Storage as a Transmission Asset

Stakeholder Comment Template

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the Storage as a Transmission Asset revised straw proposal that was posted on August 15, 2018.

California ISO

Submit comments to InitiativeComments@CAISO.com

Comments are due September 4, 2018 by 5:00pm

The revised straw proposal, posted on August 15, 2018, as well as the presentation discussed during the August 21, 2018 stakeholder web conference, may be found on the Storage as a Transmission Asset webpage.

Please provide your comments on the revised straw proposal topics listed below, as well as any additional comments you wish to provide using this template.

Contractual Arrangement

The ISO proposes to develop a new agreement with SATA resource owners that captures elements from Participating Generator Agreement (PGA), Participating Load Agreement (PLA), Reliability-Must-Run (RMR) and Transmission Control Area (TCA) agreements. Additionally, the ISO has indicated its preference to control SATAs when they operate as transmission assets. Please provide comments on this proposal.

Comments:

WPTF has no comment on the agreements at this time.

Transmission Revenue Requirement Capital Credit

The ISO has proposed a TRR capital credit to reduce a SATA resource's capital cost recovery. The objective of this credit is (1) to protect ratepayers from early degradation of SATA resources operational capabilities due to dispatches from ISO market participation and potential for reduced useful lifespan for a SATA resource's ability to meet the identified transmission need(s), and, (2) to ensure the SATA resource owner considers all marginal costs when bidding into the market. Please provide comments on the ISO's proposal and any potential alternative the ISO could consider to achieve the same objectives.

Comments:

WPTF fully supports the goal to ensure the SATA resource owners consider all marginal costs when bidding into the market. The TRR credit is intended to make up for ratepayers incurring additional costs if a SATA resource's participation in the energy market decreases the number of years the asset can be maintained as a transmission asset. The objective of the credit to use the resource's profits to offset this loss the ratepayers. The credit divides the SATA resource's capital cost recovery by number of cycles and credits this amount back toward ratepayers by lowering the SATA resource's cost recovery out of the resource's energy market profits.

WPTF supports the CAISO's effort to account for additional costs that ratepayers incur by having to replace a transmission asset sooner than expected. That said, WPTF cannot support the CAISO's specific TRR capital credit proposal.

SATA participation in the energy market may or may not impact the number of years the asset can be maintained as a transmission asset. Battery Energy Storage Systems (BESS) degradation is more complicated than simply counting number of cycles. Perhaps best explained by NREL[1] the life prediction for grid connected batteries is a combination of cycles, temperature, state-of-charge, and depth-of-discharge. Importantly, NREL found that even in BESS with a primary use as market resources often are limited by their calendar life rather than their cycle life. Other studies have shown that not cycling a storage resource and maintaining a high average state-of-charge will more rapidly deplete BESS. While sometimes it is useful to use easy measurements as a proxy for more complicated formulas, WPTF believes in this case using cycles to determine a fixed rate of life degradation per discharge is too much of an oversimplification to be useful.

The CAISO's proposal is that a SATA resource would include the TRR credit in their bid as a "marginal cost." The marginal cost in the electric markets are all the costs that vary with the quantity of power

[1] https://www.nrel.gov/docs/fy17osti/67102.pdf

that the plant produces and are included in the resource's short-run decision to produce power. In the case of storage, this is the cost to charge the battery including roundtrip efficiency losses ("fuel" cost) and variable O&M. Dividing a SATA resource's fixed capital cost by number of cycles is not a marginal cost because fixed capital costs have nothing to do with a resource's short-run decision to produce energy. By definition the TRR credit is trying to pay for a portion fixed costs out of energy market profits, and therefore no matter what number you divide these fixed costs by, they are still fixed costs. WPTF does not support a proposal that would mandate or encourage a SATA resource to include a portion of their fixed costs in their energy offers.

Instead WPTF supports the Transmission Planning Process considering a forecast of market use and associated expected life-degradation. The SATA resource can provide their own documentation and performance guarantees for the expected life based on market use (and potential features that might enhance life such as thermal control) and these can be considerations or sensitivities on the SATA's price.

Finally, depending on the contractual terms this may not be necessary. If a SATA owner is required to provide a reliability service for the next 20 years, they must fulfill this regardless of the life of the asset. If ratepayers' obligation is limited based on the initial cost estimate, it would be up to the SATA owner to make the trade off between energy market participation and the potential for battery degradation.

Market Participation

The ISO provided two additional options it is currently considering to notify SATA resources when they would be permitted to provide market services and access market revenues: Day-ahead market option and D+2 Option. Please provide comments on these options, including any preference or alternative options.

Comments:

As WPTF noted during the August 21 meeting, there may be some issues with the CAISO's proposal to use the DA market option to notify the SATA resource whether they can participate in the real-time energy market. First, the resource would only be able to participate in the real-time market, which is not full participation in the CAISO market. In particular, storage resources may want to participate in the DA market because that is where the majority of ancillary service capacity is procured. Second, the CAISO's proposal runs the risk of revealing whether the CAISO is experiencing grid conditions that could allow resources in the SATA's area to exert market power. The CAISO proposes to notify the SATA's scheduling coordinator in the event the DA optimization clears below just below the relevant transmission constraint penalty price. This would mean that if the CAISO notifies the SATA resource it cannot participate, the scheduling coordinator knows that although there may be no scarcity pricing or event in day-ahead, grid conditions are extremely tight. Simply having this knowledge exposes the scheduling coordinator to regulatory enforcement risk.

WPTF would like more information on the D+2 option and whether it is likely the CAISO will be able to allow market participation for larger periods of time, rather than a day-by-day assessment.

Cost Recovery Mechanism

The ISO has proposed three alternative cost recovery mechanisms in the straw proposal:

1. Full cost-of-service based cost recovery with energy market crediting
2. Partial cost-of-service based cost recovery with no energy market crediting
3. Full cost-of-service based cost recovery with partial market revenue sharing between owner and ratepayer

Please provide comments on these three options and any other options the ISO has not identified. Please provide specific comments on (a) if the ISO should maintain option 2, above, and (b) why, if any, specific market profit threshold must be reached before the SATA resource would be permitted to retain some portion of profits and how such threshold should be determined.

Comments:

WPTF supports previous stakeholder comments that note additional freedom to provide competitive bids in the TPP Competitive Solicitation Process can only help the CAISO find the most efficient and lowest cost option. Therefore, at this time WPTF believes the CAISO should continue fleshing out the details in all three alternative cost recovery mechanisms.

Options in the event of insufficient qualified project sponsors

The ISO has proposed potential options for addressing SATA projects when there is insufficient qualified project sponsors. Please provide comments on these options, including preferences and/or additional alternatives that should be considered.

Comments:

The TPP has a Competitive Solicitation Process that has been working well and the addition of SATA resources should only increase competition. WPTF would like more information on why these options are needed.

Consistent with FERC Policy Statement

The ISO believes the revised straw proposal is consistent with the FERC Policy Statement. Specifically, that the straw proposal does not inappropriately suppress market prices, impact ISO independence, nor result in double recovery of costs. Please provide comments on the whether you agree or disagree with the ISO. If you disagree, please clarify why and how the ISO might address this issue.

Comments:

WPTF believes that the CAISO must meet more than the FERC policy statement to yield reasonable policy. That said, WPTF is interested in the CAISO legal counsel’s determination of the current policy proposal.