

# NEM Grandfathering

February 19, 2014





# AB327 Requires Significant Changes to NEM

- The CPUC must establish a **transition period** for current customers to move from the existing program to the successor program for NEM
  - AB 327 specifically directs that the CPUC must consider a *reasonable payback period* when developing a transition period for existing customers
  - AB327 does not contemplate that existing customers will be grandfathered for the “life of the system”
- The CPUC is also required to develop a “NEM 2.0”
- Removes cap on NEM capacity and solar-only tariff

Privileged and Confidential

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# Solar Parties' Proposals Perpetuate the NEM Cost-Shift

Proposals for “life-of-system” significantly increase the potential cost-shift over proposals based on reasonable payback

	Years Post 2017	MWs Grandfathered <sup>2</sup>	Cumulative PG&E Cost-Shift During Proposed Grandfathering period (\$ billions) <sup>1</sup>
<i>TURN</i>	<b>3</b>	<b>1,640</b>	<b>\$1.3</b>
<i>ORA</i>	<b>5</b>	<b>1,640</b>	<b>\$2.1</b>
<i>PG&amp;E, SDG&amp;E</i>	<b>7</b>	<b>1,310</b>	<b>\$2.0</b>
<i>SCE</i>	<b>7</b>	<b>1,640</b>	<b>\$2.9</b>
<i>CCSE- &amp; Most solar Parties</i>	<b>20 -30</b>	<b>2,409</b>	<b>\$12.3 - \$18.4</b>
<i>Other solar parties</i>	<b>45</b>	<b>2,409</b>	<b>\$27.7</b>

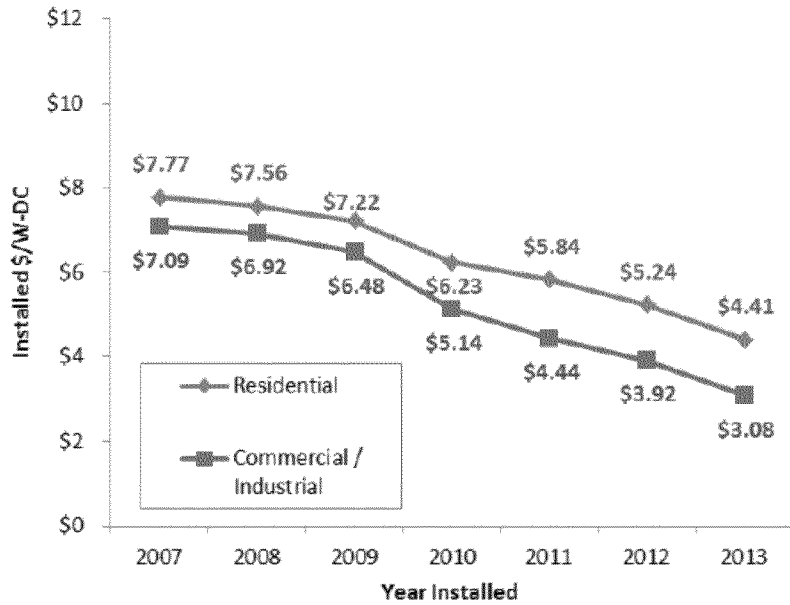
Notes:

1) Calculations rely on Cost-Shift per MW per year in 2017 of \$255,000 from E3 work-papers;

2) Projected volumes are from E3 work-paper projections of year-end volumes, with partial year values interpolated. Proposals from CCSE and solar parties are set at PG&E's NEM Cap of 2409 MW due to expected “gold-rush” from lengthy grandfathering. PG&E and SDG&E's proposal is assumed to result in less megawatts grandfathered than SCE's because of the step-down in grandfathering proposed by the former.

