

# NEM 2.0

---

Net Energy Metering Issues Under Consideration  
at the California Public Utilities Commission

# Background and Status

- AB 327 says the utilities have to continue offering a tariff for solar customers that enables the solar market to continue to grow.
- The CPUC plans to finalize a decision in January 2016. This likely means they will release a proposed decision in mid-December.
- This only affects future solar customers. Current customers are “grandfathered” on the current NEM rules for the first 20 years of their solar systems.
- The new rules begin for each utility when they reach a 5% cap. This is expected in Spring 2016 for SDG&E, Summer 2016 for PG&E, and Spring 2017 for SCE.
- On the same time frame, the federal Investment Tax Credit (ITC) is scheduled to be reduced from 30% to 10% for commercial customers and to zero for residential customers at the end of December 2016.

# Utility Proposals

Utilities have proposed two main types of changes

1. Reduced compensation for electricity put on the grid
  - Current NEM structure has credits at full retail rates (approx. 18-26 c/kWh)
  - Utilities propose compensation of 4.0-9.7 c/kWh
2. New fees and charges
  - Typical residential customer would pay \$15-\$65 extra per month

# Utility Proposals

- Export compensation
  - PGE: ~ 9.2 cents/kWh
  - SCE: 8 c/kWh
  - SDGE: 4 c/kWh
- Fees
  - PGE: \$3/kW demand charge
  - SCE: \$3/kW installed capacity charge for residential; 2.4 c/kWh for on-site consumption for non-residential
  - SDGE: \$20 fixed charge; \$9/kW demand charge

# Utility Proposals

- Other Components
  - PGE: Monthly netting
  - Large systems pay for distribution upgrades
  - SCE: Standby charges
  - Application fees of \$75-\$280; PGE \$1,600 for >30kW
- Subprograms
  - VNEM for MASH only and low export rate
  - NEMA low export rate; PGE ag only

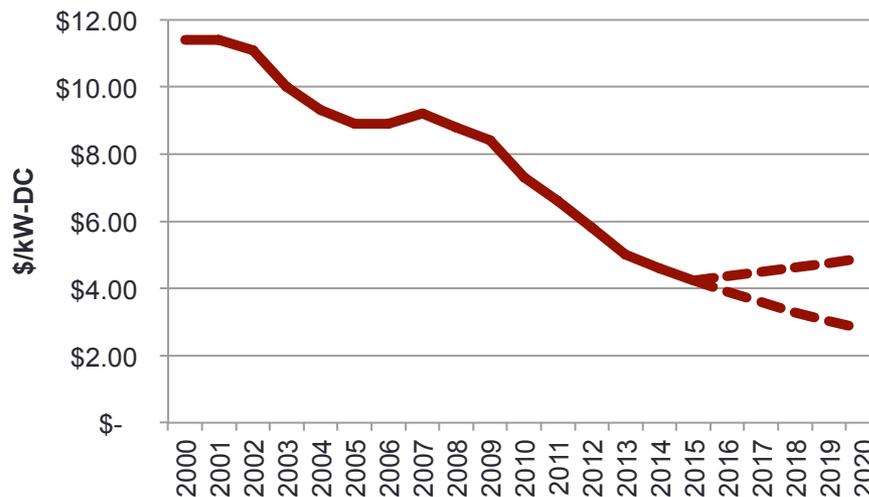
# CALSEIA Proposal

CALSEIA has proposed:

- Create a new fee for solar customers, but not until 2019 when the market has rebounded from changes to the federal solar tax credit.
- Fix virtual net metering for apartment tenants.
- Reconvene in a few years to assess the solar adoption trajectory and projected costs and benefits.

