California Energy Commission

Renewable Energy Transmission Initiative ("RETI") 2.0 Plenary Report

CLEAN COALITION WRITTEN COMMENTS ON THE RENEWABLE ENERGY TRANSMISSION INITIATIVE 2.0 PLENARY REPORT

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January 10, 2017

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I. INTRODUCTION

The Clean Coalition appreciates the opportunity to comment on the California Energy Commission's Renewable Energy Transmission Initiative ("RETI") 2.0 Plenary Report. Preparing California to meet its 50% renewable portfolio standard ("RPS") by 2030 and reducing greenhouse gas ("GHG") emissions by 40% below 1990 levels is an important goal, and we applaud your efforts to advance that process through extensive collaboration with state, federal, and local agencies as well as a wide array of stakeholders to develop this report.

In addition to this general support, the Clean Coalition also notes the report's limitations, namely the lack of consideration for growth in non-transmission alternatives to meet the state's RPS and GHG goals. The Clean Coalition also highlights an opportunity for the state to correct a market distortion on distributed generation ("DG") projects as well as other distributed energy resources ("DER") as alternatives to transmission investments where cost-effective. These considerations must be noted in the final report alongside the efforts to identify the transmission projects needed to meet California's RPS and GHG goals. Without these considerations, California's energy leaders risk overstating transmission needs and saddling California ratepayers with unnecessary transmission projects.

II. DESCRIPTION OF THE CLEAN COALITION

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of DER—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

III. CONSIDERING GROWTH OF NON-TRANSMISSION ALTERNATIVES FOR CALIFORNIA'S FUTURE TRANSMISSION NEEDS

The first task of the RETI is to help identify the transmission projects needed to accommodate California's renewable energy goals. To meet this goal, the RETI 2.0 Plenary Report referred to the California Energy Commission's 2015 IEPR Energy Demand Forecast[1] as well as California

[1] *2015 IEPR.*

PATHWAYS modeling project performed by Energy + Environmental Economics (E3).[2] We recognize that the RETI 2.0 Plenary Report notes that new transmission is not the only solution to accessing utility-scale renewable energy, but we question whether the projected transmission needs incorporate sufficient consideration of DG renewables, such as residential solar and wholesale distributed generation ("WDG") resources.

The primary benefit of DG resources is that they produce energy close to demand, so the energy does not need to travel far before it is used. In contrast to centralized renewables, local renewables in the form of DG resources meet local energy demand without use of the transmission grid and actually reduce the need for additional transmission investment. By generating electricity close to where it is needed, DG resources save California money by avoiding transmission-related costs, avoiding line losses, and freeing up existing transmission capacity for other renewable resources. In contrast to centralized renewables, local renewables can help meet the state's RPS and GHG emissions targets without requiring additional transmission investment. It is therefore *critical* that California agencies fully consider DG resources and other DER as important opportunities for meeting RPS and GHG emission goals without increasing demand for additional transmission investment.

The Clean Coalition therefore emphasizes the importance of considering these resources in identifying what transmission projects are needed to accommodate California's renewable energy goals. Important alternatives to additional transmission build exist and are slowly being deployed throughout the state. We recommend that the RETI 2.0 report note the extent to which DG resources are considered in the projections for future transmission needs and explain what steps will be taken in the future to further incorporate and review the ongoing growth of DG resources in defining the state's projected transmission needs. To ensure that California does not over-invest in transmission investments, the RETI 2.0 Plenary Report should support the full and fair consideration of DG resources and other DER in any transmission planning effort, including the high-level plans in the RETI 2.0 report.

