


Submitted by	Organization	Date Submitted
Miles Maurino, maurino530@yahoo.com	 LOCAL CLEAN ENERGY ALLIANCE	October 13, 2017

Review Transmission Access Charge Structure

Comments Submitted to initiativecomments@caiso.com

Submission Deadline: Friday, October 13th, 2017 at 5:00 PM.

Introduction

The Local Clean Energy Alliance calls for the California Independent System Operator (CAISO) to fix the current Transmission Access Charge (TAC) market distortion. This distortion inhibits the community-based renewable energy development needed to achieve California’s renewable energy and climate justice goals, and limits the ability of Community Choice programs to deliver environmental, economic, and social benefits to the communities they serve.

Benefits of Local Renewables and Distributed Energy Resources

The impact of climate change has dramatically changed the way California procures energy. The state is in the middle of a transition to increased growth of decentralized renewable energy and Community Choice aggregation. Investments into local energy assets create new business opportunities, local jobs, community wealth, and more resilient local economies. Community Choice programs can also rapidly reduce GHG emissions by innovating local programs to realize deep energy efficiency gains in buildings, develop local renewable energy generation assets, deploy energy storage, spread out peak loads, accelerate the adoption of electric vehicles, and integrate these and other distributed energy resources (DERs).

One of the most important advantages of local renewable energy generation is that it avoids the economic and environmental costs of inefficient long-distance transmission infrastructure. Electricity generated within the distribution grid requires neither high voltage (200+ kV) or low voltage (69-200 kV) transmission lines to deliver electricity to customers. Hence shifting from remote, centralized generation of electricity to local decentralized generation of renewable electricity could avoid billions of dollars in new and/or upgraded transmission infrastructure,

providing cost-savings benefits not only to Community Choice ratepayers, but to electricity consumers throughout the state.

Issues with the Transmission Access Charge

This intrinsic value of local renewable energy—the potential to avoid billions of dollars in new transmission infrastructure—is not, however, recognized by the State’s current method of recovering transmission infrastructure investments. Currently, all electricity customers in the service territories of the State’s investor-owned utilities are levied with a transmission access charge (TAC), even when the electricity they consume is not delivered over transmission lines.

This means that locally generated electricity that does not use the transmission system is still required to pay transmission access charges, negating one of the most important values of locally generated electricity. This creates an unfair disadvantage for local, distributed renewable energy generation installations, which hinders development and is counterproductive to achieving many of the State’s economic, social and environmental goals.

To correct this TAC market distortion, TAC should only be assessed on energy delivered through the transmission system. The Clean Coalition has proposed that CAISO assess TAC on metered transmission energy downflow, the amount of energy that down-converts from high voltage transmission, to low voltage transmission, to distribution voltages at local substations, instead of being measured at the customer meter (referred to as- customer energy downflow). Therefore, changing the point of measurement to the interface—the point of entry from the transmission grid—it would better align with customer costs being more directly tied to their use of transmission energy.

This approach—the TAC Fix—appropriately applies the “user pays” principle, allowing energy that is generated and consumed without use of the transmission grid to avoid transmission charges. This Fix would recognize the avoided-transmission-cost value of locally generated electricity. It would send proper market signals to encourage investments in energy generating facilities that supply locally produced electricity to the distribution grid, where significant energy can be generated and delivered efficiently without using the transmission system, and thereby avoiding TAC costs. In this way, the TAC Fix would also reduce transmission load and minimize the need for additional transmission capacity.

The current TAC market distortion makes it difficult for Community Choice programs to realize the full value of locally-generated electricity. Smaller scale, community-based generation generally has higher installation costs than remote large-scale generation, making it difficult for local development to be competitive. However, if local development could benefit from the avoided transmission costs through the TAC Fix (roughly a 3¢/kWh advantage on about the 10¢/kWh levelized cost of local wholesale solar PV electricity¹), it would create a significant

¹ *The Padilla Report to the Legislature: Reporting 2015 Renewable Procurement Costs in Compliance with Senate Bill 836* (Padilla, 2011), May 2016.

http://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Padilla%20Report%202016%20-Final%20-%20Print.pdf

incentive for Community Choice programs to build local generation assets, and thereby open the door for the many other benefits of local resource development.

By providing an economic advantage for Community Choice programs to procure locally, the TAC Fix would help counter the claims of many consultants that the only way for these programs to be competitive with the investor-owned utilities is to procure remotely generated electricity, sacrificing the substantial long-term benefits that would be realized through the investment in local renewable assets for short-term advantages.

