



# SOLAR & ENERGY EFFICIENCY FOR HOLLYWOOD RIVIERA HOMEOWNERS



# ROOFTOP SOLAR

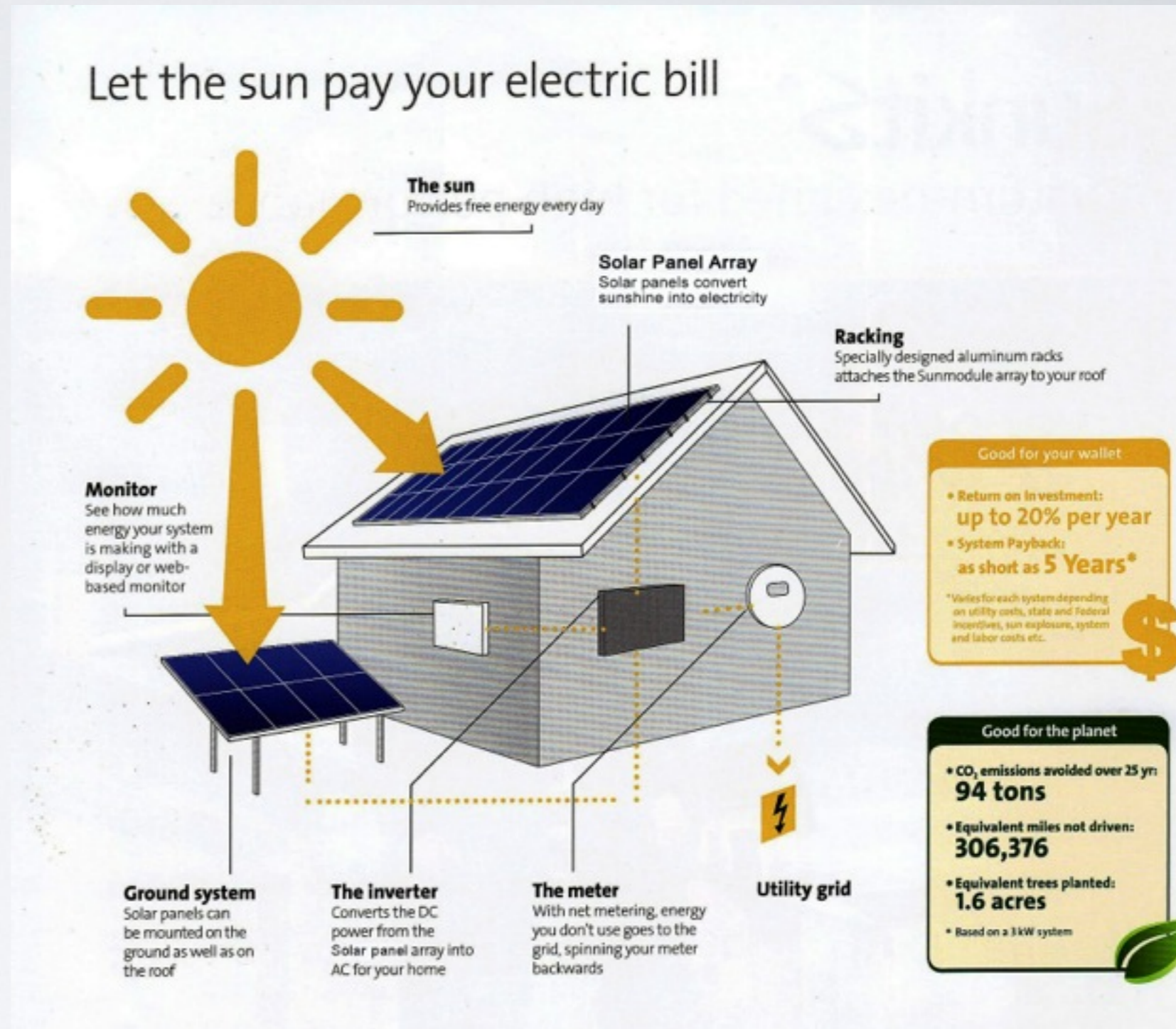
The Renewable Riviera

# WHAT IS SOLAR POWER?

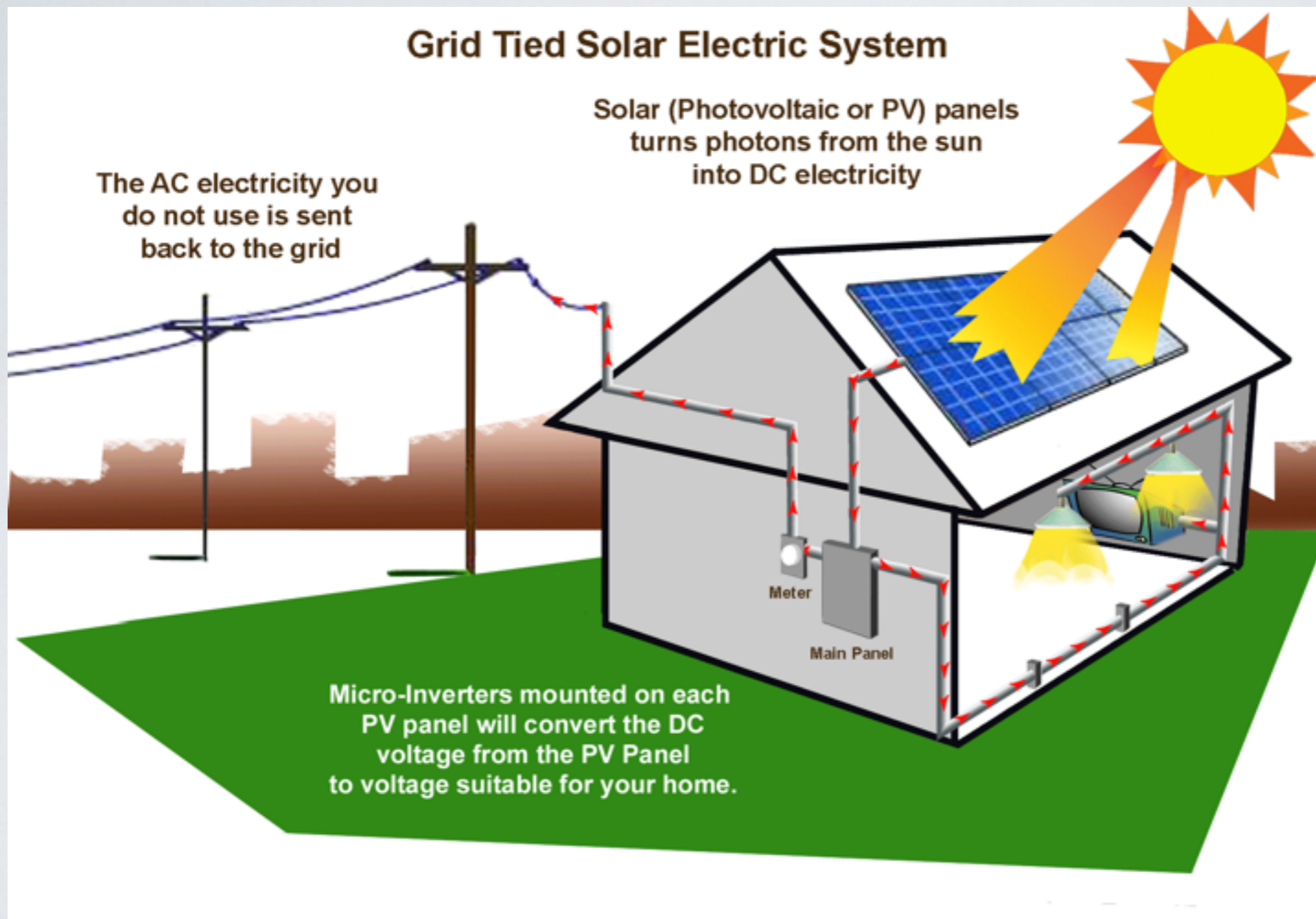
Enough energy from the sun hits the earth every hour to power the planet for a year.

Solar power turns the rays of the sun and turns them into free electricity or free hot water when they shine down upon your roof or ground mounted system.

Your nonpolluting carbon free solar fuel replaces your natural gas, coal or other fossil fuel based fuels.



