Attachment 3
Proposals for Working Group 1
Topic 1.3 Penalties and Incentives for Performance

Attachment A

All Proposals for Subtopic 1.3

SOUTHERN CALIFORNIA EDISON (SCE)

1.3 (SUB-TOPIC #3) Penalties and Incentives for Performance

1.3.1. Penalties

Shortfall in Qualifying Capacity

Shortfall in Demonstrated Capacity

1.3.2. Incentives

SCE proposal: 1.3 Penalties and Incentives for Performance:

Issue Summary

There are concerns with the level of financial consequences to DRAM sellers for providing less than the contracted quantity. The CAISO relies on the RA capacity contracted with DRAM sellers, and Load Serving Entities need confidence that amounts they are showing on supply plans represent actual dispatchable capacity. The working group explored whether firming up of financial accountability (e.g. financial incentives and penalties might help ensure more realistic RA MWs are provided from DRAM sellers. These proposals could work in tandem with the proposals for more accurate measurement standards (which are categorized under a different subtopic).

Proposal

For the following proposal, SCE is making the assumption that DRAM resources will continue to be assigned a Qualifying Capacity (QC) equal to the contracted Product Monthly Quantity. SCE's preferred approach to determine QC is the Load Impact Protocols, which would ensure higher confidence in the MW shown in the supply plans.

Under the current DRAM pro forma contract (the "DRAM Contract"), a reduction in delivered RA MWs by Seller generally results in a linear reduction of contract payments, proportional to the reduction in MWs provided (e.g., if Seller's contract is for one month of 10 MW at $5/kW-month, the full contract payment is $50,000. If seller delivers only half (5 MW), the seller is paid $25,000.) At the time the DRAM Contract was developed, it was assumed that CAISO penalties for under-deliveries (such as RAAIM and energy imbalance charges) would incentivize sellers to offer resources they could deliver, but those penalties have not yet been effectively applied in the context of the DRAM.

SCE proposes to introduce additional financial consequences into the DRAM Contract for under-deliveries of RA. SCE also proposes to incentivize DRAM sellers to notify the Load Serving Entity (LSE) as soon as possible if the contracted MWs will be unavailable, by introducing a gradient of steeper financial consequences the later the DRAM seller notifies the LSE of a lower RA MW quantity. These items should encourage Sellers to be more realistic in their MWs contracted in the DRAM solicitation and MWs reported on supply plans leading into each showing month, which in turn would help to address reliability concerns. The application of different consequences at different times acknowledges that the LSE has more options available to procure alternative RA capacity, and is better able to mitigate negative cost impacts for its customers, if it knows about under-deliveries as far in advance as possible.

Proposal Part A

SCE proposes the financial consequences of a DRAM Seller providing less MW than contracted for to be structured as follows:

- Step 1: DRAM seller is awarded contract for A MW at price (P)

- Step 2: DRAM seller notifies LSE 90 days before Year-Ahead RA showing deadline (Date AA) that their deliveries will fall short by B MW
  - The final payment for the month will be reduced by B MW multiplied by price (P) multiplied by a factor of 1.2

- Step 3: DRAM seller notifies LSE after Date AA, and shows even less on Monthly RA supply plan, by an additional capacity reduction, C MW
  - The final payment for the month will be reduced by C MW multiplied by price (P) multiplied by a factor of 1.5

- Step 4: As part of the invoicing process, the DRAM seller provides Demonstrated Capacity after the RA delivery month that is even lower than the MWs provided on the Monthly RA supply plan, by an additional capacity reduction, D MW
  - The final payment for the month will be reduced by D MW multiplied by price (P) multiplied by a factor of 2.0

- The payment for the month would be calculated as follows:
  - Payment = (A – B x 1.2 - C x 1.5 - D x 2.0) x P

The basis for DRAM seller's notification of updates to MW deliveries should be in line with common understanding of Qualifying Capacity determinations. A framework on this is discussed in proposal 1.1 on Qualifying Capacity submitted by PG&E and in proposal 2.4 on Implementation Milestones submitted by SDG&E.

Illustrative examples are provided in the attached presentation.

Proposal Part B

SCE procures RA resources important to reliability, and relies on its contracted RA resources when it finalizes its RA compliance plans. To help protect its customers from additional cost related to CAISO procuring any capacity through its Capacity Procurement Mechanism, SCE proposes to eliminate the last paragraph in Section 3.5 (d) of the DRAM Contract that currently reads:

"Notwithstanding Seller's obligations in Section 3.5(a), Seller is not required to indemnify or reimburse Buyer for any costs allocated to Buyer by the CAISO for any capacity procured by CAISO pursuant to the Capacity Procurement Mechanism with respect to any Shortfall Capacity."

