

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Revisit Net
Energy Metering Tariffs Pursuant to Decision
D.16-01-044, and to Address Other Issues
Related to Net Energy Metering

Rulemaking 20-08-020
(Filed August 27, 2020)

**CLEAN COALITION COMMENTS ON THE PROPOSED DECISION REVISING NET
ENERGY METERING TARIFF AND SUBTARIFFS**

/s/ BEN SCHWARTZ

Ben Schwartz
Policy Manager
Clean Coalition
1800 Garden Street
Santa Barbara, CA 93101
Phone: 626-232-7573
ben@clean-coalition.org

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Table of Contents

I. INTRODUCTION..... 1-3

II. DESCRIPTION OF PARTY.....3-4

III. COMMENTS..... 4

 A. WITHOUT NON-ENERGY BENEFITS, THE COMMISSION’S COST-EFFECTIVNESS TESTS GREATLY OVERSTATE THE COSTS OF NEM AND UNDERSTATES THE BENEFITS 3

 B. THE ARGUMENTS USED TO JUSTIFY THE NET BILLING TARIFF ARE NONTRANSPARENT AND UNCLEAR 4-6

 C. THE PD UNDERVALUES THE AVOIDED TRANSMISSION VALUE CAUSED BY PEAK REDUCTION FROM NEM CUSTOMERS..... 6-10

 D. STANDALONE SOLAR HAS A GENERATION PROFILE THAT MATCHES HVAC.....10

 E. INACCURAEET MODELING ASSUMPTIONS MAKE IT HARD TO EVALUATE THE NET BILLING TARIFF AGAINST OTHER PART PROPOSALS..... 10

IV. CONCLUSION..... 11

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I. INTRODUCTION

Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”) the Clean Coalition respectfully submits these opening comments on the *Proposed Decision* (“PD”) *Revising Net Energy Metering Tariff and Subtariffs*, issued at the Commission on November 10, 2021. The Proposed Decision would implement a Net Billing Tariff as the Successor to NEM 2.0, valuing NEM exports based on Avoided Costs and an ACC Plus adder that steps down by 20% each year over five years for LMI customers. Compared to the retail export compensation rate in NEM 2.0, the PD represents a 75% decrease, a shift that can only be described as drastic.

While this PD represents a slight improvement from what the Commission initially proposed in December 2021 — due to the removal of any type of Grid Participation Charge — it still falls far short of the mark. The entire proposal is centered around the “cost shift” argument and does not consider/value NEM to be a driver of electrification, nor is it treated as an important policy that has, and does, dovetail with California’s ambitious climate goals. All the analysis included in the PD, including the assumptions used in the Lookback Study, the way that party proposals were modeled, the values considered when modeling results for the Net Billing Tariff, and the benefits they are attributing to NEM customers, are inconsistent, inaccurate and incongruous with the Commission’s goals. The Commission parses words in the PD, in an apparent attempt to quash qualms raised by a multitude of parties on a series of issues and uses the need to balance a number of factors as an excuse about why no one metric can be used to evaluate the proposed Net Billing Tariff. For example, while the Commission acknowledges in the PD that the main cost-effectiveness test to value DER programs should be the Total Resource

Cost (“TRC”) Test, the use of the Ratepayer Impact Measure (“RIM”) Test is justified because of the purported cost shift. Yet, the PD does not focus on a proposal that reduces the TRC to as close to 1.0 as possible, or one that improves the RIM to make it as to 1.0 as possible, nor is a maximum reduction in the cost shift considered the way to evaluate the potential of the Net Billing Tariff. The Guiding Principles require that the tariff be transparent and explainable to customers, which it might be, but the reasons that **this proposal** was selected by the Commission is completely non-transparent and impossible to describe succinctly. Moreover, while it is proposed that the Net Billing Tariff be evaluated again in three years, it would be difficult to complete such an evaluation since there is no concrete way to evaluate the merits of the proposal in the PD.

