



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

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Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for the California Solar
Initiative, the Self-Generation Incentive Program
and Other Distributed Generation Issues.

RULEMAKING 12-11-005
(Filed November 8, 2012)

**SUPPLEMENTAL REPLY COMMENTS OF THE CALIFORNIA CLIMATE
AND AGRICULTURE NETWORK ON THE ASSIGNED
COMMISSIONER'S RULING REGARDING THE ESTABLISHMENT OF A
NET ENERGY METERING TRANSITION PERIOD**

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Dated: January 6, 2014

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I. INTRODUCTION

In response to a request for an extension of comments on the ACR Regarding the Establishment of a Net Energy Metering Transition Period, Administrative Law Judge Katherine MacDonald informed Susannah Churchill (Vote Solar Initiative) and Randy Littaker (PG&E) by email that a single round of responses to reply comment documentation would be accepted until January 6, 2014.

In accordance with ALJ MacDonald’s extension, the California Climate and Agriculture Network (CalCAN) submits this response to the reply comment documentation entered by the IOUs (PG&E, SCE, and SDG&E).

**II. IOU ANALYSES ARE UNACCEPTABLY INCONSISTENT WITH ONE ANOTHER
AND DO NOT AGREE WITH THE IOUS’ PROPOSED PAYBACK PERIODS.**

In Appendices to their reply comments dated December 23, 2013, PG&E, SCE, and SDG&E each submitted data and analyses intended to demonstrate measures of ‘payback period’

for solar PV systems currently taking part in the Net Energy Metering (NEM) program. The pertinent data characteristics of each analysis were as follows:

- PG&E’s analysis was prepared by Navigant Consulting, Inc. Navigant utilized installation data obtained from the California Solar Initiative (CSI) database, as well as data from E3’s NEM Ratepayer Impacts analysis.
- SCE’s analysis was prepared by The Brattle Group. Brattle utilized data from an ‘SCE NEM Database’, which included a combination of CSI installation data and “proprietary data specific to SCE customers”.¹ It also used data from E3’s NEM Ratepayer Impacts analysis.
- SDG&E’s internally-produced analysis features what is apparently proprietary SDG&E information, as well as some data from the E3 analysis.

The calculated estimates of ‘payback periods’ given in each of these analyses differed significantly by utility. Commercial systems installed in 2010, for example, were estimated to break even in 9-18 years according to SDG&E (depending upon the commercial rate schedule), 15 years according to SCE (for systems larger than 10 kW), and 11 years by PG&E’s calculations.² These differences in calculated break-even period presumably result partly because of differences between rates and customers in each IOU’s service area, but also because of the different methodologies they used in defining and calculating the concept of ‘payback period’. This is precisely what many parties expected when they noted in Opening and Reply comments

¹ SCE Reply Comments at 17.

² See SDG&E Reply at 11, SCE Reply at 22, and PG&E Reply at 25.

that ‘payback period’ is a measure incapable of providing a fair and consistent transition for current NEM customers.

Also, as many parties noted in their Opening and Reply comments, any generalized calculations of ‘payback period’ — such as those submitted by the IOUs — are dependent upon the average or median time until ‘payback’, which necessarily excludes a percentage of customer-generators who made ‘reasonable’ assumptions in deciding to invest in their renewable energy systems. This is demonstrated by PG&E/Navigant’s own analysis in Figures 3-2 and 4-2.³ These payback probability density function models clearly predict a notable percentage of systems in each ‘vintage year’ achieving payback *after* the 2023 transition date PG&E proposes.

It is worth noting that, in some cases, even the ‘average’ system is not allowed full payback in the IOUs’ current proposals — for example, SCE calculates a 15-year payback period for large commercial systems installed in 2010, but would have those systems lose their NEM 1.0 status in 2023: a full 2 years before their calculated break-even date.⁴

III. METHODOLOGIES DEFINE ‘PAYBACK PERIOD’ FAR TOO NARROWLY, AND THE DATA USED IS INSUFFICIENT FOR THESE PURPOSES.

CalCAN finds that the methodologies and data used in all three of these analyses do not adequately allow for measures of ‘reasonable expected payback period’ as set forth in statute, and as intended by the Legislature. Parties’ Opening and Reply comments in this proceeding raised a number of issues with generalized calculations of ‘payback period’, and we find most of these concerns to be inadequately addressed by the IOU analyses.

