



Assessment for Commitment Costs Enhancements 3

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Level-Setting

- Basic Questions to answer for CCE3:
 - How do the proposed rule-changes affect energy storage (NGR, PDR) and what should be done?
- Major conceptual: some resources want/need to limit usage
 - Path A: Establish/bid appropriately high bids and commitment costs (and manage RUC concerns)
 - Path B: Reduce participation in markets, e.g. through outage card
- Major Moving Parts to Factor:
 - RAAIM Exposure in light of change to 'use-limited' definition
 - Ability to represent Commitment Costs, including Opportunity Costs
 - Ability to Include Opportunity Costs in bids
 - Bid Insertion or lack thereof
- Energy Storage concepts to recall:
 - Many types – batteries, thermal, other
 - Commitment costs exist – thermal regulation loads
 - CPUC to review treatment of Auxiliary Loads in Storage OIR Track 2



Key Distinction

PDR and NGR – Relevant Features

	NGR	PDR
Bid Mitigation?	No	No
Ability to represent Commitment Costs?	No	Yes
Bid Insertion?	No	No
Pre CCE3 and under RAAIM (per RSI), can RAAIM penalty exposure be managed through “Use-Limited” status, aka Path B?	No ¹	Yes ²
Under CCE3 and w/ RAAIM (per RSI), can RAAIM penalty exposure be managed through Path B? ³	No	Yes ³

1. Unless the NGR is use-limited. Further clarification may be needed here.
2. Can submit a ‘use-limit reached’ outage.
3. Per CAISO, can submit a new outage card exempting DR from RAAIM once design limitation is reached. Beyond 2018, rules may be unclear.

Issue Spotting

	Assessment	Solution
Should resources have ability to represent cycling limitations if they so choose?	Yes.	Path A or Path B <i>could</i> allow. Note: some storage contracts signed under present tariff's 'use-limited'
Do Path A and Path B yield same ability for a resource to manage over-cycling or other use-limits?	It appears so, but systems requirements on CAISO are harder under Path B.	CAISO, CPUC, and stakeholders to detail challenges/solutions for Paths A vs B (as noted in RSI 1).
Will a move to Path A (per CCE3) change RAAIM penalty exposure risks for extant PDR and NGR contract beyond 2018?	Yes: if resources cannot sufficiently manage dispatch/RUC through bids and commitment costs or use-limited outages. No: if sufficient ability exists to represent opportunity costs in bids, commitment costs, and RUC and no bid-insertion	PDRs and NGRs need capabilities to represent use-limitations.
If LSE is Scheduling Coordinator for PDR/NGR, is RAAIM penalty exposure <i>to the resource</i> avoided?	Depends on contract, but costs may flow through to a resource (and not LSE) since RAAIM penalty applies to resource	Resources under established contracts need avenues to manage any new RAAIM penalty exposure.
Can NGRs and PDRs manage commitment <i>and</i> opportunity costs?	NGRs <i>cannot</i> represent commitment costs, but <i>can</i> represent opportunity costs in bids (if <\$1000). PDRs may represent comm. costs and may need ability to represent opportunity costs in comm. costs	ISO initiative should create ability to establish commitment costs for NGRs. PDRs need to represent opportunity costs in commitment costs.

Takeaways

- Path A and Path B seek to work towards same outcome – allowing resources to manage use-limitations, within reason.
- Challenge is to assess current contracts and to make sure any transition from Path B to Path A, if needed, is manageable and reasonable.
 - DRAM Contracts not affected due to implementation timelines for CCE3.
 - Ability to represent use-limitations as opportunity costs in both commitment costs and bids appears to be preferred path by CAISO (Path A).
- Some solutions warrant further development/considerations
 - Defining use-limited rules to work for extant contracts may protect contracts' balance of benefits and burdens.
 - Further authorizations/clarity needed on ability to represent opportunity costs in commitment costs and to manage RUC commitments.
 - NGRs need ability to represent commitment costs – recommend establishing this capability in ESDER 2.
 - Ability to manage RUC exposure also needs to be developed under Path A.