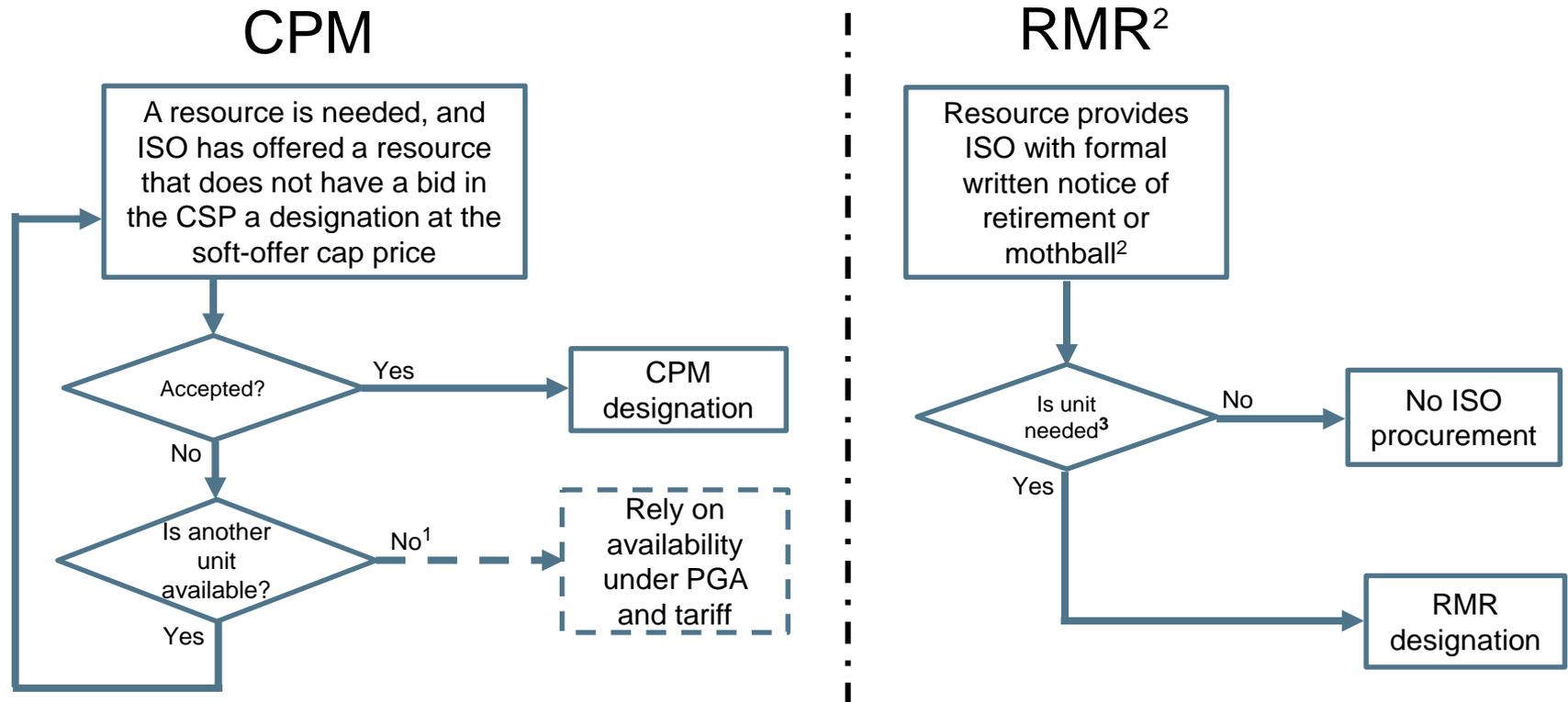
## 2a. Provide notice to stakeholders of resource retirements and mothballs

- On July 6, posted list of announced planned retirement and mothball resources
  - Posted at <http://www.caiso.com/Documents/AnnouncedRetirementAndMothballList.xlsx>
  - Update as new information becomes available
  - An item in Daily Briefing announces when list is updated with resources of 45 MW and above
  - Stakeholders should sign up for Daily Briefing
  - Changes from one posting to next are tracked in yellow highlighting
  - Resource does not get off list once on list - new information will overwrite old information

## 2b. Clarify use of RMR versus CPM procurement

- Will keep both RMR and CPM procurement mechanisms
- CPM procurement will be used to backstop RA program
- RMR procurement will be used to address resource retirements
- RMR procurement will be based on full cost of service, as procurement is mandatory
- CPM procurement is
  - Voluntary if resource has not submitted a bid into CSP
  - If bid submitted in CSP and ISO accepts that bid, resource cannot decline designation
- All RMR and CPM resources will have a MOO and be subject to RAAIM (like RA resources are)

# Use of RMR procurement versus CPM procurement



<sup>1</sup> If resource declines a CPM designation offered, ISO would rely on resource availability under the PGA and tariff unless resource falls under RMR process

<sup>2</sup> ISO will have authority to study reliability needs for upcoming year and year after, and has discretion to study year after if ISO believes that resource may be needed in year after even if resource is found to not be needed in upcoming year

<sup>3</sup> For ISO study for a potential RMR designation, all available resources are used in the analysis