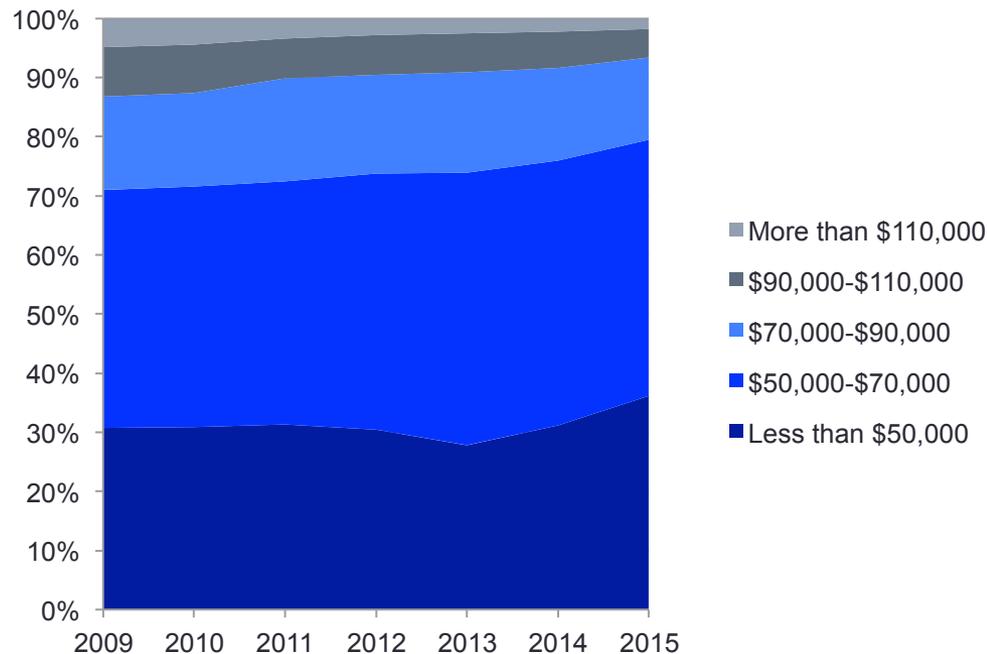
# Solar Price Reduction

Solar prices have declined over time. This is a success story that we must strive to continue. If customer activity diminishes, it will be difficult for companies to maintain or improve efficiencies and bring costs down. It would be foolish to adopt a solar tariff that results in higher costs for solar installations.



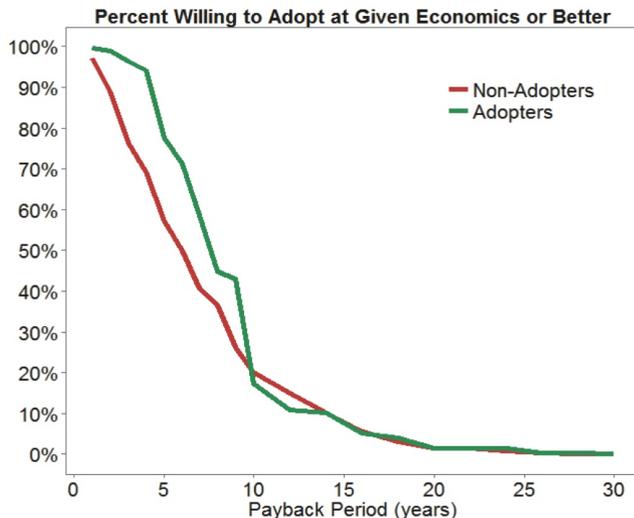
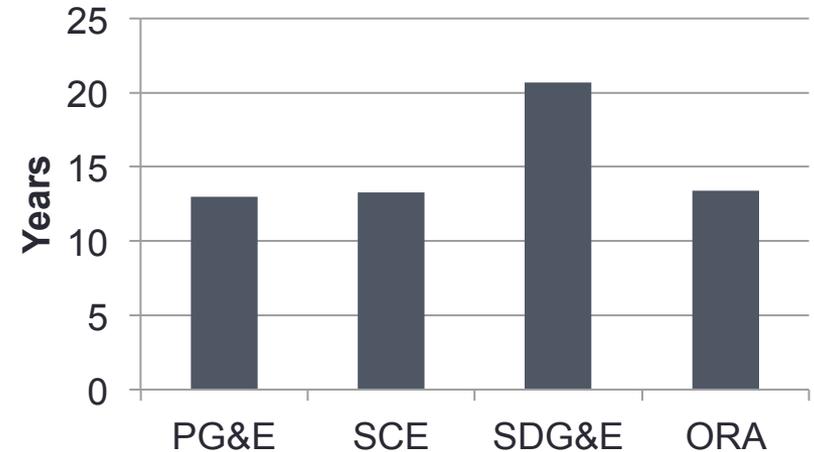
# Neighborhood Diversity

