

# Review Transmission Access Charge Structure Straw Proposal

Comments by Department of Market Monitoring  
March 19, 2018

## Summary

DMM appreciates the opportunity to provide comments on the ISO's *Review Transmission Access Charge (TAC) Structure Straw Proposal*.

DMM appreciates the ISO's consideration of DMM's comments on a volumetric TAC billing determinant and moving the energy point of measurement out towards the transmission-distribution interface.<sup>1</sup> If implemented together, these approaches could adversely affect spot market efficiency and least cost dispatch.

The ISO proposes to utilize a hybrid approach for the TAC billing determinant where a portion of the High Voltage-Transmission Revenue Requirement (HV-TRR) will be collected through a volumetric billing determinant and a portion will be recovered through a peak demand approach. Reducing the extent to which the TAC charge is volumetric can reduce the potential for spot market inefficiencies. This is because adding a fixed transmission cost onto the price load pays for each incremental MWh can impact load serving entities' willingness to pay for energy from the spot markets. This creates inefficiencies in the spot market dispatch when the decision to procure incremental energy from the transmission system does not impact transmission system expenditures.

While the ISO's proposal is an improvement over the purely volumetric approach today, DMM encourages the ISO to work towards eliminating a volumetric billing determinant completely. Further, a demand-based billing determinant must be designed carefully to ensure TAC charges do not introduce new inefficiencies or unnecessary volatility in the spot market.

DMM supports allocation of HV-TRR that aligns with the historic drivers of transmission investments identified in the ISO's Transmission Planning Process (TPP). This approach supports cost causation principles, linking historic cost drivers to cost allocation. When coupled with a demand-based billing determinant, this approach better aligns transmission cost allocation with entities' current use of the transmission system. DMM

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<sup>1</sup> See *DMM Comments on Review Transmission Access Charge Structure Stakeholder Working Groups August/September 2017*, Department of Market Monitoring, October 25, 2017: [http://www.caiso.com/Documents/DMMComments-ReviewTransmissionAccessChargeStructure-WorkingGroupMeetings-Aug29-Sep25\\_2017.pdf](http://www.caiso.com/Documents/DMMComments-ReviewTransmissionAccessChargeStructure-WorkingGroupMeetings-Aug29-Sep25_2017.pdf)

looks forward to working with the ISO and other stakeholders to further develop a workable cost allocation methodology.

The ISO should also consider adjustments to TAC that could enhance the Congestion Revenue Right (CRR) allocation process—the ISO’s mechanism for allocating day-ahead market congestion rents back to the entities that pay TAC. In particular the ISO should develop a process by which market participants can pre-pay TAC associated with delivering energy across the CAISO system. In exchange, the market participant would receive the privilege of nominating CRRs in the CRR allocation process and being included in the CRR balancing account allocations. This construct exists for entities that export or wheel energy through CAISO. The ISO should develop a similar construct for any entity that may have an obligation to deliver energy across, out of, or into the CAISO system. This would result in the ISO creating a platform in which all market participants have equal access to the congestion hedging instruments offered by the ISO.

DMM provides more detail on these concepts below.

**I. A peak demand approach for a portion of the TAC billing determinant can be an improvement over the purely volumetric approach used today. A demand-based billing determinant must be designed carefully to ensure spot market incentives and prices remain efficient.**

The ISO proposes to utilize a hybrid approach for the TAC billing determinant – a combination of volumetric and peak demand approaches. This approach could be an improvement over the purely volumetric billing determinant in place today. Moving from a volumetric TAC billing determinant can mitigate the impact that fixed transmission cost recovery has on load’s willingness to pay for spot market energy (and therefore the price at which load serving entities may reduce their withdrawal from the transmission system by either ramping up distributed generation output or reducing load).

However maintaining a volumetric billing determinant, albeit for a smaller portion of overall HV-TRR, will not completely eliminate these inefficiencies. DMM encourages the ISO to depart from a volumetric billing determinant completely. DMM maintains that it is inefficient for avoidance of fixed transmission costs to be reflected in spot market decisions. Fixed transmission costs are not marginal costs, moreover these are not marginal costs of producing or consuming energy.

DMM notes that in FERC Order 841<sup>2</sup>, the Commission finds that TAC charges should apply to charging load for electric storage resources. Additionally, pumped storage resources are charged TAC for pumping load today.<sup>3</sup> These are examples of resources capable of responding quickly to real-time price signals. As energy storage resources are further integrated into the ISO market, it is increasingly important that fixed transmission charges do not factor into these resources' willingness to charge.

DMM supports the ISO proposal to develop a peak demand billing determinant for HV-TRR, charged on a per MW basis. A demand-based approach better aligns cost allocation with how the transmission system is planned and with the benefits ratepayers receive from their current use of the transmission system. This approach should also prevent some fixed transmission costs from being reflected in load's willingness to pay for spot market energy. However, a peak demand billing determinant must be designed carefully to avoid further impacts to spot market efficiency.