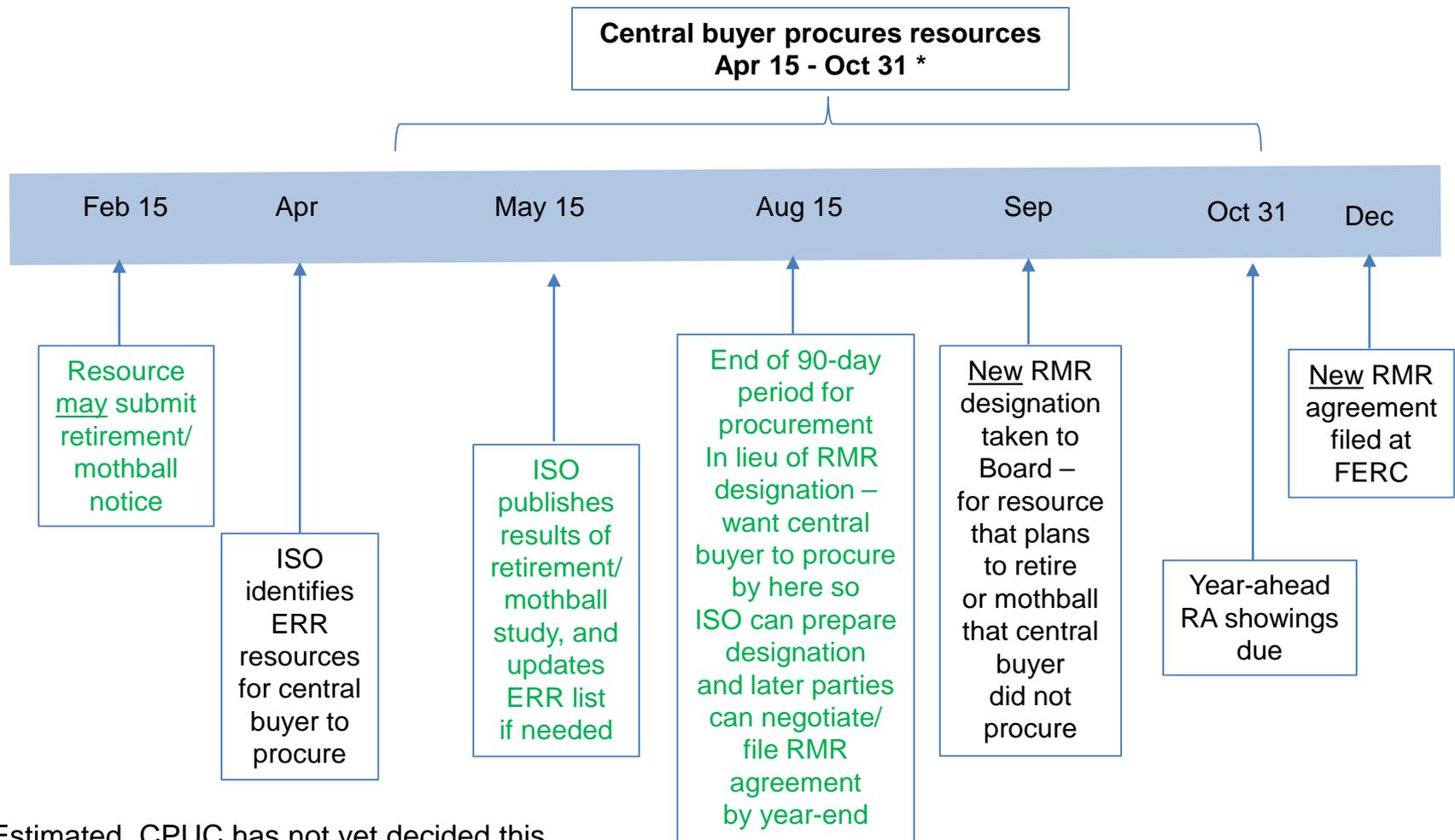
To be considered for RMR designation, a resource must submit a formal written retirement notice to ISO

- Notice must include an affidavit by an officer attesting
  - Resource will not remain in service absent procurement, and
  - Decision to retire is definite unless some other type of ISO procurement of resource occurs, resource is sold to a non-affiliated entity, or resource enters into an RA contract
- Must state planning to retire/mothball at certain date, but no earlier than 90 days from notice of removal of resource from PGA or termination of PGA
- Expect resource to also notify CPUC, if applicable

# Propose new elements to mitigate front-running RA program and provide a longer runway

- If not RA in current RA year and planning to retire/mothball
  - Can submit notice at any time during year and ISO will inform resource of study results promptly
  - If want to obtain longer runway to make retirement decisions, resource can submit notice before PGA deadline
- If RA in current RA year and planning to retire/mothball
  - If want longer runway, may submit notice by Feb 15 of current RA year, ISO will study/inform all stakeholders of results by May 15, and ISO will allow 90 days for procurement by entity other than ISO prior to seeking Board approval of conditional RMR designation
  - If resource provides notice after Feb 15, only commitment ISO will have is to inform resource of study results within 60 days prior to expiration of RA contract or 90 days of request, whichever is later

# Timeline of RMR retirement procurement and RA processes



\* Estimated. CPUC has not yet decided this.

## Several stakeholders commented

- Should delay this initiative for up to six months to allow CPUC RA proceeding to play out
  - ISO believes scope of CPUC RA proceeding is sufficiently different from this initiative to allow this initiative to proceed independently, and
  - Important CPM/RMR enhancements be put in place ASAP
- Should change notification period from current 90 days to be as much as 365 days
  - ISO is not changing period from current period
  - Changing period would not resolve all concerns with potential front-running of RA program

## Stakeholder comments (continued)

- RMR designations should not be given to resources that are economic – ISO should establish an economic test
  - ISO notes no other ISO or RTO currently has such a test in place
  - Do not believe such a test is appropriate for CAISO
- Should employ a market power mitigation test, such as a pivotal supplier test, for both CPM and RMR designations
  - ISO believes there is no need for a new test
  - FERC has already approved market power mitigation mechanisms for both CPM (soft-offer cap pricing) and RMR (cost of service pricing)