As prices have declined, solar has increasingly been installed in lower income neighborhoods. We should not allow that trend be reversed.



# Capital Recovery Periods

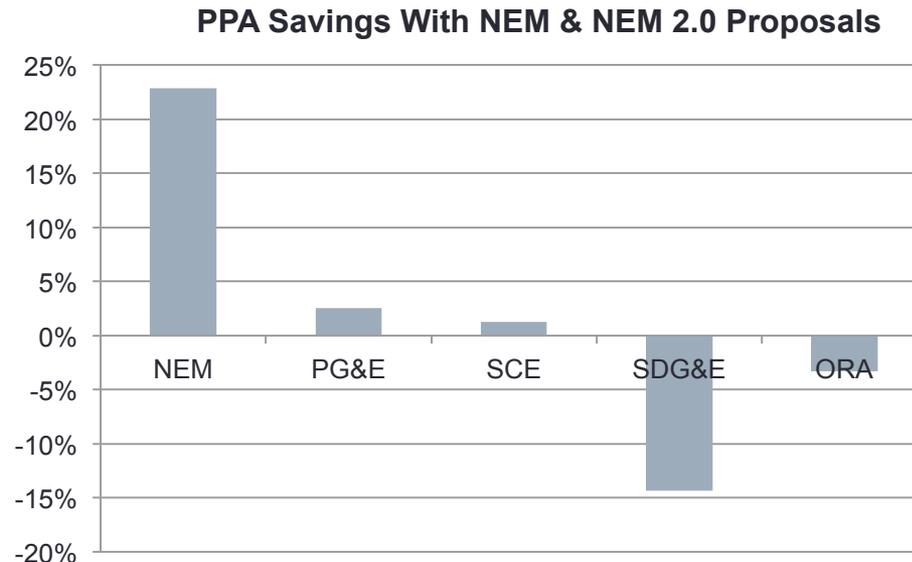
Under the proposals from the utilities and the Office of Ratepayer Advocates, capital recovery periods for an average customer would be 13-20 years.



Research from the National Renewable Energy Labs shows that few customers will consider capital recovery periods beyond nine years.

# PPA Savings

Customers generally will not sign a 20-year contract unless they achieve a bill savings of 10%-20%. Under the utility and ORA proposals, savings for a typical customer are far less from that, and under some proposals customers would lose money by going solar.



# Utility Proposals Rely on Unrealistic Reductions in Solar Prices

Utilities rely on unrealistic price projections to argue that solar will grow under their proposals. They say solar companies have wide margins and can reduce prices at will, despite evidence that the companies with the lowest prices are not profitable.

	Solar Price Projections Used in IOU Proposals (\$/W-DC)	Reduction from Previous Year
2014	\$3.88	23%
2015	\$3.08	21%
2016	\$2.49	19%
2017	\$2.06	18%
2018	\$1.81	12%
2019	\$1.61	11%
2020	\$1.45	10%
2021	\$1.43	2%
2022	\$1.40	2%
2023	\$1.38	2%
2024	\$1.35	2%
2025	\$1.33	2%

PG&E Projected Solar Cost Reduction – <i>NOT</i> Used in Its Proposal	
2014	6%
2015	8%
2016	6%
2017	4%
2018	3%
2019	3%
2020	3%
2021	3%
2022	3%
2023	3%
2024	3%
2025	3%

Actual average 2014 price according to LBNL was \$4.60.

