

Name	Company	Submittal Date
Nuo Tang	San Diego Gas & Electric	8/15/2017

SDG&E appreciates the opportunity to comment on the RAAIM Update White Paper and call held on September 7, 2017.

SDG&E believes the existing Tariff is consistent with the policy proposed in RSI Phase 1A. It is unfortunately the flawed implementation of the existing Tariff that created the issue. SDG&E provides reasons below why changes to the formula are unnecessary. Rather, the CAISO must change its implementation of the existing formula to be consistent with the existing Tariff.

SDG&E believes the existing Tariff requires the CAISO to utilize the worst availability percentage for either of the Flexible or Generic attribute as part of the RAAIM calculation. This ensures that a resource cannot try to mitigate some or all of its RAAIM penalties by providing services of one attribute while ignoring that of the other attribute. This is important as the CAISO did not want to let resources ignore the Flexible MOO after showing it on the supply plan because it can offset those penalties with incentives gained by providing the Generic attribute.

For example, a resource committed 100 MW Generic capacity and 3 MW Cat 1 Flexible Capacity on its Supply plan. It self-schedules 100 MW of generic capacity for the entire month and provided 0 MW economic bid. This would mean the resource would receive 100% generic availability and 0% flex availability. In the current case, the resource would receive 0% monthly availability for the month because the resource did not provide its obligated flexible MOO. To calculate the RAAIM penalty, the CAISO would multiple the 0% monthly availability by the greater of the committed generic or flexible capacity. In this case, it is 100 MW. Therefore, the total penalty for the existing Tariff would be \$357,777.70 for missing the most stringent MOO.

In the CAISO white paper, the CAISO proposes to count the bundled products separately and result in 100% generic availability and 0% flexible availability.

The CAISO's white paper proposes to assess each product "separately". This results in a generic incentive range of \$5,508.63 to \$16,525.89 depending on the capping of the incentive rate up to 300%. Due to the failure of providing Flex capacity, the penalty for the resource would be (\$10,733.31). This results in a total net penalty of (\$5,224.68) to an incentive of \$5,792.58. The CAISO did not intend to let resources offset their RAAIM exposure in this manner. The only method to reduce RAAIM exposure was to provide substitute capacity from other resources.

During the call, SCE advocated for complete unbundling of the capacity products for RAAIM purposes. In such a case, the generic incentive ranges between \$5,679 to \$17,037 and the Flexible penalty would be (\$10,733.31). Again, this creates an incentive for resources to ignore the flexible MOO because a resource could earn a net incentive for providing only the generic capacity. SDG&E does not believe the incentive to provide Flexible capacity should be reduced in this manner.

Generic Availability Assessment	Standard (%)	Non-Availability Charge (\$)	Incentive Payment (\$)	Flex Availability Assessment	Standard (%)	Non-Availability Charge (\$)	Incentive Payment (\$)
Low	94.5%			Low	94.5%		
Mid	96.5%	\$ 332,221.50	\$ -	Mid	96.5%	\$ 25,044.39	\$ -
High	98.5%			High	98.5%		
Generic Monthly MW Short	87.75			Flex Monthly MW Short	6.615		
Non Availability Rate	3.786			Non Availability Rate	3.786		
RAAIM Non Availability Charge	\$ 332,221.50			RAAIM Non Availability Charge	\$ 25,044.39		
Generic Monthly MW Incentive	0			Flex Monthly MW Incentive	0		
Incentive Rate	11.358 * Assumes max incentive rate			Incentive Rate	11.358 * Assumes max incentive rate		
RAAIM Incentive Payment	\$ -			RAAIM Incentive Payment	\$ -		

$$\sum_d \text{Possible M}$$

The generic penalty is \$332,221.50 and flexible penalty is \$25,044.39.

RA Type	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Generic	70	70	70	70	70	70	70	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flex 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flex 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flex 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Monthly RAAIM Settlement			
	Charge Threshold	Availability Standard	Incentive Threshold
Percentage	94.5%	96.50%	98.50%
Monthly RA Incentive	92.86		92.86
Incentive Criteria	87.75		91.46
Monthly RA Availability	0.00		0.00
Non-Availability Charge Qty	87.75		
Availability Payment Qty			0.00
Non-Availability Charge \$	\$ 332,221.50		
Availability Payment \$			\$ -
Non Availability Price \$/kW-mo	\$ 3.79		
RAAIM Price \$/kW-mo			0.00

RA Type	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Generic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flex 1	30	30	30	30	30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flex 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flex 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Monthly RAAIM Settlement			
	Charge Threshold	Availability Standard	Incentive Threshold
Percentage	94.5%	96.50%	98.50%
Monthly RA Incentive	7.00		7.00
Incentive Criteria	6.62		6.90
Monthly RA Availability	0.00		0.00
Non-Availability Charge Qty	6.62		
Availability Payment Qty			0.00
Non-Availability Charge \$	\$ 25,044.39		
Availability Payment \$			\$ -
Non Availability Price \$/kW-mo	\$ 3.79		
RAAIM Price \$/kW-mo			0.00

Generic Availability Assessment	Standard (%)	Non-Availability Charge (\$)	Incentive Payment (\$)		Flex Availability Assessment	Standard (%)	Non-Availability Charge (\$)	Incentive Payment (\$)
Low	94.5%				Low	94.5%		
Mid	96.5%	\$ -	\$ -		Mid	96.5%	\$ -	\$ -
High	98.5%				High	98.5%		
Generic Monthly MW Short	0				Flex Monthly MW Short	0		
Non Availability Rate	3.786				Non Availability Rate	3.786		
RAAIM Non Availability Charge	\$ -				RAAIM Non Availability Charge	\$ -		
Generic Monthly MW Incentive	0				Flex Monthly MW Incentive	0		
Incentive Rate	11.358	* Assumes max incentive rate			Incentive Rate	11.358	* Assumes max incentive rate	
RAAIM Incentive Payment	\$ -				RAAIM Incentive Payment	\$ -		

$$\sum_a \frac{D_t}{\text{Possible } MOC}$$

$$\sum_a \frac{D}{\text{Possible } MOC}$$

SDG&E also requests the CAISO to provide analysis for its proposal using historical data from April through August to be included in the draft final proposal. This would allow market participants to understand the full impact of the CAISO proposal. This information should be made available as it is difficult to measure the changes without a reference point.

Finally, SDG&E requests the CAISO to detail what type of information it expects to provide to market participants during market simulation and after go-live to allow market participants to accurately validate the CAISO's settlement statements. Without knowing the inputs used by the CAISO, market participants would have an extremely difficult time understanding where the problem exists.

SDG&E believes an additional workshop would help facilitate the discussion of the CAISO's proposal further.