## Stakeholder comments (continued)

- Compensation for CPM and RMR should be changed to be generally only GFFC
  - ISO does not agree that CPM or RMR compensation needs to be fundamentally changed – already found by FERC to be just and reasonable
  - FERC approved CPM compensation just three years ago
  - There is much FERC precedent for paying RMR resources traditional cost of service as currently reflected in RMR contract
- There should not be an adder when calculating a CPM price
  - ISO notes that FERC stated in its 2010 CPM order that including only a 10% adder to GFFC is not sufficient to allow for a contribution to capital

## 2c. Merge ROR CPM and RMR procurement into one mechanism

- All retirement procurement authority, including what was formerly known as ROR CPM, will be merged into one mechanism under RMR tariff and receive RMR contract
- Will move to RMR tariff the authority that is currently in ROR CPM tariff to designate a resource for the upcoming year for an essential reliability need in the following year (the “bridge”)
- Change will eliminate current ROR authority under CPM tariff and put it in RMR tariff

# 3. CPM ITEMS

## 3a. Change formula for price above soft-offer cap price

- ISO proposes to retain three current pricing options for CPM designations
  - Can submit bid in CSP (if bid selected, designation is not voluntary)
  - Can be paid soft-offer cap price of \$75.68/kW-year if no bid in CSP (resource can decline designation)
  - Can bid price higher than soft-offer cap price in CSP and file at FERC for approval of price (if bid selected, designation is not voluntary)

# Current CPM Compensation Components

## Bid into CSP (at or below \$75.68 kW-year)

<p><u>Market Rents</u> Resource keeps all market rents earned</p>
<p><u>BID</u></p> <p>Price bid into CSP</p> <ul style="list-style-type: none"><li>• Price is consider “good” (safe harbor) if the price bid is below soft-offer cap price of \$75.68 kW-year</li></ul>

## Soft-Offer Cap Price (\$75.68 kW-year)

<p><u>Market Rents</u> Resource keeps all market rents earned</p>
<p><u>20% Adder</u></p>
<p><u>Going Forward Fixed Costs</u></p> <p>Which is the sum of the amounts shown below for the reference unit specified in CPM tariff:</p> <ul style="list-style-type: none"><li>• Fixed O&amp;M costs</li><li>• <i>Ad valorem</i> costs</li><li>• Insurance</li></ul>

## Above Soft-Offer Cap Price (above \$75.68 kW-year)

<p><u>Market Rents</u> Resource keeps all market rents earned</p>
<p><u>Cost of Service</u></p> <p>Amount determined using cost of service methodology in Schedule F of Appendix G of RMR agreement</p> <ul style="list-style-type: none"><li>• Methodology does <u>not</u> include major maintenance capital expenditures</li></ul>

## The ISO is considering two options for a formula for a price above the soft-offer cap price

- Resource can submit a bid price in the CSP above the soft-offer cap based on
  - Option 1: Cost of service compensation set forth in Schedule F of RMR agreement (which does not include major maintenance capital expenditures) and actual price paid will be approved by FERC, and all market rents earned above that price will be clawed back
  - Option 2: GFFC of its whole unit using same cost categories and same 20% cost adder used for the reference unit, and keep all market rents earned
- ISO favors option 2

## Two pricing formula options under consideration (ISO favors option 2)

Type of CPM Designation	Price used to determine Payment
System monthly System annual Local monthly Local annual Local annual collective deficiency Cumulative flexible monthly Cumulative flexible annual Significant Event Exceptional Dispatch	<ol style="list-style-type: none"> <li>1. Price bid into CSP – there is a “safe harbor” price at or below \$75.68/kW-year soft-offer cap price</li> <li>2. If no bid in CSP - ISO may offer resource soft-offer cap price of \$75.68/kW-year (and resource can decline designation if it chooses)</li> <li>3. Resource can submit bid above soft-offer cap price -</li> </ol> <p style="margin-left: 40px;"> <u>Option 1:</u> Based on cost of service compensation set forth in Schedule F of RMR agreement (which does not include major maintenance capital expenditures) and actual price paid will be approved by FERC, and all market rents earned above that price will be clawed back         </p> <p style="margin-left: 40px;"> <u>Option 2:</u> Based on GFFC of its whole unit using same cost categories and same 20% cost adder used for reference unit, and keep all market rents earned         </p>

## For option 1, a CPM designation would have to be for the whole resource

- Rule is necessary as it is not possible to separate out market rents for a resource that was only partially procured under CPM
  - Only way clawing back rents can work is if ISO designates the whole resource
- Resource must bid entire resource in CSP
- When considering designation for such a resource ISO would only designate the whole resource

# Some stakeholders have suggested a different formula for a price above the soft-offer cap price

- GFFC of the unit (and no cost adder), and keep all market rents earned
  - ISO does not believe this is consistent with prior FERC direction regarding CPM compensation
  - FERC has stated there needs to be some adder to allow for a contribution to capital

# 4. RMR ITEMS

## 4a. Develop an interim pro forma RMR agreement

- Will allow ISO to terminate RMR agreement at end of contract year and re-designate same resource for service in following year
- Filed at FERC on August 31
- Requested FERC order on or before November 1, 2018
- Requested effective date of September 1, 2018
- FERC has not yet issued an order

## 4b. Streamline and automate settlement process

### Vision

Align RMR implementation to extent possible with ISO tariff and RA/CPM paradigm for bidding, dispatch, penalties/incentives, settlements, and payment to streamline RMR functionality for efficient market and reliability systems operation and maintenance

