



# Go Solar Santa Cruz

## RESIDENTIAL SOLAR CASE STUDIES

join your neighbors in saving energy and money!



## Garrett & Tara Neier

### WEST SIDE SANTA CRUZ

System Size: 3.92 KW

Type of System:

- \* Number of panels: 16
- \* Panel manufacturer & model: REC Solar REC245PE
- \* Inverter manufacturer & model: Sunny Boy - SMA America SB3000US (240V)

Date installed: February 2013

Estimated solar production per year: 5600kWh

Baseline utility energy usage: 3000kWh

Portion of electricity demand met by system: 100%

Average utility cost at time of installation: about 9 cents/kWh

Average cost of solar electricity over 20 years: 9 cents/kWh

Cost of system before rebate and tax credit: about \$16,000

State rebate amount: about \$632 (Sunrun received this)

Federal tax credit amount: \$4,600 (Sunrun received this)

Type of financing: Leased through 20 year power purchase agreement from Sunrun

Final costs: \$10,739 (paid through monthly billing)



See the City's Residential **Go Solar** brochure and worksheet for a comparison of the advantages and disadvantages of each financing option and guidance on decision-making.

Dreams of installing a hot tub and a promotional campaign by a group of Silicon Valley companies pushed the Neiers off the fence and into a residential solar installation. High tech professionals, Garrett and Tara were already fairly energy conscious, installing energy efficient appliances in their home and a greywater system to irrigate their landscape, and even drying their clothing outside when possible.

In considering solar, the Neiers did their homework by understanding their electricity usage and realized they would soon be exceeding their baseline tier for electricity billing. When Sunrun proposed a 20 year power purchase agreement (PPA), they realized, however, that with only 5 to 10 years left remaining on the life of their current roof, a new roof installation was necessary.

After they installed the new roof, solar system, and that dream hot tub, the Neiers noticed they were producing more electricity than they were consuming. So, when Garrett needed a new commuter car, an electric vehicle just made sense. While they do have natural gas heating, their 16 panel solar PV system covers 100% of their 3-person family's electricity needs.

Because their system is a PPA lease arrangement, Sunrun owns the panels and equipment. They monitor the output and are responsible for maintenance and replacing any parts that fail, including the expensive inverter. The Neiers like that someone else is responsible for these aspects of their system and are very satisfied with their solar experience in Santa Cruz.

Do you have any questions about solar PV installations in the City of Santa Cruz? Contact our Green Building Program Environmental Specialist at (831) 420 - 5124!



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# Tamara & Gerry Doan

## SOQUEL HILLS

- System Size: 3.2 KW
- Type of System
  - \* Number of panels: 16
  - \* Panel manufacturer & model: Kycoera Solar KD234GX-LP8
  - \* Inverter manufacturer & model: Enphase Energy D380-72-240-S1x (8 total microinverters)
- Date installed: November 2011
- Estimated solar production per year: 5,114 kWh
- Baseline utility energy usage: unknown
- Portion of electricity demand met by system: 95%
- Average utility cost at time of installation: 12 cents/kWh
- Cost of system before rebate and tax credit: \$21,816
- State rebate amount: \$1,895
- Federal tax credit amount: \$6,545
- Type of financing: Direct purchase
- Final costs: \$13,376



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Residing on a half-acre lot that slopes 200 feet in elevation means Tamara and Gerry Doan sit right above the fog line most days, which, when combined with the orientation of their house, makes their property a great choice for solar. Seeking a smaller, safer community and higher quality of living by being in close proximity to beaches, mountains and parks, the Doans moved to the Santa Cruz area from LA over a decade ago.

With fruit trees peppering their lot, weekly deliveries of Community Supported Agriculture produce boxes, and other low-impact, local-focused efforts, the Doans were already committed to sustainable urban living. As environmental professionals, the Doans cite their sustainability values and reduced energy costs as the primary factors in why they invested in a solar system. The Doans also were interested in purchasing a system over leasing so they would be able to retain the Renewable Energy Credits associated with offsetting grid produced electricity and face no system

ownership issues if they sold their property.

After getting two quotes, their 16 cell system was installed in the fall of 2011 by a local contractor and is offsetting almost 100% of the electricity the Doans' 2-person household consumes. Tamara says that the system installation was very straightforward, taking only 2 days, and that others considering purchasing a solar system should just do it! Since installation, the Doans have hosed down their panels once and plan to do a cleaning and servicing in 2014. Since the Doans plan to stay in their home for a long time, the estimated 7 year payback means they will be saving money very soon. The Doans monitor their system's performance through a web-based monitoring dashboard, allowing them to make better informed decisions on major equipment purchases, like the electric vehicle they are considering. Tamara and Gerry are happy with their system and look forward to many days of sun and free electricity!

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