Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your written comments on the stakeholder initiative:

"Review Transmission Access Charge Structure"

Submit comments to InitiativeComments@CAISO.com

Comments are due July 26, 2017 by 5:00pm

The Issue Paper posted on June 30, 2017 and the presentations discussed during the July 12, 2017 stakeholder meeting can be found on http://www.caiso.com/informed/Pages/StakeholderProcesses/ReviewTransmissionAccessChargeStructure.aspx.

Please use this template to provide your written comments on the issue paper topics listed below and any additional comments that you wish to provide.

The Northern California Power Agency ("NCPA") welcomes the opportunity to comment on this initiative. The current TAC rate design has served the CAISO well for many years. NCPA will give close consideration to any proposed changes, but cautions that any changes should be carefully studied and based on comprehensive data about existing and new uses of the grid.

As noted in the April 12, 2017 Background White Paper, the NCPA MSS Aggregation[1] was an existing utility serving load at the time CAISO commenced operations in 1998. NCPA and its members had made their own investments in transmission, both in high-voltage transmission facilities ("Transmission Ownership Rights" or "TOR") and in transmission contracts ("Existing

[1] The City of Santa Clara, doing business as Silicon Valley Power, is a member of NCPA and also an MSS, and NCPA serves as its scheduling coordinator.

Transmission Contracts" or "ETC"). The ETCs were grandfathered until their expiration dates. NCPA Aggregation members still retain ownership in certain transmission assets, including TORs and ETCs. Acquiring these assets was then a viable way to minimize transmission costs under the pre-existing rate structures of PG&E. NCPA members chose not to turn over their transmission assets to CAISO control in order to become Participating Transmission Owners (PTOs). As non-PTOs, their loads are considered to be outside the CAISO grid, in the same position as LSEs located entirely outside of the CAISO grid, and, like them, it pays the Wheeling Access Charge ("WAC") for power exported from the CAISO control area. As certain of its existing transmission contracts expired, NCPA transitioned to CAISO service for greater portions of its loads served over the CAISO controlled grid.

In addition to their transmission investments, NCPA and other Non-PTOs had invested in generation to serve their customers at the lowest possible cost. Some of that generation was located behind NCPA's individual members' meters with PG&E, while other generation was delivered in part over non-CAISO transmission lines. NCPA also invested in central station type assets remote from its loads, for the delivery of which it has paid the WAC since the expiration of certain ETCs. Payment of the WAC charge recognized the existence of Non-PTOs' existing investments and allowed non-PTOs like NCPA to transition their operations seamlessly into the larger CAISO framework while still relying on the existing generation and transmission for which their customers had paid.

Today, NCPA continues to pay the WAC for transmission of resources remote from load. Its members continue to own transmission resources that are not part of the CAISO grid, and which are not compensated through the CAISO TAC or WAC charges. NCPA customers also continue to pay for the operation and maintenance of both remote and internal generation resources. All of NCPA's generation was debt-financed and NCPA customer load is still paying off the bonds for most of it. NCPA does not believe that its circumstances have changed in any way that would warrant a change in the CAISO billing structure for non-PTOs.

1. Suggested modifications or additions to proposed scope of initiative.

The issue paper proposed two main topics for the scope of this initiative. If you want to suggest modifications or additions to the proposed scope, please explain how your proposed changes would fit with and be supportive of the two main topics.

Comments:

NCPA does not disagree with the two main topics identified in the scope. This is, however, a very broad initiative. NCPA agrees with most of the items excluded from scope, but notes that if the scope considers the question of what structures might replace TAC, it is very possible that such an inquiry could include new structures or different types of transmission service. For example, NCPA believes that the BAMx proposal for cost allocation of public policy-driven transmission expansions might fit well into any proposal to distinguish between treatment of existing transmission infrastructure costs and the costs of new facilities. If the CAISO pursues

such a strategy, different methods of cost allocation for different categories of facilities should be within the scope.

2. Structure of transmission cost recovery in other ISOs/RTOs.

Please comment on any lessons learned or observations from the other ISO/RTO approaches that you think will be useful to the present initiative.