# Contract Initiation and FERC Anti-Toggling Expectation Mechanism to minimize market impact

- RMR contract only utilized to prevent retirement/mothball of required capacity
- Proposal to eliminate RMR owner right to elect Condition 1 - Condition 1 can be used based on mutual agreement
- ISO RMR contract
  - Compensation based book value and cost of service and FERC ratemaking principles
  - New Capital Item/major capital maintenance cost recovery only for each RMR operating year
    - Any unrecovered cost of approved Capital Items may only be recovered if the resource closes within six months of RMR contract termination and only gets FERC interest rate
    - Unrecovered portion is paid over 36 months and must be paid back if unit returns to service at any point during 36-month period

# RMR treated like RA/CPM in ISO systems

## Key element of Paradigm Shift

- MOO for RMR resources enables use of market and reliability mechanisms to dispatch resources as needed
- RMR represented in CIRA and presented to ISO systems as reliability capacity
- SIBR RA/CPM bidding rules would apply
  - Major maintenance/opportunity cost adders used, as applicable
  - \$0 bids for RUC
- Bid Cost Recovery used in lieu of Schedule C and Schedule D compensation
- Leverage established settlement rules and infrastructure

# RMR Compensation

## Align with RA/CMP simplicity and incentives

- Fixed costs would be recovered through monthly payments similar in structure to CPM payments
  - Continue to use Schedule F to define costs
  - CIRA will store price and provide to Settlements
  - Interest calculation handled same as CPM
  - New charge code for RMR fixed payment
  - Eliminate the use of hourly availability payment structure
  - RMR resources subject to RAIM incentives/penalties and substitution capability as RA/CPM
- RMR variable costs for energy and startup defined in Schedule C and D will be replaced with costs as defined in Bid Cost Recovery provisions of tariff

## RMR Compensation (continued)

- Other than charge codes for RMR fixed payment and Condition 2 credit, all standard market charge codes apply
- Condition 2 credit back of all revenues above cost based bid values to Responsible Utility (also applies to CSP bids above soft-offer cap price)
  - Energy costs above calculated bid cost
  - Capacity costs above \$0/MW bids for AS and RUC
  - Resource retains RAIM incentive payments

## Dispatch for Reliability

### Maximize Efficiency Utilizing Market Optimization

- RMR will be included in pool of reliability capacity with RA and CPM capacity available to meet reliability needs identified either through market optimization, contingency/voltage analysis or other reliability analysis tools
- RMR dispatch will no longer be identified distinctly with respect to other types of dispatches
- RMR resources will be subject to Exceptional Dispatch without additional compensation (i.e. will not trigger CPM) as needed for dispatch required and not identified by market optimization or power flow analysis

# Settlement, Invoicing and Validation

## Maximize Use of Existing Capability

- Replace RMR invoicing template and owner submitted Excel based invoices and use ISO settlement system invoice process
  - Add line item for RMR monthly capacity payment
  - Add charge codes for excess market revenues
- RMR invoice validation process currently performed manually and in RAVE application will be eliminated and incorporated into the Market Settlement Statement and invoicing structure

## Settlement, Invoicing and Validation (continued)

- RMR would continue to receive energy payments through market and these payments would be subject to default credit risk as they are under current paradigm
  - Condition 2 resources would be subject to credit of market revenue amounts above RMR unit variable cost (per DEB) to Responsible Utility(ies)
  - New charge code to track credit for Condition 2 RMR and CPM capacity above soft-offer cap
- Replace RMR payment calendar/dispute process and use market settlement timeline/dispute process



# Information available to validate invoice



California ISO

Market Participant Portal

Help | Contact Us

MPP Home System Integration Discussions

### Applications

-  **AIM** Access and Identity Management
-  **CIDI** Customer Inquiry Dispute and Information
-  **CIRA** Customer Interface for Resource Adequacy
-  **CMRI** Customer Market Results Interface
-  **Master File**
-  **OASIS** Open Access Same-Time Information System
-  **RIMS** Resource Interconnection Management System

Applications below require separate log on

### Alerts, Warnings & Emergencies

- [No active notices](#)
- [More...](#)

### Market Notices

- 10/22/2018
- [October 2018 Significant Event Capacity Procurement Mechanism Designation Report Posted](#)

**Welcome to the California ISO Market Participant Portal,**  
the centralized access point for secure applications and business critical information.



### Market Operations

Market Status [Market Event Log](#) [System Operating Messages](#)

Day Ahead Market

Select Trade Date

Bids & Schedules	Inter SC Trades
PUBLISHED	PUBLISHED

Hour Ahead and Real Time Market

Select Trade Date

Hour Ending	Bids & Schedules	Inter SC Trades
15	PUBLISHED	PUBLISHED
16	CLOSE	PUBLISHED
17	OPEN	PRE_CLOSE
18	OPEN	PRE_CLOSE

### Meetings and Training Calendar

- Monday, 10/22/2018
-  11:00 AM - 12:00 PM  [Documentation Consolidation for Operating Procedures](#)
  -  2:00 PM - 3:00 PM  [Market Simulation - Fall 2018 Release](#)

