

## Stakeholder Comments

### Flexible Ramping Product Second Revised Draft Final Proposal

Submitted by	Company	Date Submitted
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Southern California Edison (SCE) appreciates the opportunity to comment on the California Independent System Operator (CAISO), October 24, Second Revised Draft Final Proposal on Flexible Ramping Product (FRP)<sup>1</sup>. SCE's comments comprise three sections:

1. A summarized table of SCE's positions on various components of the CAISO FRP proposal. (Pages 1, 2)
2. Detailed discussion of key components and position reasoning. (Pages 2, 3)
3. A presentation laying out SCE's proposal on a simplified, Robust, CAISO commitment framework. (After Page 3)

#### SCE position and comments on components of the CAISO proposal.

Component	SCE Position	Comments
<b>IDAM</b>	Will not support if the proposal continues to price RUC.	IDAM is a prerequisite for any additional flexibility procurement, including FRP or increased Regulation procurement. SCE does not have a position on the BCR section until the RUC pricing issue is resolved.
<b>DA FRP</b>		
<i>Procurement. Use of demand curve.</i>	Support in general.	
<i>Allowing to bid.</i>	Support.	
<i>Determining procurement targets.</i>	Needs more discussion. No position at this time.	
<i>Cost allocation.</i>	Support allocating costs based on causation to both Load and Generation.	However, actual details must interact with DA procurement approach.
<i>Consideration of energy bids in procurement.</i>	Oppose.	Energy bids associated with FRP should be locked-in and carried to RT.
<i>Buyback obligation if dispatched in RT.</i>	Oppose.	Should be treated as AS capacity.
<i>No Pay for non-performers.</i>	Support.	If unit not available or does not follow instruction.
<b>15 min RT FRP</b>		
<i>1. No Bidding. 2. Demand Curves.</i>	Support.	SCE's position is viewed in the framework of the CAISO's initial 764 straw proposal <sup>2</sup> and

<sup>1</sup> <http://www.caiso.com/Documents/SecondRevisedDraftFinalProposal-FlexibleRampingProduct.pdf>

<i>3. Procurement target based on Real Ramp. 4. No Pay for non-performers.</i>		may change based on changes in the CAISO's proposal.
<i>Multi-interval lookahead in 5 min Energy dispatch.</i>	Support.	This is how the CAISO should manage the flexibility handed to them by the DA and the 15 min processes.
<i>1. Obligation to buyback if dispatched in 5 min. 2. 5 min FRP. 3. 5 min Energy dispatch constrained to maintain FRP.</i>	Oppose.	
<i>Cost allocation.</i>	Same position as for DA cost allocation.	
<b>Ability of VERs to provide FRP.</b>	Support.	Subject to verifiable performance.
<b>PIRP dec bidding.</b>	Not applicable.	PIRP is eliminated under 764 proposal.

**SCE does not support RUC pricing.**

The IDAM is a prerequisite for any flexibility product. SCE does not support moving forward on FRP without IDAM implementation. Further, SCE does not support IDAM implementation unless RUC is not priced. It is unjust and unreasonable to reflect an “opportunity cost” through RUC pricing, that is not an actual opportunity cost for the vast majority of the market.

**SCE supports a Robust Commitment through the DA and 15 min commitment processes.**

The two commitment processes available to the CAISO are the DA and the RTUC. These two processes provide a Robust Commitment to the CAISO to manage in its RT energy dispatch. The 5 min space should not be used for FRP commitment since 5 min is not used to make any commitment decisions. The role of FRP is to drive a Robust Commitment – thus, FRP should be limited to markets that commit resources. SCE describes this in further detail in the accompanying presentation at the end of these comments (after Page 3): “SCE Proposal to Simplify CAISO’s FRP Framework”.

**SCE supports 5 min RTD being solely a dispatch mechanism.**

The existing RTD lookahead mechanism should be sufficient to preserve flexibility provided by the Robust Commitment from the DA and the RTUC. In 5 minute space, resources should be dispatched solely based on Energy bids. Any further “need” for FRP should be met only through the 15 minute Robust Commitment mechanism. This can include, among other measures, expanding the target procurement band. The size of such “wings” should be determined based on the level of uncertainty-cost that is deemed appropriately acceptable.