IV. Highlighting the Massive Market Distortion Hindering the Growth of Distributed Generation Renewables

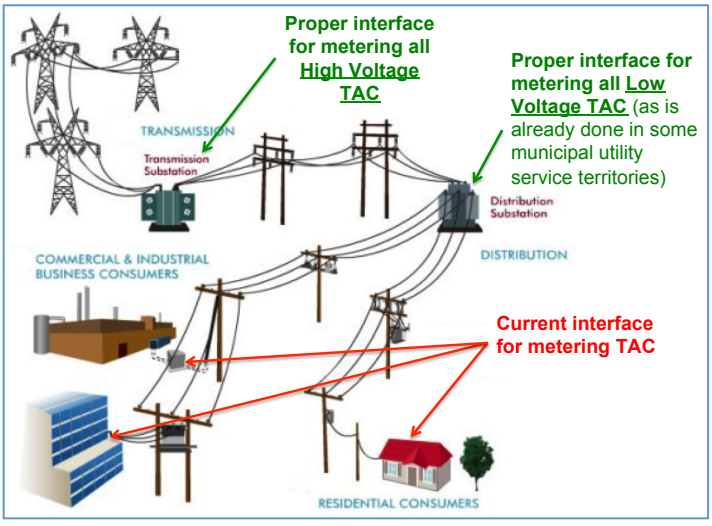
Despite the benefits mentioned above, distributed generation ("DG") resources—particularly local renewables—face a massive market distortion that skews the market against them. Transmission Access Charges ("TAC") are usage fees designed to pay for California's transmission system, including investment amortization, return-on-equity, operations, and maintenance. TAC add nearly 3¢/kWh to the levelized cost of energy over a typical 20 year renewable energy contract, increasing the wholesale price

[2] Energy + Environmental Economics (E3). *Estimating Renewable Transmission Needs for RETI 2.0* (Apr. 19, 2016).

of energy in California by about 30%. **TAC are currently misapplied to local energy that does not actually use the transmission grid, including local renewable energy.** The RETI 2.0 effort should be aware of this issue and consider that the demand for additional transmission projects to meet RPS and GHG goals may be overstated due to the TAC distortion's impact on DG resources.

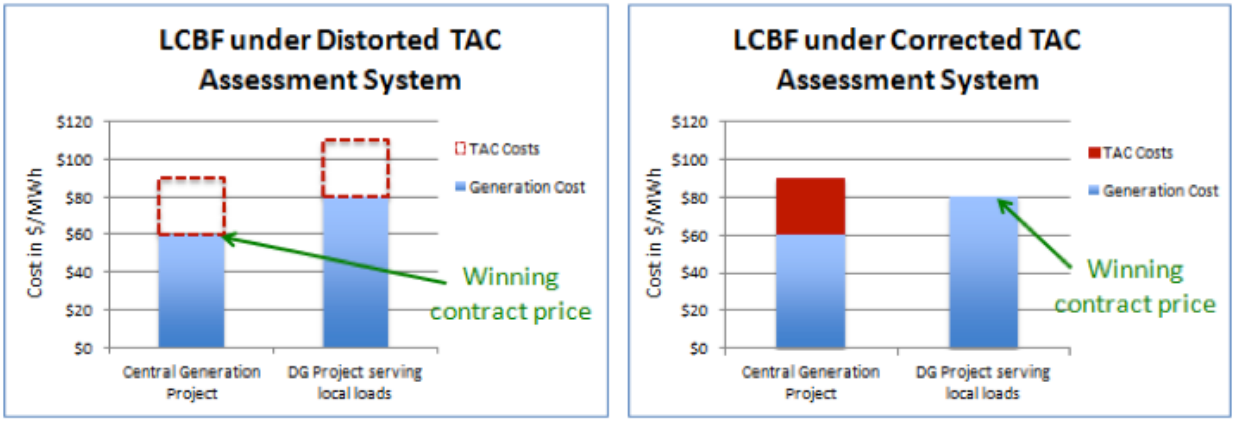
The California Independent System Operator ("CAISO") currently assesses TAC on all California electric energy consumption in Participating Transmission Owner ("PTO") service territories based on the Customer Energy Downflow, or the amount of energy that crosses from the distribution system to the customer via a meter. As a result, TAC currently applies to locally generated energy (including exported net energy metering energy) that does not travel along the transmission system to reach customers. In reality, locally generated energy reduces transmission costs by freeing capacity on the transmission system.