# What payment calendar will look like



## CAISO Payments Calendar January 1, 2018 through December 31, 2018

Calendar Date	Day	Publish Initial Statement Publish Day-Ahead Price Corrections T+3B	Publish Real-Time Price Corrections T+5B	Receive End-Use Meter Data, Manual Submission of non-PTO Wheeling Data T+8B	Publish Recalculation Statement T+12B	End of SC Review Period T+26B	Receive End-Use Meter Data (to include non-PTO load) T+48B	Publish Recalculation Statement T+55B	End of SC Review Period T+77B	Meter Data Resubmittal Deadline (to include non-PTO load) T+8M (as T+172B - T+168B), optional Subject to Rule of Conduct	Publish Recalculation Statement T+9M (as T+194B), optional	End of SC Review Period for Incremental Changes T+216B, if applicable
1-Jan-18	Monday											
2-Jan-18	Tuesday	12/27/2017	12/22-12/25/2017	12/19/2017	12/13/2017	11/21/2017	10/20-10/22/2017	10/11/2017	09/11/2017	04/26-05/02/2017	03/27/2017	02/23/2017
3-Jan-18	Wednesday	12/28/2017	12/26/2017	12/20/2017	12/14/2017	11/22-11/26/2017	10/23/2017	10/12/2017	09/12/2017	04/27-05/03/2017	03/28/2017	02/24-02/26/2017
4-Jan-18	Thursday	12/29-01/01/2018, Dec 2017 Monthly	12/27/2017	12/21/2017	12/15-12/17/2017	11/27/2017	10/24/2017	10/13-10/15/2017	09/13/2017	04/28-05/04/2017	03/29/2017	02/27/2017
5-Jan-18	Friday	01/02/2018	12/28/2017	12/22-12/25/2017	12/18/2017	11/28/2017	10/25/2017	10/16/2017	09/14/2017	05/01-05/07/2017	03/30/2017	02/28/2017, Feb 2017 Monthly
6-Jan-18	Saturday											
7-Jan-18	Sunday											
8-Jan-18	Monday	01/03/2018	12/29-01/01/2018	12/26/2017	12/19/2017	11/29/2017	10/26/2017	10/17/2017	09/15-09/17/2017	05/02-05/08/2017	03/31-04/02/2017, Mar 2017 Monthly	03/01/2017
9-Jan-18	Tuesday	01/04/2018	01/02/2018	12/27/2017	12/20/2017	11/30/2017, Nov 2017 Monthly	10/27-10/29/2017	10/18/2017	09/18/2017	05/03-05/09/2017	04/03/2017	03/02/2017
10-Jan-18	Wednesday	01/05-01/07/2018	01/03/2018	12/28/2017	12/21/2017	12/01-12/03/2017	10/30/2017	10/19/2017	09/19/2017	05/04-05/10/2017	04/04/2017	03/03-03/05/2017
11-Jan-18	Thursday	01/08/2018	01/04/2018	12/29-01/01/2018	12/22-12/25/2017	12/04/2017	10/31/2017	10/20-10/22/2017	09/20/2017	05/05-05/11/2017	04/05/2017	03/06/2017
12-Jan-18	Friday	01/09/2018	01/05-01/07/2018	01/02/2018	12/26/2017	12/05/2017	11/01/2017	10/23/2017	09/21/2017	05/08-05/14/2017	04/06/2017	03/07/2017

Timelines are PT (Pacific Time) except as noted

Publish Recalculation Statement T+18M (as T+383B), optional	End of SC Review Period for Incremental Changes T+19M (as T+405B), if applicable	Publish Recalculation Statement T+33M (optional) as T+693B	End of SC Review Period for Incremental Changes T+715B, if applicable	Publish Recalculation Statement T+36M (as T+759B), optional	Publish Weekly Invoice (by bill period)	Weekly Invoice Due by 10:00am for Disbursement at 2:00pm T+4B
06/23/2016	05/23/2016	04/02/2015	03/03/2015	12/26-12/28/2014		
06/24-06/26/2016	05/24/2016	04/03-04/05/2015	03/04/2015	12/29/2014	T+3B Initial: 12/22-12/26/2017, T+33M Recalc: 03/01-03/31/2015	T+3B Initial: 12/18-12/21/2017, T+12B Recalc: 12/04-12/10/2017
06/27/2016	05/25/2016	04/06/2015	03/05/2015	12/30/2014		
06/28/2016	05/26/2016	04/07/2015	03/06-03/08/2015	12/31-01/01/2015, Dec 2014 Monthly		
06/29/2016	05/27-05/30/2016	04/08/2015	03/09/2015	01/02-01/04/2015		
06/30/2016, Jun 2016 Monthly	05/31/2016, May 2016 Monthly	04/09/2015	03/10/2015	01/05/2015		T+3B Initial: 12/22-12/28/2017, T+33M Recalc: 03/01-03/31/2015
07/01-07/04/2016	06/01/2016	04/10-04/12/2015	03/11/2015	01/06/2015	T+3B Initial: 01/01-01/07/2018, T+3B Initial: 12/01-12/31/2017, T+12B Recalc: 12/18-12/21/2017, T+12B Recalc: 12/11-12/17/2017, T+9M Recalc: 03/01-03/31/2017, T+18M Recalc: 06/01-06/30/2016, T+36M Recalc: 12/01-12/31/2014	
07/05/2016	06/02/2016	04/13/2015	03/12/2015	01/07/2015		
07/06/2016	06/03-06/05/2016	04/14/2015	03/13-03/15/2015	01/08/2015		

# There will be many changes to the tariff and pro forma agreement

- Changes to the following items are shown in the slides in the appendix to this presentation
  - Tariff
  - Pro forma agreement
    - Articles
    - Schedules

## 4c. Align agreement and tariff authority for system and flexible needs

- Tariff already provides authority through RMR to meet Applicable Reliability Criteria
  - Which includes meeting system, local and flexible needs
  - To date, authority has been implemented for local needs
- RMR pro forma agreement (versus the tariff) currently does not reflect existing system and flexible authority
- Propose to change pro forma RMR agreement so existing RMR tariff authority and language in pro forma RMR agreement are aligned