SOUTHERN CALIFORNIA
EDISON
Energy for What's Ahead℠

DRAM Working Group 1
SCE Proposal - Illustration

Sub-topic #3: 1.3 Penalties and Incentives for Performance

2/6/2019

Sub-topic #3: 1.3 Penalties and Incentives for Performance

Proposal explained with numbers

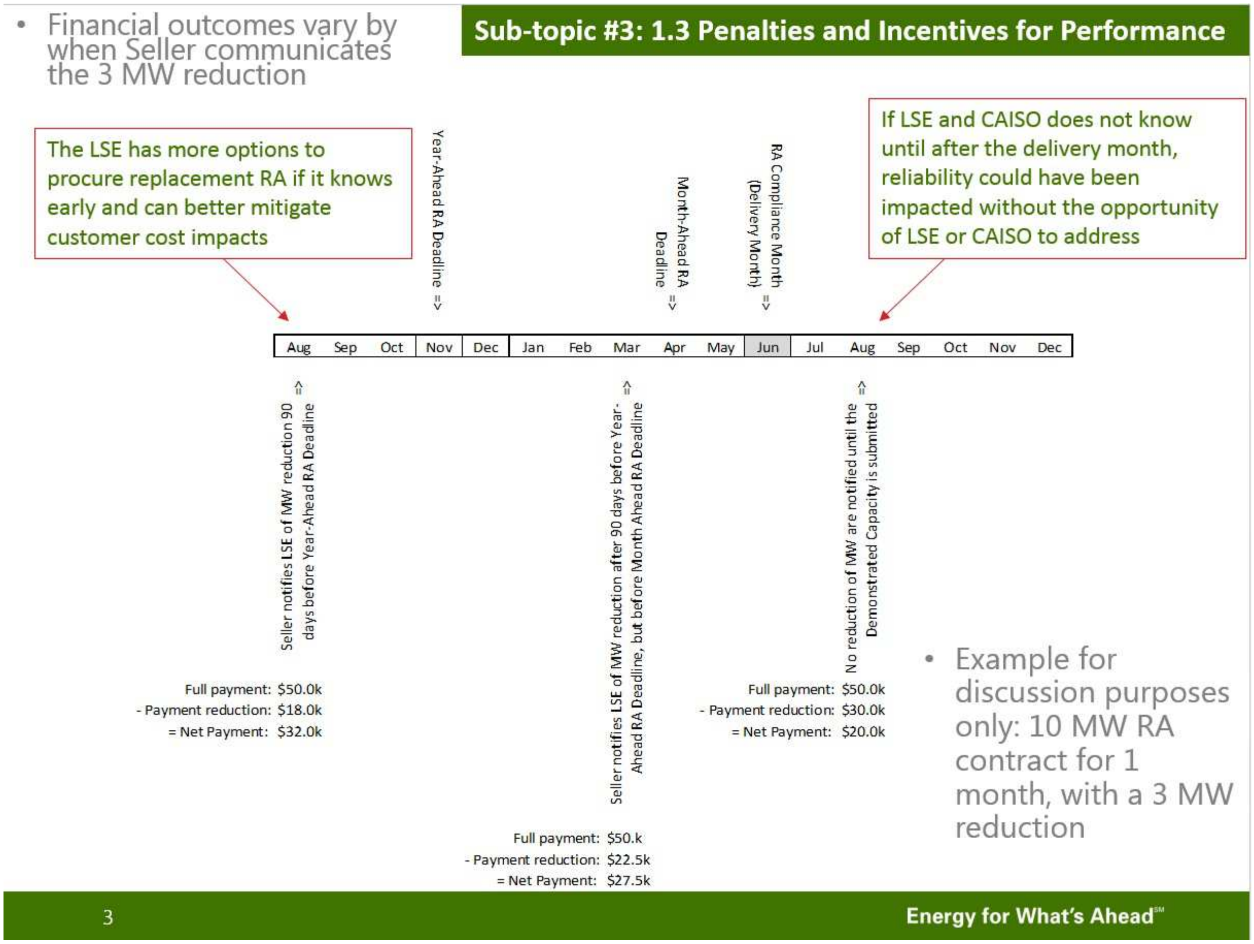
- Example for discussion purposes only: 10 MW RA contract for 1 month, with 1 MW reduction expressed at various times during the delivery life cycle.
- Financial impact of expressing a reduction in delivered MW early:

Time =>

Step	Description of timing when MW reduction is communicated	Reduction, MW		Capacity, MW		Accountability Factor	Price, $/kW-mo	Payment component, $k
1	Contract Capacity awarded as part of DRAM solicitation/RFO	NA	NA	A	10	NA	5.00	50.00
2	DRAM seller notifies LSE 90 days before Year-Ahead RA Showing Deadline of a reduction in capacity	B	1	NA	9	1.2	5.00	-6.00
3	DRAM seller notifies LSE after 90 days before YA RA Showing Deadline of an additional reduction in capacity on Monthly RA Supply plan (incremental to B)	C	1	NA	8	1.5	5.00	-7.50
4	Seller provided final Demonstrated Capacity as part of invoice process that are even lower than the MWs provided on the Monthly RA Supply plan	D	1	NA	7	2	5.00	-10.00
Result	Payment = (A - B x 1.2 - C x 1.5 - D x 2.0) x P =							26.50

- Financial impact of expressing reduction in delivered MW after the RA Showing month:

Energy for What's Ahead℠


• Financial outcomes vary by when Seller communicates the 3 MW reduction
Sub-topic #3: 1.3 Penalties and Incentives for Performance
The LSE has more options to procure replacement RA if it knows early and can better mitigate customer cost impacts
Year-Ahead RA Deadline =>
Month-Ahead RA Deadline =>
RA Compliance Month (Delivery Month) =>
If LSE and CAISO does not know until after the delivery month, reliability could have been impacted without the opportunity of LSE or CAISO to address
Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Seller notifies LSE of MW reduction 90 days before Year-Ahead RA Deadline
Full payment: $50.0k
- Payment reduction: $18.0k
= Net Payment: $32.0k
Seller notifies LSE of MW reduction after 90 days before Year-Ahead RA Deadline, but before Month Ahead RA Deadline
Full payment: $50.k
- Payment reduction: $22.5k
= Net Payment: $27.5k
No reduction of MW are notified until the Demonstrated Capacity is submitted
Full payment: $50.0k
- Payment reduction: $30.0k
= Net Payment: $20.0k
• Example for discussion purposes only: 10 MW RA contract for 1 month, with a 3 MW reduction
3
Energy for What's Ahead℠

JOINT DR PARTIES

Working Group 1.3 – Performance Incentives/Penalties

Problem: Some DRPs have not performed well. There are no real penalties built into the DRAM, except for the ability to recover costs reasonably incurred by the CAISO.

Proposal: The Joint DR Parties have suggested that the IOUs use a subjective factor to weight the selection of DRAM bids such that good performers receive a favorable weighting versus poor performers or bad actors. In addition, the Joint DR Parties supported the ability to impose reasonable penalties for failure to perform when dispatched and for failure to provide the contracted capacity on the supply plans. The Energy Division also raised these issues in its DRAM Evaluation. However, the Joint DR Parties are concerned about imposing penalties when there is no harm to the IOU for the failure and no costs incurred as a result.

OHMCONNECT

Working Group 1.3 (Sub-Topic: Penalties and Incentives for Performance)
Proposal: Penalties and Incentives for Ex Ante and Ex Post Performance

A. Problem Statement

Stakeholders have raised two concerns with the performance-related penalties applicable to Sellers under the current DRAM contract. First, the contract lacks specificity regarding the consequences to the Seller should one, or both, of two types of "underperformance" occur with respect to a given delivery month:

1. *Ex ante* Supply Plan Capacity less than Contract Capacity; and
2. *Ex post* Demonstrated Capacity less than Supply Plan Capacity.

In particular, it is presently unclear at what point either type of underperformance would constitute an event of contract default. Second, the contract is asymmetric with respect to its incentive structure for monthly Demonstrated Capacity in that it penalizes the Seller if Demonstrated Capacity is less than Supply Plan Capacity, but does not reward the Seller if Demonstrated Capacity is greater than Supply Plan Capacity. As discussed in greater detail below, *performance of a DR resource is essentially a random variable with a probability distribution, such that it is reasonable to reward modest over-delivery – or at least not to punish modest under-delivery – of a DRAM Seller's monthly Supply Plan Capacity.*

B. Description of Methodology

Penalties in case of Supply Plan Capacity below Contract Capacity

We presume the Seller's monthly Supply Plan Capacity will be informed by some sort of *ex ante* plausibility analysis, the precise details of which remain to be determined by stakeholders and Staff. The main implication of such an analysis is that, for a given DRAM contract and delivery month, Supply Plan Capacity may be set to less than 100 percent of Contract Capacity.