The one assertion that stands out in the PD about what a successful tariff looks like is the Commission’s intention to promote solar+storage deployments over standalone solar due to the ability of storage to shift energy to be exported peak periods. The Clean Coalition agrees that solar+storage is more beneficial to the grid than standalone solar, particularly when considering the added layer of resilience, but we diverge with the Commission when it comes to the value of solar. As the comments will discuss, standalone solar still generates, albeit at fraction of what is produced during the middle of the day, at the beginning of the peak period. During the months with the highest peaks, rooftop solar is still producing from 4-6pm, reducing the amount of peak energy that is required from the transmission grid (called Transmission Energy Downflow, or “TED”). In addition, standalone solar is an important building block for Community Microgrids. As NEM systems are deployed, the overall cost of deploying the components of a Community Microgrid is reduced, meaning that both standalone NEM solar and paired NEM solar+storage add some value when it comes to holistic distribution-level resilience. The Clean Coalition comments will go into detail on the following issues:

- Without consideration of Societal Benefits, also called non-energy benefits, the Commission’s cost-effectiveness tests greatly skew the analysis of NEM 2.0 by overstating costs and understating benefits.

- The arguments used to justify this iteration of the Net Billing Tariff are completely non-transparent and unclear when it comes to determining how to evaluate the success of the tariff.
- The PD undervalues the avoided transmission benefits due to peak reduction caused by solar and solar+storage users.
- Standalone solar has a generation profile that matches HVAC systems, which will become increasingly valuable as the climate continues to change.
- Cutting incentives for standalone solar due to an overabundance of energy during non-peak times of the day ignores future load growth of the grid and CAISO's shifting curtailment patterns due to participation in WEIM.
- A Net Billing Tariff that is less cost-effective than deploying a non-export system sends a negative price signal to consumers about grid participation.
- The PD does not have sufficient allowances for system oversizing, nor does it effectively promote electrification.
- The Clean Coalition recommends that the Commission reject this Proposed Decision and fix the modeling assumptions and then update the analysis on initial party proposals to give the Commission a level playing field to decide on a Successor tariff.

We also wish to note that any fixed charges that are discriminatory towards NEM customers and customers who adopt electrification measures should be avoided at all costs, as they send a negative price signal to customers making a transition that California desperately needs to speed up in order to meet its goals.

II. DESCRIPTION OF PARTY

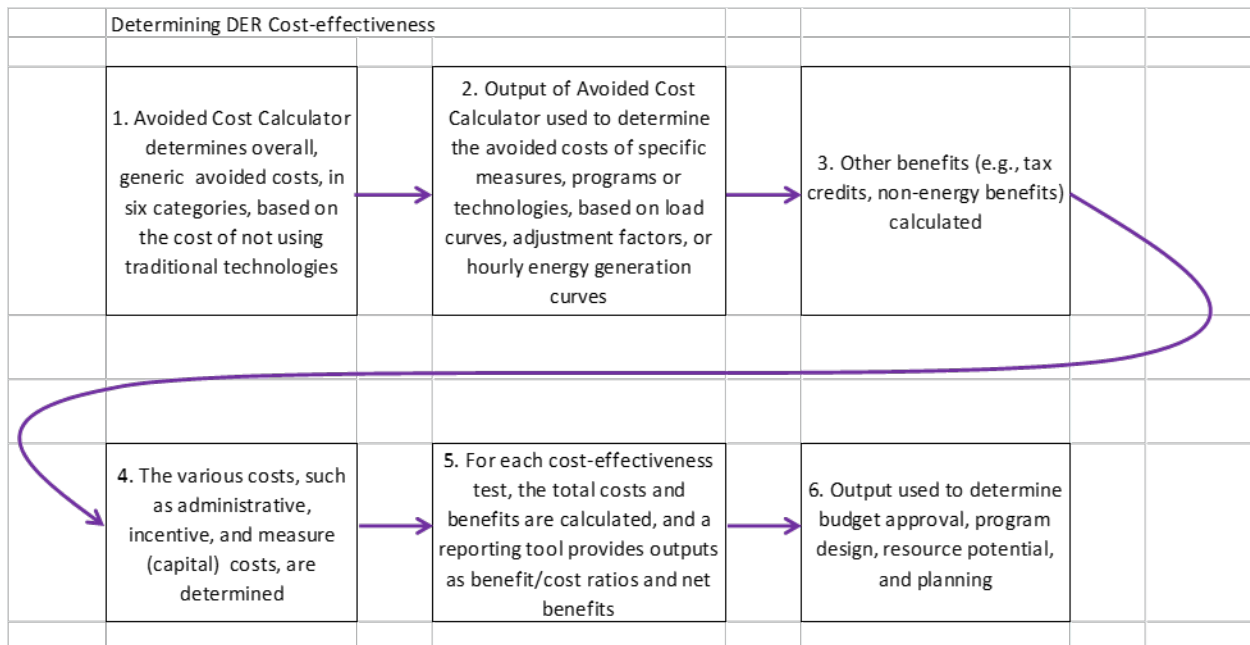
The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources (“DER”) — such as local renewables, demand response, and energy storage — and we establish market mechanisms that

realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the unparalleled benefits of local renewables and other DER.

III. COMMENTS

A. Without consideration of Societal Benefits (non-energy benefits), based on the Commission’s cost-effectiveness methodology, the CBA of NEM 1.0 and NEM 2.0 is incomplete, skewing the record.

The Lookback Study (which measured the Cost Shift) did not consider any Societal costs, did not consider the value of NEM 1.0 and 2.0 customers shifting back peak demand at the T-D interface (and reducing peak demand), and did not consider the value of NEM as a driver of electrification. The figure below shows what the CPUC process for determining cost-effectiveness of customer DER programs.



CPUC Process for Determining DER-program Cost-Effectiveness¹

Step three, which includes valuing the non-energy benefits and considering the benefits of NEM in achieving broader policy goals appears to have been skipped entirely. In theory, the

¹ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/idsm>

Commission does have a test that encapsulates these values, the Societal Cost Test (“SCT”), which is described in the 2001 iteration of the Commission’s Standard Practice Manual (“SPM”). While the test is a variant on the TRC test, “The Societal Test differs from the TRC test in that it includes the effects of externalities (e.g., environmental, national security), excludes tax credit benefits, and uses a different (societal) discount rate.”² Whereas the TRC Test only considered value to the ratepayers and utility, the SCT considers a much broader view, including more accurate representations of tax credits as transfer payments. The SPM describes a non-exhaustive list with seven different categories. Twenty-one years after the 2001 iteration of the SPM was released, the Commission has made progress via Energy Division Staff released a White Paper which considers valuing three of these categories.³

The PD takes the unfortunate position of siding with the IOU argument to reject the use of a SCT because it is “premature”⁴ Other potential adders, including a land use adder, a resilience adder, and an out of state methane adder are also rejected. The precedent that the Commission appears to be following is regressive. The logic that because certain benefits have not yet been carefully tested, the value can only be \$0.00, harkens back to a time when the environmental impacts of carbon dioxide did not factor into the selection of resources.

With that being said, the Clean Coalition does understand that there is currently no completed SCT, which we hope will soon be remedied as the successor to the IDER proceeding begins. On the other hand, rejecting all Societal Benefits skews the analysis of NEM 2.0 and of the Net Billing Tariff by understating benefits and overstating costs. Therefore, we argue that the Commission should not rely on the RIM or the cost shift arguments as the primary reasons for selecting a final proposal. Instead, the TRC, payback periods, bill savings, and the effect on other California policies should be the main evaluation criteria. In addition, the Commission should mandate that the analysis of the Net Billing Tariff that will occur three years from now must include the use of a SCT as the main cost-effectiveness test.

It is also worth considering that the value of incremental NEM resources is set to increase in the next few years, rather than decreasing. As demonstrated by SCE in the figure below (from

² CPUC Standard Practice Manual at p. 18

³ https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2019-2020-irp-events-and-materials/societal_cost_test_impact_evaluation.pdf