Comments:

The issue paper provides a good summary of how other ISOs/RTOs ("RTO") have designed their respective transmission cost recovery structures. Each of the cost recovery structures described are both very complex and materially different. NCPA believes this is due to regional and local differences between transmission systems throughout the country, and factors that may have influenced transmission rate design, such as technical considerations, political/policy objectives, historical considerations, and impacts to ratepayer groups. As such, each RTO's cost recovery structure is the result of extensive discussions/negotiations among impacted stakeholders, and the equity of those structures is based on a careful balance of design elements. Therefore, each of the rate structures used in other RTOs must be considered holistically, rather than focusing on individual elements or aspects of the design.

While referencing other RTO transmission cost recovery designs as possible alternatives could inform the present initiative, the CAISO and stakeholders must be careful to avoid cherry picking elements from different RTOs without consideration of how each element fits into the overall balance of benefits and burdens comprising each RTO, and how it might change the balance of benefits and burdens if applied to California.

NCPA does note that the concept of treating the costs of existing transmission facilities (and the maintenance and replacement thereof) differently than new transmission facilities for cost allocation purposes has been implemented in other RTOs and accepted by FERC. NCPA is not advocating such a change at this time, but if CAISO chooses to pursue that option, different methodologies (such as the BAMx proposal for new public policy-driven facilities) should be considered.

3. Today's volumetric TAC rate structure.

Do you think it is appropriate to retain today's volumetric TAC rate structure ($ per MWh of internal load or exports) going forward? If so, please explain why. If not, please indicate what type of change you think is preferable and why that change would be appropriate.

Comments:

NCPA supports the current volumetric approach because it reflects the use all entities make of the grid during both peak and off-peak times. As we have observed, daily peaks can shift from

their historic time of day due to new resource patterns. CAISO initially moved away from the pre-CAISO peak/off-peak concept of transmission cost allocation because transmission congestion put different kinds of pressure on the grid not necessarily coincident with the time of peak usage. Today's grid serves a variety of needs, including transfer/thermal capability, voltage support, ramping, ancillary services such as reactive power, regulation and reserves and congestion management. Tomorrow's grid may have to serve a larger variety of needs. These needs do not all occur at the same time, and it is unlikely that they will coincide in future.

Any proposal to change the TAC rate structure should be based on data reflecting the varied uses of the grid. NCPA is not certain CAISO has such data on these granular uses. NCPA supports CAISO's current volumetric structure, and may be supportive of alternative structures, provided those alternative structures fairly and equitably allocate cost recovery for transmission investments that were approved based on assumed rate recovery over thirty years for investments justified using load forecasts at the time of project approval, and other express environmental policy objectives, that were considered at the time investments were authorized.

4. Impact of distributed generation (DG) output on costs associated with the existing transmission system.

Do you think DG energy production reduces costs associated with the existing transmission system? Please explain the nature of any such cost reduction and suggest how the impact could be measured. Do the MWh and MVAR output of DG provide good measures of transmission costs avoided or reduced by DG output? Please explain your logic.

Comments:

NCPA believes that CAISO should study whether DG production will reduce costs associated with the existing transmission system. As with conventional generation, not all DG generation is likely to provide the same benefits; for example, some generation may relieve congestion, some may worsen it, and some may have no effect at all. Crediting load with DG for any such benefits (or penalizing it for detrimental impacts) would seem to require location-by-location analysis. Moreover, the existing retail rate structure applicable to the IOUs and CCAs does not allow for differentiation in congestion costs passed along to ratepayers. Rather, all IOU customers in the same customer class pay the same transmission rate, thus muting any price signals that such changes might send. NCPA is not advocating for a change in this policy, but seeks to highlight the difficulty in attributing locational benefits as strictly as would be necessary to truly reflect the impact of specific DG production.

It is also important to note that the majority of capital expenditures by the three largest CAISO PTOs are claimed to be projects focused on management of existing transmission facilities and those meant to improve or replace outdated or failing infrastructure rather than for construction of large new transmission projects. Many of these investments will be made to maintain existing system transfer capability, rather than expanding system transfer capability.

For example, roughly 80% of PG&E's capital transmission projects, accounting for 60% of PG&E's capital transmission expenditures in 2016, were for upgrade and replacement projects not developed through the CAISO Transmission Planning Process (TPP) or any other stakeholder process.[2] Likewise, the numbers for SCE and SDG&E indicate that at least 64% and 30% of their respective capital transmission expenditures last year were for similar transmission projects not vetted through the CAISO TPP or any other type of stakeholder process. While these expenditures are subject to *post hoc* review by FERC, FERC does not habitually disallow costs for capital expenditures when money has been spent.