Similar Treatment to Municipal Utilities

The TAC structure should apply to DER and CCA's the same way it is currently applied to municipal utilities. CAISO already assesses the TAC for municipal utilities based on metered transmission energy downflow, meaning they only pay for the energy delivered from the transmission system. Thus, CAISO has already recognized the legitimacy of this approach to the TAC. The TAC would then provide similar treatment to a CCA, which is also a public entity.

Responses to Arguments Raised at September 25, 2017 CAISO Conference

Response to SCE's Comment Regarding What Parties Use the Transmission Grid the Most

At the conference, Southern California Edison (SCE) expressed interest in doing more research to find out who uses the transmission grid the most. They also claimed that all customers on the distribution system receive benefits from the transmission grid and should pay for those benefits. However, the customer meter cannot determine what percentage of electricity is transferred from the transmission grid. Therefore, the measurement needs to be at the grid interface in order for customers to be properly billed for their transmission benefits. Indeed, even in SCE's presentation at the conference, they cite "cost causation" and "benefits received" as being two essential criteria for assessing the TAC rate design. The TAC Proposal seeks to directly integrate these two principles into transmission rate planning.

There is also federal precedent for this allocation of transmission charges in Federal Energy Regulatory Commission (FERC) Order No. 1000, which adopted *Regional cost allocation principles 1 and 2*:

Regional Cost Allocation Principle 1: The cost of transmission facilities must be allocated to those within the transmission planning region that benefit from those facilities in a manner that is at least roughly commensurate with estimated benefits.²

Table B-1 shows a cost of energy of 6.77¢/kWh for 3-20MW-sized facilities for 2015 contracts, and Table A-2 shows a cost of energy of 13.66¢/kWh for 0-3MW-sized facilities for 2015 contracts and earlier. Hence, the 10¢/kWh figure in the text is a rough approximation of the cost of local wholesale solar PV electricity.

² FERC Order No. 1000, Paragraph 619, page 439. 136 FERC ¶ 61, 051. Found at <https://www.ferc.gov/whats-new/comm-meet/2011/072111/E-6.pdf>

Regional Cost Allocation Principle 2: Those that receive no benefit from transmission facilities, either at present or in a likely future scenario, must not be involuntarily allocated any of the costs of those transmission facilities.³

These principles corroborate the Clean Coalition’s proposal that transmission rates should reflect the benefits of the transmission grid as the main determinant of the TAC.

This restructuring of the TAC would also recognize the strong growth of distributed energy resources (DER) in California. The recent growth in rooftop solar has significantly changed the use of transmission infrastructure. To SCE’s point, we know who will use the transmission grid less—those with solar on their roof. Currently, more than 5,000 MW of rooftop solar is installed within CAISO’s footprint, and it is expected to exceed 9,000 MW by 2020. Both technology and pricing have improved for DER resources, and the TAC Proposal would establish a policy that recognizes and accelerates that growth.

Response to SCE’s Claim that FERC Recently Rejected Changes to Current TAC Structure

SCE’s presentation mentioned that “FERC recently rejected changes to the current structure in ER17-1432.”⁴ However, that proceeding was substantively different than the proposed TAC Proposal here. In ER17-1432, the CAISO filed tariff amendments, pursuant to section 205 of the Federal Power Act (FPA),⁵ to create a new class of participating transmission owner (PTO)—the Certified Small PTO—whose low-voltage, generator-interconnection-driven network upgrade costs would be allocated regionally, rather than locally.⁶ The TAC Proposal is not proposing to create a new transmission owner class but simply to change the point of measurement of where the TAC is calculated. Therefore, ER17-1432 is not analogous to the CAISO initiative here.

Response to Western Power Trading Forum’s Argument of Avoiding Costs

One argument the Western Power Trading Forum (WPTF) raised at the September 25th conference was how can the proposal avoid the shortfall of load serving entities changing their procurement decisions to increased distributed generation, without under-paying for their transmission costs. Essentially, WPTF is guarding against the notion of “I don’t want as much transmission service anymore, so I don’t have to pay for it.” However, under the TAC Proposal LSEs employing DER would continue to use the transmission grid when it is most economical to do so. This does not mean that load serving entities would stop paying for transmission service altogether, but would simply pay an amount that is proportional to the benefits they receive from the transmission system. The current policy results in a certain customer class paying too much for minimal transmission grid benefits. WPTF seems to assume that there is no basis for LSEs

³ FERC Order No. 1000, Paragraph 637, page 456. 136 FERC ¶ 61,051. Found at <https://www.ferc.gov/whats-new/comm-meet/2011/072111/E-6.pdf>

⁴ Southern California Edison - Review of TAC Structure. September 25, 2017 CAISO Conference. Found at: https://www.caiso.com/Documents/SCEPresentation-ReviewTransmissionAccessChargeStructure-Sept25_2017.pdf

⁵ 16 U.S.C. § 824d (2012).