# WHAT IS SOLAR POWER?



Sunlight is made of energy called photons which radiate out from the sun...

Solar panels are made up of several individual cells, each with a positive and a negative layer. That creates an electric field.

Photons strike the cells, and their energy frees some electrons in the semiconductor material.

The electrons create an electric current, which is harnessed by wires connected to the positive and negative sides of the cell.

The electricity created is multiplied by the number of cells in each panel and the number of panels in each solar array.

# HOW WELL DOES SOLAR POWER WORK?

How well does it work  
in the South Bay?

You'd think the desert -  
like out in Palm Springs  
or Death Valley would  
be best for solar.

It works great due to  
heavy AC and electrical  
use, but...

Heat is the enemy of  
solar efficiency



# HOW WELL DOES SOLAR POWER WORK?

**Cooling breezes help keep PV working at top efficiency.**

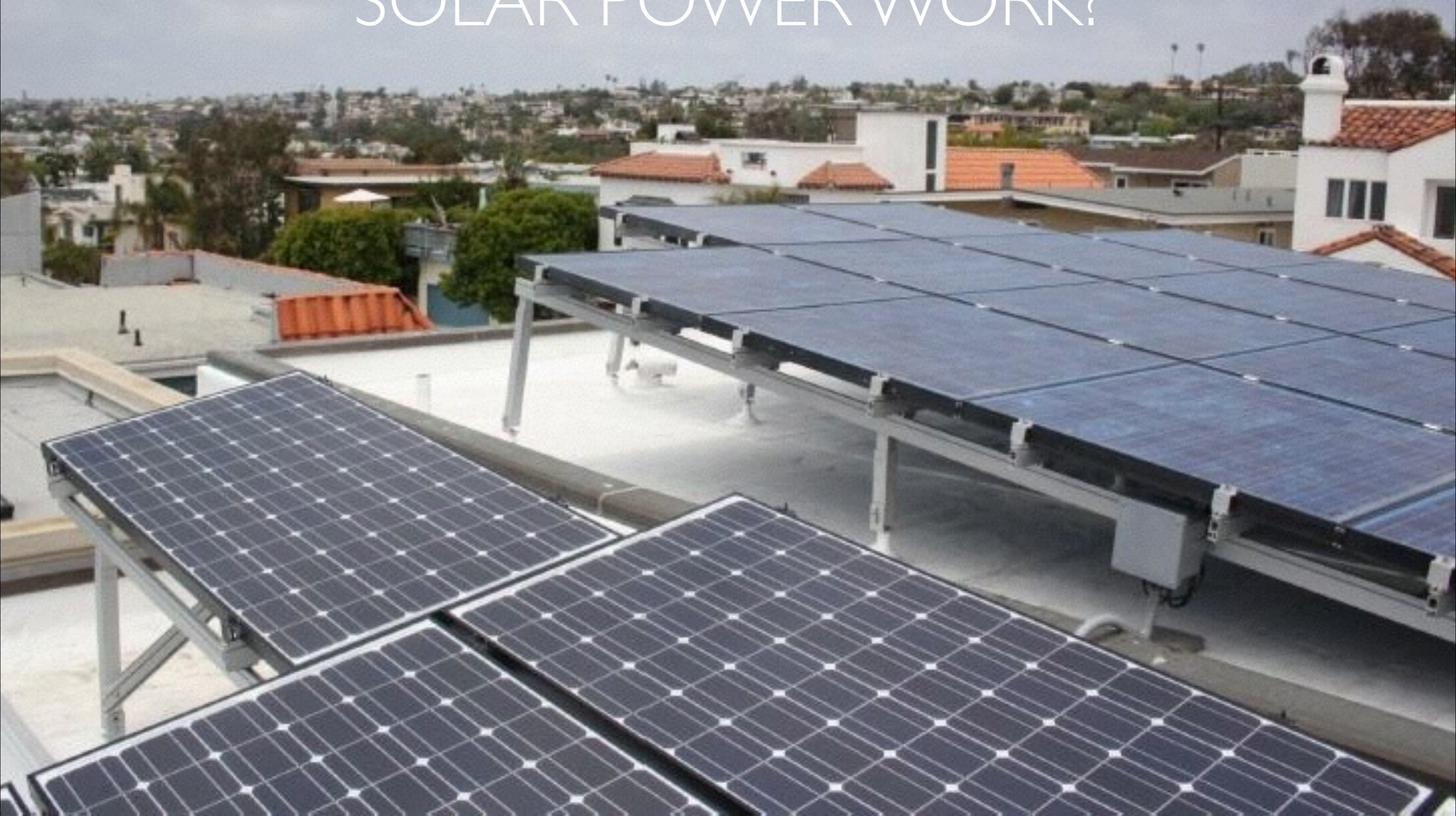
**Solar power is generated even when sun is diffused through  
marine layer.**



