BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures, and Rules for the California Solar Initiative, the Self-Generation Incentive Program and other Distributed Generation Issues.	)	Rulemaking 06-03-004

REPLY COMMENTS OF THE UTILITY REFORM NETWORK ON THE DRAFT STAFF PROPOSAL REGARDING REBATE DESIGN AND PROGRAM ADMINISTRATION

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Pursuant to the April 5th and May 9th rulings of ALJ Duda (as modified by the electronic message extending the comment date on May 11th), The Utility Reform Network (TURN) hereby submits its reply comments on the draft staff proposal regarding the design of performance-based rebates and other program administration issues.

I. INTRODUCTION

As stated in opening comments, TURN endorses the goal of structuring a long-term sustainable solar incentive program which maximizes installed capacity and peak production to benefit both participants and non-participants. Consistent with these goals, TURN supports the proposal to apply design standards and performance metrics to incentive allocation. These reply comments pertain to Sections 2.2, Performance-Based Incentives for large systems > 100kW, 2.4, Expected Performance Based Buy Down Incentives for small systems < 100kW, Section 4, Trigger Mechanisms, and Section 5, Funding Levels in the following sections.

II. PERFORMANCE-BASED INCENTIVES (PBI) SHOULD APPLY TO SYSTEMS OVER 100 kW INITALLY AND BE EXTENDED TO COVER SMALLER SYSTEMS AS EXPERIENCE IS GAINED IN SUBSEQUENT YEARS

Many parties recommend system size thresholds much lower than 100kW for PBI eligibility. The Division of Ratepayer Advocates suggests the lowest

threshold at 8kW.[1] Although TURN is not recommending a specific system size threshold, DRA's proposal for an 8kW cutoff appears too low, at least during the early years of the program, and threatens unnecessary market disruption. Systems between 8kW and 30kW are likely to be primarily installed by small business and large residential customers. These customers will face difficulty in financing a PV system with a 5-year PBI payout term. Furthermore, the transaction costs of metering equipment and data collection on the volume of systems 8kW and above promise to be administratively burdensome and costly. After reviewing the comments submitted by other parties, TURN supports an initial rollout of PBI for systems of at least 100kW and encourages the Commission to adopt a decreasing system size threshold as experience with this incentive structure is gained.

III. THE EPBB PROGRAM SHOULD INCLUDE GEOGRAPHIC LOCATION IN THE DESIGN FACTOR RATING

TURN commends the staff for proposing to allocate the rebate based on expected system performance. Consistent with this approach, TURN believes that geographic location, a demonstrated relevant and significant factor affecting performance, should be added to the design factor rating. In opening comments, PG&E noted that insolation variances in California account for an output disparity as much as 25% throughout the state.[2] PV Watts, the National Renewable Energy Laboratory's performance estimation tool, shows that an identically designed and installed 1 kW system in Dagget (1705 kWh / year) generates 29% more kWh / year than a system installed in Arcadia (1209 kWh / year).[3]

[1] DRA Opening Comments (Pg. 3-4)
[2] PGE Opening Comments (Pg. 8)
[3] NREL website: http://rredc.nrel.gov/solar/codes_algs/PVWATTS/

Including geographic location will result in the highest level of production from PV systems at the least cost to ratepayers. The use of geographic variables will allow the Commission to vary incentives based on expected performance – the same outcome sought by moving to PBI awards. TURN strongly agrees with SCE that "The notion that reduced incentives for systems installed in a poor location is somehow a 'punishment' fails to appreciate that the objective of an EPBB is to encourage the installation of systems with maximum value."[4]

In contrast to the difficulties of tracking metered production from smaller systems, geographic location is easily verifiable by zip code, administratively simple, and economical. The Commission should rely on information already complied in the CEC's 2005 Draft Staff Paper on California's Solar Resources to divide the state into territories of various solar potential.[5] The CEC paper divides California into four distinct areas based on NREL's Climatological Radiation Model.[6] The Commission should use this information in combination with publicly available data sources such as PV Watts[7] to set the baseline value at California's median output location. Better-than-average locations would receive a greater rebate, and lower-than-average locations would receive a smaller rebate. Incorporating geographic location into the design factor is consistent with TURN's goal to structure a solar incentive program that maximizes installed capacity and peak production at the lowest possible cost to all ratepayers.

[4] SCE Opening Comments (Pg. 6-7)
[5] CEC Draft Staff Paper on California Solar Resources, CEC-500-2005-072D, April 2005 (Pg. 5 – 9)
[6] Maxwell, E.R. George and S. Wilcox, *A Climatological Solar Radiation Model,* Proceedings of the 1998 Annual Conference, American Solar Energy Society, Albuquerque, New Mexico
[7] NREL website: http://rredc.nrel.gov/solar/codes_algs/PVWATTS/

IV. THE EPBB PROGRAM SHOULD NOT DECREASE THE DESIGN FACTOR RATING FOR WEST-FACING SYSTEMS

Westward panel orientation offsets grid demand during peak load periods (late afternoons). Therefore, TURN agrees with PG&E's proposal that systems oriented west not be deterred by a lower design factor rating.[8] The Commission should hold that systems oriented between 180 and 270 degrees will receive equivalent design factor ratings on the orientation line item.

