Stakeholder Comments Template

Review Transmission Access Charge Wholesale Billing Determinant

June 2, 2016 Issue Paper

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The ISO provides this template for submission of stakeholder comments on the June 2, 2016 issue paper. The issue paper, presentations and other information related to this initiative may be found at:
http://www.caiso.com/informed/Pages/StakeholderProcesses/ReviewTransmissionAccessChargeWholesaleBillingDeterminant.aspx

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Issue Paper

Currently the ISO assesses transmission access charge (TAC) to each MWh of internal load and exports. Internal load is measured as the sum of end-use metered customer load (EUML) in the service area of each participating transmission owner (PTO) in the ISO balancing authority area. Clean Coalition proposes that the ISO change how it measures internal load for TAC purposes, to measure it based on the hourly energy flow from the transmission system to the distribution system across each transmission-distribution substation; a quantity called "transmission energy downflow" (TED). The main difference between using TED or EUML as billing determinant is that TED excludes load that is offset by distributed generation (DG). Please see the ISO's June 2 straw proposal for additional details.

The ISO does not yet have a position on the Clean Coalition proposal, and has posted the June 2 issue paper in order to stimulate substantive stakeholder discussion and comments on this topic.

1. At this point in the initiative, do you tend to favor or oppose Clean Coalition's proposal? Please provide the reasons for your position.

California is in the midst of broad policy efforts, through both legislation and regulation, to assure the growth of distributed energy resources (DERs), including distributed generation (DG) [1], by creating new opportunities for both DER market participation and revenue streams that could support DER proliferation. For example, the California Independent System Operator Corporation (CAISO) made a Distributed Energy Resources Program (DERP) filing to revise its tariff, recently approved by the Federal Energy Regulatory Commission (FERC), "to facilitate participation of distribution-connected or 'distributed' energy resources in the CAISO's [wholesale] energy and ancillary services markets" noting that "[t]he number and types of distributed energy resources are growing and represent an increasingly important and larger part of the future resource mix."

SCE believes that DG represents an opportunity to improve on many aspects of electricity production, including the optimal use of investment resources, improved resource planning, and more efficient grid operation. SCE sees the potential for DG to play an important and growing role in providing new energy choices to customers, and helping the state meet priority environmental goals, including reduction of greenhouse gas (GHG) emissions. The impacts of DG will likely have additional positive impacts, including reforms to distribution and transmission planning.

Southern California Edison ("SCE") is supportive of providing a sound regulatory and market framework, including appropriate rate design, which will allow DG to reach its potential while assuring reliability, safety and affordability of the electric system. With that objective in mind, SCE has supported several initiatives that should allow the

[1] In SCE's comments the term Distributed Generation, or DG, refers to any generation (including storage devices) connected to a distribution system that is in turn connected to the CAISO Controlled Grid. DG may be small or large; there is no size limit on DG.

potential of DG to be more fully realized, including the Preferred Resources Pilot in south Orange County, the launch of new demonstration projects and new wholesale market opportunities as those provided in the recently approved DERP framework. SCE sees an expanded role for DG, and supports rules that provide benefits to all customers.

However, SCE does not favor the TED Billing Determinant proposal of Clean Coalition for the reasons set forth below.

The CAISO initiated this stakeholder process to examine whether a revision of the CAISO's "wholesale" billing of the Transmission Access Charge ("TAC") to CAISO transmission customers, including Utility Distribution Companies ("UDCs"), Metered Subsystems ("MSSs"), and Wheeling customers is appropriate.[2] Specifically, the stakeholder process is considering whether TAC billing should be revised to be based on a "net load on a distribution system" billing determinant, called Transmission Energy Downflow ("TED") in the Issue Paper[3] rather than the current billing determinant consisting of all retail end-use metered load (Retail EUML, or alternatively, Gross Load as defined in the CAISO tariff).[4]

[2] In addition to the "Wholesale" billing of the TAC by the CAISO to UDCs, MSSs, and Wheeling Customers that is the primary subject of the Issue Paper, there is also the "retail" aspect of transmission cost billing that is an important part of overall TAC billing to retail transmission customers. CAISO Participating Transmission Owners ("PTOs") recover the "wholesale" TAC costs through their retail rates. For the three PTOs that are Investor Owned Utilities (SCE, PG&E, and SDG&E), these TAC costs are recovered through FERC-jurisdictional transmission rates, which are a combination of energy and demand charges. These IOU retail transmission rates include both the transmission revenue requirement ("TRR") costs of the individual PTO as well as the "wholesale" TAC bill assessed by the CAISO to the PTO, representing the High Voltage TAC cost incremental to the PTO's own HV TRR costs (and which may be positive or negative).