Thus, even if the CAISO makes some sort of distinction in allocation between the treatment of costs related to the existing grid and costs related to new transmission projects, the cost of maintaining the existing grid shows every sign of rising for the foreseeable future, regardless of the addition of DG. Moreover, it may be necessary to build out the sub-transmission system to accommodate DG production wishing to participate in the CAISO markets, further increasing future grid costs.

5. Potential shifting of costs for existing transmission infrastructure.

If the TAC rules are revised so that TAC charges are reduced or eliminated for load offset by DG output, and there is no reduction in the regional transmission revenue requirements that must be recovered for the existing transmission infrastructure, there will be an increase in the overall regional TAC rate that presumably will be paid by other load. How should this initiative take into account this or other potential cost shifts in considering changes to TAC structure?

Comments:

One key factor in this discussion is the method by which the underlying transmission revenue requirements are structured, and what assumptions were taken into consideration as the basis for ensuring sufficient but equitable rate recovery. The PTOs submit separate retail and wholesale load forecasts in their Transmission Owner Tariff filings that ultimately drive the volumetric energy rate that is applied to TAC customers. At this point, as options are being considered, it is not yet clear how this effort will differentiate potential DG credits/benefits between retail and wholesale customers (or forecasts), whether wholesale benefits can or should accrue to retail customers, or how the CPUC or other local regulatory authorities may respond to some of the wholesale and retail bypass issues (e.g., direct access limits) that could be implicated by any proposals made. For example, how will any changes that may be considered as part of this initiative influence or impact the retail rate design and associated cost recovery mechanisms. As a result, NCPA recommends that CAISO spend some time working

[2] NCPA and other CAISO stakeholders have filed a complaint against PG&E, pending before FERC in Docket No. ER17-45-000 (California Public Utilities Commission, et al. v. Pacific Gas & Electric Company), seeking the development of an open and transparent planning process for these projects that will afford ratepayers an opportunity to review and understand PG&E's planning process for projects not vetted through the CAISO TPP. Complainants had more data on PG&E projects than on Southern California Edison or San Diego Gas and Electric Company projects, so only PG&E is named in the complaint.

with the PTOs and other stakeholders to further clarify how these wholesale/retail distinctions will be handled under any proposed options as a consideration for answering this question.

NCPA is not at this point advocating a change in the existing structure. If the CAISO chooses to consider a change in any case, NCPA believes that it is important to distinguish between the costs of the grid built to accommodate the system as it now stands, and the costs incurred for future new projects. As noted above, absent change, the costs of the grid as it is now would still result in increases in the TAC revenue requirement from year to year, even if no large new projects are ever built.

Additionally, as studies have suggested[3], costs of upgrading the grid to accommodate DG participation in the CAISO markets vary considerably depending on where the projects are located. To the extent that DG loads are proposed to be exempted from paying TAC charges, exemptions should be limited to load associated with DG units in locations that minimize transmission and sub-transmission grid expansion costs, rather than DG at any location, in order to minimize the costs that might be shifted to load in locations where DG installation would require major grid upgrade costs.

Finally, Clean Coalition stated in the stakeholder meeting that the integration of DG projects would be a decades long process. It might therefore be appropriate to consider a transitional phase-in over a similar period of time of any major change in rate structure in order to avoid rate shock on other market participants. The original phase-in of the existing TAC methodology took place over a period of ten years.

6. Potential for DG and other DER to avoid future transmission costs.

The issue paper and the July 12 presentation identified a number of considerations that the transmission planning process examines in determining the need for transmission upgrades or additions. Recognizing that we are still at an early stage in this initiative, please provide your initial thoughts on the value of DG and other DER in reducing future transmission needs.

Comments:

NCPA is certainly in favor of avoiding or lowering future transmission costs; the question is whether DG can accomplish that. NCPA does not presume that DG expansion will, or will not, help avoid future transmission costs, but it is NCPA's current understanding that any future savings will have to be identified as part of the annual transmission planning process. As such, one element of this stakeholder initiative needs to focus on how DR expansion can be sufficiently measured and factored into the existing transmission planning process, and this will likely result in certain new obligations for DR providers to provide planning data to the CAISO and PTOs.