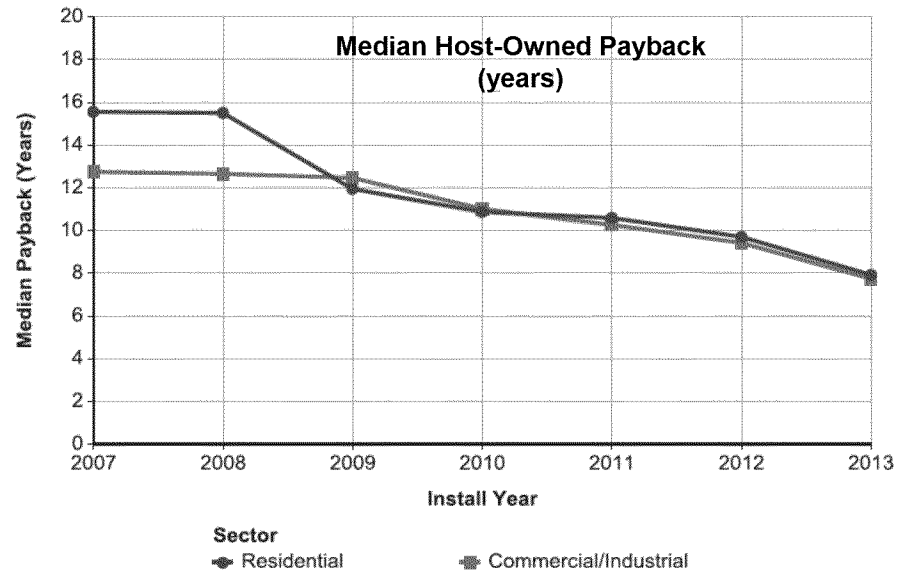


# Basis for 8- to 10-Year Payback Period



- System prices declined 40% over 4 years
- Depreciation savings, scale and tax benefits create differential between res/non-res
- Costs are expected to continue declining (Germany~\$2.35/Watt)

- Lower prices have led to declines in payback period
- Residential and Commercial paybacks converged in 2009 partially due to lifting of the ITC cap for residential systems