[3] The proposed TED billing determinant would be the total load on the distribution system less Distributed Generation ("DG") located on that distribution system. The CAISO Issue paper specifically states that this DG is composed of distribution-connected utility-side generation as well as any on-site behind-the-retail-meter generation in excess of customer load (page 3 of Issue Paper).

[4] Note that the CAISO tariff definition of Gross Load corresponds to EUML. It does not include behind-the-retail-meter generation that contemporaneously reduces behind-the-retail-meter load.

Today, all retail customers within the CAISO Balancing Authority Area ("BAA") benefit from the reliability that is provided by the CAISO transmission grid, to which distribution systems are connected. Distribution circuits reliably serve customer load by their connection to the CAISO transmission grid, regardless of how much DG may be located on the circuit. All distribution level loads use the CAISO transmission grid, even at moments when DG located on the same distribution circuit offsets the same amount of energy, because the transmission grid provides reliability to distribution loads by providing essential services such as maintaining frequency, voltage, load following, and spinning and non-spinning reserves. EUML load receives the benefit of the reliability services that can be made available only through the operation of the transmission grid that it is connected to. In other words, the CAISO transmission grid is *used* by the EUML distribution load, regardless of the quantity of TED.[5] Since all EUML load benefits from the CAISO transmission grid, all EUML load should pay for the transmission grid. It is not reasonable to separately deem some portion of EUML load to be served by DG and to allow it to avoid transmission charges as the TED Billing Proposal would do.

The Federal Energy Regulatory Commission ("FERC") has previously recognized that all load benefits from the reliability provided by the transmission grid and, therefore, should pay for the transmission grid. In the start-up phase of the CAISO, Enron proposed the concept of distribution-only wheeling in an attempt to avoid CAISO charges, including transmission charges. The service proposed by Enron is effectively the same service now being proposed by Clean Coalition, but with a different name. FERC rejected the concept at the time, stating:[6]

> "The ISO-controlled grid is the very backbone of the service that Enron now proposes to implement under the Companies' WDTs. The theory behind Enron's distribution-only service depends on the technical ability of such service to operate in isolation from the ISO grid. If anything has been proven in respect to this issue, it is that distribution-only service would have numerous effects on the ISO grid, and cannot be performed in isolation from the ISO grid." (Initial Decision in ER97-2358, page 70)

[5] It should be noted that since the TAC is assessed to load, DG is not assessed the TAC.
[6] See the Initial Decision in Docket No. ER97-2358 issued on September 1, 1999, issue #16. The Commission upheld the Initial Decision with respect to this issue in Opinion 458.

The CAISO recognized in that proceeding that the wholesale-only distribution service would "unjustly permit a customer to avoid responsibility for its share of costs associated with the construction, maintenance, and operation of the ISO Controlled Grid".[7] Distribution-only service whereby DG would be wheeled across a distribution circuit to a load located on the same circuit was a simplistic accounting that did not reflect the physical realities of operating a transmission system and providing reliable service to all loads. In fact, it was a concept created simply for the purpose of avoiding legitimate transmission charges, as the CAISO recognized in its comments. Nothing has changed in the intervening years that would change the conclusion of that proceeding.

Specifically, distribution-only service has not changed to the point in which it cannot be performed in isolation from the ISO grid. To the contrary, with increasing distributed energy resources (DERs) on the distribution grid, the costs associated with the operation and maintenance of the ISO grid may increase. For example, there is an increasing level of coordination between the ISO and UDC to resolve bi-directional flow between the distribution grid and the ISO grid; this likely will increase as a result of the DERP framework. The ISO should not revise the TAC billing to the TED Billing Proposal, as it would allow some customers to avoid legitimate ISO transmission charges, while simultaneously increasing charges to the remaining customers.