## RMR tariff currently includes ability to designate resources to meet system, local and flexible needs

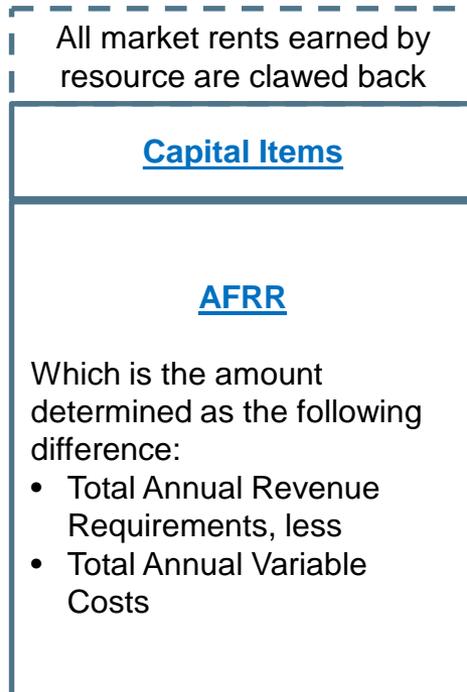
- ISO Tariff Section 41.1 – RMR procurement
  - “to ensure that the reliability of the CAISO Controlled Grid is maintained”
- ISO Tariff Section 41.2 – RMR designation
  - Based on “CAISO Controlled Grid technical analysis and studies”
- ISO Tariff Section 41.3 – Reliability studies
  - “In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria”
  - Where: Reliability Criteria is “Pre-established criteria that are to be followed in order to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.”

# Tariff Section 42 defines need for adequacy of facilities to meet Applicable Reliability Criteria

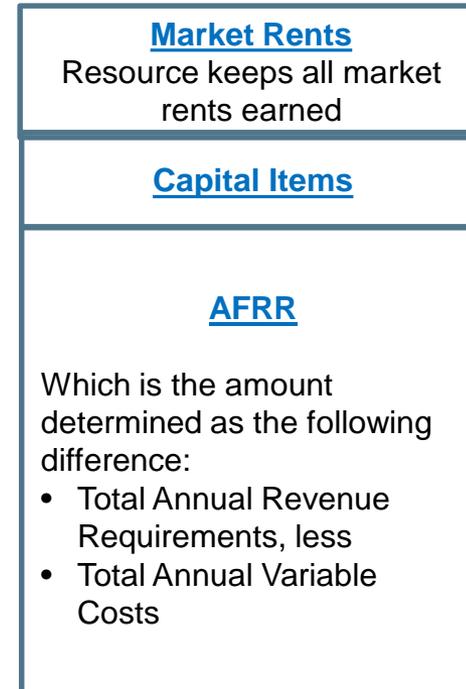
- 42.1 – Generation Planning Reserve Criteria
  - First use market forces however if not available or not enough
- 42.1.3 – ISO to take necessary steps to ensure criteria compliance
  - “Notwithstanding the foregoing, if the CAISO concludes that it may be unable to comply with the Applicable Reliability Criteria, the CAISO shall, acting in accordance with Good Utility Practice, take such steps as it considers to be necessary to ensure compliance, including the negotiation of contracts through processes other than competitive solicitations. These steps can include the negotiation of contracts for Generation or Ancillary Services on a Real-Time basis.”

## 4d. Update rate of return

ISO does not propose to change major components of RMR compensation, which are shown below



**Condition 2** –  
Resource paid 100% of its AFRR



**Condition 1 RMR** –  
Resource paid <100% of its AFRR

\* RMR agreements also include a Termination Fee that may be owed to resource owner under certain circumstances.

## The ISO proposes to remove the fixed rate of return currently in RMR pro forma agreement

- Current pre-tax rate of return is “hard-wired” into pro forma RMR agreement at 12.25%
- Value has not changed in many years, despite changing economic conditions and corporate tax rates
- ISO proposes to remove specific 12.25% from pro forma tariff language

## Rate of return proposal

- Resource owners filing an RMR agreement will be required to specify and support a rate of return
  - Support may include expert conducting a discounted cash flow model and risk analysis
- This approach meets objectives of
  - Updating current rate (it removes current “hard wired” fixed rate)
  - Establishing a mechanism so rate can change over time to reflect current conditions

## 4e. Make subject to a MOO

- RMR Condition 2 resources
  - Paid full cost of service
  - Will submit cost-based bids into energy and AS markets
  - All market rents earned above variable costs are clawed back
  - All RUC revenues above \$0 are clawed back
  - ISO will insert cost-based bids if no bids are inserted by resource
  - May be instructed by ISO to not run
- RMR Condition 1 resources
  - Not paid full cost of service
  - Resources will bid into market at market-based bids
  - ISO will insert cost-based bids if no bids are submitted by resource
  - May be instructed by ISO to not run

# The ISO currently creates ISO-generated bids for RA and CPM resources that have not bid into market

- ISO-generated bids include
  - Start-up costs
  - Minimum load costs
  - Energy costs
  - MSG transition costs (registered default values)
- ISO-generated energy bids include
  - Fuel Costs
  - O&M
  - GHG Costs
  - GMC
  - Opportunity Costs
- ISO-generated AS bids are at \$0/MWh
- ISO-generated RUC bids translate to \$0 offers

# Treatment of MMAs, opportunity costs and BCR in RMR bids

- MMAs and opportunity costs, if applicable, will be reflected in bids to ensure true cost of operation is considered in market decisions
  - Actual MMA costs will be compensated as they are incurred, similar to current RMR construct
  - Any market revenues from MMAs bid into market will be clawed back to prevent double recovery of these costs
  - Market revenues from bid opportunity costs will also be clawed back
- Resources with RMR agreements will be eligible for BCR payments when market earnings are insufficient to cover fuel costs

