

# ***Net Energy Metering***

*Emerging consumer protection issues*

The Utility Reform Network  
October 20, 2016

# *Bill Savings Estimates*

## **Calculating changes to utility rates under NEM 1.0 or under a no-solar scenario**

- Must consider consolidation of tiers from 3 to 2 with a 25% differential by 2019.
- Possible fixed charge of up to \$10/month (+CPI).
- Top tier rate declining significantly (from as high as 40 cents/kWh to mid-20 cents/kWh).

## **Estimating bill savings under NEM 2.0**

- Potential fixed charge of \$10/month (+CPI) or higher (under AB 327).
- Forecasting post-solar bill requires long-term understanding of changes to TOU rates.
- IOUs are offering multiple TOU rate options today.
- TOU periods are evolving and peak will likely shift later into the evening during summer months. Assuming no changes to current peak/off peak periods for 20 years is certainly wrong.
- TOU peak/off-peak rate differentials may grow over time (as “TOU-lite” shifts to “cost-based TOU”), providing lower value for generation and higher rates for consumption during evening hours.

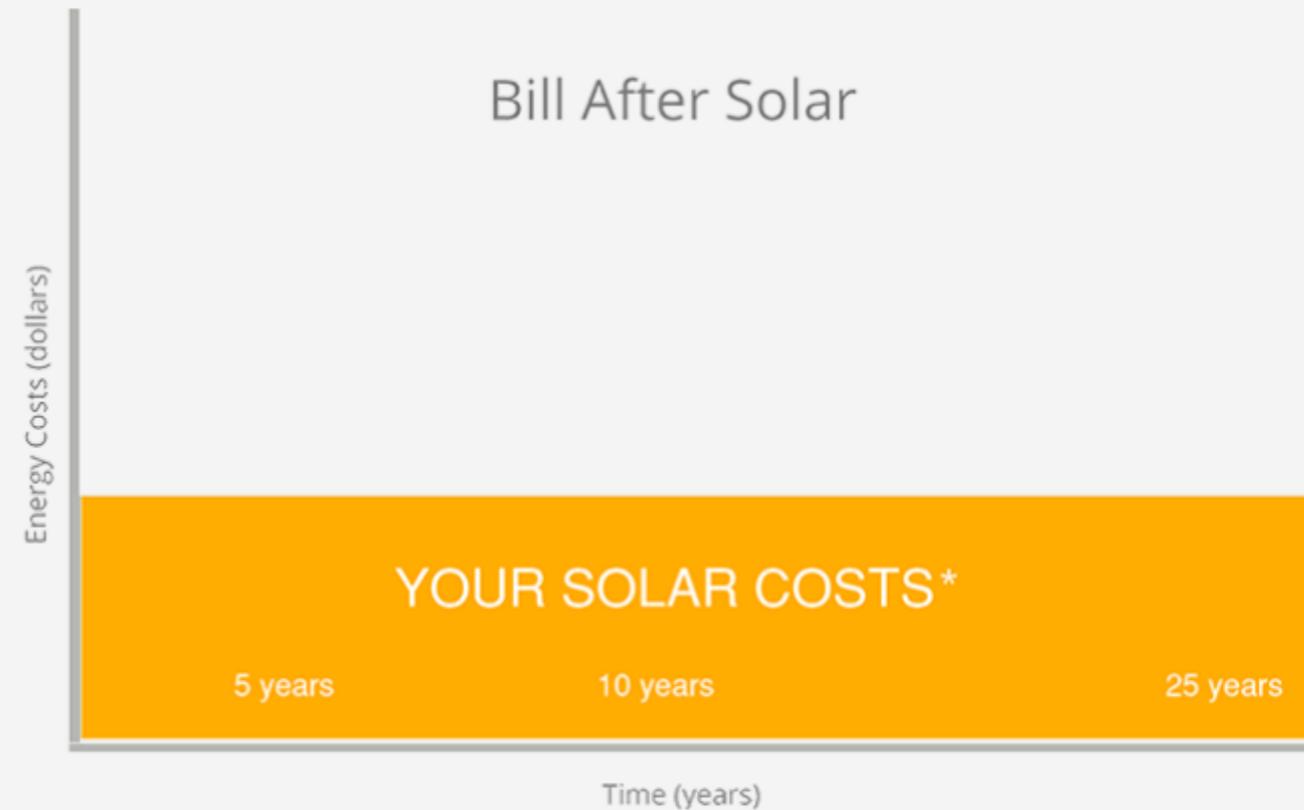