One argument made by Clean Coalition (CC) is that it will result in savings to ratepayers by fixing a "flaw" in the Least Cost Best Fit ("LCBF") procurement evaluation.[8] CC asserts that because existing transmission costs are not considered in the LCBF procurement evaluations, the procurement process is distorted against DG resources. CC is incorrect in its assertions. Transmission costs associated with the existing transmission system should not be considered in planning and resource procurement process; only incremental transmission costs should be considered. The LCBF methodology considers the incremental costs of any required network upgrades to the CAISO transmission in its

[7] CAISO Initial Brief, page 4.
[8] See page 11 of the CC June 17, 2016 presentation before the CAISO's Market Surveillance Committee, and pages 5-6 of the CC April 18, 2016 ESDER Phase 2 comments.

resource evaluation. It is not appropriate to consider non-incremental transmission costs in the planning process, as those costs are sunk and will not change as a result of the procurement decision. Adding a TAC cost penalty to reflect the cost of existing CAISO transmission resources for transmission-connected resources, but not to distribution-connected resources, would result in inefficient use of the existing transmission grid.[9]

CC also argues that because certain Wheeling transmission customers of the CAISO are assessed on a net load basis, it follows that the TAC assessed to UDCs/MSSs associated with a PTO should also be assessed on a net load basis.[10] This argument is constructed on the false premise that all Wheeling customers should be assessed transmission costs on a net load basis. In fact, a more reasonable argument is that all load within the CAISO Balancing Authority Area ("BAA"), including that load served by CAISO Wheeling service, should be assessed transmission charges on an EUML basis for the reasons described below.

There are two primary kinds of Wheeling customers: 1) customers in neighboring BAAs that are using ISO transmission on an intermittent basis for economy transactions; and 2) Non-PTO customers that are operating utilities within the CAISO BAA. It is reasonable and efficient that customers wheeling power out of the CAISO BAA to ultimately serve load in some other BAA should be assessed Wheeling charges on the amount of power

[9] CC argument seems to be that because there is a flaw (in their assessment) in the procurement process for which future resource additions are evaluated (by not considering existing transmission costs), this should be remedied by providing a TAC cost waiver for all DG (and some associated load), current and future, so that such DG may bid a lower cost in procurement. As discussed above, the procurement process already considers incremental transmission costs, and should not consider existing transmission costs. If there is an issue with the planning/procurement process concerning TAC cost representation for transmission versus distribution-connected resources, the appropriate way to fix that could be to modify the planning process, rather than waiving legitimate TAC costs to some load deemed to be associated with DG.

[10] See CC ESDER Phase 2 comments, pages 4-5. SCE notes that the basis for net load assessment of CAISO transmission costs is whether a customer is a PTO with an associated UDC or MSS, or a Wheeling customer, not whether a customer is a Metered Subsystem ("MSS"). All PTOs with associated UDCs or MSSs are assessed the TAC on a EUML/Gross Load basis (See Section 26.1(a) of the CAISO Tariff). Furthermore, there are PTOs that are MSSs (such as Anaheim and Riverside) assessed the TAC on an EUML basis per the CAISO tariff, and there are utilities that are not PTOs within the CAISO Balancing Authority Area (such as Bear Valley Electric) that are assessed CAISO transmission charges as a Wheeling customer.

that exits the CAISO BAA, as is the case today. Such transactions are generally intermittent, and the CAISO does not know what load is ultimately served by this Wheeling service. However, the load of non-PTO entities that are operating utilities within the CAISO BAA is indistinguishable from load of PTO entities with associated UDCs or MSSs. This load must be planned for and receives benefits from the CAISO transmission grid, in much the same manner as the load of PTO entities, and should be assessed transmission charges on an EUML/Gross Load basis (just like the load of PTO entities). The argument that the load of PTO entities should be assessed on a net load basis like the load of non-PTO entities within the CAISO BAA should be dismissed.

2. Clean Coalition states that TED is better aligned with the "usage pays" principle than EUML is, because load offset by DG does not use the transmission system. Do you agree? Please explain your reasoning.

