



Comments of Pacific Gas and Electric Company on CRR Auction Efficiency Initiative Working Group

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the CAISO’s Congestion Revenue Rights (CRR) Auction Efficiency Initiative Working Group, held December 19, 2017.

PG&E urges the CAISO to quickly pursue reforms to the CRR auction and to mitigate persistent losses to California ratepayers. Under the current CRR auction design, there is little measurable benefit to LSEs from the CRR auction as opposed to the CRR allocation, yet LSEs bear significant risks arising from the auctions regardless of their participation in auctions. Despite the CAISO’s best efforts to reduce revenue inadequacy, the CAISO has been unsuccessful at addressing the insurmountable issues associated with the CAISO CRR market design. PG&E asks the CAISO and other stakeholders to recognize that, due to the inherent differences between the transmission models used in the CRR market and in the Day Ahead market¹, the current market structure inherently creates mismatches that cannot be resolved without major changes to the market structures.

PG&E supports DMM’s proposal to eliminate the CRR auction or to replace it with a market that clears among willing participants (e.g. SCE’s proposal to release all transmission capacity in the allocation tiers and only allow for auction transactions between willing counterparties.) While some work must be done to structure the auction in a fashion that would facilitate its ability to arrange trades between willing trading parties, PG&E believes that such a design goal is achievable. In addition to supporting these proposals, PG&E recommends other approaches that focus on addressing the risk that loads bear when the CAISO over-allocates transmission capacity. At a minimum, now that there is exhaustive evidence that the CAISO is unable to address this revenue inadequacy through modeling improvements, PG&E believes that charging costs to loads associated with ensuring that the CRRs receive their full target payments when congestion revenues are inadequate is unjust and must be reformed. PG&E believes the CAISO’s analysis provides a basis for elimination of the CRR auction or, at least, major reforms¹ to the CRR market processes.

Detailed Comments:

1. PG&E supports replacing the CRR auction.

PG&E supports DMM’s proposal to eliminate the CRR auction or to replace it with a market that clears among willing participants (e.g. SCE’s proposal to release all transmission capacity in the allocation tiers

¹ The CRR processes use only two time-periods to represent an entire month of Day Ahead market runs in the monthly CRR processes and three months of Day-Ahead market runs in the seasonal CRR processes.



and only allow for auction transactions between willing counterparties.) For the auction CRRs, the target payments may also be more or less than the CRR auction revenue the CAISO receives based on the bids associated with CRR auction procurement. This has been termed “auction efficiency” by the CAISO. An issue arises since the auction has historically sold CRRs at a substantial discount to the expected payments that the CRR will receive. While making a profit on CRRs purchased in the auction is not wrong, the persistence of a significant amount of CRRs being sold at significantly less than their expected value is a problem. This may be due to sophisticated participants being better able to assess the impact of inevitable differences in transmission models used in the CRR processes and in the Day-Ahead market on the price at which CRR will sell and the congestion revenue they will receive. Because of this, PG&E supports replacing the CRR auction with a modified structure.

- a. PG&E supports eliminating the auction as we know it and replacing it with an auction between willing participants.

As PG&E understands how CAISO presented this solution, this solution is in reference to SCE’s proposal to ensure that any CRR that clears the CRR auction is permitted solely due to other market participants’ bids that clear and result in a counterflow to the first CRR. As PG&E understands the SCE proposal, it recommends two distinct changes. First, that the CAISO remove the residual value set aside for Scheduling Points in the CAISO Tariff that permits the CAISO to reserve 50% of the remaining import capacity for the CRR Auctions in both the annual and monthly process. Second, the SCE proposal appears to recommend that the CAISO set transmission line ratings to zero in the auction process to ensure that any CRR that clears the CRR auction is permitted as a result of counterflow from other market participants’ auction bids that clear. PG&E believes both of these changes will have a significant positive impact on revenue inadequacy and auction efficiency.

However, allowing the auction to accept bids between all possible nodes may make it difficult for willing participants to submit bids that the auction can clear to provide counterflows. To facilitate the auction finding and clearing such bids, CAISO should investigate restricting bids for CRRs between a limited number of hubs or aggregations of nodes.

- b. PG&E supports eliminating the auction as we know it and replacing it with swap market of limited hubs.

As PG&E understands how CAISO presented this solution, we assume that it is in reference to DMM’s proposal to eliminate the auction and have CAISO or a third party provide bilateral market services to hedge congestion costs. If this assumption is correct, PG&E would support this solution. Congestion costs are not so distinct from energy that the CAISO should feel obligated to provide congestion hedging when it does not provide a market to hedge energy costs on a forward basis.

2. At the bear minimum, PG&E asks the CAISO to address the allocation of revenue inadequacy if actions to address auction efficiency fail or do not fully address the concern.

The persistence of revenue inadequacy is irrefutable. The CRR market has been revenue inadequate for 60 consecutive months between October 2012 and September 2017, costing load approximately \$561M over this timeframe. October and November 2017 are also projected to be revenue deficient. PG&E stresses that revenue inadequacy is a real, tangible, and measurable cost billed to LSEs and directly



impacts California ratepayers. Each month, ratepayers bear millions of dollars in costs arising from CRR revenue inadequacy.

PG&E supports solutions that are focused on the interaction between target payments to CRRs and the uplift costs that load pays to ensure that target payments are fully funded. The “target payment” to each CRR is the difference in congestion components of the LMPs in the Day-Ahead Energy Market at the CRR source and sink nodes times the MW quantity of the CRR. Revenue inadequacy results when the total of the target payments to the CRRs exceeds the congestion revenue collected in the Day-Ahead Energy Market.

