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*Sent via email to EDTariffUnit@cpuc.ca.gov on 9/5/13*

ED Tariff Unit
Energy Division
California Public Utilities Commission
505 Van Ness Avenue
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**Re: Comments of the Interstate Renewable Energy Council, Inc. on Draft Resolution E-4610 (Commission determination authorizing net energy metering (NEM) aggregation pursuant to Senate Bill 594 (Wolk, 2012))**

To the ED Tariff Unit:

The Interstate Renewable Energy Council, Inc., (IREC) appreciates the opportunity to comment on Draft Resolution E-4610 (Draft Resolution) regarding the Commission determination of whether to authorize net energy metering (NEM) aggregation pursuant to Senate Bill 594 (Wolk, 2012) (SB 594).

IREC is a non-profit organization that works to enable greater use of clean energy in a sustainable way by (i) introducing regulatory policy innovations that empower consumers and support a transition to a sustainable energy future, (ii) removing technical constraints to distributed energy resource integration, and (iii) developing and coordinating national strategies and policy guidance to provide consistency on these policies centered on best practices and solid research. As part of this work across the nation, IREC has worked to identify best practices in the area of NEM, including NEM aggregation, and has participated in proceedings in multiple states to provide support to regulators on implementing NEM aggregation policies.

IREC generally supports the Draft Resolution and its Findings and Conclusions to authorize NEM aggregation. IREC does, however, feel that it is necessary to address several statements in the Draft Resolution regarding the potential costs of implementing and administering NEM aggregation. IREC suggests that it is important that the Commission clarify or acknowledge that its reliance on the 2010 NEM Cost-Effectiveness Evaluation (E3 Study) is illustrative and that current rate structures and alternate valuation methodologies might create an even more compelling case that NEM aggregation will not impose new costs beyond the current NEM program.

## I. The Draft Resolution Findings and Conclusions Adequately Justify the Commission's Determination to Implement NEM Aggregation Pursuant to SB 594

IREC ultimately agrees with the Draft Resolution that NEM aggregation will not create additional cost to the NEM program. In support of this position, the Draft Resolution makes several key assumptions: (1) that the NEM program is limited in size (and thus in impact) by the statutory program cap under current NEM practices and with the addition of NEM aggregation pursuant to SB 594; and (2) NEM aggregation will be primarily used by non-residential customers and can be expected to require larger systems than traditional, residential NEM, which will, in turn, increase the proportion of large systems to small systems in the NEM program. IREC believes these assumptions are sound and are consistent with the experience in other jurisdictions that have already implemented NEM aggregation.

### *A. SB 594 requires a determination on the impact of NEM aggregation on the NEM program as it exists at the time of determination, or before September 30, 2013.*

First, it is intuitive that the size of the NEM program, at the time of the Draft Resolution, is static in terms of comparing what the NEM program looks like with or without NEM aggregation. The existing NEM cap only allows NEM up to 5% of an Investor Owned Utility's (IOU) aggregate customer peak demand and this does not change with SB 594. More important, however, is the fact that the Commission's determination to allow NEM aggregation is fixed in time and must be decided by September 30, 2013. The Legislature does not expect the Commission to predict the future or to speculate on whether NEM will be a capped or uncapped at some time in the future, or to revisit the determination to make NEM aggregation operative. The determination of whether NEM aggregation will become operative, and thus the law of the land, is clearly intended to be a one-time occurrence.[1] Thus, the assumption that the NEM cap is in place and is still effective as of September 30, 2013 is a valid assumption for purposes of the required determination.