In cases where a Seller's monthly Supply Plan Capacity is determined to be less than 100 percent of its Contract Capacity, we propose that the Seller forfeit the contract revenue associated with the deficient contract quantity. For example, if Contract Capacity is 5 MW for the month of August, but the Seller's ex ante analysis supports a Supply Plan Capacity of only 3 MW, the IOU is not obligated to pay the Seller for the 2 MW of August capacity for which the Seller is deficient.

Furthermore, in cases where Supply Plan Capacity is less than 50 percent of Contract Capacity *for two consecutive months*, we propose the IOU be permitted (but not obligated) to terminate the Seller's contract – provided the deficiency is not demonstrably the result of the actions or inactions of either the IOU or the CAISO. For example, if Contract Capacity is 5 MW for the months of August and September, but the Seller's ex ante analysis supports a Supply Plan Capacity of only 2 MW for each of these months, the IOU would have grounds to terminate the Seller's contract.

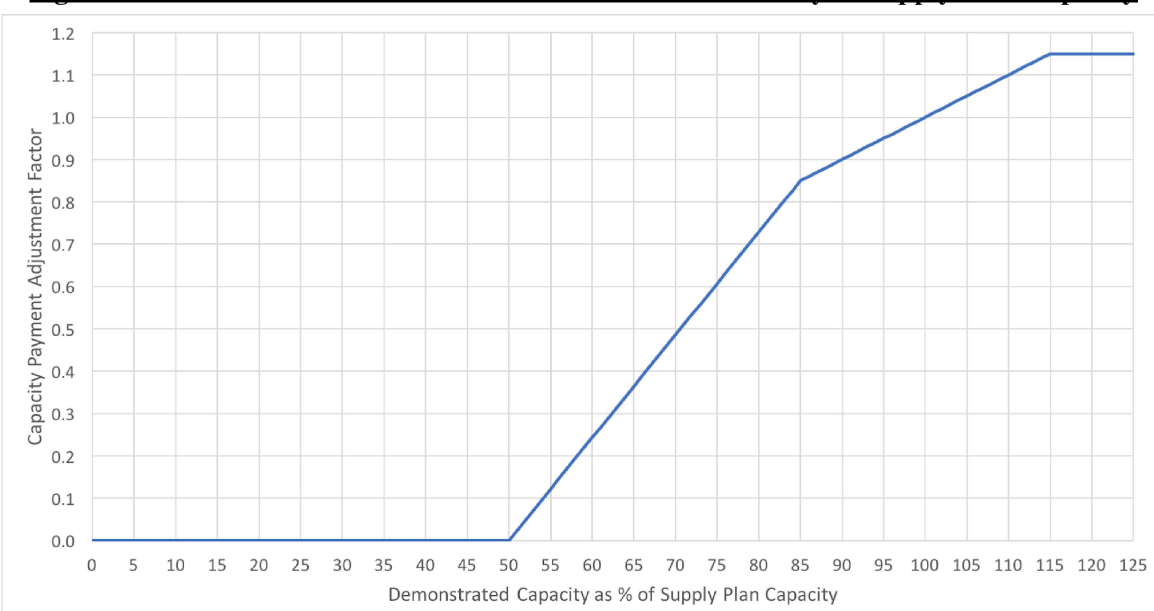
Penalties in case of Demonstrated Capacity below Supply Plan Capacity

We propose two alternative incentive structures for monthly Demonstrated Capacity, each of which is intended to address the asymmetric treatment of under- versus over-delivery of Supply Plan Capacity in the current DRAM contract. Each proposal calculates, as a function of Demonstrated Capacity ("DC") and Supply Plan Capacity ("SPC"), an Adjustment Factor ("AF") that is applied to the Seller's monthly capacity payment. Letting "P" denote the monthly contract capacity price, the Seller's adjusted monthly capacity payment for each proposal is equal to AF x P x SPC.