# RMR resources will be required to bid into the market at total cost, including variable, MMA and opportunity costs

## Opportunity Costs

Calculated or negotiated values for use-limited resources if applicable

## Major Maintenance Adders

Negotiated values based on costs

## Variable Costs (DEB)

Calculated similar to the DEB with inputs specified in Master File data including:

- Heat rate
- Fuel Costs
- O&M
- GHG Costs
- GMC

- Variable costs are compensated through energy market revenues
- Actual costs of major maintenance are compensated for RMR resources
- Opportunity costs are not compensated

## 4f. Make subject to RAAIM

- RA, CPM and RMR resources provide capacity to operate grid; therefore, incentives and penalties should be similar
- Current RMR availability payment construct does not provide an incentive to submit bids
- Having RMR resources have separate incentives and requirements would create inconsistencies and add unnecessary complexity to systems and processes

## RMR resources will be subject only to RAAIM mechanism

- Will delete current Non-Performance Penalty and Long-term Planned Outage Adjustment provisions
- Penalty price will be RMR agreement price
  - Like is currently done for CPM resource paid a price above soft-offer cap
  - Fixed costs and major maintenance capital expenditures will both be “at risk”
- Will apply current RAAIM availability standard of 96.5% per month
- Will apply current RAAIM availability range of plus and minus two percent (94.5%-98.5%)

## RAAIM provisions (continued)

- RMR resources will be treated just like RA and CPM resources currently are treated
  - Resource can receive a non-availability charge for month if above performance band
  - Resource can receive an availability incentive payment for month, with payment paid to resource owner
  - ISO systems provide ability for RMR resources to take outages without being subject to RAIM charges

## Several stakeholders commented

- Should employ 24x7 assessment hours for RAAIM
  - ISO proposes to use current requirements to streamline and automate use of RA, CPM and RMR resources
  - Enhancements to RAAIM, if needed, can be considered in RA Enhancements initiative
- Should not use standard RAAIM performance metric; instead should create custom metric with no dead band
  - ISO proposes to use current requirements to streamline and automate use of RA, CPM and RMR resources
  - RA, CPM and RMR resources should be treated similarly
- RAAIM assessment hours might not result in RMR resource being available when RMR service is needed
  - ISO believes resource can be managed so that resource is available when needed

## 4g. Consider whether both Condition 1 and 2 options are needed

- Last proposal stated
  - Propose to change tariff so resource owner no longer can choose whether it wants to be a Condition 1 or 2 RMR resource
  - Default will be full cost of service agreement where resource will have its full cost of service paid and must credit back all market rents earned above full cost of service (Condition 2)
  - By mutual agreement, a resource may be able to negotiate an agreement where resource is not paid its full cost of service and may keep market rents earned above its full cost of service (Condition 1)
- ISO will post its next proposal on Nov 19, after considering written stakeholder feedback just received and discussion at today's working group meeting

# There are pros and cons for each condition of service

- Condition 2

- One design objective is to ensure resources are not incentivized to hold out from RA or CPM procurement for an RMR agreement
- RMR designed as last resort to extend life of resources slated to retire until a new resource or transmission upgrade is available
- Therefore, procurement is mandatory and should receive only full cost of service

- Condition 1

- Provides possibility resource could recover more than full cost of service
- May provide incentives to select cost recovery method that provides greatest revenue
- May be useful to help parties reach consensus when negotiating an agreement and avoid a lengthy and costly rate case

# ISO requested and received written feedback from stakeholders on this topic

- Several stakeholders recommend that Condition 1 option no longer be available
- Some stakeholders note that having a Condition 1 option can facilitate reaching agreement on an RMR contract
- ISO is interested in receiving additional feedback from stakeholders during today's working group meeting

## 4h. Allocate flexible RA credits

- Would not automatically qualify for flexible RA credits
- To qualify RMR resource must
  - Have approved Effective Flexible Capacity value that qualifies unit as eligible to provide flexible RA capacity
  - RMR agreement will specify that as a default the resource must agree to fulfill RA flexible capacity requirements
- Credits would continue to be allocated as today
- RMR capacity would be taken off top of flexible requirement

## 4i. Lower banking costs

- Current process
  - Requires minimum of two bank accounts for each RMR agreement (more if multi-party)
  - RMR accounts have zero balances at all times since disbursements are made the same day as receipt of payments
- Propose to use ISO's established market clearing account to administer RMR transactions
  - Going forward, all payments from and disbursements to RMR parties will be made from this account
  - RMR funds will still be tracked individually
  - Invoices/payment advices are cleared on specified due dates

# There are several advantages of using market clearing bank account

- Reduces costs
  - By using only one bank account instead of multiple accounts (ISO pays fixed fees to maintain each RMR account)
- Minimizes potential bank fraud
  - By using only one account as opposed to multiple accounts
- Reduces administrative burden
  - Each RMR account has to be monitored, reconciled and verified
- Eliminates confusion
  - RMR participants do not have to choose from a list of bank accounts when submitting payments

# 5. NEXT STEPS

# Next Steps

<b>Date</b>	<b>Milestone</b>
November 19	Post second revised straw proposal
November 26	Hold stakeholder meeting
December 21	Stakeholder written comments due on second revised straw proposal

# APPENDIX

Stakeholder comments are combined into one document at the following web page:

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=A3F2218A-3294-4949-AB04-B243216A58F5>

# ISO Tariff Updates

## Update to align RMR with RA/CPM paradigm

- 11.13 Settlements and Billing of RMR Charges and Payments
- 12.7 Credit Obligations of New Responsible Utilities for RMR Costs
- 31.2.2 Bid Mitigation for RMR Units
- 31.2.3 Bid Mitigation for Non-RMR Units
- 41. Procurement of RMR Generation