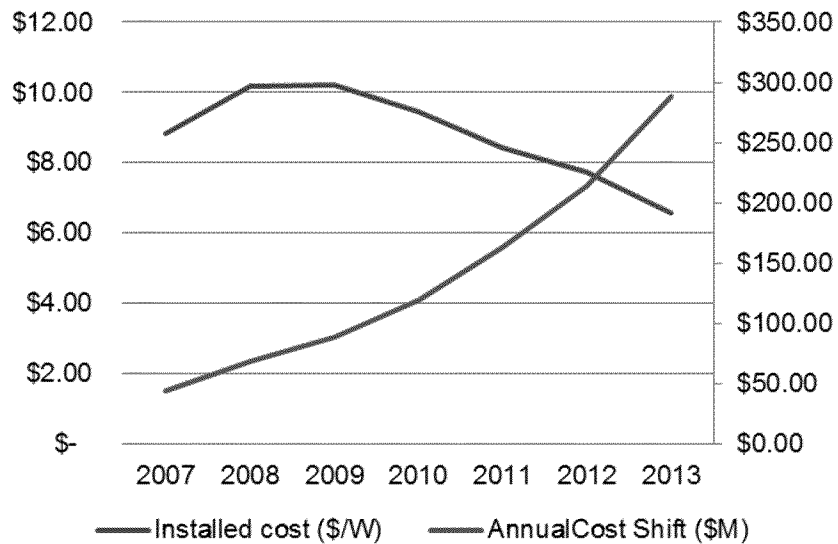




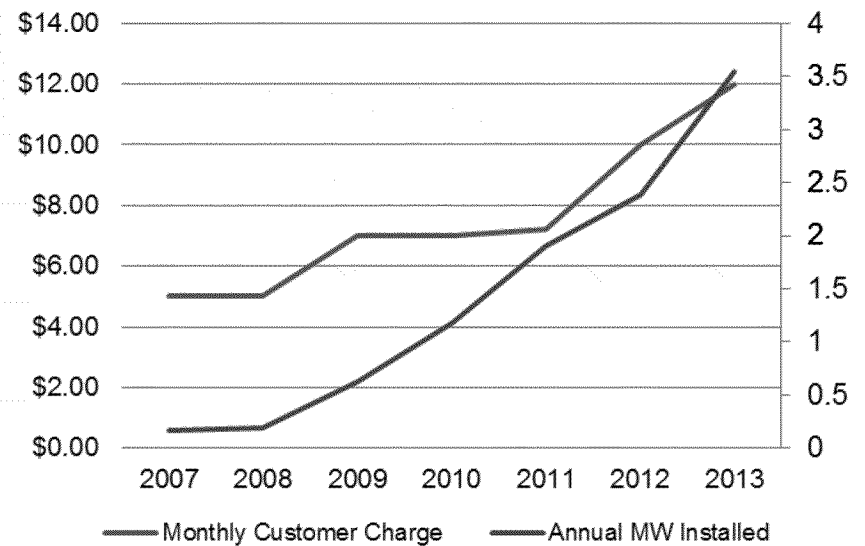
# Market Analysis

- Solar industry's previous claims of market disruption did not materialize
- Decreasing system costs mean it is possible to address cost-shift without market disruption
- It is understandable that solar market wants to preserve (increase) profits, but not at expense of utility customers

**As cost of solar has decreased, no savings have reached nonparticipating customers**



**SMUD has increased customer fixed charge with no decrease in installation rates**







# PG&E's Grandfathering Proposal

Interconnection From	Interconnection To	Customer Transfers to NEM 2.0*	Years on NEM 1.0
<i>Start of NEM</i>	<i>March 30, 2014</i>	<i>January 1, 2023</i>	<i>10 - 25</i>
<i>April 1, 2014</i>	<i>December 31, 2015</i>	<i>January 1, 2020</i>	<i>5 - 7</i>
<i>January 1, 2016</i>	<i>June 30, 2017</i>	<i>NEM 2.0 effective date</i>	<i>1 - 1.5</i>

\* Transition occurs first true-up period following January 1, 2023

- Based on transparent analysis of “reasonable expected payback period”
- Protects all customers and market participants
  - Non-participants are subject to lower cost-shift than under the solar proposals
  - NEM participants recover their costs and continue to benefit under NEM 2.0
- Step-down approach designed to mitigate a gold-rush in 2017
- Reflects legislative direction to base transition period on payback



# APPENDIX



# Understanding NEM Issues

**NEM customers receive retail value for every kWh that is generated**

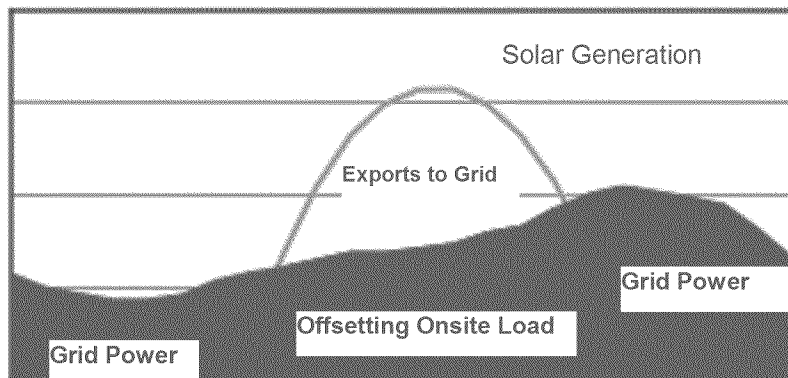
**Other customers only receive the wholesale value of that generation in the form of avoided costs (energy, capacity, RECs, etc.)**

**The difference is a cost shift from participants to nonparticipants**

- fixed costs to serve solar customers are collected through variable rates (which solar customers avoid)