V. CONTRACTORS APPLYING FOR THE EPBB REBATE SHOULD BE REQUIRED TO WARRANTY SYSTEM PERFORMANCE FOR ONE YEAR

TURN supports the concept, identified by the City and County of San Francisco (CCSF), that contractors be obligated to warranty system output.[9] However, the five year time period proposed by CCSF creates disproportionate responsibility on installers for the consequences of ongoing maintenance activities fully within the control of the customer. Host customers play an important role in maximizing output over time by maintaining and cleaning the system as appropriate for their specific site and system orientation. Dirt accumulation on the PV module surface is location and weather dependent, with greater soiling losses (up to 25% for some California locations) for high-traffic, high-pollution areas with infrequent rain.[10]

In order to balance the relative responsibilities of installer and customer, TURN recommends that the Commission require installers to provide a one-year

[8] PGE Opening Comments (Pg. 3-4)
[9] CCSF Opening Comments (Pg. 2)
[10] NREL website:
http://rredc.nrel.gov/solar/codes_algs/PVWATTS/version1/US/change.html

performance warranty for systems receiving the EPBB rebate in addition to the installation and equipment warranties presently mandated. The Commission should permit installers to provide minimum guarantees of performance which account for weather anomalies in a particular year. For example, the guarantee could be set at 80-90% of expected output in an average year. Guidance can be taken from studies such as Clean Power Markets' (CPM) annual audit that evaluates the accuracy of the estimation tool PV Watts. CPM found, "On average, the results for 2005 were that the PV Watts estimate was higher than the actual production by 9%. But our results from 2005 indicate that actual versus estimated results are more likely to converge when compared over a longer period of time."[11]

The Commission should require that installers supply customers with accurate performance expectations from a standardized estimation tool as a consumer protection measure. The purpose of this requirement is to create installer accountability for initial performance and thereby ensure high-quality solar system installations while limiting the use of substandard parts or poor worksmanship. A one year guarantee, as opposed to the five-year proposal described by CCSF, would prevent this requirement from becoming an excessive or unreasonable burden on the solar industry.

VI. FUNDING LEVELS AND COST ALLOCATION SHOULD REMAIN WITHIN THEIR RESPECTIVE SERVICE TERRITORY AND CUSTOMER CLASS (RESIDENTIAL AND NON-RESIDENTIAL)

TURN urges the commission to guard against cross subsidization in the CSI program design. TURN strongly supports the Consumer Federation of

[11] CPM Opening Comments (Pg. 2)

California's position to allocate rebate funding based on the proportion of distinct residential and non-residential class contributions.[12] In alignment with the Joint Solar Parties' proposal, TURN requests a further division by IOU service territory so regional variances are taken into account.[13] The benefits each customer class and service territory receives from solar rebates should be proportionate to the cost each bears in funding the program.

VII. A VOLUME-BASED TRIGGER SHOULD BE APPLIED TO EACH DISTINCT SERVICE TERRITORY AND CUSTOMER CLASS (RESIDENTIAL AND NON-RESIDENTIAL)

Assigning volume-based triggers by customer class and service territory will result in a market-responsive, self-correcting incentive model. TURN is in alignment with the Joint Solar Parties' position that incentive levels should vary by customer class and utility service territory based on the MW volume of solar installations.[14] Differentiating the trigger metric by service territory and customer class protects the availability of funding in each individual market and allows for each distinct market to respond to incentive levels appropriately and independently. Separating volume triggers in this manner will ensure large commercial entities do not drive residential rebates down beyond the level the residential market will tolerate.

[12] CFC Opening Comments (Pg. 29)
[13] Joint Solar Parties Opening Comments (Pg. 3)
[14] Joint Solar Parties Opening Comments (Pg. 9)

VIII. THE PBI APPLICATION PROCESS SHOULD DISTINGUISH BETWEEN PUBLIC AND PRIVATE ENTITY REQUIREMENTS FOR OBTAINING A CONDITIONAL RESRVATION

TURN recognizes the difference between public and private sector project development and agrees with the City and County of San Francisco that distinct treatment for obtaining a conditional reservation is warranted.[15] Because public entities are required by law to engage in an open bidding and review process, proof of a Request for Proposal (RFP) should satisfy the criteria for receiving a conditional reservation. A conditional reservation should be granted to private sector projects once an application fee is received. SDREO states that the implementation of the application fee (0.5% of requested incentive amount) has decrease the drop out rate in their service area from 30% to 3%.[16] TURN finds the RFP and application fee requirements satisfactory for awarding conditional reservations to public and private entities.

IX. THE PBI PROGRAM SHOULD BASE VOUME TRIGGERS FOR REBATE REDUCTION ON CONDITIONAL RESERVATIONS

TURN urges the Commission to adopt deployment based triggers attached to conditional reservations. The SGIP 'stop-and-go' cycle and drop-out rate have caused considerable market disruption in the commercial sector and tremendous burdens in managing funding levels. Establishing significant requirements for obtaining conditional reservations shows commitment by the requesting party. Attaching deployment triggers to conditional reservations will result in adequate fund management and clear understanding of market demand, essential elements to the success of the CSI program.

[15] CCSF Opening Comments (Pg. 4)
[16] SDREO Opening Comments (Pg. 7)

Respectfully submitted,

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