³ PG&E Reply at 40 and 50, respectively.

⁴ SCE Reply Comments at 2 and 22.

With respect to the data used, we find that the CSI database does not include all of the variables parties consider relevant to a proper calculation of payback period.⁵ Parties have also argued that data used in the E3 analysis is already outdated, and therefore object to its use in determining a transition period before its merits have been fully debated in this context.⁶

What follows is a list of the variables that parties argue must be considered in calculating ‘payback period’, but which the IOUs’ methodologies and data do not all sufficiently take into account:

- Financing method and terms⁷, including interest on loans taken out to install the system.
- Commercial (mainly agricultural) customers’ individual expectations under Time-of-Use tariffs, based on their particularized energy usage patterns (which factor heavily in system design).⁸
- Credit impacts if money was borrowed to install the system.⁹
- Personnel time and costs to oversee installation and management of the system.¹⁰
- Opportunity costs of time and financial resources directed towards an RE installation instead of other investments.¹¹

⁵ A Glossary of all terms and variables included in the CSI Working Data used in the analyses can be found at: http://csi.powerclerk.com/ProgramDocs/CSI/PowerClerk_Glossary.pdf

⁶ See, e.g., CalSEIA Reply at 3; SEIA/Vote Solar Reply at 8-9.

⁷ See Récolte Energy Reply at 3.

⁸ See Farm Bureau Reply at 4.

⁹ See Farm Bureau Opening Comments at 5.

¹⁰ See Farm Bureau Opening Comments at 5.

¹¹ See Farm Bureau Opening Comments at 5.

- Installation and interconnection costs beyond the ‘eligible system costs’ reported through CSI data.¹²
- Lower than anticipated energy generation, or higher than expected maintenance and operation costs,¹³ risks which a customer-generator might have ‘hedged’ through reliance on the NEM 1.0 tariff long past the expected simple payback period.

These are just some of the variables — many of which are highly particular to individual customer-generators’ situations, but are closely considered when designing and installing a system — not adequately captured by the IOUs’ analyses. We maintain our contention, echoed by a majority of parties in both Opening and Reply comments, that ‘payback period’ is therefore an extremely problematic and inadequate measure on which to base the length of the transition.

IV. CONCLUSION

As put forth in our Opening and Reply comments, we believe the adequate measure of the transition period length to be the Governor’s proposal of expected system life. Agricultural customer-generators often have the most complex situations when it comes to interconnection, maintenance and operation, actual vs. expected generation, actual vs. expected usage, and any other number of factors that they consider when making any kind of capital investment in renewable energy. Any administratively-feasible measure of ‘payback period’ cannot possibly

¹² See Récolte Reply at 3. The system cost data used in all analyses is derived from the CSI database; the total costs eligible for reporting to that database are restricted by the Incentive Limitations listed in Section 3.4.1 of the ‘CPUC CSI Program Handbook’ (available online at: http://www.gosolarcalifornia.ca.gov/documents/CSI_HANDBOOK.PDF).

¹³ See Farm Bureau Opening Comments at 4. Navigant estimates fixed Operation & Maintenance Costs from a 2009 Black & Veatch study which is based on costs in the Midwestern United States. Regardless, the point here is that the risk of higher-than-expected M&O costs might have been considered and accepted by system owners given their reasonable assumptions as to the long-term nature of their NEM contract. The PG&E proposal supported by Navigant’s study would deprive them of that hedge on the risk they were taking.

account for all of these variables, as the IOUs' analyses clearly show. To ignore the reasonable expectations of these customer-generators would be unfair and counter-productive for the reasons set forth repeatedly in Opening and Reply comments by the majority of parties.

Executed this January 6, 2014 in Sacramento, CA

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Adam Kotin", is written over a horizontal line.

Adam Kotin

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