**Most of the cost shift comes from meeting the customer's load**

How NEM Works



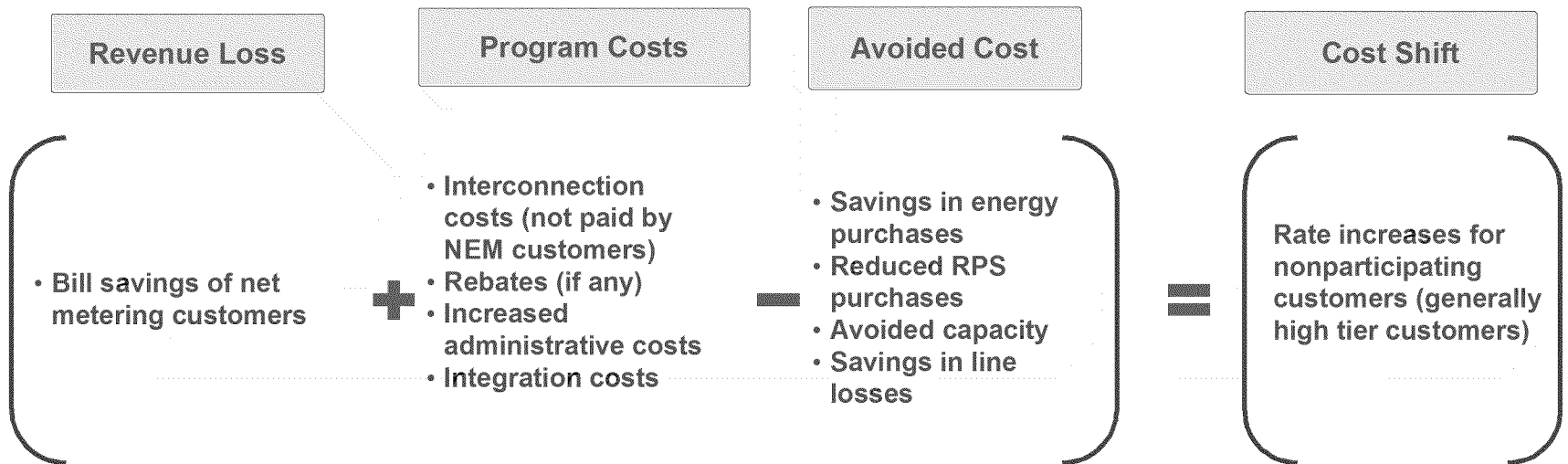
- In residential sector, ~60% of output and ~70% of bill savings come from offsetting onsite load.<sup>1</sup>
- Even for customers that size systems to “zero-out” their bill, most of the bill savings come from offsetting onsite load.





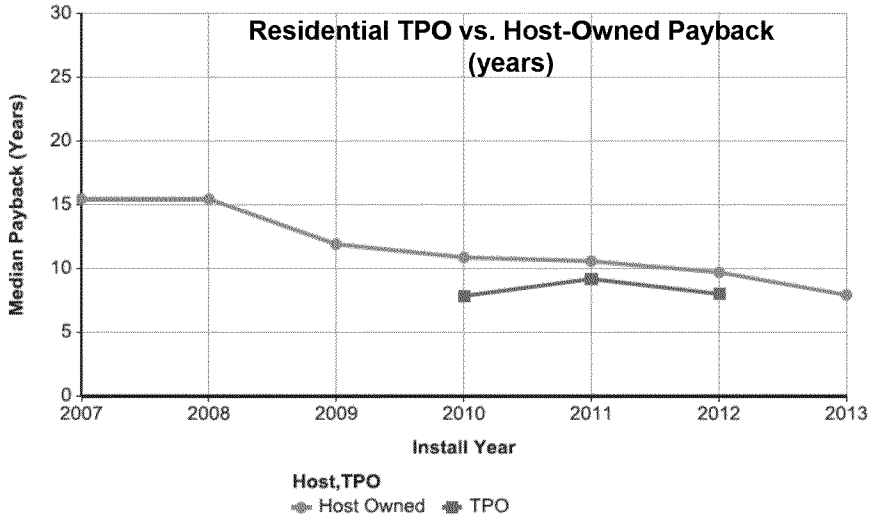
# Net metered customers shift costs to nonparticipants

- Customers on net metering can drastically reduce their contribution to utility revenues.
- The value of the net metered generation for other customers is far less than the reduction in revenues from customers who take advantage of net metering.
- Most of the revenue reduction comes from generation that serves the customer's at-site load
- If customers do not pay for the services they need, their costs are shifted to other customers.