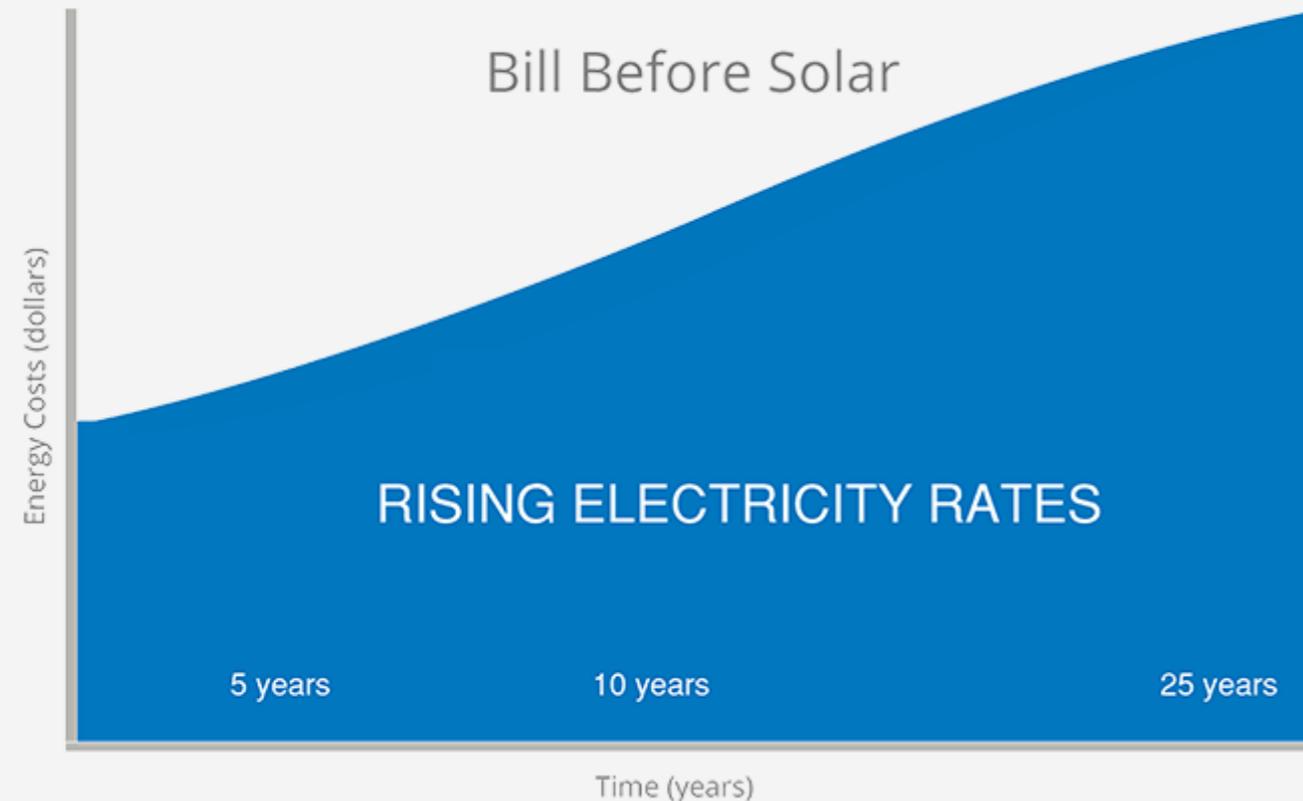
## **Use of historical average rate increases not consistent with reality**

- SunRun assumes 4.75% average rate increase (for PG&E).
- Sungevity escalates utility rates based on last 10 years of state-level data from EIA.
- Calculating of actual non-CARE residential rate escalation since 2006 shows 2.7% average annual increases for PG&E, 3% for SCE, 4.4% for SDG&E.

## **Customers do not have the capacity to understand the caveats**

- Disclosures that “actual savings may vary” due to utility rate changes are lost on 99.9% of customers.
- Every rate change (including elimination of legacy schedules) generates customer complaints.
- Neither solar companies nor utilities can accurately predict long-term savings at this time.

# *SunPower claims v. reality*



When you're relying on your utility company for power, electricity rates typically always go up. They rarely go down. From 2006 to 2012, California utility prices increased 30%\* (LA Times).

This is why going solar with a company and solar panels you can trust is so important. Every year you wait, the cost of electricity continues to rise.