# HOW WELL DOES SOLAR POWER WORK?

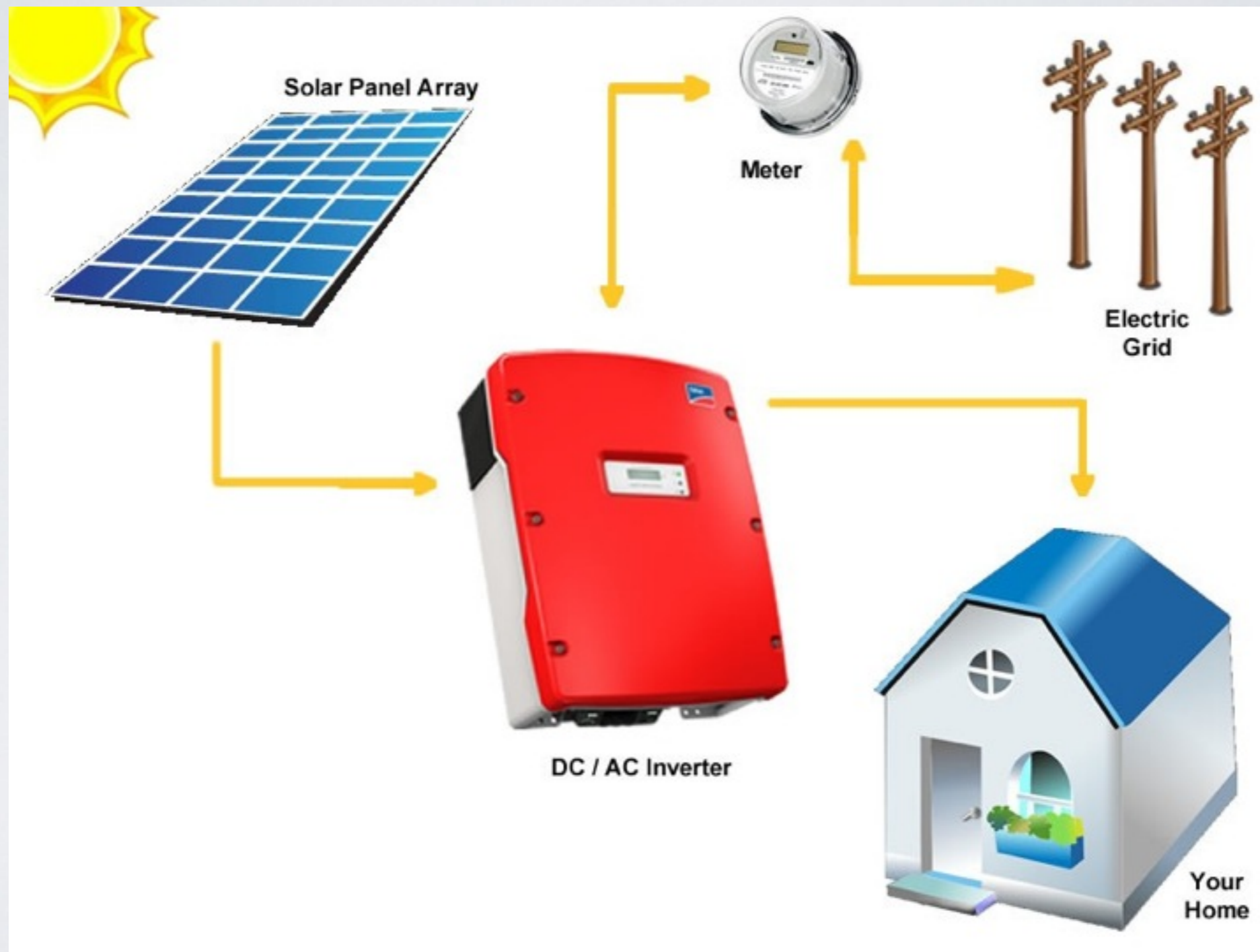


# HOW WELL DOES SOLAR POWER WORK?

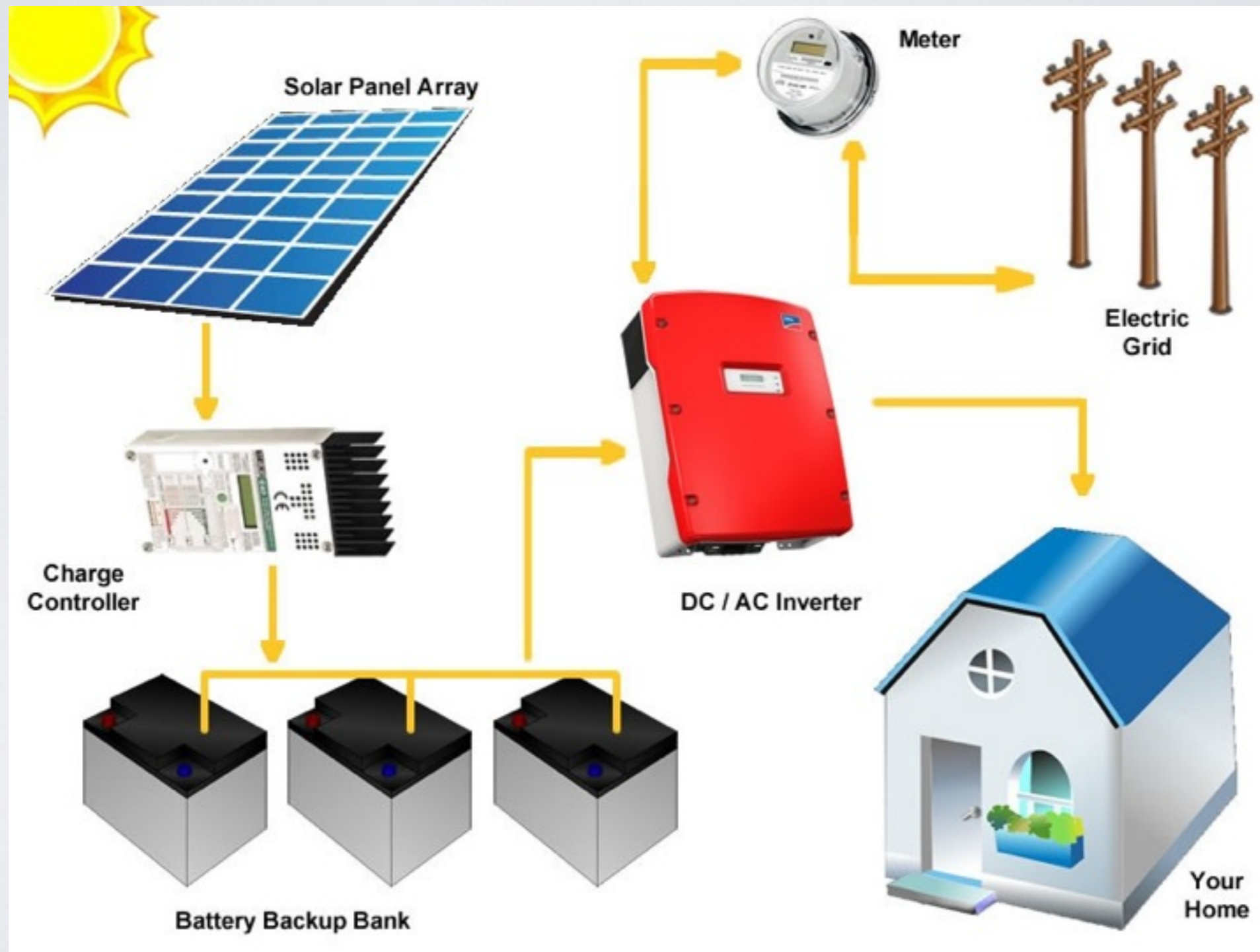




# GREEN THE GRID OR GO IT ALONE?



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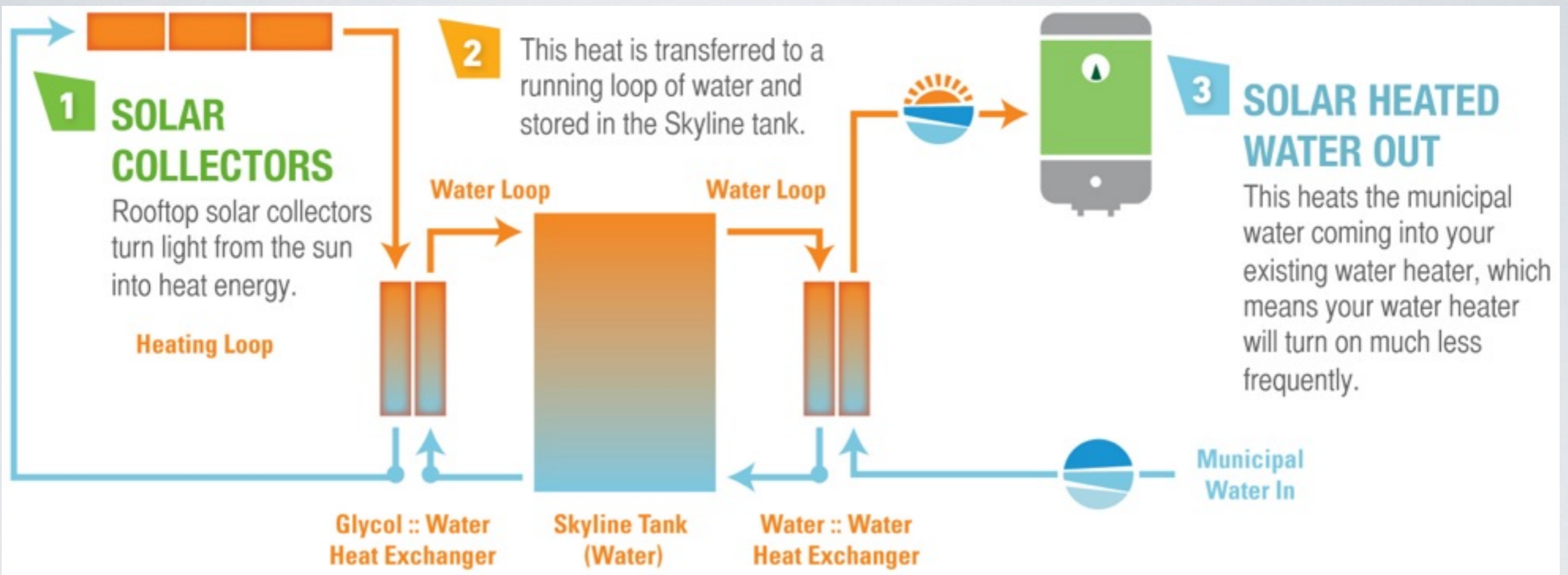
# SOLAR HOT WATER



# SOLAR HOT WATER



# SOLAR HOT WATER



SOLAR THERMAL HOT WATER SYSTEMS HEAT ALL THE WATER YOU USE IN YOUR HOME FROM THE HEAT OF THE SUN

# SOLAR HOT WATER FOR YOUR POOL OR SPA

## HOW IT WORKS

The fuel from the sun is being used to do TWO primary jobs with the Amazing Solar Hot Tub Kit.

- Power a 12v circulation pump (solar electric)
- Heat the water (solar thermal)

Basically we take water from your hot tub to the 12v circulation pump. This pump operates at 3 to 5 GPM (gallons per minute) depending on the size of the solar electric panel (bigger panel, more flow) and how much sun is hitting said panel. The pump we use can move water as high as 60 feet of head. It requires more power to go higher. Our 68 watt solar electric panel does really well up to 20 feet of head.