First Proposal

Under our first proposal, the contract would reward Demonstrated Capacity in excess of Supply Plan Capacity (up to some limit), while continuing to penalize any instance of Demonstrated Capacity less than Supply Plan Capacity (as is the current practice). An example of this incentive structure is presented in Figure 1. In this example, under- and over-performance are penalized and rewarded symmetrically within a 15-percent tolerance band around Supply Plan Capacity. Over-delivery above the tolerance band does not result in increased reward. Meanwhile, under-delivery below the tolerance band results in increased penalty (in the form of capacity payment withheld at an increased rate). Finally, Demonstrated Capacity that is less than 50 percent of Supply Plan Capacity results in the Seller forfeiting its monthly payment altogether, and two consecutive months of such underperformance would be grounds for the IOU to terminate the Seller's contract.

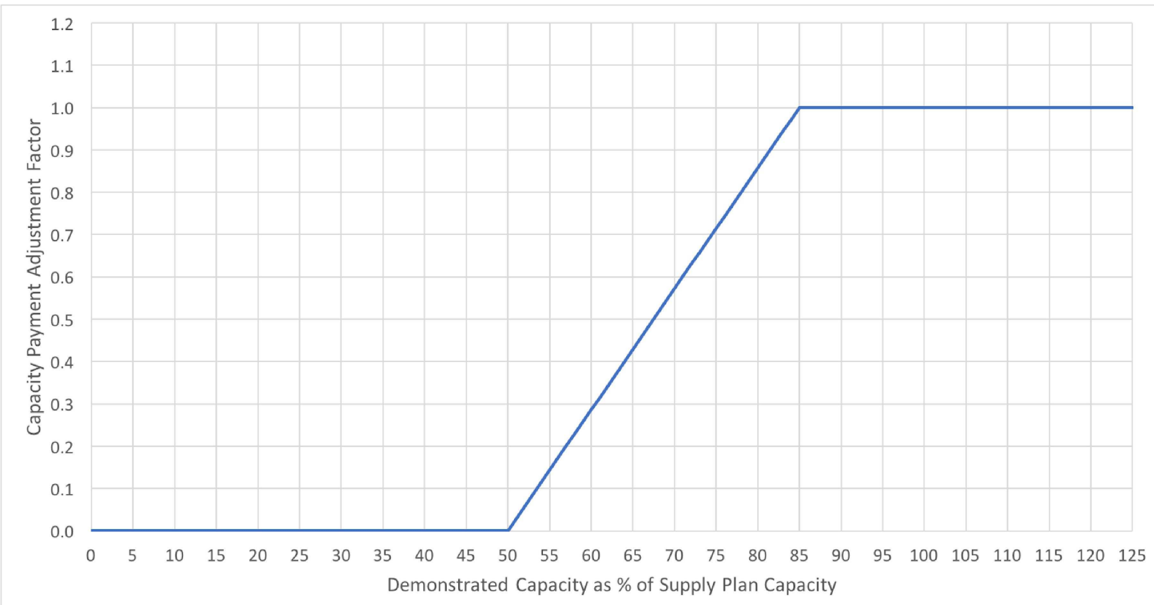
Figure 1: Incentive structure that rewards modest over-delivery of Supply Plan Capacity



Second Proposal

Under our alternate proposal, rather than reward Demonstrated Capacity in excess of Supply Plan Capacity, the contract would penalize only Demonstrated Capacity that is substantially below Supply Plan Capacity. It would *not* penalize Demonstrated Capacity that is modestly below Supply Plan Capacity. An example of this incentive structure is presented in Figure 2. In this example, the Adjustment Factor applied to the Seller's monthly capacity payment is 1.0 as long as Demonstrated Capacity is at least 85 percent of Supply Plan Capacity. If Demonstrated Capacity falls below this threshold, then the Seller incurs a penalty in the form of withheld capacity payment. As in the previous example, Demonstrated Capacity that is less than 50 percent of Supply Plan Capacity results in the Seller forfeiting its monthly payment altogether, and two consecutive months of such underperformance would be grounds for the IOU to terminate the Seller's contract.

Figure 2: Incentive structure that does not punish modest under-delivery of Supply Plan Capacity



C. Discussion

There is good reason to address the asymmetric treatment of under- versus over-delivery of Supply Plan Capacity in the current DRAM contract. As stated above, a DR resource's performance can be thought of as a random variable – i.e. it is governed by a probability distribution. Whereas Supply Plan Capacity should be indicative of the resource's *expected* performance, Demonstrated Capacity should be thought of as a *draw from the probability distribution* that will tend to differ from the expected value. In some months Demonstrated Capacity will naturally be less than Supply Plan Capacity while in other months the opposite will be true – for example, due to summertime weather that is unusually mild or unusually hot, respectively. Accordingly, Demonstrated Capacity that is modestly below Supply Plan Capacity for some months does *not* necessarily mean that the Seller has failed to deliver its Supply Plan Capacity to the IOU, especially if the Seller's Supply Plan Capacity was informed by a Commission-approved ex ante analysis.