While a demand-based billing determinant supports more efficient spot market scheduling and pricing, a peak demand charge could influence behavior in the spot market to a greater extent than the volumetric approach today. A peak demand charge could incent load to shift energy consumption to off-peak hours to avoid TAC charges. The greater the demand charge, the more pronounced this effect will be. So while the transmission system is planned for a system-wide coincident peak, assigning costs based on contribution to a single coincident peak or a small number of intervals may assign very high TAC costs to this concentration of intervals.

Under this approach, load may significantly change behavior in the spot market to avoid high TAC charges. DMM believes that over time, incentives to shift consumption to avoid TAC charges in peak intervals will minimize future buildout of the transmission system, lowering transmission costs overall. However significant shifts in consumption in the short term will only re-allocate sunk transmission costs among transmission ratepayers, potentially resulting in large cost shifts and volatility in spot market behavior.

DMM supports including more high demand intervals than a single coincident peak to calculate the peak demand billing determinant. This will mitigate the magnitude of behavior changes in the energy market attributed to a demand-based TAC. The ISO's proposed 12CP approach seems to strike a reasonable balance between capturing peak demand intervals and allocating across enough intervals to prevent disruptive shifts in spot market consumption.

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<sup>2</sup> Order No. 841. *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 162 FERC ¶ 61,127, February 15, 2018, p. 191: <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14823759>

<sup>3</sup> CAISO Tariff Section 26.1 [http://www.caiso.com/Documents/Section26\\_TransmissionRates-Charges\\_Apr1\\_2014.pdf](http://www.caiso.com/Documents/Section26_TransmissionRates-Charges_Apr1_2014.pdf)

DMM recognizes that as more intervals are incorporated into the demand-based TAC calculation, the concept begins to depart from how the transmission system is planned. However, these types of approaches could mitigate significant shifts in consumer behavior in the spot market driven by avoidance of TAC.

DMM also understands that the ISO intends to set TAC charges based on forecasted peak demand intervals then bill entities based on usage during the actual observed peak intervals. DMM supports this approach. DMM supports a construct that does not charge entities based on a *forecasted* or collectively known peak as this would induce market participants to incorporate known TAC charges in offers to consume spot market energy, introducing the same inefficiencies the volumetric TAC charge does today.

Lastly, DMM believes Non-PTO Municipal and Metered Sub System billing determinants should be subject to the ISO's revised approach to the TAC billing determinant. Because these entities' use of the transmission system (consuming and delivering energy) is very similar to that of other PTOs, DMM supports applying a demand-based TAC billing determinant to these entities instead of the volumetric wheeling access charge (WAC).

## **II. As long as a volumetric billing determinant is maintained, DMM supports maintaining the current point of energy measurement for TAC billing at end use customer meter.**

DMM conveyed in a previous working group presentation and in prior comments that a volumetric TAC structure coupled with a change in the energy point in measurement can create market inefficiencies.<sup>4</sup> Changing the point of energy measurement while maintaining a volumetric billing determinant could incent load serving entities to dispatch more expensive distributed generation before less expensive transmission connected resources. This has the effect of subsidizing resources behind the energy point of measurement, resulting in inefficient dispatch. Efficient wholesale market design should not favor or subsidize any particular generation technology. For this reason, DMM supports the ISO proposal to maintain the current point of energy measurement for TAC billing at the end use customer meter as long as a volumetric billing determinant remains.

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<sup>4</sup> *Spot market inefficiency from charging TAC on per MWh basis*, Department of Market Monitoring, August 29, 2017:

[http://www.caiso.com/Documents/DMMPresentation-ReviewTransmissionAccessChargeStructureWorkingGroup-Aug29\\_2017.pdf](http://www.caiso.com/Documents/DMMPresentation-ReviewTransmissionAccessChargeStructureWorkingGroup-Aug29_2017.pdf)

Also *Review Transmission Access Charge Structure Stakeholder Working Groups – August / September 2017 Comments* by Department of Market Monitoring, October 25, 2017:

[http://www.caiso.com/Documents/DMMComments-ReviewTransmissionAccessChargeStructure-WorkingGroupMeetings-Aug29-Sep25\\_2017.pdf](http://www.caiso.com/Documents/DMMComments-ReviewTransmissionAccessChargeStructure-WorkingGroupMeetings-Aug29-Sep25_2017.pdf)

While DMM believes the ISO's proposed hybrid billing determinant is an improvement over the purely volumetric approach today, DMM encourages the ISO to depart completely from a volumetric billing determinant. If a volumetric billing determinant is eliminated, DMM believes there is merit in exploring modifications to the point of measurement for future HV-TRR costs (i.e., treating the point of measurement differently for embedded versus future system costs). This approach could reflect distributed energy resources' contribution to reducing future transmission buildout while ensuring spot market efficiency is maintained.