The Solar Thermal panel(s) now come into play. The water from the circulation pump is pushed thru the solar thermal panels and this is where we gain the heat in the water. The Amazing Solar Hot Tub Kit features a 4' x 20' solar thermal panel. This 80 sq. ft. panel is rated at 80,000 btu in heating power. Once the water is pushed thru the Solar Thermal Panels it is returned to your hot tub. At peak sun we find up to a 30 degree F increase in temperature from the hot tub source to the return solar heated water.



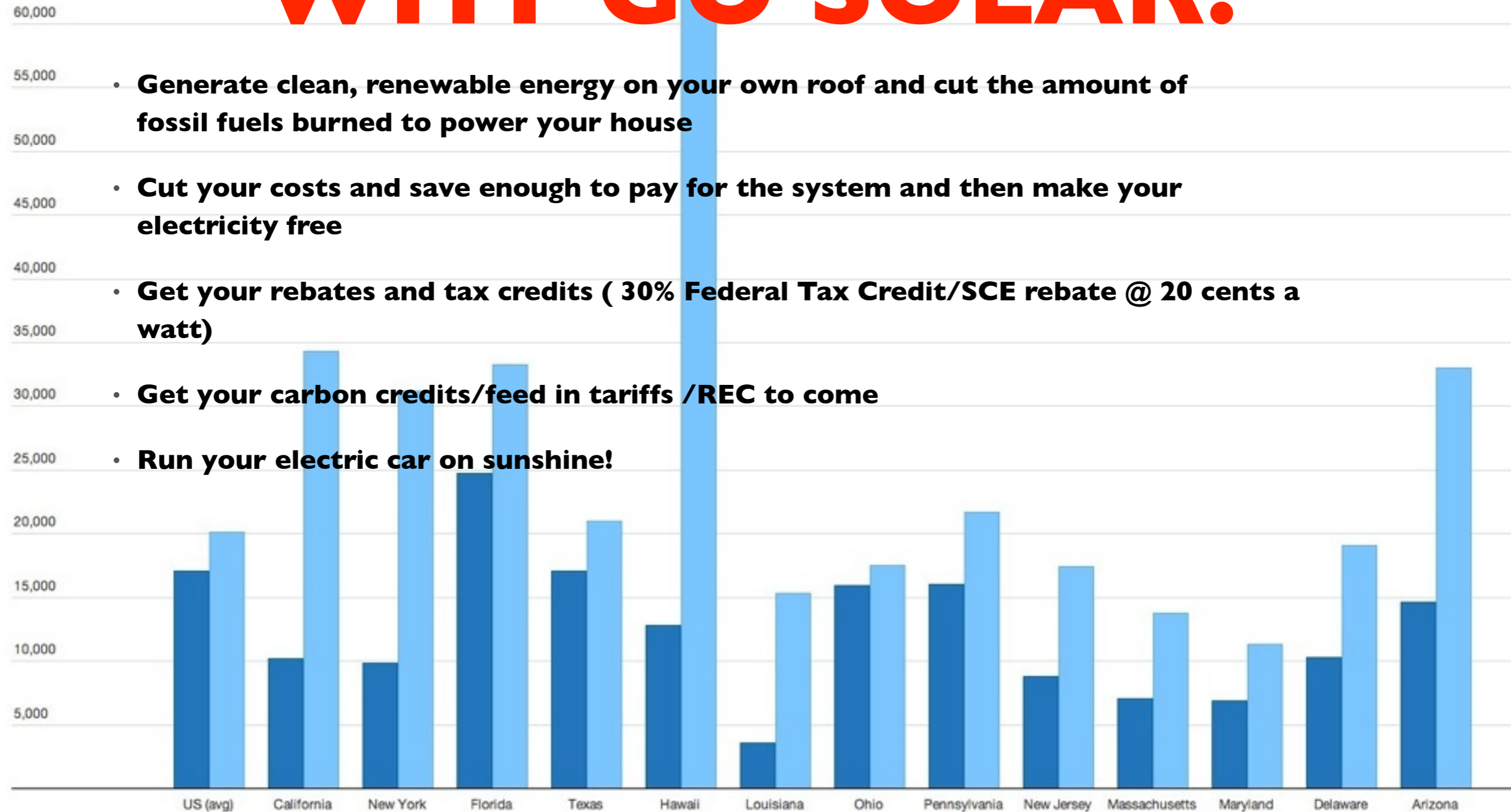
# DEDICATED SYSTEM HEATS & PUMPS THE WATER FOR YOUR POOL OR SPA

# Cost of Going Solar & Average 20-Year Savings (2011)

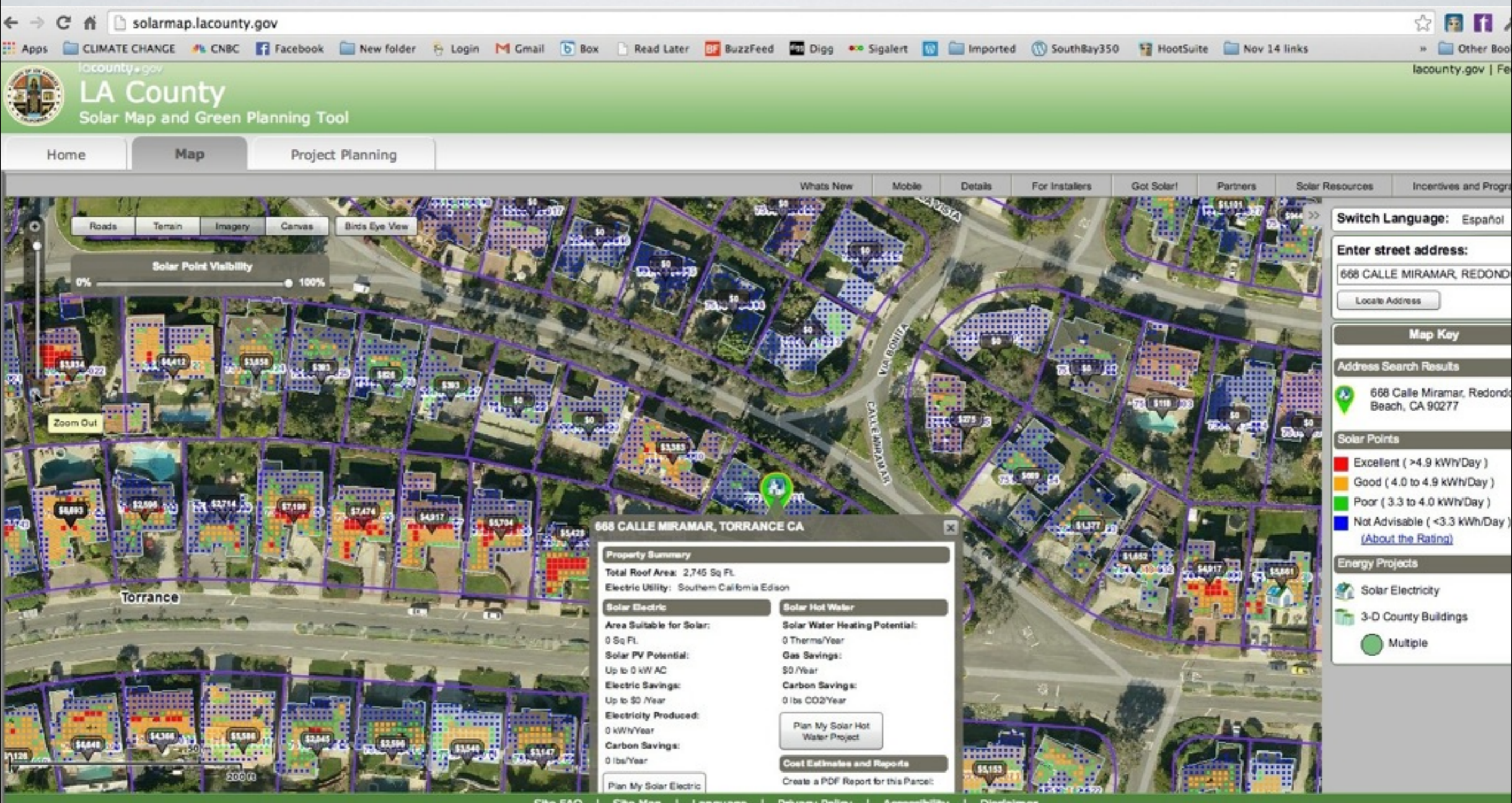
■ Average Cost of Solar in 2011 ■ Average 20-Year Savings from Solar