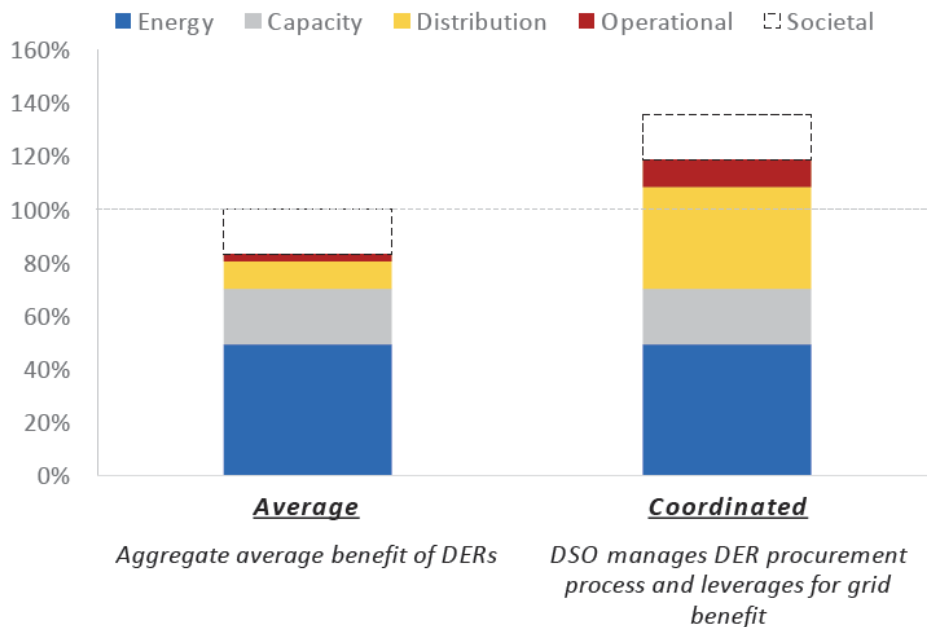
⁴ PD at p. 66

2016), when DER are optimized through the use of a Distributed Energy Resources Management System (“DERMS”), via a DSO, the distribution (yellow box) and operational (red box) benefits are set to increase significantly.

Figure 5: Impact of DSO coordination of DERs on benefits to grid

Note: 100% indexed to average DER benefits

DIRECTIONAL



Once the IOUs implement DERMS and the roles/responsibilities of a DSO are cemented, increased benefits from the customers on the Net Billing Tariff will be realized, adding value across the distribution grid as well as via increased avoided transmission values. They should be properly compensated when that change occurs; for now, the Commission should acknowledge that relying on a single RIM score to gut NEM 2.0 should not be the driver of changing such an important policy.

- B. The arguments used to justify this iteration of the Net Billing Tariff are completely non-transparent and unclear when it comes to determining how to evaluate the success of the tariff.**
 - i. The PD relies on part of the Lookback Study, even though it provides an incomplete picture.**

The PD states that the Lookback Study is of sound analysis and should be used in the creation of a Successor Tariff. Two sentences later, it is acknowledged that the Lookback Study provides an incomplete picture and should only be used to determine what **not** to do.⁵ The logic appears flawed, especially considering that the PD uses only bits and pieces of the Lookback Study and does not attempt to correct the cost shift. Consider the cost-of-service analysis, figure 2, which can be seen below.

Table 2. Ratio of Bill Payment to Cost of Service, NEM 1.0 vs. NEM 2.0²⁶

	Sector	Ratio of Bill Payment /Cost of Service					
		PG&E		SCE		SDG&E	
		Pre-NEM	Post-NEM	Pre-NEM	Post-NEM	Pre-NEM	Post NEM
NEM 1.0	Residential	171%	88%	152%	86%	101%	54%
	Nonresidential	128%	106%	110%	105%	124%	122%
	Total	146%	99%	122%	100%	119%	111%
NEM 2.0	Residential	139%	18%	91%	9%	94%	9%
	Nonresidential	189%	152%	118%	108%	178%	166%
	Total	157%	60%	99%	34%	113%	46%

The analysis in the PD addresses the change in the ratio of Bill Payment/Cost of Service in NEM 2.0 as a reason that the tariff needs to be changed. However, this ignores the other half what this table shows, which is essential. According to the table, there are two takeaways which are missing. First, for both NEM 1.0 and NEM 2.0, pre-NEM customers are being billed at **far higher rates** than the cost of service (over 50% more in almost every case). This alone suggests an issue with electric rates for the broader customer classes that should be remedied. Second, when considering NEM 1.0 customers, while the ratio goes ratio of pre-NEM compared to post NEM goes down, it is still close to, or over 100% for both residential and nonresidential customers. On average, the post-NEM values for NEM 1.0 reach a ratio of 100%, which is ideal. Any attempt at crafting a Successor Tariff that does not account for this difference risks making the same mistake again. Moreover, the PD does not consider this ratio (bill payment/cost of service) as one of the determinants the Commission should use to evaluate the Net Billing Tariff.