A PG&E analysis that is *not* used in its proposal projects that solar costs will decline much more gradually.

# Gradual Change Is Good Policy

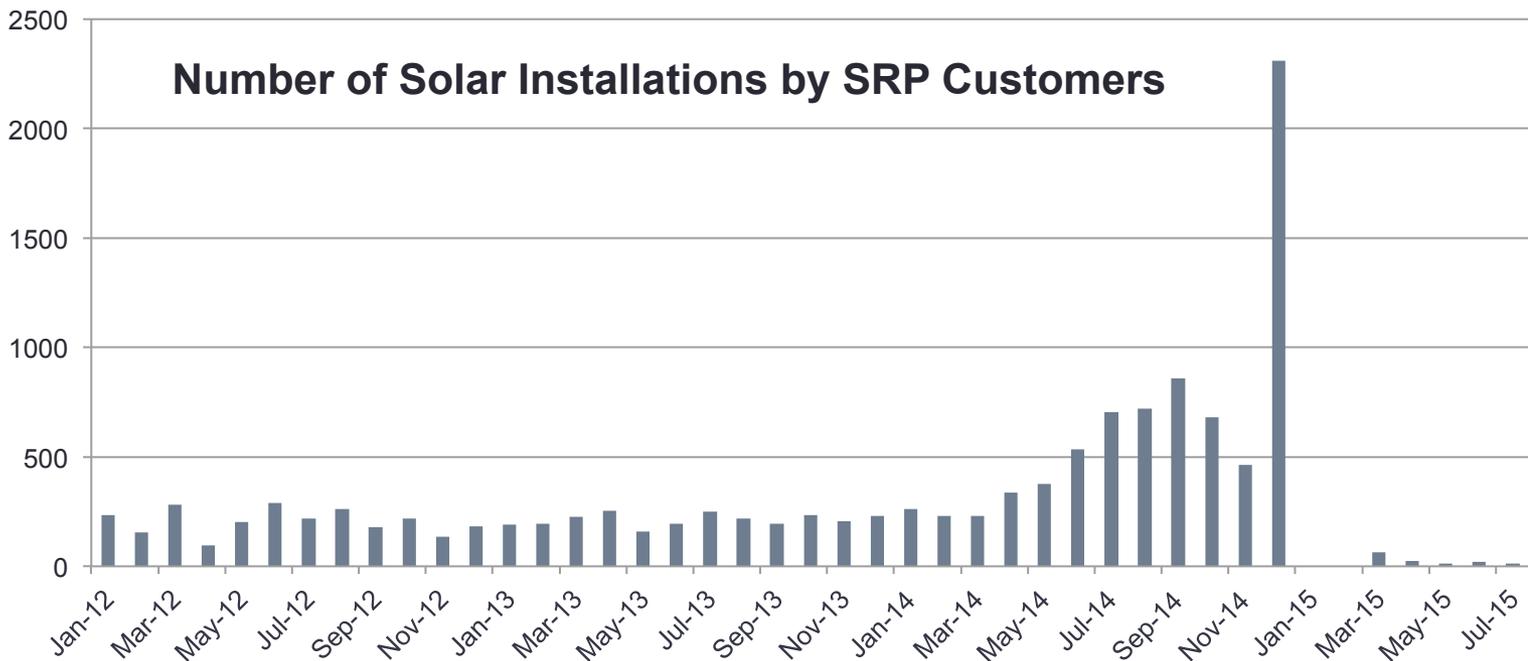
The California Solar Initiative was a success because the stepped reductions in rebate levels were very gradual. In contrast, the ITC will be a shock wave, and the phase-in schedule of the ORA proposal is drastic. Gradual policy changes can be offset by cost reductions, but rapid changes cannot.

