Submitted By	Company	Date Submitted
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Comments on the Availability Incentive Mechanism (AIM)

Measuring availability on a monthly basis. NRG supports and appreciates the CAISO returning to assessing availability on a monthly basis, rather than on a daily basis.

Requirement to submit an economic bid from flexible capacity. In general, NRG supports discouraging self-scheduling and prefers that scheduling coordinators for resources submit economic bids to the CAISO’s markets. Nevertheless, NRG believes that it is necessary at times to self-schedule certain resources to achieve certain outcomes (e.g., ensuring a gas burn or protecting resources from adverse settlements due to the resources being decremented from its day-ahead schedules), especially for resources that are represented as multi-stage generating (MSG) units. NRG does not oppose the CAISO implementing an availability incentive mechanism that would work for both generic/local and flexible resource adequacy capacity. However, until CAISO market participants can find some other way to avoid adverse outcomes created by CAISO markets, requiring flexible capacity to submit an economic bid or be counted as unavailable and penalized accordingly will be a problem that likely will cause market participants to think twice about offering their flexible capacity as flexible capacity. Before the CAISO implements a mechanism that would have a unit submitting a self-schedule declared to be unavailable for that period, the CAISO should thoroughly evaluate what causes market participants to self-schedule generating resources and address the fundamental causes behind self-scheduling.

Proposed penalty rate. NRG supports decoupling the AIM penalty rate from the CPM price. NRG supports the CAISO’s proposal to reduce the AIM penalty rate to $3.50/kW-month, but also notes that the proposed $3.50/kW-year still remains substantially above (several multiples of) NRG’s estimate of the going price for system RA capacity.

The concerns raised by some parties that decoupling the AIM penalty rate from the CPM price would create an incentive for parties that have been given a CPM designation to simply quit bidding their units into the CAISO’s markets and pocket the differential between the CPM rate and the AIM penalty are overstated. In any case, NRG would not object to penalizing a resource that has been given a CPM designation for non-availability at the CPM rate. However, NRG would object to an AIM penalty rate that is unduly higher than the going rate for RA contracting.

Proposed AIM structure. The CAISO has proposed to:

- Eliminate monthly availability targets with an annual availability target of 96.5%.
- Reduce the dead-band around the annual availability target from +/- 2.5% to +/-2%.
- Cap the availability incentive payment rate at $7/kW-month, twice the proposed AIM penalty rate. While excess incentive payment funds will be carried over to the following month through December, after December, any excess funds will be paid out to load.

NRG offers these comments:

Trade Month	Availability Standard Percentage 2014	2013	2012	2011	Average
Jan	97.7%	97.5%	97.2%	98.0%	**97.6%**
Feb	97.0%	97.7%	97.8%	98.0%	**97.6%**
Mar	96.8%	97.0%	95.7%	96.0%	**96.4%**
Apr	96.2%	95.8%	95.4%	95.0%	**95.6%**
May	95.3%	94.9%	94.0%	95.0%	**94.8%**
Jun	96.3%	96.3%	96.6%	97.0%	**96.6%**
Jul	96.9%	96.6%	96.0%	96.0%	**96.3%**
Aug	95.1%	95.3%	96.8%	96.0%	**95.8%**
Sep	95.9%	95.5%	95.8%	96.0%	**95.8%**
Oct	95.3%	96.3%	97.2%	98.0%	**96.7%**
Nov	95.9%	96.1%	97.1%	96.0%	**96.3%**
Dec	97.4%	97.8%	97.7%	98.0%	**97.7%**
Average	**96.3%**	**96.4%**	**96.4%**	**96.6%**	**96.4%**

- As shown above, the CAISO's proposed flat annual 96.5% availability target is a higher monthly target than the availability targets in 15 of the 20 past peak RA season months (months in which the 96.5% availability target is greater than the monthly target are highlighted).

- While the proposed 96.5% target would lower availability targets in January, February and December, it seems unlikely that these lower targets would result in significant incentive payments, for several reasons. First, as the data shows, units in these months have higher availabilities; given that the CAISO is paying out only to the extent it collects non-availability penalties, there would likely be reduced pools of non-availability penalties in these months due to the higher availabilities. Second, the CAISO has proposed to cap the availability incentive payment rate at twice the proposed penalty rate. While the CAISO has indicated it will roll over any excess funds from month to month through the end of the year, the CAISO has proposed that any excess moneys would be returned to load at the end of December – which, coupled with the higher historical availability rates in January, would reduce the pool of funds available to units with high availability in January.

  In sum, while the CAISO has indicated that implementing lower availability targets in December, January and February (in exchange for higher targets in all but one of the summer months) would be a benefit – those benefits appear illusory.