**Bidding should remain in DA space and Energy bids associated with FRP should be locked-in and carried all the way to RT.**

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<sup>2</sup> <http://www.aiso.com/Documents/StrawProposal-FERC-Order764MarketChanges.pdf>

The CAISO optimization considers DA Energy bids while committing resources. Thus, to honor the optimization and avoid spurious results, it is crucial to preserve these Energy bids all the way to RT. Any anticipated changes in Energy prices between DA and RT must be incorporated in through the DA Energy bid price. Thus, resources should reflect any price risk in their FRP bids. The CAISO is effectively purchasing an option when it procures FRP. Allowing changes in Energy bids implies allowing the seller to change the strike price at will which does not make sense.

**SCE does not support buyback of 15 minute FRP in 5 minute space or that 5 minute price formation should consider 15 minute FRP obligations.**

Buyback obligations lead to price uncertainty for sellers and create spurious Energy price formation. This is an inefficient and suboptimal outcome. SCE does not support such mechanisms that lead to distortion of market prices at an increased risk.

# SCE Proposal to Simplify CAISO's FRP Framework



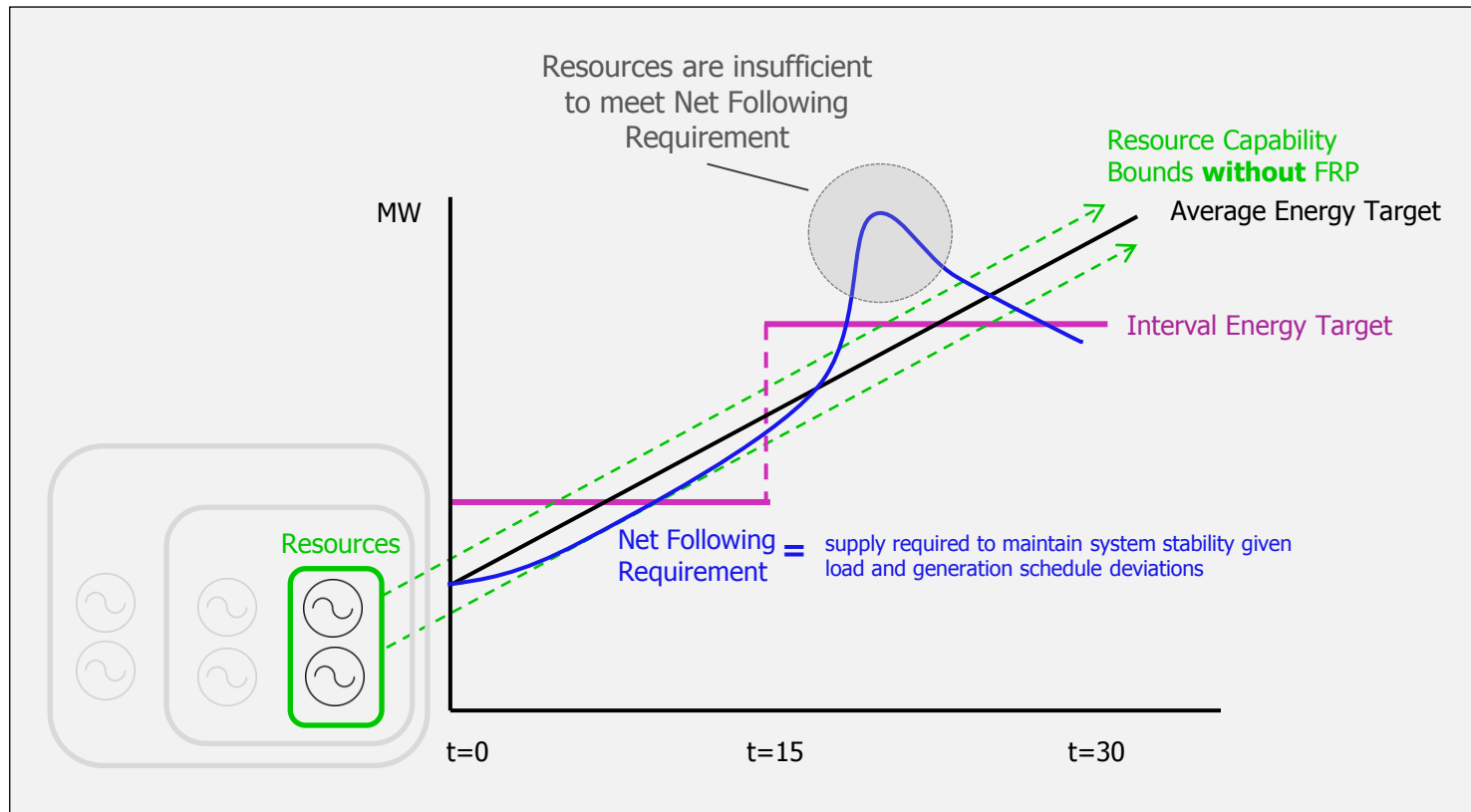
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# Overview of suggested modifications to CAISO's current FRP framework:

- **IDAM**
  - Eliminate RUC pricing
- **DA FRP**
  - Energy bids locked-in through RT
  - No buy-back of DA FRP if dispatched for energy
- **15 minute FRP**
  - No buy-back of 15 min FRP in 5 min market
- **5 minute FRP**
  - Eliminate FRP in the 5 min market
  - 5 min energy price formation should not include constraints to preserve FRP

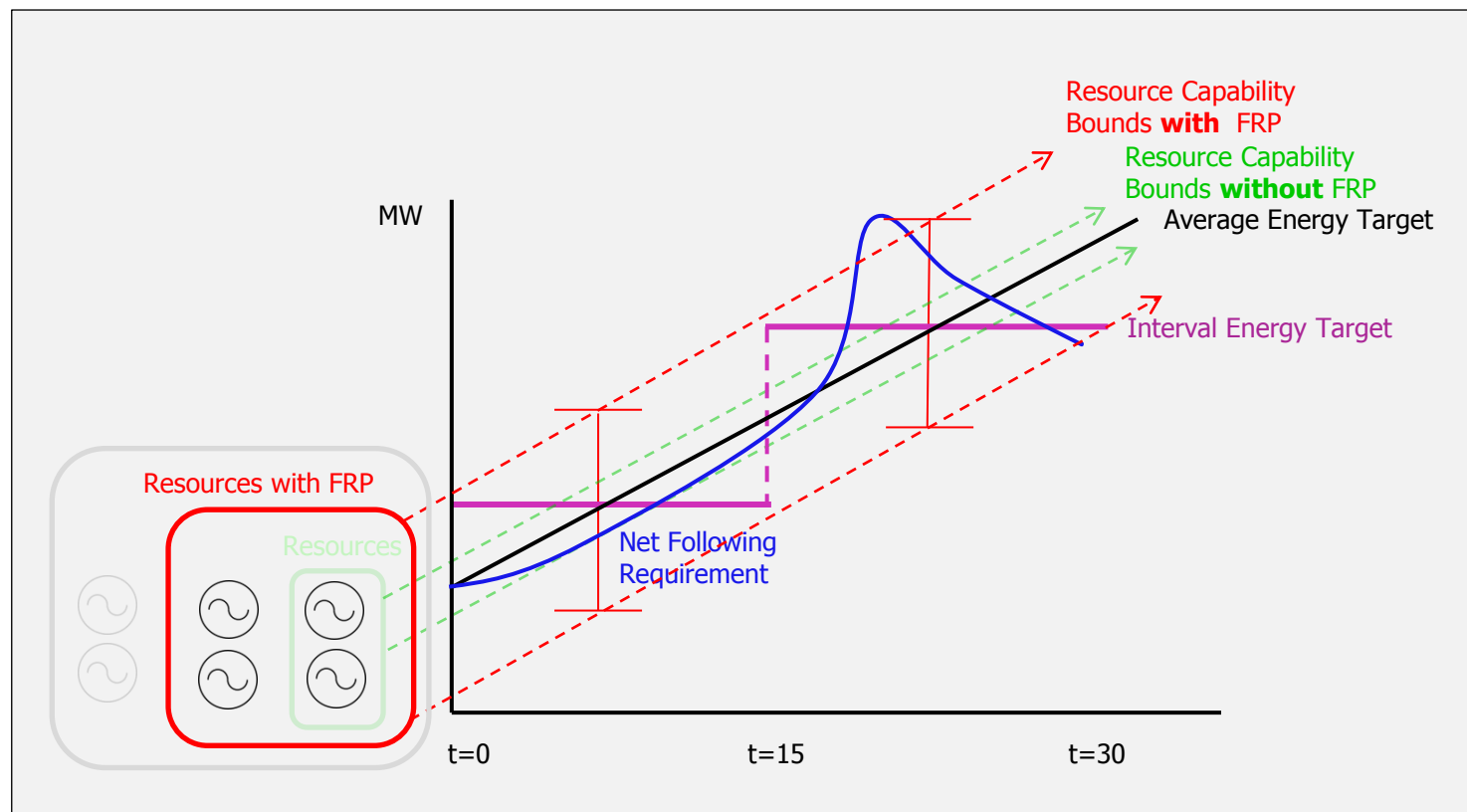
*Note: In this presentation, the implementation of a 15 minute market under the proposed Order 764 Market Changes is assumed to be complete.*