[3] Distributed Generation Integration Cost Study (CEC-200-2013-007-REV); http://www.energy.ca.gov/2013publications/CEC-200-2013-007/CEC-200-2013-007-REV.pdf

As noted below, NCPA provides CAISO with ten-year forecasts of its member loads and generating plans. All of that data is available to the CAISO TPP. Under the Participating Generator Agreement ("PGA"), NCPA units are subject to CAISO dispatch when needed. NCPA provides the CAISO with real-time visibility of the operating status of its units and revenue quality metering to verify that they have performed as directed. If DG units can reliably provide useful services to the market, and if those services can be identified and quantified for CAISO's planning purposes, and if that data can be incorporated into the TPP, such units may begin to provide the value to the system that existing utility generators do. It does not appear to NCPA that CAISO yet possesses such data in the granular level discussed at the stakeholder meeting, but NCPA believes that developing such data would be a useful exercise to inform this process. NCPA has previously (in the regional TAC process) argued in favor of a proposal by BAMx that the costs of large new public policy-driven projects should not be spread to all, but should be paid by the entities that contract for the project power, or at least by entities that have not already met their mandates for whatever type of public policy power the projects are meant to access. NCPA conceptually could support a cost allocation for new public policy driven projects along those lines, and if DG can be shown to provide meaningful benefits to help eliminate the need for these or reliability projects, it would be fair to consider those benefits. However, it is also fair to note that any such benefits would depend on project-specific analysis. Not all DG would be similarly useful in this regard.

7. Benefits of DERs to the transmission system.

The issue paper and the July 12 discussion identified potential benefits DERs could provide to the transmission system. What are your initial thoughts about which DER benefits are most valuable and how to quantify their value?

Comments:

Just like conventional central station generation, all DG does not have identical impacts on the grid. For example, it is possible, depending on location, that some DG production could support the existing grid with respect to issues such as congestion. However, the degree of support would depend on factors such as location and whether the CAISO would have assurance that the generation would be functioning when needed. It is equally true that DG production located in other areas might detract from grid functioning and require upgrades to the sub-transmission system to accommodate it. This suggests that whether particular DG production helps or harms the grid would be a matter for individual study. This would seem to be a lot for CAISO to undertake for individual DG production, or even DG production in locational areas.

NCPA is uncertain whether the concepts discussed in the issue paper are meant to apply to wholesale DG production (plants built with the intention of participating in the market as wholesale generators but connected to the distribution system) or to DG production built to serve the needs of particular retail customers. NCPA submits that there is a difference. Generation participating in the wholesale markets executes a Participating Generator

Agreement with the CAISO, where it commits to abide by the Tariff and be subject to CAISO dispatch. Such generation bids economically into the system and can be dispatched by the CAISO, in accordance with system needs. For example, if in the event of an emergency the CAISO determines that a PGA resource can be operated to support reliability and/or relieve a constraint in the system, that generator is providing a direct and measurable benefit to the CAISO and the transmission system. Alternatively, depending on its commitments, a DR resource may not be required to respond to CAISO operating instructions during times of need; therefore, it may be argued that the DR is not providing an equivalent level of service to the CAISO and/or supporting the reliability of the system. Similarly, the price such generators can command for power can depend on congestion issues. NCPA member generation participates in the CAISO TPP and submits detailed ten-year load forecasts and generation plans to enable CAISO to take NCPA generation capabilities into account in both long term grid planning and in daily operational decisions. CAISO also has real-time visibility into what those generators are doing and revenue quality metering to verify that they have performed as required.

During the stakeholder meeting, Clean Coalition members asked whether CAISO could quantify the different benefits DG production provides, in addition to quantifying how much different load depends on the grid. The CAISO indicated that it does not have that granular of data. At a minimum, however, NCPA believes that such data must be developed in order to move forward with concrete proposals. NCPA is not itself in a position to identify what benefits DG production can provide, but any change in the TAC rate structure should be based on clearly identifying and tracking such benefits to ensure that such a change is beneficial to ratepayers.

8. Other Comments

Please provide any additional comments not covered in the topics listed above.

Comments:

NCPA has no further comments at this time.