### *B. It is reasonable to assume that non-residential customers are likely to employ larger NEM systems because those customers are likely to have larger aggregated loads than residential customers with multiple meters.*

Second, the assumption that NEM aggregation will largely be utilized by larger, non-residential customers, who are likely to install larger systems on average, embraces common sense and is consistent with anecdotal evidence IREC has witnessed in jurisdictions that already have NEM aggregation in place. The Draft Resolution correctly points out that NEM aggregation is likely to have the most appeal to "agricultural, commercial, industrial, institutional, and government customers" who are more likely to have more than one meter under common ownership on a property and the desire to take advantage of the convenience and efficiency of NEM aggregation. In IREC's experience, these customer types are typically discouraged from participating in NEM where rules would require a dedicated system be attached to each meter. NEM aggregation has an appeal to farmers and vineyard operators who have diverse loads over a sprawling property. Often the only way to make NEM feasible to meet such customers' total load is by achieving

[1] *See* Senate Floor Analysis of SB 594, August 31, 2012, *available at* http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0551-0600/sb_594_cfa_20120831_222756_sen_floor.html (noting the appropriations committee's estimate that the bill would cause a "one-time cost of about $150,000 (special fund) for the Public Utilities Commission to undertake a proceeding to determine whether the bill would increase costs for non-participating ratepayers.").

economies of scale through installing a single, large system designed to meet all on-property load. Additionally, NEM aggregation is a natural accommodation for government customers, who often face rigid procurement processes or have other transactional barriers that increase the burden and expense militating against installing multiple, single-meter NEM projects. With both of these examples, the appeal of NEM aggregation is that it allows systems to be sized beyond the immediate metered load and that it allows customers with large total load to benefit from economies of scale. IREC suggests that it is entirely reasonable for the Commission to assume that uptake of NEM aggregation systems will be greatest in non-residential sectors and that systems installed by non-residential customers through NEM aggregation will be larger, on average, than residential NEM systems.

## II. The Draft Resolution Should Clarify that E3's 2010 NEM Cost-Effectiveness Valuation Possibly Overestimates the Cost-Impacts of NEM on Non-Participating Customers.

While IREC supports the ultimate conclusion reached by the Draft Resolution that the Commission should authorize NEM aggregation because it will not add costs to the NEM program, IREC suggests that it is important for the Commission to clarify or provide a caveat to its reference to the 2010 E3 Study. Specifically, the Draft Resolution cites several findings from the E3 Study as relevant to its conclusion that non-residential systems will cause less of an impact than residential systems that feature outdated cost-shift figures[2]:

1. "NEM costs ratepayers approximately $20 million per year on a 20-year annualized basis for the fleet of solar PV installed through the end of 2008.
2. Due to lower non-residential rates, non-residential NEM projects cost non-participating ratepayers comparatively less per kWh of exported generation than residential customers: the levelized net total cost of non-residential NEM facilities averages $0.03 per kWh-exported, compared to an average $0.19 per kWh-exported for residential facilities [citation omitted].
3. As of 2008, NEM solar non-residential generators supplied approximately 56% of the capacity enrolled in the NEM program, but accounted for just 10% of the total cost of the solar NEM program."

IREC agrees with the thrust of the Draft Resolution's conclusion; it is well understood that commercial NEM systems tend to be more cost-effective from the programmatic standpoint. However, the Draft Resolution fails to point out that the E3 Study was conducted when the upper-tier residential rates in California were at historic highs and that Pacific Gas & Electric's NEM billing and administration costs were disproportionately higher than the other IOUs.[3] IREC

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[2] Draft Resolution at p. 4.

[3] Beach, Thomas and McGuirre, Patrick, *Re-evaluating the Cost-Effectiveness of Net Energy Metering in California* (Crossborder Study) at p. 5 (noting that two-thirds of the purported cost-shifts were in PG&E's territory and were likely tied to high residential upper tier rates) (2012), *available at* http://votesolar.org/wp-content/uploads/2012/01/Re-evaluating-the-Cost-effectiveness-of-Net-Energy-Metering-in-California-1-9-2012.pdf.

recommends that the discussion of the E3 Study on page 4 of the Draft Resolution be modified in the following manner to reflect this important fact:

> "Energy Division reviewed the findings of the 2010 NEM Cost-Effectiveness Evaluation as a primary source of information on the non-participant costs of NEM, but notes that the numerical values reflecting those costs were based on rates in effect at the time of the study, which were significantly higher than currently effective rates for upper tier consumption. While the extent of cost shifts may have reduced significantly since 2010, ~~S~~several findings from the 2010 study regarding the relative costs of residential and non-residential NEM systems are relevant to this Resolution [citation omitted]:"

In 2012, Crossborder Energy published a study to update the 2010 E3 Study results with more current assumptions about billing costs and rate design[4] and found that non-residential NEM systems can actually provide an identifiable net benefit when the assumptions about rate design and rate levels were updated.[5] IREC suggests that the Commission modify the Draft Resolution to recognize that this alleged cost shift of $0.03/kWh has not been substantiated under existing rates and that it is logical to expect any subsidy to be lower, for both residential and non-residential NEM, given the changes in rate design and upper-tier rate levels since 2008. At a minimum, IREC suggests that the Commission should modify the Draft Resolution to recognize that alternate valuations, such as the Crossborder Study, raise questions about the continuing validity of the 2010 E3 Study's numbers describing the extent of any cost-shift associated with NEM on non-participating customers.

For purposes of issuing a Draft Resolution that authorizes NEM aggregation, however, IREC views the Commission's reliance on the E3 Study as merely illustrative. Indeed, the Draft Resolution acknowledges that an updated version of the study is imminent, which is likely to have far greater detail and consideration of sensitivities to important assumptions. IREC encourages the Commission to modify the Draft Resolution to include the specific caveats that the information referenced from the E3 Study is illustrative, without accepting absolute values in that study as a finding of the Commission. The Draft Resolution makes this explicit caveat in Finding and Conclusion No. 6, but not for Finding and Conclusion No. 5. Accordingly, IREC suggest the following modification to Finding and Conclusion No. 5:

> The 2010 Net Energy Metering Cost-Effectiveness Evaluation found that, ~~A~~as of 2008, net energy metered solar non-residential generators supplied about 56% of the capacity enrolled in the net energy metering program, but were responsible for just 10% of the total cost of the program. A 2012 update of that evaluation conducted by Crossborder Energy suggests the possibility that non-residential NEM customers may actually be providing a net benefit to non-participating customers.

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[4] Crossborder Study at pp. 7-8 (discussing how drastic reductions in PG&E's upper tier rates from 2008 to 2011, from approximately $0.50/kWh to $0.33/kWh, dramatically improved the overall cost-effectiveness of NEM across all IOUs because "[t]wo-thirds of the NEM cost shift calaculated in the E3 NEM Study was tied to PG&E residential customers…").

[5] Crossborder Study at pp. 11-12 (showing that NEM is cost-effective and produces a positive net value for a full range of commercial customers on PG&E's schedule E-19).

## CONCLUSION

IREC appreciates the Commission's work to present a solid justification for authorizing and requiring the IOUs to provide NEM aggregation pursuant to SB 594. The Commission makes highly defensible assumptions regarding the parameters of its determination, as the statute requires the Commission to determine if NEM aggregation would add costs to NEM as it currently exists. IREC agrees that, in its experience, NEM aggregation primarily appeals to larger, non-residential customers that are likely to take service under schedules with lower retail rates and, thus, the policy is likely to impose less costs on non-participating customer for exported kWhs, or is likely to provide additional benefits, as described in the Crossborder Study. IREC strongly supports adoption of the Draft Resolution with modifications to note that the 2010 E3 Study rests on assumptions that possibly overstate the cost impacts of NEM on non-participating customers. The Commission should clarify that the E3 Study is used for illustrative purposes and that the E3 Study's particular quantitative findings are not adopted by reference herein as formal findings of the Commission. Additionally, IREC recommends that the Commission make reference to alternative valuations—in particular the Crossborder Study—to recognize that non-residential NEM may actually provide a net benefit to non-participating customers.

Respectfully submitted this 5th day of September, 2013,

/s/

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Service Lists: R.12-11-005 and R.10-05-004