# Dispatch profile of resources without FRP



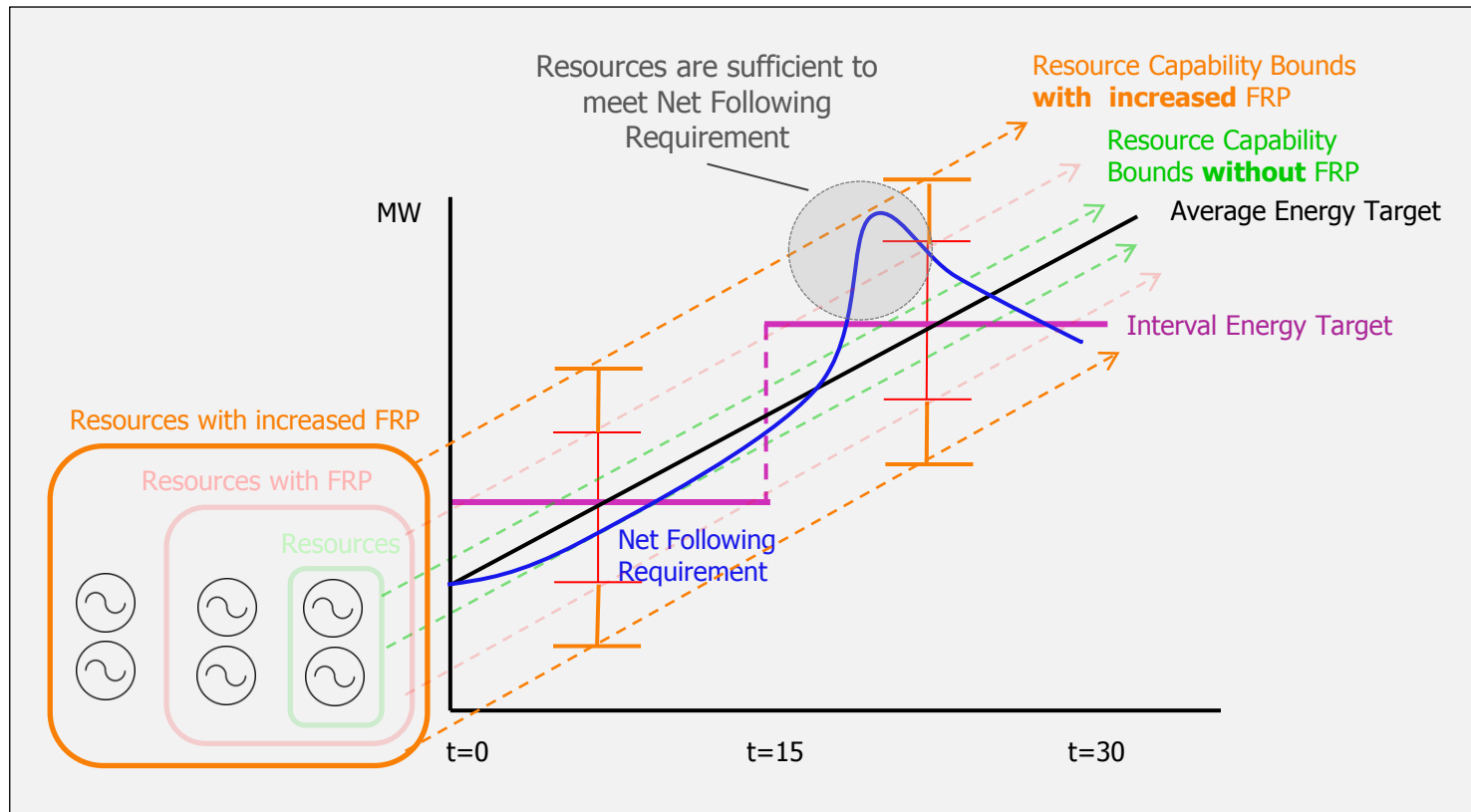
- The limited number of available resources can attain the Average Energy Target and small up/down variations in the **Net Following Requirement** .
- The resources are insufficient to meet the larger deviations of the **Net Following Requirement** from the Average Energy Target that go outside of the **Resource Capability Bounds**.