## WHY GO SOLAR?

- **Generate clean, renewable energy on your own roof and cut the amount of fossil fuels burned to power your house**
- **Cut your costs and save enough to pay for the system and then make your electricity free**
- **Get your rebates and tax credits ( 30% Federal Tax Credit/SCE rebate @ 20 cents a watt)**
- **Get your carbon credits/feed in tariffs /REC to come**
- **Run your electric car on sunshine!**



# WHAT DOES **YOUR** HOUSE NEED TO GO SOLAR?

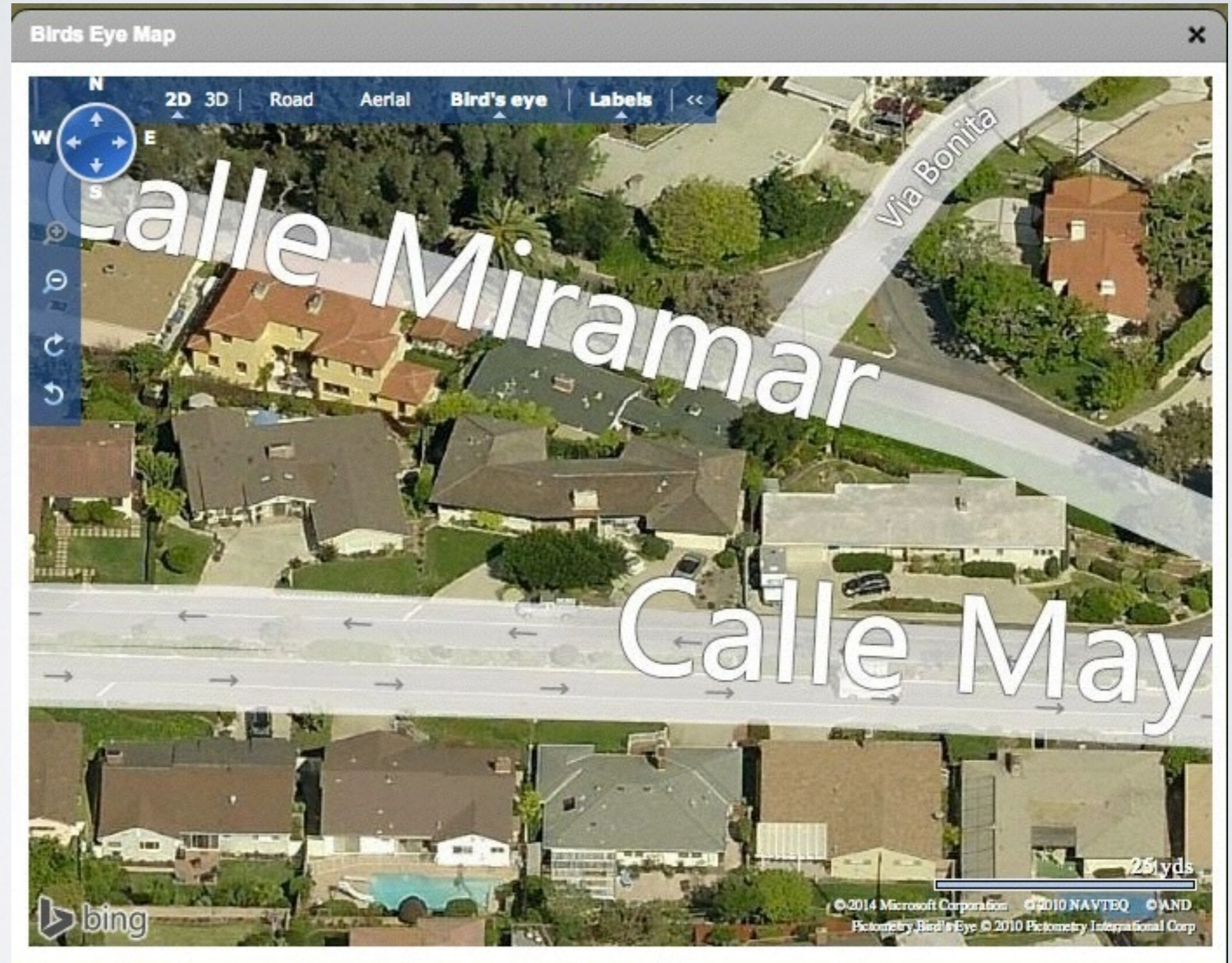


# WHAT DOES **YOUR** HOUSE NEED TO GO SOLAR?

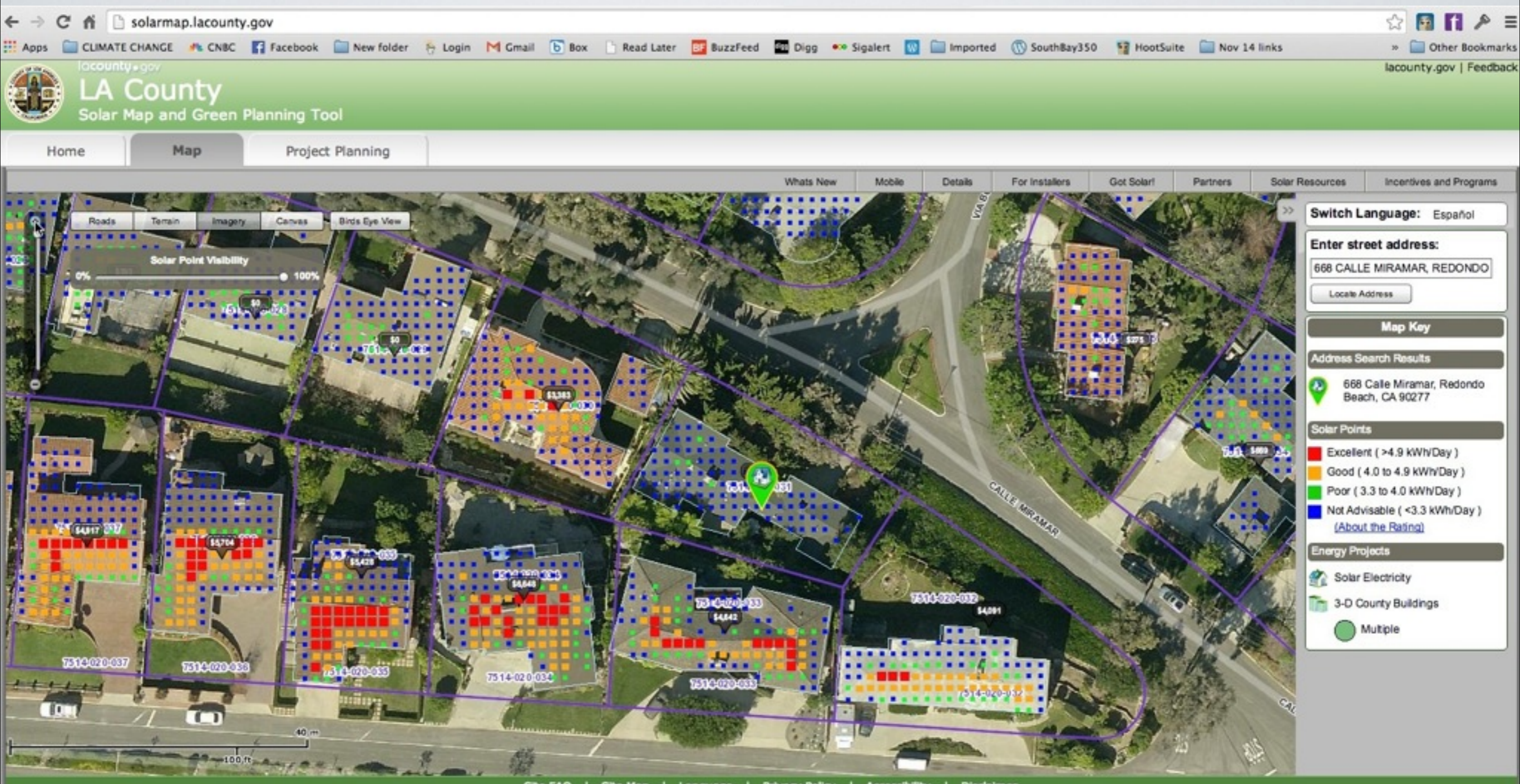
L.A. County's on-line solar tool to see if your roof is good for solar!