The CAISO allocates congestion revenue shortfalls and surpluses compared to CRR target payments to LSEs regardless of their participation in CRR processes (both the allocations and the auctions). The CAISO’s report shows that LSE participation is concentrated on the allocation processes while any CAISO market participant can participate in CRR Auctions. Even if an LSE does not participate in CRR auctions, it is subject to any revenue inadequacy associated with CRRs sold in auction. It is clear from the CAISO’s report that over-allocating or overselling transmission capacity in the CRR processes is the root cause of the CRR revenue shortfalls². It is not equitable that LSEs and ultimately LSE ratepayers bear all revenue inadequacy costs. PG&E asks the CAISO to address the cost allocation process of revenue inadequacy before (or at least concurrent to) any actions are taken by the CAISO to address auction efficiency or improve the modeling of transmission availability.

PG&E would recommend fully funding the CRRs’ target payments by charging any necessary uplifts to cover revenue insufficiency to CRR holders themselves. Another change that PG&E would recommend would be to allocate congestion revenues to cover target CRR payments for allocation CRRs first. Any revenue shortfall for these allocation CRRs would be charged to these CRRs. Any remaining congestion revenues could then be allocated to cover target CRR payments for auction CRRs. Any revenue shortfall for these auction CRRs would be charged to these CRRs. The separation of allocating congestion revenues between allocation CRRs and auction CRRs ensures LSEs are given priority to transmission congestion revenues to fund the hedges provided by their CRRs to minimize load exposure to congestion costs. Those being allocated CRRs receive CRRs because they pay for transmission service and cannot adjust their payments for transmission service (and hence the allocation CRRs) taking into account the risk of CRR revenue inadequacy. Just as allocation of CRRs to LSEs is prioritized, the CAISO should first pay congestion revenues to allocation CRRs. In contrast, CRR auction participants can assess the risk of revenue inadequacy for their CRRs and modify their bids in the CRR auction accordingly to manage their risk. Therefore, such an allocation of congestion revenues to auction and allocation CRRs could be

² Some of the causes of the CRR revenue inadequacy include:

- Random transmission outages that cannot be modeled in the CRR processes
- Transmission outages whose duration do not match the period covered by the CRRs being allocated or auctioned and the inaccuracy inherent in pro-rating transmission capacity available over the allocation or auction period
- Loopflows modeled in the CRR processes that differ from loopflows that arise in the Day-Ahead energy markets.

None of these are under the control of the loads yet cause the CRR revenue underfunding. It is unreasonable to provide risk free CRRs via an auction while requiring the loads to bear the resulting risks when the loads are not the source of the risk and cannot manage their exposure to the risk.



appropriate. In addition, if congestion revenue exceeds the target CRR payments associated with both allocation and auction CRRs in any hour, the excess should be held in reserve. Any congestion revenue remaining in the reserve account for a month at the end a month could be allocated to the CRRs that were assigned an uplift during the month.

3. While improvements to processes, business rules, and operational guidelines may mitigate revenue inadequacy, they are unlikely to be sufficient to address persistent losses the CRR market introduces to ratepayers.

From its public statements to date, it appears that the CAISO has a tendency to focus on improving processes, business rules, and operational guidelines (hereto referred to as “process improvements”) to mitigate revenue inadequacy. While PG&E does not oppose such work, we implore the CAISO to understand that such changes alone are unlikely to address the needs of LSEs like PG&E for two reasons. First, process improvements are unlikely to reduce revenue inadequacy to the magnitude necessary for PG&E to feel that the existing inequities have been appropriately reduced. Second, process improvements must be assessed based on the benefits and costs to improve the existing structure. PG&E, in its verbal comments, has expressed that the magnitude of LSE losses have been so substantial that neither intangible benefits associated with reduced energy market costs nor incremental improvements are likely to be sufficient. Nothing in the recent working group meetings have changed PG&E’s view. While improvements to mitigate CRR revenue inadequacy are important, PG&E believes process changes alone will not mitigate the disproportionate costs that LSEs bear associated with CRR revenue inadequacy or the undervaluing of auction CRRs.

The CAISO CRR staff has pursued process improvements over several years³, and they should continue to do so. However, any improvements such as outage management, for example, should be based on a well-founded understanding of the effort required to provide additional outage data and the benefits associated with providing more accurate information. The ISO has reported that significant amounts of the CRR revenue inadequacy can be linked to outages that were either less than 24 hours in duration or were not started/ended as scheduled. How such outages could be accurately modeled in a monthly or seasonal CRR process that only uses two transmission models for the month or season is unclear. The CAISO has yet to provide any evidence that a significant amount of CRR revenue inadequacy could be addressed with process improvement. Therefore, the CAISO should focus on design enhancements that target structural issues and market design rules while CAISO management can support the CAISO CRR team in making process improvements that incrementally improve the CRR process outside of the stakeholder process, provided the benefits gained are worth the effort required to obtain them.

³ Page 2, <http://www.caiso.com/Documents/Presentation-CRRAuctionEfficiencyPolicyDiscussion-Dec192017.pdf>



- 4. PG&E supports the CAISO's proposed timeline for CRR market design changes. The CAISO must move expeditiously to make changes to the CRR market design to meet its target of a July Board vote.**

The CAISO proposes two action plans to address CRR market issues. The first action plan involves processes, business rules, and operational guidelines and do not require tariff changes. The second action plan focuses on “structural matters and market design rules” which would require Board approval and is targeted for the 2020 annual auction which would take place in November 2019. PG&E is concerned that as this initiative moves into mid-year, the necessary subject matter expertise of the CAISO (and stakeholder) CRR teams will be fully engaged with the 2019 annual process, which will lead to a delay that could hold up the entire initiative. Due to PG&E's belief that there are limited benefits associated with process improvements, PG&E urges the CAISO to prioritize its “second track” to address key CRR structural matters and market design issues over the “first track” of process improvements.