   SCE does not agree that load offset by DG does not use the transmission system, as explained in detail in the response to Question #1.

3. Clean Coalition states that using TED will be more consistent with the "least cost best fit" principle for supply procurement decisions, because eliminating the TAC for load served by DG will more accurately reflect the relative value of DG compared to transmission-connected generation. Do you agree? Please explain your reasoning.

   SCE does not agree. As explained in its response to Question #1, TAC costs represent the sunk costs of the existing transmission system. Eliminating the TAC for load served by DG will not have an impact on the sunk costs of the existing transmission system and, therefore, should not be considered in procurement. Power procurement decisions should be based on the effect on incremental costs, including transmission costs. Today's power procurement process considers incremental transmission costs because it includes the costs of any transmission system network upgrades required for any particular generator to interconnect.

4. Clean Coalition states that changing the TAC billing determinant to use TED rather than EUML will stimulate greater adoption of DG, which will in turn reduce the need for new

transmission capacity and thereby reduce TAC rates or at least minimize any increases in future TAC rates. Do you agree? Please explain your reasoning.

Since all EUML load uses the transmission grid (see comments in response to Question #1), changing the TAC billing determinant to use load measured at the TED rather than at the EUML would provide an inappropriate subsidy to distribution loads served by DG. As discussed in Question #3, the power procurement process already reflects incremental transmission costs relative to incremental distribution system costs associated with power procurement choices. Since the power procurement process already correctly reflects incremental transmission costs, providing a subsidy to DG would result in some DG displacing cost-effective, transmission-level generation and in higher total costs to electricity customers (as a result of power procurement decisions that would not be cost-effective, in addition to the impact of shifting transmission costs to customers without DG).

5. In the issue paper and in the stakeholder conference call, the ISO pointed out that the need for new transmission capacity is often driven by peak load MW rather than the total MWh volume of load. This would suggest that load offset by DG should get relief from TAC based on how much the DG production reduces peak load, rather than based on the total volume of DG production. Please comment on this consideration.

   Although the need for new transmission capacity is often driven by peak load MW, particularly for Reliability projects, the need for many transmission projects today is not primarily driven by peak load. Economic and Public Policy transmission projects are primarily driven by energy considerations (energy savings for Economic projects and meeting MWh procurement goals for Public Policy projects), not peak load, and even some Reliability projects may be at least partially driven by off-peak considerations.

6. Related to the previous question, do you think the ISO should consider revising the TAC billing determinant to utilize a peak load measure in addition to or instead of a purely volumetric measure? Please explain your reasoning.

SCE believes that the CAISO should maintain the energy billing determinant for the TAC. All EUML retail loads of UDCs/MSSs of a PTO benefit from the transmission system, use the transmission system, and should pay for the CAISO's TAC on an energy basis.

7. Do you think adopting the TED billing determinant will cause a shift of transmission costs between different groups of ratepayers? If so, which groups will pay less and which will pay more? Please explain your reasoning, and provide a numerical example if possible.

Adopting the TED billing determinant would cause a shift of transmission costs between different PTOs and the customers of their associated UDCs or MSSs, as well as between different groups of retail customers of individual UDCs or MSSs. At the PTO UDC/MSS level that is directly billed TAC costs by the CAISO, any PTO with more DG than the average PTO would receive a lower "wholesale" CAISO TAC bill, while any PTO with less DG than average would receive a higher "wholesale" CAISO TAC bill. Within any PTO, under the CC TED Billing Proposal, certain retail customers would receive a waiver of TAC costs,[11] and therefore shift the remaining transmission costs to other retail customers.

Additionally, the amount of DG for which an associated load could avoid TAC charges under CC's TED Billing Proposal may be significantly in excess of the 2% figure that CC states is the maximum for any PTO today.[12] For SCE, many resources are connected at the distribution (non-CAISO grid) level, including many Qualifying Facilities and some merchant generation. SCE has not been able to quantify the MWh percentage that all

[11] The CC TED Billing Determinant would also implicate the billing of retail Base TRR costs of IOU PTOs to their retail customers. Retail customers with DG would avoid Base TRR costs, and therefore the PTO would have to increase Base transmission rates to remaining customers. SCE notes that retail customers with behind-the-retail-meter DG are already realizing a transmission cost reduction through lower demand and energy charges. In the future, it may be appropriate to consider such customers to be a separate customer "DG behind the retail meter" Rate Group, and to allocate costs using the FERC 12-CP method based on that group's separate load characteristics.