<http://solarmap.lacounty.gov/>

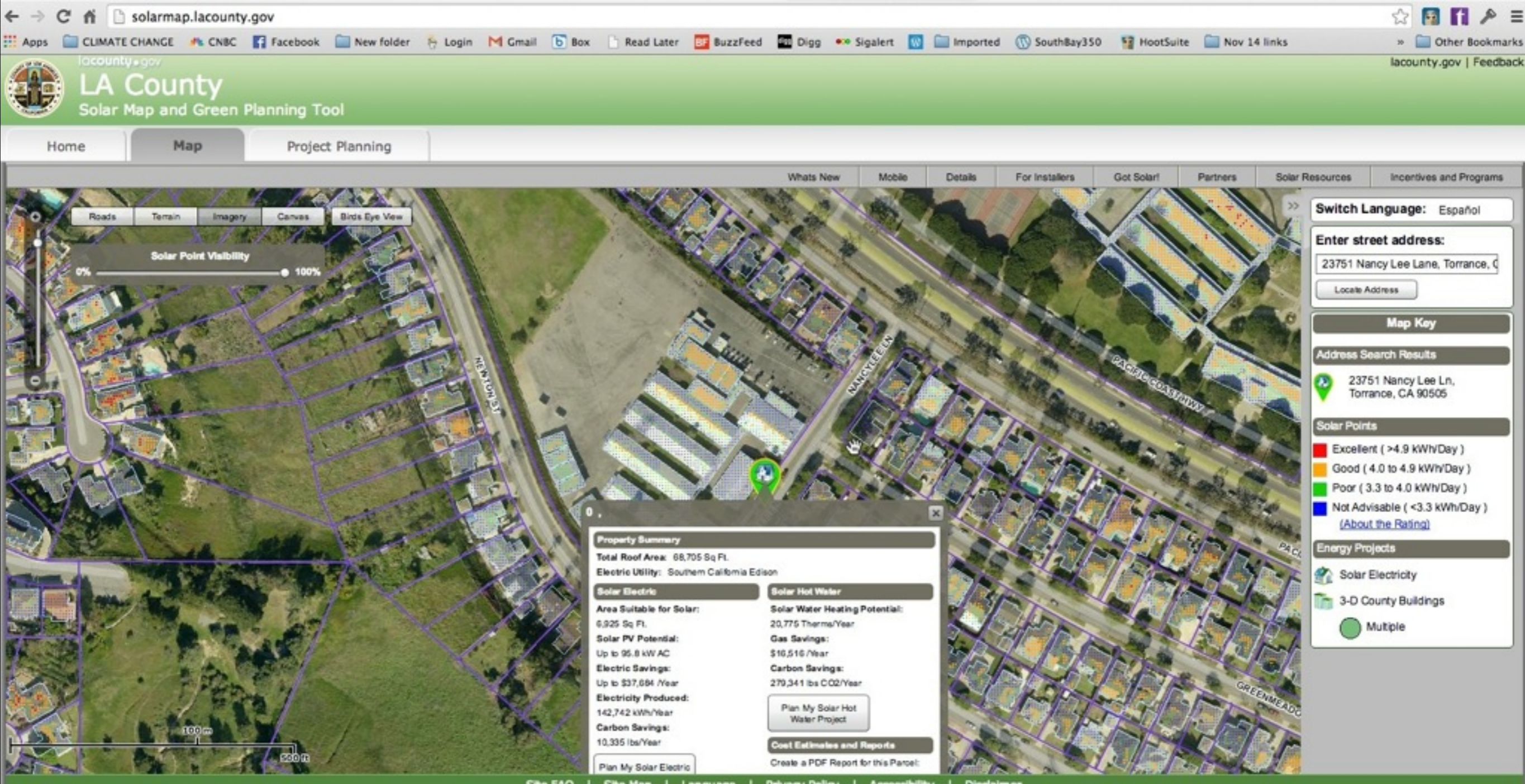
Good place to start but plenty of other solar calculators out there. Everyone will give you a free estimate



# WHAT DOES **YOUR** HOUSE NEED TO GO SOLAR?



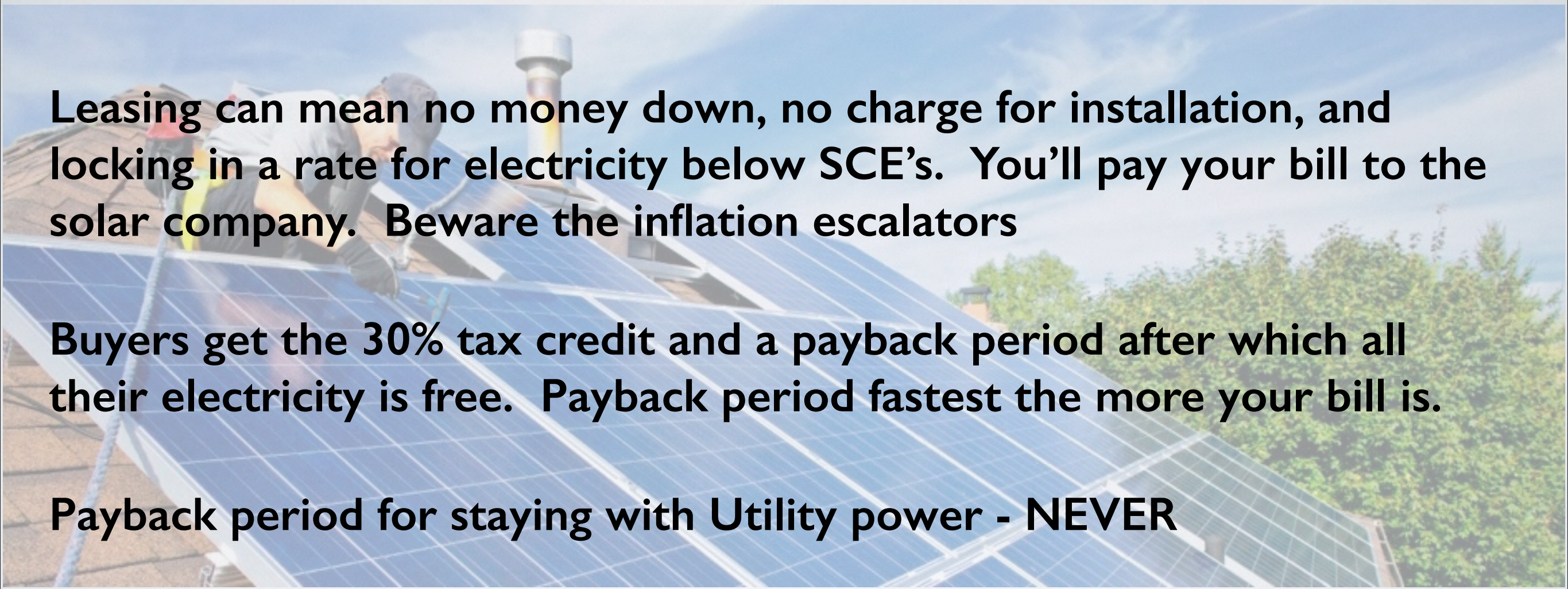
# WHAT DOES **YOUR** HOUSE NEED TO GO SOLAR?



# WHAT DOES IT COST & HOW LONG DOES IT TAKE FOR MY HOUSE TO GO SOLAR?



# OWNING SOLAR VS LEASING

A person is shown working on a roof, installing solar panels. The roof is covered with blue solar panels, and a chimney is visible in the background. The sky is blue with some clouds.

Leasing can mean no money down, no charge for installation, and locking in a rate for electricity below SCE's. You'll pay your bill to the solar company. Beware the inflation escalators

Buyers get the 30% tax credit and a payback period after which all their electricity is free. Payback period fastest the more your bill is.

Payback period for staying with Utility power - NEVER

**New great reason to buy in 2014: The new PACE financing program - paying for solar over 20 years as a tax assessment!**

# WHAT DOES IT COST & HOW LONG DOES IT TAKE FOR MY HOUSE TO GO SOLAR?

Go on line or look at your electric bill to see how many kWh your house uses a month. You'll base how many kilowatts your solar system needs to produce on what you use.