Since we sell the highest producing, longest lasting solar panels on the market with SunPower, many times we can eliminate your entire electric bill even when the competition can't. This means that you are no longer subject to rising electricity rates. Your bill remains steady month to month and year after year, building up your savings over time.

\*Adjusted for inflation.

\*Individual savings may vary, contact us for details.

## **Actual 2006-2012 rate changes**

PG&E residential non-CARE rates increased by 20% (or 4% after adjusting for inflation)

SCE residential non-CARE rates increased by 22% (or 6% after adjusting for inflation)

## **Effect of future rates**

Unless the customer has 100% of consumption offset by solar, they are "subject to rising electricity rates" for both their unmet overall needs and for usage during hours when the solar is not producing.

# *Environmental Claims*

## **Ownership of Environmental Attributes/RECs differs by ownership model**

- If customer owns the system, REC ownership typically belongs to customer.
- Under lease/PPA arrangement, REC ownership typically belongs to solar provider.
- Approximately 48% of CA residential systems recently installed use PPA/lease arrangement.

## **Rights to claim emissions reductions without REC ownership**

- Customer cannot claim that they are supplying their own needs with “solar” energy if the RECs belong to another entity. Customer should not make public claims about environmental benefits.
- Marketing claims made by solar providers do not adequately explain this fact.
- No real enforcement of environmental claims by any state or federal agency.

## **Potential for double counting of emissions reductions**

- Customer believes they are receiving “zero GHG” energy and have reduced their carbon footprint.
- RECs may be used by the solar company to make GHG reduction claims or sold to another entity for regulatory compliance or to make voluntary claims. Ultimate REC buyer makes GHG claims.
- California CCAs and ESPs currently purchase unbundled RECs which, matched with system power, are used to meet RPS requirements and make zero carbon procurement claims to their customers.
- If WREGIS certifies RECs associated with NEM systems under PPA/lease arrangements, rooftop solar RECs can be sold for RPS compliance.

## **Validity of GHG claims to be clarified under AB 1110 (Ting)**

- Directs CEC and CARB to develop a methodology for GHG claims associated with electricity procured by retail suppliers to serve their customers.
- Value of unbundled RECs for making GHG claims will be addressed.
- Claims relating to behind-the-meter solar may be addressed in implementation.

# *Solar Energy Industries Association model disclosures*

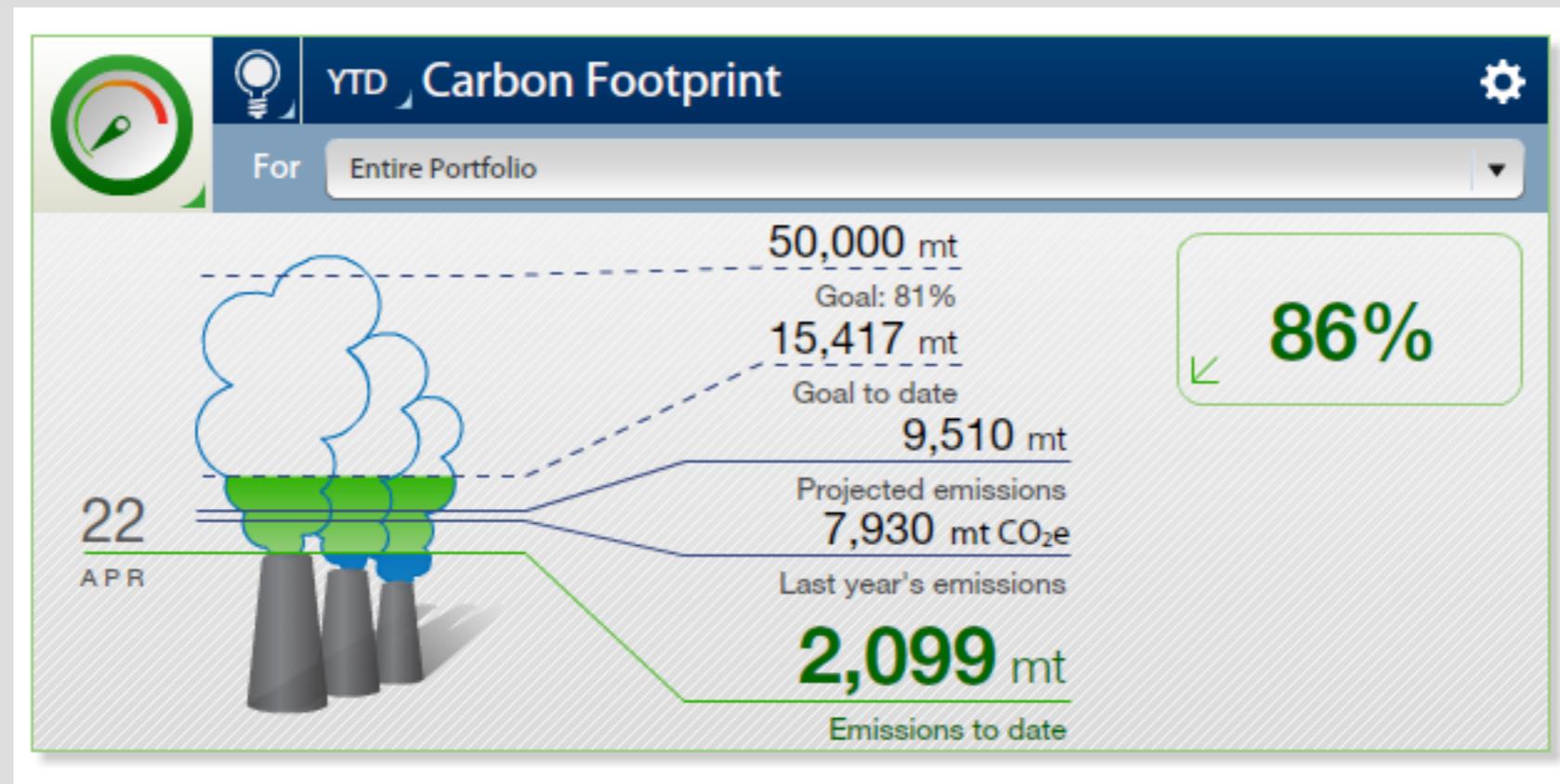
## **Renewable Energy Certificates (RECs) (P)**