Parties did have an opportunity an initial opportunity to comment on the Lookback Study when it was published, but the study was never changed/amended after the initial draft was

⁵ Ibid at p. 42-43

released. The only difference was that an addendum was added explaining what assumptions were used. Party critiques of the assumptions were never truly addressed then, were not accepted afterwards, and Verdant staff was not made available for cross examination during evidentiary hearings. While the PD states, “A disagreement on an assumption does not equate to a flaw in the assumption,” it is worth noting that changing a flawed assumption could lead to a drastically different end result.⁶

ii. The Lookback Study did not consider the value of NEM as a driver of electrification.

The PD states that the Lookback Study did not consider the relationship between NEM customers enrolled in NEM and those who adopted other electrification measures. Specifically, it suggests that any correlation is on the part of the customer and not the result of NEM itself, effectively ending any discussion by reducing the value to zero. Because of relatively cheap natural gas prices (until recently) in comparison to electricity prices, adopting electrification without any on-site generation would not have been economically optimal decision. Since customers are motivated by economics, environmental benefits, and resilience, there is a clear correlation between NEM 1.0 and NEM 2.0 customers and electrification measures. On the other hand, recent increases in natural gas prices over the last few years, which have made gas-fired appliances more expensive than electrified appliances in most cases provide are a like a stick and along with the carrot — incentives in the Inflation Reduction Act — are pushing more and more customers toward NEM and electrification measures. This can be seen in 2021 upticks in NEM adoption by lower-income customers. Based on the guiding principles, NEM should enable and encourage customers to help achieve the state’s climate/energy goals. The PD cannot be evaluated as successful unless it considers the clear correlation between NEM and electrification.

iii. The PD states that neither payback periods or monthly savings alone can be used, but focuses on a simple payback period.

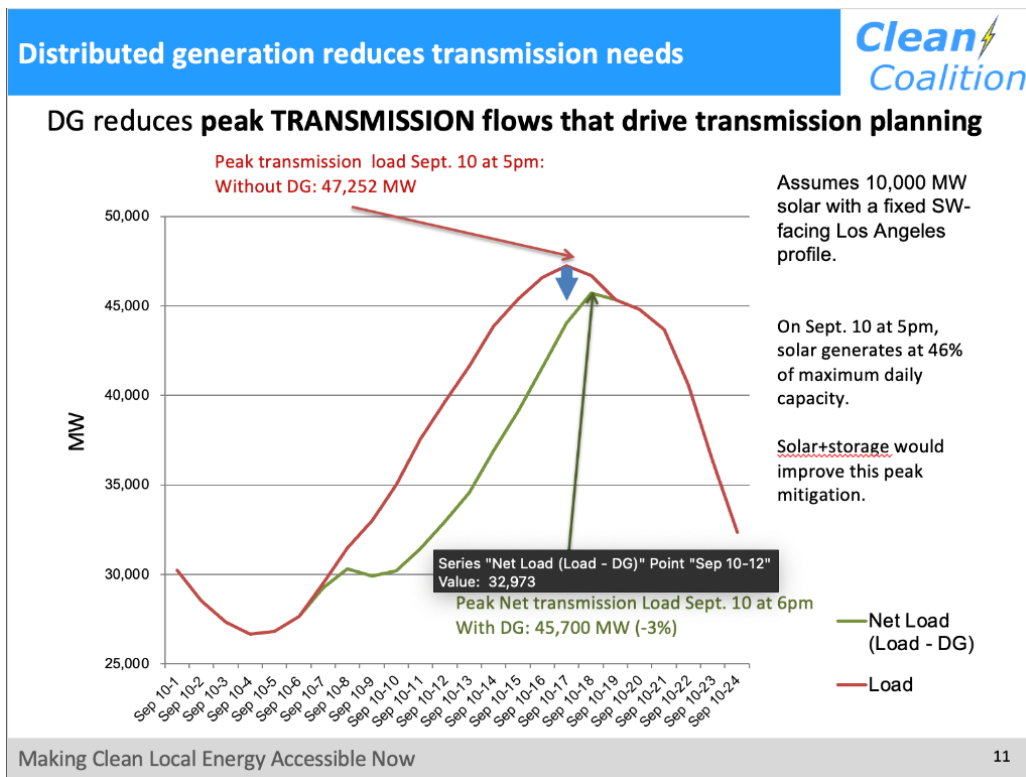
While this is not quite a logical discrepancy, it does make the simple payback periods that are supposed to be fixed (for certain customer classes) seem random. There is no wherewithal why 9 years is appropriate and seems to be no data/reasoning about why such a payback period is