To create a fair, transparent, and consistent TAC assessment practice, the Clean Coalition recommends that CAISO measure PTO utility service territory transmission usage at the Transmission Energy Downflow, where energy down-converts from transmission to distribution voltages. Importantly, CAISO already allows non-PTO utility service territories to pay TAC based on this assessment system by opting to be treated as Metered Sub-Systems. The graphic below compares how TAC is metered in PTO utility service territories (at the Customer Energy Downflow) to how TAC is metered in non-PTO utility service territories (at the Transmission Energy Downflow, or "TED"). Under the Clean Coalition's proposal, low voltage ("LV") TAC would be assessed at the TED for the transmission-distribution grid interface. High voltage ("HV") TAC would be assessed at the TED for the high voltage to low voltage transmission system interface.

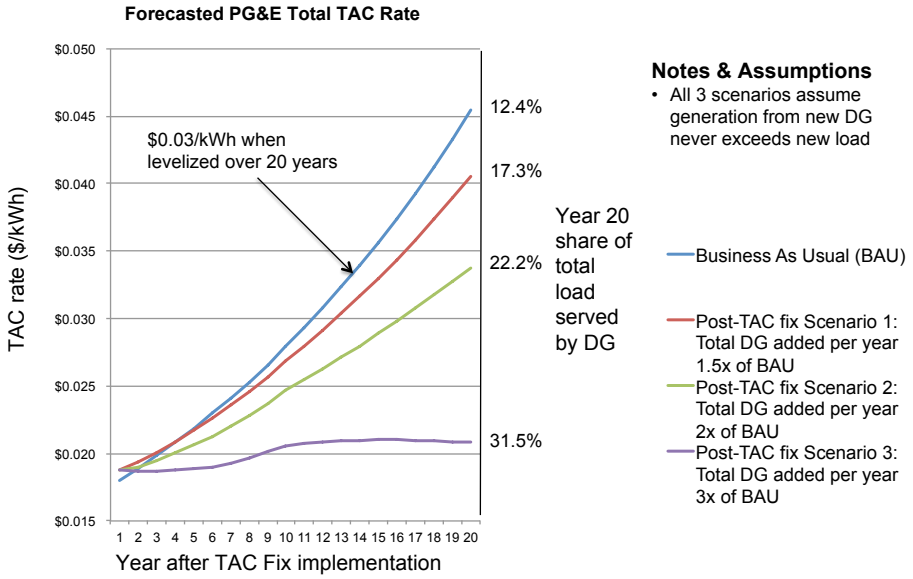


The current method for assessing TAC causes local generation to subsidize costs associated with the transmission grid, distorting Least Cost Best Fit ("LCBF") conclusions when comparing local generation to centralized generation. The charts below compare distorted LCBF conclusions (left chart)

against corrected conclusions (right chart). This market distortion harms ratepayers by discouraging the development of cost-effective local renewable energy resources, depriving communities of the benefits of local energy development, and artificially inflating demand for transmission capacity.



Measuring TAC at substations in all service territories will provide consistent TAC treatment across the entire CAISO region and ensure accurate market signals. The elimination of the massive TAC market distortion will result in increased deployments of local generation, which will significantly reduce TAC over time and save ratepayers enormously. The Clean Coalition estimates that a solution to the TAC distortion will increase the amount of local renewables by a factor of 5 and save California ratepayers approximately $40 billion in avoided transmission costs over 20 years. The chart below shows drastically reduced TAC rate outcomes over 20 years by eliminating the TAC market distortion. The area between the blue and purple curves represents over $20 billion in avoided transmission costs over 20 years.



By understanding this issue, the RETI 2.0 Plenary Report writers will have a more complete view of how the TAC market distortions harms local renewables and artificially inflates the projected transmission need. The Clean Coalition recommends that the RETI 2.0 staff consider the impact of

correcting the TAC on transmission need and also ensure that their recommendations include a full and fair accounting of the value created by DG resources. This would produce more cost-effective transmission decisions and protect Californians from unnecessary transmission investments. The Clean Coalition remains available if you have any further questions on this issue.

V. CONCLUSION

The Clean Coalition appreciates this opportunity to comment on the RETI 2.0 Plenary Report. Considering the growth of DG resources in transmission planning as well as the impact of the TAC market distortion will improve the accuracy of predicted transmission needs and will protect California from avoidable transmission investments.

Respectfully submitted,
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Dated: January 10, 2017