⁶ 160 FERC ¶ 61,047. (Issued September 1, 2017). At 1. Found at: <https://www.ferc.gov/CalendarFiles/20170901163042-ER17-1432-000.pdf>

paying less for their transmission service, when in fact there is good reason for doing so, such as provided in FERC Order No. 1000 and drawing comparable treatment to municipal entities.

Response to CAISO's Request to Coordinate with the CPUC and CEC

CAISO staff mentioned at the September 25th conference that they would like to see a corresponding proceeding be started at the California Public Utilities Commission (CPUC) regarding the TAC. Coordination with the CPUC would indeed be beneficial from a planning standpoint. However, CAISO should recognize its role in determining the point of measurement for the TAC—which should be at the interface. If the point of measurement were more clear to the CPUC, it could then calculate what the best rate is for the TAC in a subsequent proceeding. Therefore, it appears there will be a need for a CPUC proceeding on the TAC but they could also benefit from a clearer position from CAISO on the point of measurement.

CAISO should also be mindful of the CPUC Staff's support for modification of the TAC structure. The CPUC's comments highlight the need to reform the TAC rate structure to be more tied to the costs caused by a customer's benefits of the transmission system. They succinctly state, "Stated differently, 'cost responsibility should track cost causation.'"⁷ Thus, the CPUC agrees with the goal to structure the TAC to be proportional to the benefits received from the transmission grid. It also highlights that the current TAC rate structure does not promote economic efficiency because it does not align with the cost causation, and it unfairly overcharges off-peak transmission users based on their reduced role in cost causation.⁸ Therefore, the CPUC sees inefficiencies in the way the TAC is structured, and will likely manifest this in a separate CPUC proceeding. CAISO should recognize this and not be hesitant to define the point of measurement for the TAC.

Response to California Large Energy Consumers Association (CLECA)

In their brief, CLECA cited the July 12 conference call in which Neil Millar, Executive Director of Infrastructure Development, stated that "transmission provides necessary reliability services (like voltage, dynamic stability, and fault detection and control) that have not yet been demonstrated to be able to be provided by DER on the distribution system."⁹

However, in a recent report¹⁰ the National Renewable Energy Laboratory (NREL) highlighted the reliability benefits of solar generation technology, such as plant participation in automatic generation control (AGC), primary frequency control, ramp rate control, and voltage

⁷ California Public Utilities Commission – Stakeholder Comments – "Review Transmission Access Charge Structure". Note 1, Page 3.. Found at: <https://www.aiso.com/Documents/CPUCComments-ReviewTransmissionAccessChargeStructure-IssuePaper.pdf>

⁸ California Public Utilities Commission – Stakeholder Comments – "Review Transmission Access Charge Structure". Page 4, Note 3. Found at: <https://www.aiso.com/Documents/CPUCComments-ReviewTransmissionAccessChargeStructure-IssuePaper.pdf>

⁹ California Large Energy Consumers Association comments, page 4. Found at: <https://www.aiso.com/Documents/CLECAComments-ReviewTransmissionAccessChargeStructure-IssuePaper.pdf>

¹⁰ Clyde Loutan, Peter Klauer, Sirajul Chowdhury, and Stephen Hall of the California Independent System Operator; Mahesh Morjaria, Vladimir Chadliev, Nick Milam, and Christopher Milan of First Solar; and Vahan Gevorgian National Renewable Energy Laboratory. Demonstration of Essential Reliability Services by a 300-MW Solar Photovoltaic Power Plant. at 1. March 2017. Found at: <https://www.nrel.gov/docs/fy17osti/67799.pdf>

regulation.¹¹ In several of the tests by NREL in their report, they showed fast and accurate PV plant response to AGC, frequency, voltage, power factor, and reactive power signals under a variety of solar conditions.¹² Solar PV resources with these advanced grid-friendly capabilities have unique operating characteristics that can enhance system reliability by providing: (a) essential reliability services during periods of oversupply; (b) voltage support when the plant's output is near zero; and (c) fast frequency response time frame for low and high frequency events. Therefore, distributed energy resources have the potential to offer several types of reliability services that can increase grid resiliency.

¹¹ Ibid. At 1.

¹² Ibid. At 46.