## Dispatch profile of resources with FRP: a “Robust Commitment”



- By adding the FRP constraint new resources are committed; this “Robust Commitment” provides greater flexibility.
- New resources committed with FRP broaden the **Resource Capability Bounds** allowing any **Net Following Requirement** within the Bounds to be met.

# Dispatch profile of resources with increased FRP



- If there is concern that the 15 minute market will not result in procurement sufficient to meet the real-time **Net Following Requirement**, then CAISO could increase the 15 minute FRP procurement to further widen the Resource Capability Bounds. An even more Robust Commitment would result.



## Why eliminate FRP in 5 minute market?

- The role of FRP is to drive a Robust Commitment. Therefore, FRP should be limited to the markets that commit resources (i.e. DA and 15 min). There should not be FRP in the 5 min market.
  - Once units are committed in the 15 min RTUC they can be moved around to meet operational needs in the 5 min RTD intervals
  - 5 min RTD already performs a “look-ahead” to manage its ramping capability
- As demonstrated in the previous slide, increased uncertainty and variability can be met by increased FRP procurement if needed
  - Actual data can be gathered to gauge performance/costs
  - This data can be used to determine if any additional real-time constraints would be justified

# Explanation of other suggested modifications to CAISO's FRP proposal

- Why eliminate RUC pricing?
  - No other ISO/RTO prices RUC, there is not justification for the CAISO to continue
  - RUC pricing is an artifact from before Resource Adequacy requirements. RUC pricing is no longer necessary given that RA ensures that the cost of providing RUC is sufficiently covered. Moreover, by introducing “Flexible Capacity”, the CAISO will have more comprehensive capacity product lineup than any other ISO/RTO
  - It is unjust and unreasonable to reflect an opportunity cost of RUC into energy prices, even though there is zero opportunity cost for the vast majority of market participants which have RA contracts
- Why lock-in DA energy bids associated with FRP?
  - The optimization will be preserved
  - It is unjust and unreasonable to “buy an option”, and then let the seller change the strike price
  - If sellers are concerned about changing costs between DA and RT, they can incorporate that uncertainty into their FRP bids.
- Why eliminate buy-back of FRP?
  - Doing so provides certainty to sellers – DA and 15-min sales are certain revenue
  - Buy-back obligation causes spurious energy price formation in real-time