

**Clean Coalition Informal Comments to the California Public Utilities Commission Regarding April 2014 Workshop on Net Energy Metering Successor Tariff or Contract**

May 30, 2014

The Clean Coalition respectfully submits the following comments on the Commission’s April 2014 workshop on the Net Energy Metering (NEM) Successor Tariff or Contract (“NEM 2.0”). The Clean Coalition’s comments focus on aligning NEM 2.0 with AB 327’s requirement for utilities to develop Distribution Resources Plans, and supporting the growth of distributed generation on cost-effective customer sites that were not provided financial incentives to participate in the original NEM program. A diversified portfolio approach that supports solar development at a broad range of customer sites, and targets optimal locations, is essential for meeting legislative requirements to ensure sustainable growth of customer-sited distributed renewable generation, while keeping total benefits and costs of the program to the electrical system approximately equal.

The Clean Coalition is a California-based 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, interconnection, and realizing the full potential of integrated distributed energy resources, such as distributed generation, advanced inverters, and energy storage. The Clean Coalition participates in proceedings before the Commission and other state and federal agencies throughout the United States.

**I. Guiding Principles**

The Clean Coalition supports several of the possible guiding principles proposed by Commission staff at the workshop. First, we agree that the legislative requirement to support sustainable growth of customer-site renewable distributed generation necessitates market certainty, transparency, and predictability, considering customer expectations and long-term benefits of distributed generation.

We support the guiding principle that the successor tariff or contract should be consistent with other Commission policies and goals involving distributed energy resources. We recommend specifically ensuring that NEM 2.0 is consistent with the Section 769 Distribution Resources Plans requirements to guide distributed energy resources to optimal locations on the grid. In addition to requirements relating to NEM, AB 327 added Public Utilities Code 769, which requires the investor owned utilities to submit Distribution Resources Plans by July 2015 that identify optimal locations for distributed energy resources and guide these resources to optimal locations on the grid. These plans must “Evaluate locational benefits and costs of distributed resources located on the

distribution system. This evaluation shall be based on reductions or increases in local generation capacity needs, avoided or increased investments in distribution infrastructure, safety benefits, reliability benefits, and any other savings the distributed resources provides to the electric grid or costs to ratepayers of the electrical corporation.” Such plans must also “Propose cost-effective methods of effectively coordinating existing commission-approved programs, incentives, and tariffs to maximize the locational benefits and minimize the incremental costs of distributed resources.”

When considering how to align NEM 2.0 with Zero Net Energy requirements, the Clean Coalition recommends consideration of utility proposals to comply with such requirements at a community level rather than at the individual building level to encourage the most cost-effective blend of renewable generation and demand-side management while maintaining grid reliability.<sup>1</sup> A community-level approach would support development of distributed generation at optimal locations, rather than requiring individual buildings to size onsite generation projects to onsite load.

NEM 2.0 can support the Distribution Resources Plans requirements and Community Zero Net Energy compliance by guiding NEM 2.0 projects to optimal locations on the grid and encouraging these customers to size projects to available space at the site and available capacity on the feeder line section, rather than to onsite load.

With respect to the guiding principle that “The successor tariff or contract should promote innovation and growth among different technologies, applications, and financing structures,” we recommend that the staff clarify that different “applications” includes different “market segments” or “types of customers”. The current NEM program has been remarkably successful at supporting solar development on single-family residential and owner-occupied commercial rooftops. However, NEM has not encouraged most commercial and multi-family residential properties to participate. These types of customers have not been motivated to participate because NEM bill credits result in split incentives for owners and their tenants, or these properties have much more space for solar than on-site load to offset.<sup>2</sup>

Rather than designing a NEM successor program that only provides either a bill credit or a wholesale contract, we recommend designing a NEM successor program that supports a broader range of customers making both options available. Accordingly, we recommend that interconnection of NEM successor projects receive equal interconnection treatment, regardless of whether the project will interconnect behind or in front of the meter.

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<sup>1</sup> See presentations by Pacific Gas & Electric and Southern California Edison from the July 18, 2013 California Energy Commission Lead Commissioner Workshop on The Definition of Zero Net Energy in Newly Constructed Buildings in California, available at [http://www.energy.ca.gov/2013\\_energypolicy/documents/#07182013](http://www.energy.ca.gov/2013_energypolicy/documents/#07182013).

<sup>2</sup> See Ethan Elkind, In Our Backyard: How to Increase Renewable Energy Production on Big Buildings and Other Local Spaces (UC Berkeley Law and UCLA Law, 2009), available at [http://www.law.berkeley.edu/files/In\\_Our\\_Backyard\\_Dec\\_3\\_2009%281%29.pdf](http://www.law.berkeley.edu/files/In_Our_Backyard_Dec_3_2009%281%29.pdf)

## **II. Sustainable Growth**

Sustainable growth of customer-sited generation should be defined to reflect both past levels of growth of distributed generation and the optimal levels and locations of Big distributed generation that will be defined through the process of developing the Distribution Resources Plans.

We are concerned that NEM payments or bill credits based on a blanket calculation of the net value of customer-sited solar projects will not be sufficient to encourage the same level of customer participation that NEM has experienced in the past, nor encourage the location-specific participation needed to fulfill the legislative intent of the Distribution Resources Plans requirements to guide projects to optimal locations. A blanket net value of local solar that only includes direct benefits and costs to ratepayers will likely not be high enough to encourage participation of single-family residential and small commercial projects.<sup>3</sup> On the other hand, projects with high locational value and low project costs will have higher net value to ratepayers.

A diversified portfolio approach that targets optimal locations will make it possible to keep total benefits and costs of the program to the electrical system approximately equal, while offering payments or bill credits for smaller projects that are high enough to encourage participation. Accordingly, NEM 2.0 should support a broad range of customer types and project sizes.