## ISO Tariff Updates (continued)

- Appendix A - Master Definition Supplement
  - Manual RMR Dispatch
  - Reliability Must-Run Generation (RMR Generation)
  - RMR Dispatch
  - RMR Dispatch Notice
  - RMR Invoice
  - RMR Payments Calendar
  - RMR Proxy Bid
  - RMR Security

# RMR Contract Updates

## Retain essential elements only

- Article 1 - Definitions: Revise/eliminate/add as needed
- Article 2 – Term: retain Termination fee language and revise invoicing to use standard settlement timeline
- Article 3 – Conditions of Operation: revision to address market transaction and transfer of conditions
- Article 4 – Dispatch of Units: Revise to remove limitations and align with RA and CPM dispatch practices; remove service limits, air emissions provisions and discuss how these are addressed; align test dispatch with tariff; remove forecast, remove determination of service limits

## RMR Contract Updates (continued)

- Article 5 - Delivery of Energy and AS by Owner: Revise to align with dispatch of RA/CPM resources including substitution; remove counting rules and reports
- Article 6 – Market Transactions: Revise to define compensation for Condition 2 resources to credit back market revenues above costs using BCR as cost basis
- Article 7 – Operation and Maintenance: Retain provisions for capital items and repairs and eliminate any provisions covered in tariff

## RMR Contract Updates (continued)

- Article 8 – Rates and Charges: Revise to align with CPM paradigm for fixed payments and reference to RAAIM provisions of tariff
  - Cover both Condition 1 and Condition 2 options as available
  - Compensation for startups and minimum load to tariff bid cost recovery mechanism
  - Removal of the excess service payments
  - Determination of hybrid and billable to be removed and aligned with CPM
  - Remove prepaid startups, nonperformance penalty and long term planned outage adjustment

## RMR Contract Updates (continued)

- Article 9 – Statements and Payments: Refer to tariff for invoicing, statements and disputes
  - Revise payment structure to CPM style
  - Remove prior period change worksheet
  - Revise switching between Condition 1 and 2
  - Use finance proposal for facility trust accounts
  - Refer to tariff process for remaining terms: adjustments, corrections, payment default, provisions on collection, insurance, indemnity, credit rating, interest, disputes, payment security, errors, termination fee, final invoice

## RMR Contract Updates (continued)

- Revise provisions to reference to tariff provisions for
  - Article 10 – Force Majeure Events
  - Article 12 – Covenants of the Parties
  - Article 13 – Assignment
  - Article 14 – Miscellaneous Provisions
- Article 11 – Remedies: Revise to reference tariff provisions for dispute resolution and retain provisions not covered in the tariff

## RMR Contract Updates (continued)

- Schedule A – Unit Characteristics, Limitations, Commitments: Remove elements covered either in PGA and/or Master File and retain others
- Schedule B – Monthly Option Payment: Revise to cover only AFRR and monthly payment amount
- Schedule C – Monthly Option Payment: Revise to reference tariff defined costs
- Schedule D – Start-Up Payment: Revise to reference tariff defined costs
- Schedule E – Ancillary Services: Retain and revise to cover synchronous condenser or other unique needs only

## RMR Contract Updates (continued)

- Schedule F – Annual Revenue Requirements of Must-Run Units: Retain with minor revisions as needed to align paradigm shift
- Schedule G – Charge for Service in Excess of Contract Service Limits: Revise to eliminate
- Schedule H – Fuel Oil Service: Revise to eliminate
- Schedule I – Insurance Requirements: Revise to eliminate and use tariff provisions if possible
- Schedule J – Notices: Retain
- Schedule K – Dispute Resolution: Revise to eliminate and use tariff provisions
- Schedule L-1 – Request for Approval of Capital Items or Repairs: Retain and revise to align with new concepts

## RMR Contract Updates (continued)

- Schedule L-2 – Capital Item and Repair Progress Report: Retain and revise to align with new concepts
- Schedule M – Mandatory Market Bid for CAISO Dispatched Condition 2 Units: Revise to reference use of market bidding rules with bid mitigation
- Schedule N-1 – Utility Non-Disclosure & Confidentiality Agreement: Retain
- Schedule N-2 – Utility Non-Disclosure & Confidentiality Agreement: Retain
- Schedule O – RMR Owner's Invoice Process: Revise to use tariff provisions
- Schedule P – Reserved Energy for Air Emissions Limitations: Revise to eliminate

# RMR Contract Updates Summary

Change	Term
Revise to reflect proposal	Art-3 Conditions, Art-4 Dispatch, Art-5 Delivery, Art-6 Market Transactions, Art-8 Rates and Charges, Art-9 Statements and Payments, Sch B–Monthly Option Payment, Sch C–Variable Cost Payment, Sch D–Startup Payment
Minor adjustments to address impacts	Art-1 Definition, Art-2 Term, Art-7 Operation and Maintenance, Art-12 Covenants of the Parties, Art-13 Assignment, Art-14 Miscellaneous Provisions, Sch A–Unit Characteristics, Limitations and Owner Commitments; Sch E–Ancillary Services, Sch F-AFRR, Sch J-Notices, Sch L-Cap Items, Sch N-NDA
Eliminate/use existing ISO Tariff provisions	Article 10 Force Majeure Events, Article 11 Remedies, Sch G- Excess Service, Sch H-Fuel Oil Service, Sch I-Insurance, Sch K-Dispute Resolution, Sch M-Market Bids, Sch O-Invoicing, Sch P-Reserved Energy for Emission Limitations