⁶ Ibid at p. 42

appropriate, let alone optimal. There is also no information about why these numbers will result in sustainable growth, when the payback periods are doubled (or more) when compared to those in NEM 2.0. This lack of clarity makes it hard for the Commission to justify selecting the Net Billing Tariff over other party proposals.

C. The PD undervalues the avoided transmission benefits due to peak reduction caused by NEM customers.

Avoided Cost export rates based on the 2022 ACC result in undervaluing avoided transmission values. For example, the 2022 ACC approves a specific avoided transmission value for PG&E but waits to do so for SCE and SDG&E until calculations are finished. The slide below demonstrates the way in which DER push down the peak transmission energy downflow (“TED”), reducing the strain on the transmission grid, reducing line losses, and reducing congestion (which can better allow Least Cost Best Fit (“LCBF”) energy to flow to optimal locations.



Moreover, while the ACC considers avoided specified transmission, unspecified avoided transmission is not yet valued. In other words, this PD would lock customers into a compensation rate that is **far** lower than it should be. It is also worth considering that reducing the pace of NEM adoption as the total system load begins to grow as electrification measures are adopted on a broader scale will lead to far more transmission than would have otherwise been necessary.

D. Standalone solar has a generation profile that matches HVAC systems, which will become increasingly valuable as the climate continue to change.

At least 50% of NEM energy is consumed on-site, a number that could increase as the total electric load on the system increases (due to electrification) and customers shape energy usage to reflect time-varying energy pricing. Solar energy matches the profile of HVAC system; ideal solar production occurs at time when there is high demand for cooling. In other words, renewable production consumed on-site or on the local distribution grid, meaning it does not cause strain on the grid, whereas wholesale energy includes charges for transmission that are equal to, or greater than, the cost of the energy. Moreover, HVAC loads are going to increase as the climate continues to warm and if not met on-site in real time, the demand on the grid will be significant.

E. Issues with modeling assumptions make it hard to evaluate the Net Billing Tariff accurately, or effectively compare it to other party proposals that were modeled.

Consider the following:

- Party proposals modeled in 2021 (prior to IRA being passed and more accurate solar/storage costs being considered).
- Energy storage and solar are modeled using costs from 2020.
- Proposals were modeled using the 2021 ACC whereas the NEM PD was modeled using the 2022 ACC. Importantly, the 2021 ACC was a significant swing away from the 2020 ACC, slashing the value of standalone solar significantly. The 2022 ACC is a pendulum swing in the other direction, meeting in the middle of 2020 and 2021 and is a reasonable alternative to put all proposals on a level playing field.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these opening comments and urges the Commission to reject this PD and reconsider the Successor Tariff after properly evaluating party proposals on a level playing field and considering non-energy benefits as well as full avoided transmission values. As the Sierra Club explained during oral arguments, “To meet the targets in the draft CARB Scoping Plan, we need to exceed our best year of solar deployment by 60 percent and sustain that pace for the next decade.”⁷ As is, the PD will not put California on a track to meet those goals; significant changes are necessary to ensure sustainable growth and to evaluate what a “successful” tariff looks like.

/s/ BEN SCHWARTZ

Ben Schwartz

Policy Manager

Clean Coalition

1800 Garden Street

Santa Barbara, CA 93101

Phone: 626-232-7573

ben@clean-coalition.org

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⁷ Katie Ramsey of the Sierra Club Oral Arguments, at transcript p. 2266