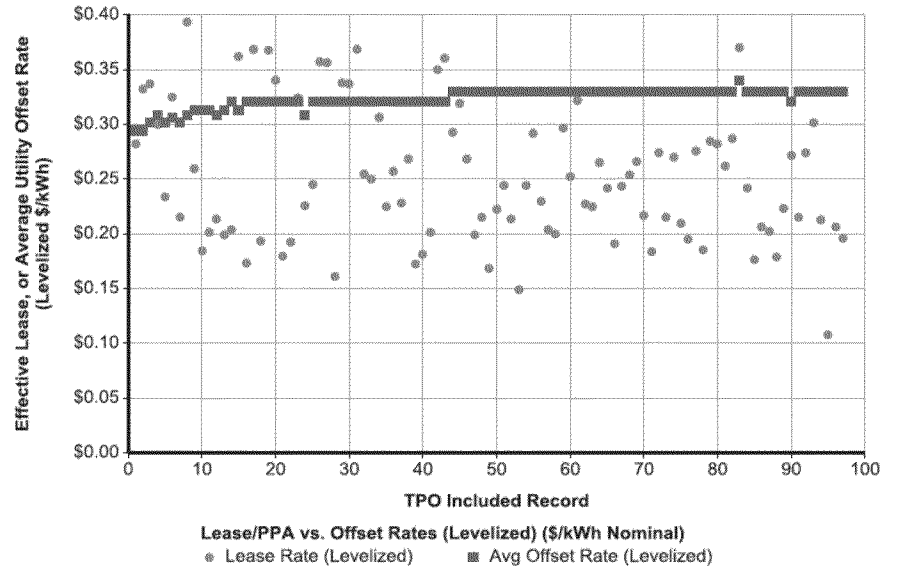
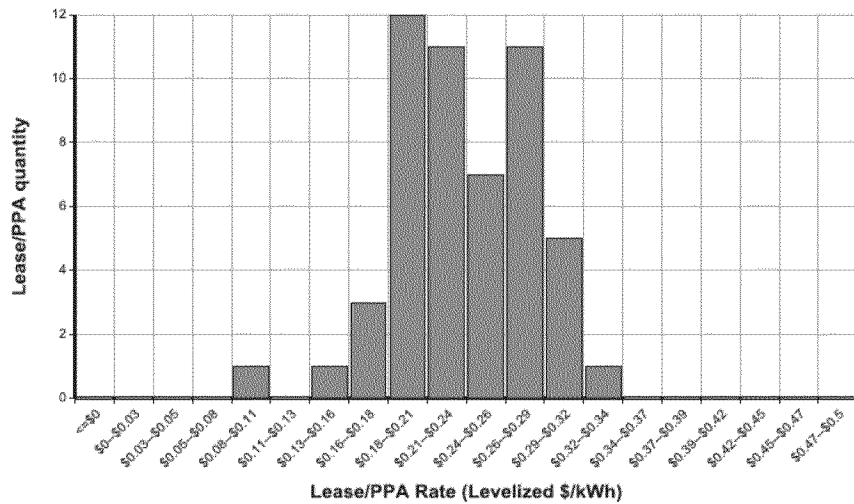




# Residential Third-Party Owned Analysis



- TPO payback lower than host-owned for residential; TPOs are able to monetize depreciation
- TPO arrangements provide immediate savings with little upfront payment
- Required conversion of the lease/PPA into terms that could translate into payback





# Residential adoption is concentrated among high income customers