## **III. Locational Value**

Utilities across the country have quantified locational values, such as how local solar capacity may avoid, reduce, or defer the need for additional new transmission capacity. For example, the Long Island Power Authority (LIPA) recently offered a 7¢/kWh premium to 40 MW of appropriately sited solar DG facilities to encourage locational capacity sufficient to avoid \$84,000,000 in new transmission costs that would otherwise be incurred, expecting a net savings of \$60,000,000.<sup>4</sup>

The Clean Coalition is currently working with utilities to leverage advanced grid modeling tools that can provide the basis for interactive Distribution Resources Plans that

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<sup>3</sup> The Clean Coalition has worked with utilities throughout California and across the country to calculate the avoided cost value of local solar to ratepayers. California utilities have generally determined that the avoided cost value to ratepayers of local solar is 14 cents or lower.

<sup>4</sup> Proposal Concerning Modifications to LIPA's Tariff for Electric Service, available at <http://www.lipower.org/pdfs/company/tariff/proposals-FIT070113.pdf>. LIPA's guidance states: "The rate will be a fixed price expressed in \$/kWh to the nearest \$0.0000 for 20 years applicable to all projects as determined by the bidding process defined below, plus a premium of \$0.070 per kWh paid to projects connected to substations east of the Canal Substation on the South Fork of Long Island."

guide distributed energy resources to the best locations on the grid and reduce the uncertainty around costs and timeframes involved in grid interconnection. The Clean Coalition is currently working on the Hunters Point Project, a Community Microgrid Initiative project in collaboration with Pacific Gas & Electric.<sup>5</sup> This project will serve 25% of total energy consumed at the Hunters Point substation in San Francisco with local renewables, balanced with intelligent grid solutions like advanced inverters, demand response, and energy storage. The Clean Coalition uses sophisticated powerflow modeling and cost-benefit analysis tools to help utilities determine how – and precisely where – local renewable energy can be supported in the distribution grid by intelligent grid solutions. The Clean Coalition team works with utilities and modeling tools providers to improve tools for seeing, and planning enhancements for, the distribution grid. For the Hunters Point project, we are working with PG&E’s modeling tool provider CYME. We are also developing standard specifications for modeling tools providers, so that lessons learned from this experience can be applied to any other modeling tool.

#### **IV. Projects Greater than 1 MW, Sizing to Onsite Load**

AB 327 allows projects greater than 1 MW that do not have a “significant impact” on the distribution grid to be built to the size of onsite load if the projects are subject to reasonable interconnection charges under Rule 21. The Clean Coalition recommends interpreting “significant impact” in a manner consistent with the rest of AB 327, including Section 769 of the Public Utilities Code.

Section 769 provides that the utilities shall propose grid investments to support distributed energy resources for inclusion in the ratebase, provided that these grid investments will yield net benefits to ratepayers. To develop these proposals, the utilities would need to determine the optimal locations and amounts of distributed generation that would result in net benefits to ratepayers. Accordingly, any project that does not exceed the amount of feeder capacity made available by such proposed grid investments should be considered cost-effective and not have a “significant impact” on the distribution grid.

Whether an individual project has a positive or negative impact on the distribution grid should depend on both the characteristics of the individual project and its position in the queue for available capacity. For example, if there is only 500 kW of cost-effective capacity for distributed generation on a feeder line section, then a 1 MW project that may export more than 500 kW to the grid should not be allowed to proceed. However, the 1 MW project should be allowed to proceed if it has a maximum export capacity of 500 kW, enforced with a breaker to limit export. So long as exports to the grid remain within the cost-effective capacity, such exports should be considered to have positive impacts on the grid.

Further, to maintain consistency with the AB 327 requirements to optimize locational

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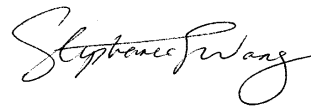
<sup>5</sup> For more info, see <http://www.clean-coalition.org/our-work/community-microgrids/>

value and support sustainable growth of customer-sited renewable generation in a cost-effective manner, the successor tariff should apply to projects sized above onsite load when proposed for preferred locations. Whether a project's grid impact will be positive or negative in light of the utility's Distribution Resource Plan and its plan for meeting Zero Net Energy goals is more important than whether it is sized to onsite load. Current NEM projects are considered sized to onsite load if they zero out the customer's energy bill over the course of a year. Unless generation and onsite load is coincident at all times, such a project would be exporting at some times and would have an impact on the grid.

## V. Disadvantaged Communities

The Clean Coalition recommends consideration of the "Solar for All" model for increasing distributed generation in disadvantaged communities. In 2012, the California Environmental Justice Alliance led a broad coalition to support AB 1990 (Fong), the "Solar For All" bill that would have established a feed-in tariff that would support solar projects 1 MW or smaller on multi-family residential and commercial rooftops, and included local hiring for long-term sustainable jobs.<sup>6</sup> Similarly, UCLA's Luskin Center found that expansion of the Los Angeles Department of Water and Power feed-in tariff could create major benefits of disadvantaged communities.<sup>7</sup>

Respectfully submitted,



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<sup>6</sup> Based on May 30, 2014 email with Strela Cervas (scervas@caleja.org), Co-Coordinator of the California Environmental Justice Alliance, and the 2012 fact sheet for AB 1990 (Fong) "Solar for All", available at <http://caleja.org/wp-content/uploads/2012/04/Solar-For-All-Fact-Sheet-v9.pdf>

<sup>7</sup> UCLA Luskin Center and Los Angeles Business Council, *Sharing Solar's Promise: Harnessing LA's FIT to Create Jobs and Build Social Equity*, available at <http://innovation.luskin.ucla.edu/content/sharing-solars-promise>