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**Comments of Northern California Power Agency
Flexible Ramping Product
Revised Draft Technical Appendix**

November 25, 2015

Northern California Power Agency (NCPA) appreciates the opportunity to provide the following comments in response to the CAISO's Flexible Ramping Product Revised Draft Technical Appendix dated November 11, 2015.

Settlement of Flexible Ramping Product

According to the revised draft technical appendix, the CAISO will financially settle Flexible Ramping Product (FRP) in the Real-Time market. The financial settlement of FRP will be separated in to two settlement calculations:

- A direct settlement in the market for all forecasted movement; and
- A settlement for FRP procured for uncertainty, based on observed load and non-dispatchable resource forecast error, allocated at the end of the month through an uplift settlement

FRP will be procured by the CAISO to meet 5-minute to 5-minute net system demand changes plus uncertainty. NCPA currently operates in the CAISO balancing authority area as a Load-following Metered Subsystem (MSS). As a Load-following MSS, NCPA is contractually required to dispatch its resource portfolio to serve its metered demand in every 5-minute settlement interval. If NCPA is not able to balance its supply and demand portfolio every 5-minutes (within a defined deviation band), NCPA is assessed significant deviation penalties by the CAISO. This contractual structure creates a strong incentive for NCPA to manager its own load and resource forecasted movements.

- Forecasted Movement

Prior to each 5-minute dispatch interval, NCPA produces a forecast of its load following needs (or forecasted movements) for each 5-minute interval for the subsequent two (2) hour period. Based on its forecasted need, NCPA preserves generation capacity on its MSS resources so that it is available to be used by NCPA to follow the forecasted movements. Due to the fact that NCPA currently accounts for any forecasted movements within its supply and demand portfolio,

CAISO's need to procure FRP to manage its collective forecasted movements of supply and demand is reduced.

In practice, NCPA provides Load Following Instructions (LFI) to the CAISO for each 5-minute dispatch interval to communicate its expected use of Load-following capacity to offset forecasted movements. This information is used by the CAISO to anticipate how NCPA may be operating its resource portfolio. Since NCPA is contractually obligated to balance its supply and demand portfolio in each 5-minute settlement interval, NCPA believes that it should not be subject to FRP cost allocations or settlements attributed to CAISO's procurement of FRP to manage forecasted movements in the system. To the extent NCPA has generation capacity that is available, and which is not being used by NCPA to balance its MSS portfolio, the capacity that is made available can be committed and dispatched by CAISO to supply FRP.

- Uncertainty

Regarding allocation of costs associated with uncertainty, NCPA continues to agree with CAISO that load that uses 5-minute metering, such as a Load-following MSS, should be included in the supply category. In the case of a Load-following MSS, NCPA suggests that its allocated share of uncertainty should be based on its net MSS portfolio uninstructed deviation within each 5-minute settlement interval. An MSS's net portfolio uninstructed deviation within each 5-minute settlement interval represents that amount of energy it either supplied to, or consumed from, the CAISO system that was not attributed to its portfolio balancing; therefore this amount of net uninstructed deviation represents that amount of uncertainty contributed to the system by the Load-following MSS.