[12] The CC defines DG as Wholesale Distributed Generation and Net Energy Metering ("NEM") exports, and that it equals about 2% of CAISO EUML (page 10 of the CC ESDER Phase 2 comments, page 18 of the Market Surveillance Committee presentation from June 17, 2016).

distribution-connected generation represents of all SCE load, but the Company believes the amount is larger than 2% (SCE has at least 3,000 MW of generation resources that are connected at the distribution level). As a result, SCE believes that it is likely that TAC cost shifts in excess of the 2% limit that CC posits could occur.

8. Do you think a third alternative should be considered, instead of either retaining the status quo or adopting the TED billing determinant? If so, please explain your preferred option and why it would be preferable.

SCE supports maintaining the existing TAC billing determinant based on all EUML.

9. Do you think that ISO adoption of TED by itself will be sufficient to accomplish the Clean Coalition's stated objectives (e.g., incentives to develop more DG)? Or will some corresponding action by the CPUC also be required? Please explain.

The objectives of the TAC should be to price transmission appropriately (see the response to Question #10). If the CC TED Billing Determinant proposal was adopted, its ultimate impact on DG is unclear given the many other factors which help encourage or deter DG. However, one effect would be a TAC that is less fair. For example, the CC TED Billing Determinant proposal would not promote economic efficiency since it would provide a waiver of TAC costs to certain loads that are somehow linked to associated DG, even though such loads continue to use and receive benefits from the transmission system. Such transmission cost are not avoided but must be paid for by other customers.

10. What objectives should be prioritized in considering possible changes to the TAC billing determinant?

FERC stated five general pricing objectives for transmission service in its Transmission Pricing Policy Statement (69 FERC 61,086).[13] SCE agrees that these objectives should

[13] The CAISO's "wholesale" assessment of the TAC to UDCs, MSSs, and Wheeling customers is FERC jurisdictional, as set forth in the FERC-jurisdictional CAISO tariff. For the three Investor-Owned Utility PTOs (SCE, PG&E, and SDG&E), retail transmission rates for their end-use customers are FERC

be considered in this stakeholder process and has the following comments on each with respect to a possible change to the TAC billing determinant to be based on TED:

1) Transmission pricing must meet the traditional revenue requirement.

The current TAC billing determinant of EUML and the associated transmission cost regulatory mechanisms provide each PTO with recovery of its transmission revenue requirement ("TRR"), as well as any net TAC bill or payment assessed by the CAISO to the PTO. This is accomplished for the three IOU PTOs and their associated UDCs through their individual retail transmission rates that recover their own TRR, and a separate regulatory mechanism to recover the net TAC bill or payment assessed by the CAISO.[14] Since the CAISO TAC was implemented in its current form in 2001, the combination of these retail ratemaking mechanisms has provided recovery for the IOUs of their TRR.[15] One reason why the current mechanism provides for recovery of each PTO's TRR is that the PTOs and their associated UDCs are responsible for the collection of transmission costs from all retail transmission customers in their service area, without ceding responsibility to others to collect transmission revenues on their behalf.[16]

Some billing scenarios under the TED Billing Proposal would provide for the direct assessment of TAC costs by the CAISO to "Load Serving Entities", or LSEs. This may place recovery of a PTO's TRR at risk, because the PTO would have no visibility of the transmission revenues being collected on its behalf.

jurisdictional, as set forth in their individual FERC jurisdictional Transmission Owner Tariffs. For municipal utility PTOs and their associated UDCs or MSSs retail transmission rates are set by their governing body.

[14] The FERC regulatory mechanism to recover the CAISO TAC bill/payment is the "Transmission Access Charge Balancing Account Adjustment ("TACBAA"). Each IOU PTO has a TACBAA.