### **III. DMM supports transmission cost allocation according to cost causation. Drivers of transmission investments identified in the ISO Transmission Planning Process can be used to guide cost allocation.**

DMM supports a cost causation approach to HV-TRR cost allocation and allocating costs to whoever the ISO TPP identifies as creating the need for transmission investment. Investment drivers should also be tracked going forward in order to allocate any future transmission costs. Cost allocation based on historic drivers would assign transmission costs as best as practicable to the ratepayers those investments were made for. A demand-based charge could allocate costs to those who currently benefit from those investments. For existing transmission, more work is needed to determine the appropriate method for splitting the allocation between historic cost drivers and the current beneficiaries.

In addition to categorizing transmission projects, the ISO could also assign costs from specific transmission projects built to meet particular Utility Distribution Company's (UDC) needs directly to those benefitting UDCs. While the impact of a more targeted cost allocation may be muted by the allocation of HV-TRR to the UDCs rather than individual LSEs, this construct would best set a precedent for prudent transmission investments decisions going forward.

Further thought is needed to determine how to allocate costs of high voltage transmission investments that support multiple objectives – a single transmission project may support both reliability and policy objectives for example, or a single transmission project may benefit multiple UDCs. DMM looks forward to working with the ISO and other stakeholders to further develop a workable cost allocation methodology.

#### **IV. The ISO should consider developing a process by which any entity that may have an obligation to deliver energy across the ISO transmission system can pre-pay TAC and participate in the CRR allocation process**

CAISO notes in its Straw Proposal that revising the structure of the wheeling access charge (WAC) applicable to exports is not within scope for this initiative. However, the inefficiency of a volumetric TAC or WAC applies to exports as well. A volumetric billing determinant applied to export and wheeling transactions reduces a scheduling coordinator's (SC) willingness to export or wheel energy by the amount of the volumetric WAC. SCs cannot reflect their true willingness to export or wheel power in the spot market, impacting the efficiency of spot market scheduling and prices. DMM encourages the ISO to consider changes to the export and wheeling transaction billing determinants in parallel with changes to the internal UDC HV-TAC billing determinant. Real-time scheduling flexibility could be enhanced if fixed transmission costs are removed from export and wheeling scheduling decisions as much as possible.

A potential change to the TAC or WAC billing structure for export and wheeling transactions is to allow SCs to pre-pay TAC based on their own forecasted contribution to the ISO's peak demand (or forecasted overall system usage as long as a volumetric billing determinant is maintained). This could allow the ISO to apply a demand-based billing determinant to export and wheeling transactions. In exchange for pre-paying TAC or WAC, the market participant would receive the privilege of nominating CRRs into the CRR allocation process and being included in the CRR balancing account allocations.

With this approach, exports would owe additional TAC if their coincident peak (or volumetric) usage exceeded the forecasts used to determine the quantity of CRRs they could nominate. Further, the ISO could make this option to pre-pay TAC available to *any* entity that may have an obligation to deliver energy across, out of, or into the CAISO system including those that do not pay TAC or WAC today (e.g. generators or marketers who may have contracts to deliver energy across, outside of, or into the ISO system). Upon pre-payment of TAC, these entities could then participate in the CRR allocation process and have commensurate exposure to CRR balancing account allocations.

This concept is similar to how Qualified Out-of-Balancing Authority Area Load Serving Entities (OBAALSEs) pre-pay WAC in order to participate in the CRR allocation process today.<sup>5</sup> Today, OBAALSEs pre-pay WAC for any CRRs (MWs) nominated in CRR

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<sup>5</sup> *Business Practice Manual for Congestion Revenue Rights Version 21*. pp. 82-86:  
[https://bpmcm.caiso.com/BPM%20Document%20Library/Congestion%20Revenue%20Rights/Congestion%20Revenue%20Rights%20BPM%20Version%2021\\_Clean.docx](https://bpmcm.caiso.com/BPM%20Document%20Library/Congestion%20Revenue%20Rights/Congestion%20Revenue%20Rights%20BPM%20Version%2021_Clean.docx)  
And *CAISO Tariff Section 36.9*. pp. 35-38:  
[http://www.caiso.com/Documents/Section36\\_CongestionRevenueRights\\_asof\\_Jun2\\_2016.pdf](http://www.caiso.com/Documents/Section36_CongestionRevenueRights_asof_Jun2_2016.pdf)

allocation process and are refunded if their nominations are not fulfilled.<sup>6</sup> Under the design contemplated above, the ISO could instead true-up TAC charges against the SC's actual use of the grid.

This construct would provide any market participant who pays for the transmission system the opportunity to participate in the CRR allocation process and have equal opportunity to obtain the congestion cost hedging instruments offered by the ISO. Transmission ratepayers own congestion rents because they pay for most of the transmission system through TAC. This design would allow entities who do not pay TAC today the opportunity to contribute to paying for the transmission system and in exchange obtain rights to day ahead congestion rents.

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<sup>6</sup> OBAALSEs must show the ISO they have a legitimate need for CRRs by demonstrating their obligation to deliver energy to and from source and sink locations to be nominated in the allocation process