To purchase a 3kw - 4kw solar PV system costs today from \$12,000 to \$15,000

Two days of installation for average size house including - racking, panels, wiring, inverter, connection to breaker box, and BOS

25 year warranty - no moving parts, no maintenance, nothing to break, tests show lasts 30-40 years



## Home Energy Renovation Opportunity

### Low Cost Financing is Now Available to Homeowners in Western Riverside County

- No Credit Score Requirements
- Low, Fixed Payments
- Over 150,000 Eligible Products
- Make Payments with Your Property Taxes
- Balance Transfers to New Property Owner Upon Sale\*
- Interest is Tax Deductible\*\*


APPLY NOW

[Learn More](#)

HERO is now available in cities and counties throughout California.

41

HERO  
Communities

 HERO financing communities



# Sample Property Tax Bill: San Bernardino County



**LARRY WALKER • Auditor-Controller/Treasurer/Tax Collector**

## 2013 ANNUAL SECURED PROPERTY TAX BILL

FISCAL YEAR JULY 01, 2013 TO JUNE 30, 2014

Mailed to

SMITH, JOHN

PO BOX 123

SAN BERNARDINO CA 92407

172 West Thrid Street, San Bernardino, CA 92415. (909) 387-8308

[www.MyTaxCollector.com](http://www.MyTaxCollector.com)

**EXAMPLE  
TAX BILL**

### PROPERTY ASSESSMENT

CNTL-0000001

Parcel Number	Bill Number	Tax Rate Area	Total Tax Rate
0123-456-78-0-000	080123456	0018001	1.205800

#### Owner(s) of Record

AS OF JAN.01,2013  
SMITH JOHN  
CO.DOE.JANE S

#### Property Address

12345 MAIN STREET  
SAN BERNARDINO, CA 92415

#### First Installment Due

11-01-2014 \$2,365.42

#### Second Installment Due

02-01-2015 \$2,365.42

**Total  
Taxes Due \$4,730.84**

Description	Assessed Values
Land	63725
Improvements Fixtures	191175
Improvement Penalty	
Personal Property	
Personal Property Penalty	
Homeowners Exemption	7000
Other Exemptions	
<b>Net Value</b>	<b>247900</b>

### TAX DISTRIBUTION

Service Agency	For Information Call
GENERAL TAX LEVY	2479.00
'CO VECTOR CONTROL	909-388-4000 5.63
'HIGHLAND LANDSCAPE & LIGHT	909-864-8732 23.74
'HIGHLAND PARAMEDIC TAX	909-862-3031 19.30
SAN BONO COMM COLLEGE BOND	909-888-6511 45.85
SCHOOL BONDS	0.00
REDLANDS UNIFIED BOND	909-307-5300 116.26
SCHOOL STATE REPAYMENT	0.00
SB VALLEY MUNI STR CBT SVC	909-387-9200 347.06
SANBAG HERO FINANCING	800-969-4381 1694.00

#### Legal Descriptions

TRACT 1 LOT 2

#### Important Messages

**HERO First Payment Due: November 2014**

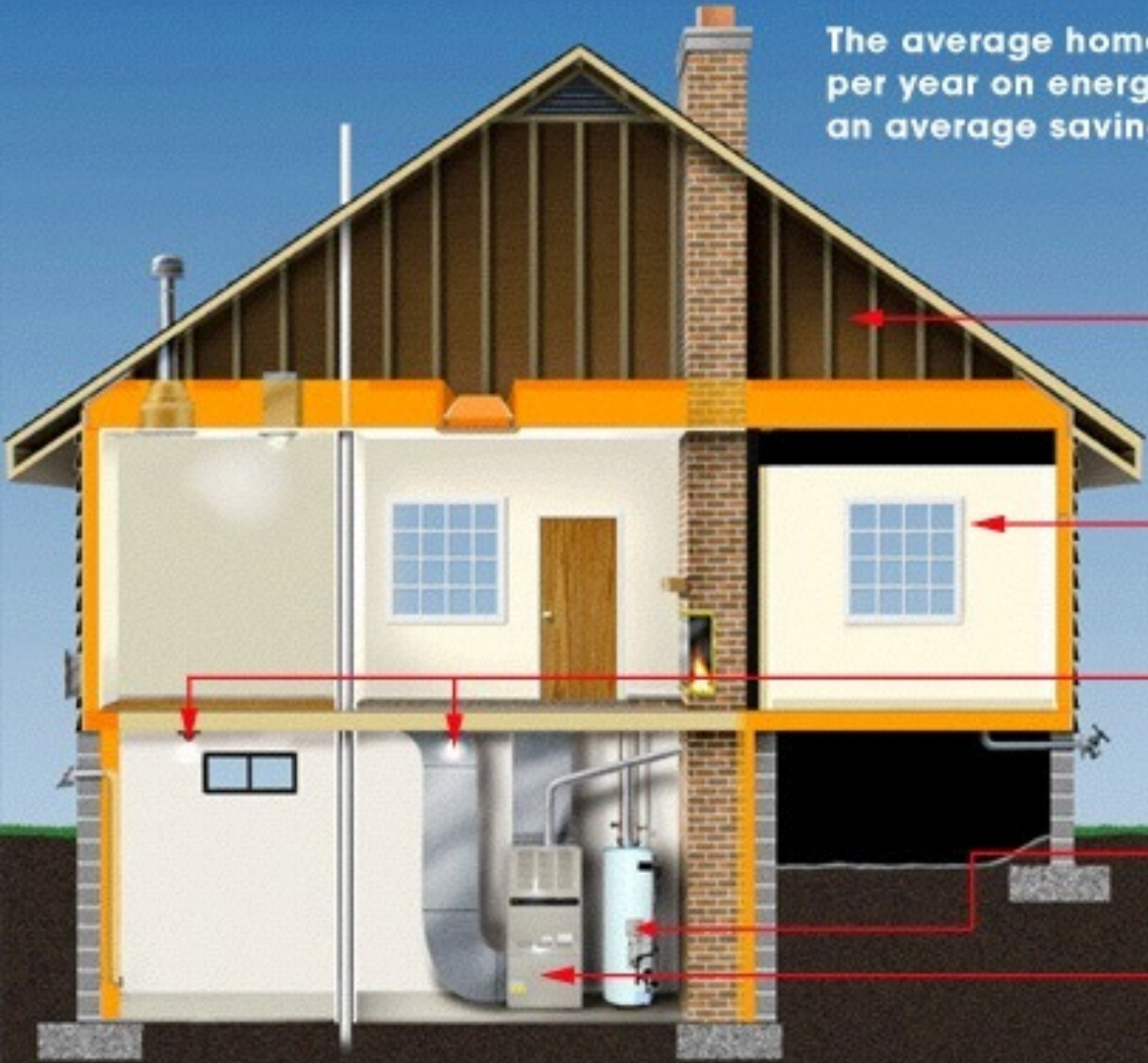
# **MAKING YOUR HOUSE ENERGY EFFICIENT BEFORE**

- **#1 - Conduct an energy audit - DIY or House Doctors type service**
- **Seal all the the places you're leaking energy**
- **Insulate your walls and attic with environmentally safe & highly efficient insulation materials**
- **Upgrade your lighting to LEDs**
- **Add light and temperature sensors, use your smart meter and other tools to see your energy use data**

**Grab the Low-  
Hanging Fruit!**

# Home Energy Savings

The average homeowner spends over \$1,900 per year on energy. STAR energy audits find an average savings of 30% - \$600 per year!

A cross-section diagram of a two-story house. The roof is shown with wooden rafters and insulation. The attic is highlighted in orange. The first floor has a window and a door. The second floor has a window. The basement has a furnace, a water heater, and a window. Red arrows point from the text labels to the corresponding parts of the house.