[15] SCE assumes that the non-FERC jurisdictional municipal utilities set their retail rates to recover their costs, including any "wholesale" TAC transmission costs assessed or paid to the entity by the ISO.

[16] PTOs receive a bill or payment for their net HV TAC cost equal to the sum of CAISO Charge Codes 372 (HV TAC cost responsibility) and 374 (HVTRR revenue credit), based on all EUML load in their service area. Additionally, PTOs bill all retail transmission customers in their service area for their own transmission costs.

2) Transmission pricing must reflect comparability.

The current TAC reflects comparability of rates assessed for transmission services provided in the sense that each transmission customer pays the same rate for using the CAISO transmission grid. As SCE noted above, the current Wheeling Access Charge assessment to entities that are operating utilities within the CAISO BAA is not comparable to the assessment of the TAC to PTO utilities and their associated UDCs or MSSs, since both are receiving the same service yet Wheeling customers pay on a net basis and thus avoid payment for some amount of transmission services provided.

The CC TED Billing Determinant proposal would further depart from the principle of comparability in that it would provide additional waiver of transmission charges for certain customers that have DG.

3) Transmission pricing should promote economic efficiency.

The current CAISO HV TAC pricing promotes efficiency since it is an equal, per MWh rate applied to all EUML load (not generation) that uses the CAISO HV transmission (as SCE discussed in Question #1 above, all EUML uses CAISO transmission). TAC costs do not enter into generation dispatch decisions.

The CC TED Billing Determinant proposal would not promote economic efficiency since it would provide a waiver of TAC costs to certain loads that are linked to associated DG. This would allow DG to bid lower than its actual costs in a procurement process, which is not consistent with promoting economic efficiency. Furthermore, to the extent that a DG resource participates in a CAISO market (Day Ahead or Real Time) to serve CAISO market load, it would be able to bid below its costs by the amount of the TAC per MWh charge, knowing that it could recoup that cost through a lower TAC bill. This aspect would also clearly

not promote economic efficiency, since it would result in higher cost generation displacing lower cost generation.

4) Transmission pricing should promote fairness.

The current TAC promotes fairness in that it is applied on an equal basis to all similarly-situated transmission load.[17]

The CC TED Billing Determinant proposal would not promote fairness in that it would provide for a waiver of transmission costs if a customer was linked to some DG, in the amount of the DG.

5) Transmission pricing should be practical.

The current HV TAC "wholesale" billing by the CAISO to PTOs and associated UDCs/MSSs is practical and relatively simple. It is administered by the CAISO by applying the HV TAC rate to all EUML of a PTO, crediting the TRR costs of the PTO against the HV TAC costs, and billing the PTO for the net cost, positive or negative. At the retail level, each PTO collects its own TRR costs from its own retail transmission customers.

The CC TED Billing Determinant proposal would add complexity to what is currently a relatively simple TAC billing system. In order to implement the CC TED Billing Determinant proposal, a mechanism would have to be established to credit an amount of load associated with qualifying DG for the transmission that the associated load is deemed to have not used. One proposal of CC would involve augmenting the steps currently in effect (described above) with two additional steps: 1) the CAISO would have to determine the amount of distribution system load that qualifies for waiver of the HV TAC based on the

[17] With the possible exception of Wheeling customers that are utilities serving load within the CAISO BAA.

amount of DG produced in a given time period; and 2) the UDC would be placed in the position of sorting out how to provide the lower TAC assessment to the load. How the UDC would provide a credit for LV TAC costs that are 100% billed and collected by the PTO/UDC (and also FERC jurisdictional) is not clear.

11. What principles should be applied in evaluating possible changes to the TAC billing determinant?

    The principles should correspond to the objectives mentioned in Question #10 above.

12. Please add any additional comments you'd like to offer on this initiative.

As noted, SCE strongly supports a sound regulatory and market framework, including appropriate rate design, which will allow DG to reach its potential and grow in its important role in providing customer choice, furthering environmental goals, improving reliability and providing overall benefits to customers. While SCE here recommends maintaining the current rate structure and not adopting the CC proposal, the grid is changing and other rate structures may ultimately prove more appropriate. Consistent with the principles noted, SCE remains open to exploring such rate changes with the CAISO and stakeholders.