Exempting resources. The CAISO has proposed to exempt the following resources from the AIM:

- Planned outage capacity that does not require replacement or has replacement provided
- Planned Unit testing

- Unit Cycling
- Unit Supporting Startup
- Transitional Limitation
- Ambient not due to Temperature
- Transmission-induced Outage
- Environmental Restrictions Use Limit Reached
- Pmax < 1.0 MW
- Contracts for Energy from non-specified resources
- Modified Reserve Sharing LSE and Load following MSS resources
- Most Qualified Facilities (QFs)
- Some use-limited resources if use-limitation cannot be captured in market optimization or opportunity cost calculation
- Wind, solar and CHP (generic RA obligation)

NRG does not oppose this list of proposed exemptions. In particular, NRG has experience with use-limited resources whose use limits are not easily captured in the market optimization or in the supporting CAISO systems and agrees that exempting such resources would be preferable to trying to adapt or alter CAISO systems to ensure the availability calculations are sound.

Grandfathering. The CAISO has expressed concern about the amount of RA capacity that currently is not subject to the CAISO's SCP availability penalties because it is "grandfathered" pursuant to an existing contract. The CAISO has proposed to implement a new AIM in 2016, and notes that "many contracts will have to be renegotiated due to the new flexible RA requirement."[1]

The schedule the CAISO has proposed for this initiative has this matter going to the Board in Q1 2015. While some RA contracts may not be finalized and executed until summer 2016, after FERC approval of the CAISO proposal, and could be revised to incorporate the new AIM, it is likely that some RA contracts have already been put in place for 2016. The CAISO's assumption that those contacts already in place can simply be amended to address this issue may not be a valid assumption. Whether and how RA contracts can be restructured to incorporate the new AIM is a topic that must be more fully explored.

<u>Comments on Modifications to Replacement and Substitution</u>

NRG agrees with the CAISO that the current systems for providing replacement and substitution are very complex and can be difficult to navigate. While NRG shares the CAISO's overall goal of developing a more streamlined, rational process, NRG is not yet persuaded that assigning the replacement obligation (and the consequent risk) solely to the supplier, while simplifying the process, is the right or equitable approach.

The following issues must be addressed as part of any new system regarding replacement and substitution:

[1] Revised Straw Proposal at 40.

The risk of moving outages. While suppliers often submit planned outages well in advance, the CAISO often does not approve them until around the T-45 time frame. Further, the CAISO can and does move planned generation outages in that time frame or even beyond that time frame. This creates two sets of risks for the supplier: the risk of losing crews and equipment lined up to do the outage work and the risk of having to provide replacement capacity for the new outage window. While the CAISO proposal notes that the CAISO "typically" does not ask suppliers to provide replacement if the CAISO moves an outage after T-45,[2] this does not amount to a guarantee that a supplier will be held harmless for the CAISO moving one of their planned outages requested well in advance. Moreover, it is not clear how the CAISO simultaneously considers and processes transmission and generation outages, and how suppliers are affected by those considerations. While suppliers are already exposed to the risk of moved outages, the CAISO proposal exacerbates that risk by proposing that suppliers alone would be responsible for providing replacement. The CAISO must address the risks associated with moving planned outages for NRG to get comfortable with any new direction for replacement and substitution.

Substitution Criteria. The CAISO currently has broad discretion in deciding what it will or will not accept as substitute RA capacity. Given that the Local RA requirements are enforced only at the local capacity area level, and that the CAISO has broad discretion in exercising its backstop authority if local sub-areas are deficient, requiring that substitution be provided at the same bus, or by a unit with identical operating and electrical flow characteristics, provides the CAISO with a "bus-specific" product that is far superior to the local area capacity product that the supplier committed to, and was paid to, provide. As part of this initiative, the CAISO needs to replace its current broad discretion for approving substitution with explicit, detailed criteria that allows suppliers to know in advance whether their substitution requests will be granted. Substitution should not be a "bring me a rock" exercise.

Having to provide local capacity to substitute for or replace system capacity within a local area. NRG supports the CAISO proposal to separate system and local showings so that a supplier will not have to replace system capacity within a local area with local capacity within that same area, as is currently required. The current rule allows LSEs to acquire local capacity at system prices.

Using the T-25 forecast instead of the T-45 forecast. NRG sees no value in using the T-25 forecast instead of the T-45 forecast to determine whether suppliers need to provide replacement capacity. NRG is unaware of any forecasting technique that would allow the CAISO to draw different, reliable conclusions about the need (much of which is driven by weather) 25 days out as opposed to 45 days out.

NRG appreciates the opportunity to submit these comments.

[2] CAISO Presentation for August 18, 2014 meeting at slide 66.