Moreover, insofar as a Seller's monthly Demonstrated Capacity is *consistently* below Supply Plan Capacity, this will factor into the Seller's subsequent ex ante analyses and constrain the Supply Plan Capacity the Seller may claim in future delivery months. For these reasons, we believe it is appropriate that the DRAM contract either reward modest over-delivery, or tolerate modest under-delivery, of a Seller's monthly Supply Plan Capacity.

D. Pros/Cons

Operational efficacy: The penalty/incentive proposals specify precisely the conditions that could trigger an event of default due to Seller underperformance (with regard to either monthly Supply Plan Capacity or monthly Demonstrated Capacity). The proposals also permit the IOU to withhold payment to the Seller if Supply Plan Capacity is less than Contract Capacity, which provides the IOU with a source of funds to procure any replacement capacity needed to cure a RA deficiency. Finally, the proposals address the current DRAM contract's asymmetric treatment of under- versus over-delivery of Supply Plan Capacity.

Verifiability: The penalty/incentive proposals take as inputs the Seller's monthly Supply Plan Capacity and monthly Demonstrated Capacity. The proposals are "verifiable" insofar as stakeholders agree that Supply Plan Capacity and Demonstrated Capacity are verifiable.

Costs: If a DRAM Seller's monthly Supply Plan Capacity is less than its monthly Contract Capacity, this could result in the IOU being deficient with regard to its overall RA requirement. Presumably, the IOU can pay for the costs of procuring any needed replacement capacity using the portion of the contract payment withheld from the deficient DRAM Seller. Likewise, if a DRAM Seller is paid in some months for Demonstrated Capacity (modestly) above Supply Plan Capacity, this can be funded from payments *not* made to the Seller in other months for which Demonstrated Capacity is (modestly) below Supply Plan Capacity.

Impacts on new entrants: The penalty/incentive proposals treat new and existing DRAM Sellers equivalently.

Impacts on good actors: The proposals specify precisely the conditions that could trigger an event of default due to Seller underperformance (with regard to either monthly Supply Plan Capacity or monthly Demonstrated Capacity). Under the proposals, the DRAM Seller knows precisely the minimum performance that is acceptable to avoid contract default.

Parties' positions (for and against): Third-party DRPs have expressed support for compensation for monthly Demonstrated Capacity in excess of monthly Supply Plan Capacity (at least up to a limit). The IOUs have expressed concern with paying for capacity for which they cannot claim RA credit (e.g. because the capacity is not included on a Seller's monthly supply plan).

E. <u>Dependencies</u>

The second of the two proposed incentive structures for monthly Demonstrated Capacity (whereby Demonstrated Capacity modestly below Supply Plan Capacity is not penalized) assumes there is some feedback mechanism between performance during CAISO test and dispatch events and the ex ante analysis that informs Supply Plan Capacity. In this manner, Demonstrated Capacity that is *consistently* below Supply Plan Capacity will in time factor into the Seller's ex ante analysis and constrain its Supply Plan Capacity for future delivery months.

OLIVINE

Penalties / Incentives (1.3)

Olivine Proposal

Description

Our proposal is:

- Do not introduce penalties or incentives to Supply Plan shortfall against contract.
- Consider a discount (or de-rate) on underperformance of DC against the Supply Plan.

This proposal is based on the assumption that a verifiable methodology for determining QC will be introduced into the DRAM (WG 1.1), and that an increase in tests/dispatch will be required either due to dispatch hours (WG 1.2) or as a result of efforts to ensure that the DC provides more consistent evidence of the use of the RA as converted to energy (WG 1.4).   To ensure that Supply Plans and DC are comparable, it is also critical that dispatch performance follows an excepted CAISO and CPUC performance methodology at the resource level.

The rationale for not including a penalty for shortfall against contract, is that penalties on actual delivery (i.e., DC) should provide enough incentive to the DRP to accurately determine supply plan quantities. Aside from the concern of double penalties, we are also concerned that a penalty on shortfall against contract could create a perverse incentive to increase supply plan quantities with the DRP hoping to resolve the shortfall in time for delivery (i.e., essentially kicking the can down the road).