**Increase in Solar Price from Policy Change**

	<b>CSI Steps</b>	<b>ITC</b>	<b>ORA NEM Proposal</b>
<b>2008</b>	<b>4%</b>		
<b>2008</b>	<b>4%</b>		
<b>2009</b>	<b>5%</b>		
<b>2010</b>	<b>7%</b>		
<b>2010</b>	<b>7%</b>		
<b>2011</b>	<b>4%</b>		
<b>2012</b>	<b>2%</b>		
<b>2012</b>	<b>1%</b>		
<b>2016</b>			<b>9%</b>
<b>2017</b>		<b>43%</b>	<b>10%</b>
<b>2018</b>			<b>17%</b>

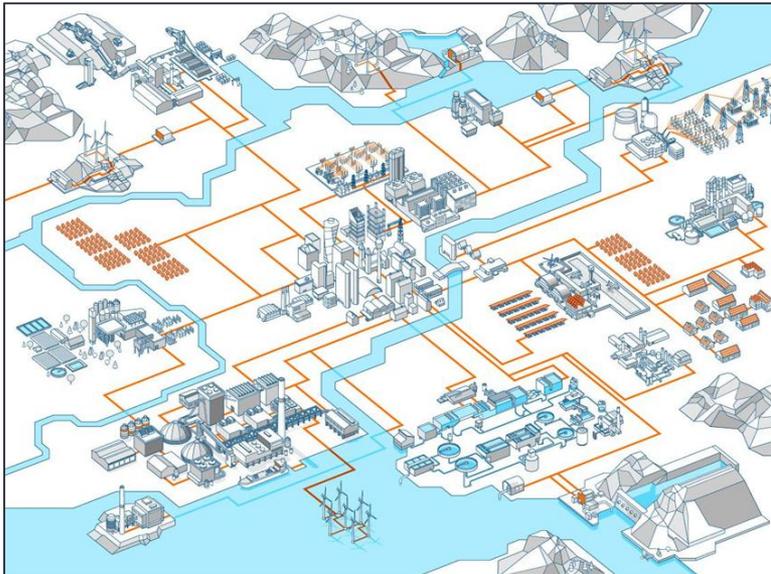
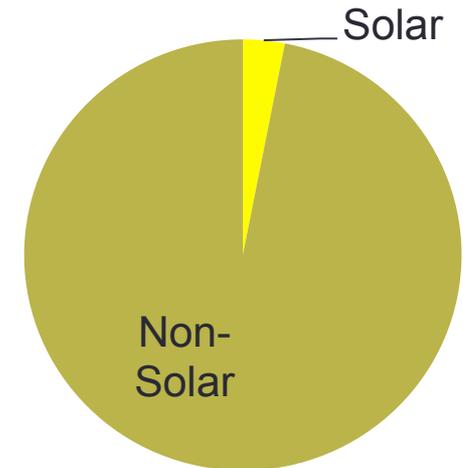
# Lesson from Arizona

Recent experience in Arizona shows that a strong market can vanish from changes to policy.



# More Solar Is Needed for a Smarter Grid

- Currently only three percent of California IOU customers have solar.
- Solar must be much more commonplace if we are to break with the past and create a modern electrical system.



# Bottom Line

- Given the other uncertainties and challenges facing the solar industry, CALSEIA is asking the CPUC to make minimal, if any, changes to net metering until the market recovers from changes to the federal tax credit.
- The state should let residential rate design changes settle in, along with other coming changes such as default time-of-use rates, potential residential fixed charges, and the evolution of energy storage and smart inverters.
- In 2019, regulators will have a much better sense of future grid costs and solar prices, and can make more informed changes to net metering then.

# California Solar Energy Industries Association (CALSEIA)

Bernadette Del Chiaro, Executive Director

916-228-4566

[bernadette@calseia.org](mailto:bernadette@calseia.org)

Brad Heavner, Policy Director

415-328-2683

[brad@calseia.org](mailto:brad@calseia.org)