Any renewable energy certificates or credits (RECs) from producing renewable solar energy sold under your PPA belong to the owner of the solar system (Provider), not the owner of the property. Provider  **MAY**  **WILL**  **WILL NOT** sell the RECs to a third party. You will not own the RECs to sell, use or claim, and a third party may have the right to claim clean, green or renewable energy based on its purchase of the RECs from your PPA installation. [Optional: Contact Provider if you would like to purchase the RECs from your installation.]

## **Understand Renewable Energy Certificates (RECs)**

RECs or “Green Tags” are tradeable tags representing the renewable qualities of the electricity your solar system generates. RECs were created to encourage and expand the overall growth of renewable energy. In some states, if you own RECs, you can claim you use “green” or “solar” power. Selling or transferring your RECs can help lower the cost of your system, but you may lose the ability to make “green” or similar claims when marketing your home. It’s a complicated topic and solar companies should explain RECs and REC ownership to you if they apply in your state.

# Sunpower EnergyLink measurement of avoided GHG emissions



To better understand how your energy savings positively impact the environment, EnergyLink™ offers you insights over the lifetime of the system on:



# *Solar City 2015 Impact Report Disclosures*

*SolarCity often assumes ownership of the RECs generated by our customers' solar panels. This directly benefits customers by reducing the cost of their solar system and indirectly benefits their neighbors and community by reducing CO2 emissions. While SolarCity assumes ownership of customers' RECs for ease, in most areas we also offer customers the option to buy the RECs if they choose.*

*However, if a customer does not own the RECs, then that customer is not able to sell, use, or claim them; a third party may have the right to claim that it is using clean, green, or renewable energy based on the purchase of the RECs from a customer's system. Regardless of whether a customer owns the RECs, the solar panels on their roof are producing clean energy.*

[http://www.solarcity.com/sites/default/files/SolarCity\\_Impact\\_Report\\_2015.pdf?062916=](http://www.solarcity.com/sites/default/files/SolarCity_Impact_Report_2015.pdf?062916=)

## *Solar City website (FAQs for renewable energy)*

*SolarCity gives you the tools you need to have a positive impact on the environment. By using clean energy from a renewable solar energy system, you can combat greenhouse gas emissions and global warming, as well as reduce our global dependence on fossil fuels. With the installation of your solar power system, you will offset 178 tons of carbon dioxide over 30 years. For comparison's sake, that is like planting 10 football fields full of trees. Imagine how dramatically you can benefit from solar energy and reduce your carbon footprint with SolarCity.*

<http://www.solarcity.com/residential/solar-energy-faqs/is-solar-energy-renewable>