## Attic Insulation

*Insulation savings \$150 year  
Cost Recovery: 2-6 years*

## Double Pane Windows

*Replacement savings \$80 year  
Cost Recovery: 5-6 years*

## Lighting

*Replacement savings \$50 year  
Cost Recovery: 6 months*

## Hot Water Heater Insulation

*Insulation savings \$20 year  
Cost Recovery: 1 year*

## Heat / Air System (HVAC)

*Replacement savings \$300 year  
Cost Recovery: 4-6 years*



**WELCOME TO OUR SITE!**  
You are just *four simple steps*  
from a healthier home...



**1** Comprehensive  
Energy Audit

**2** Your Report or  
Treatment Plan

**3** Energy Efficient  
Upgrades

**4** Third Party  
Verification

## Energy Audits



A **comprehensive home energy audit**, commercial or multi-family energy audit is the first step toward saving money and improving the energy efficiency in your building. Our building

## Health



Poor indoor air quality can come from the attic, crawlspace and outside. We can fix these problems with **Air sealing the building envelope**, proper duct sealing and carbon

## Comfort



We treat the problem and not the symptom through the proper installation of **attic, wall and floor insulation**. In addition, we ensure proper duct design and balancing to make

## Environment



By making your home more energy efficient you will lower your carbon footprint and do your part to help the environment.

[Read More](#)

Get up to

**\$4500**  
IN REBATES



Contact us for a

**FREE PHONE  
CONSULTATION**

**877.411.2534**

- OR -

**CLICK HERE**

# MAKING YOUR HOUSE ENERGY EFFICIENT BEFORE YOU GO SOLAR



1 Comprehensive  
Energy Audit

2 Your Report or  
Treatment Plan

3 Energy Efficient  
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4 Third Party  
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1 Comprehensive  
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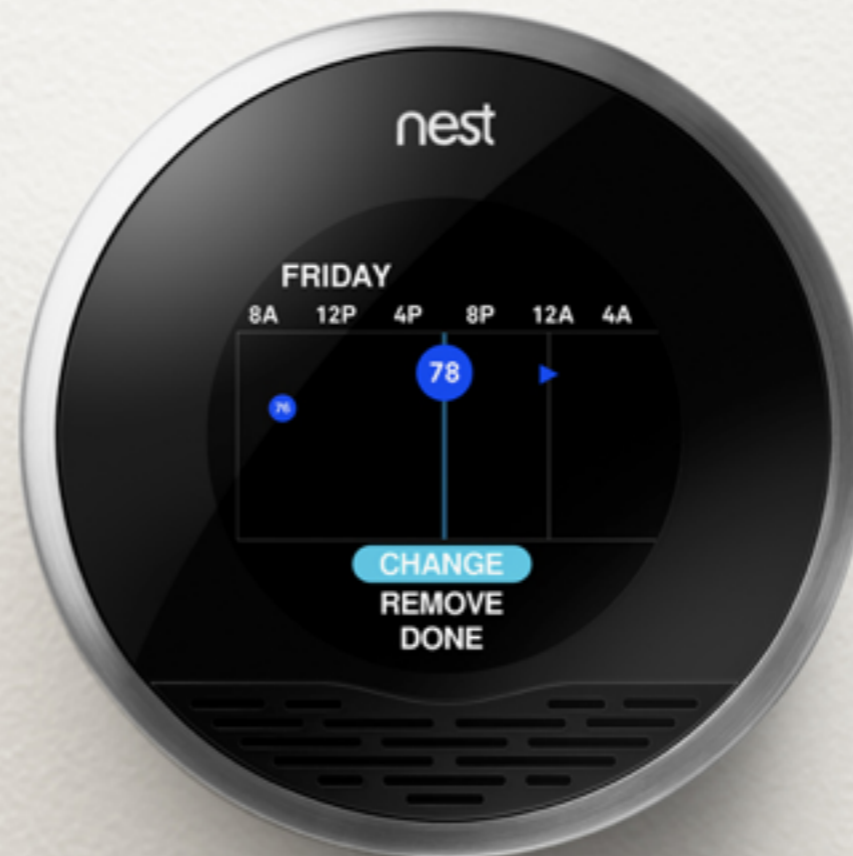
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# The Nest Learning Thermostat

Keeps you comfortable.



Nest builds  
a schedule  
you can adjust.

# THE NELSON HOUSE



- Built to use both passive solar and PV solar power
- Sustainable, low energy use, small carbon footprint
- solar electricity, solar hot water, recycled materials,

# THE GREEN IDEA HOUSE



Hermosa Beach remodel increased size of the house by nearly 60%  
Upgrades achieved the goal of reducing the energy load by more than 80% House now generates as much energy as it uses and releases no carbon emissions.



# THE GREEN IDEA HOUSE



- Architectural design elements that capitalize on the abundance of natural sunlight.
- Solar panels long overhangs on the roof act as a natural umbrella when the sun is higher in the summer months.
- Phase-change drywall installed throughout employs a "catch and release" use of natural sunlight, absorbing the heat when temperatures are high and releasing it when temperatures drop.
- Excess water from bathing and doing laundry is redirected straight to their landscape via a "laundry to landscape" irrigation system.

# WHAT DOES IT COST?

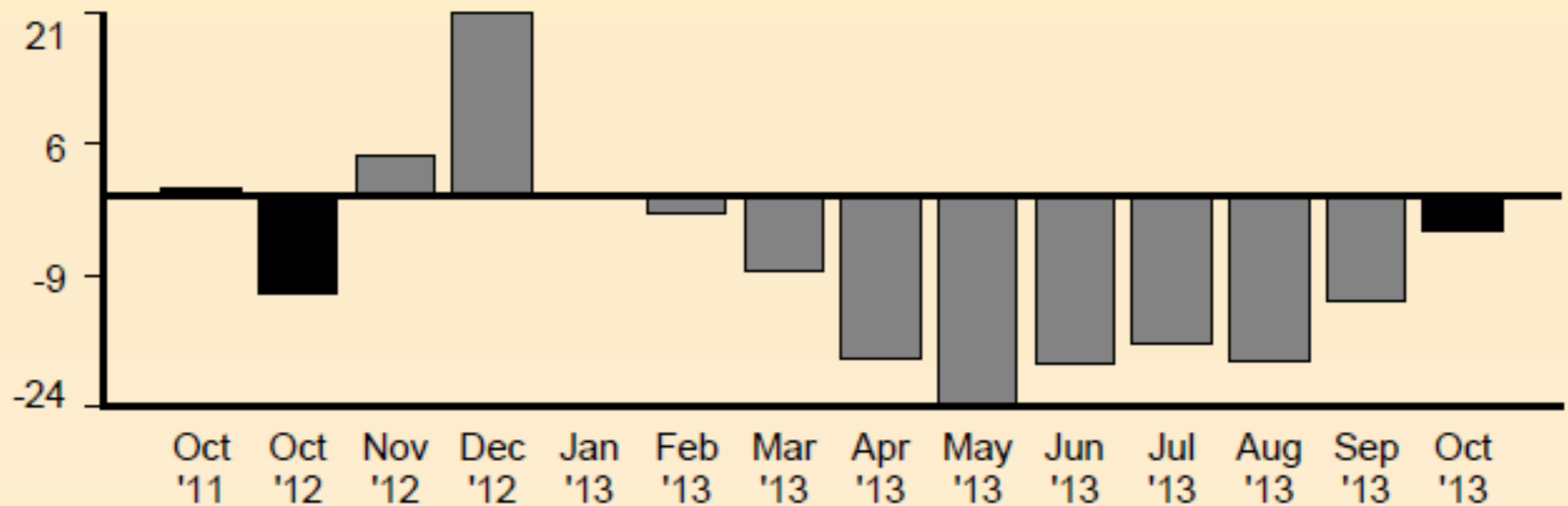
## Fortunato Green Idea House SCE Bill

Your daily average electricity usage (kWh)

2 Years ago: 0.94

Last year: -11.31

This year: -3.97



Time of Use

Net Metering

Zeroing out your bill

# WHAT DOES IT COST?

## Fortunato Green Idea House SCE Bill

### Details of your new charges

Your rate: TOU-D-TEV

Billing period: Oct 7 '13 to Nov 6 '13 (30 days)

#### Delivery charges

##### Energy-Winter On Peak

Lvl 1 (1% to 130% of bsln)	-220 kWh x \$0.04236	-\$9.32
Lvl 2 (more than 130%)	-225 kWh x \$0.22781	-\$51.26

##### Energy-Winter Off Peak

Lvl 1 (1% to 130% of bsln)	1 kWh x \$0.04236	\$0.04
Lvl 2 (more than 130%)	1 kWh x \$0.22781	\$0.23

##### Energy-Winter Sup Off Pk

Lvl 1 (1% to 130% of bsln)	161 kWh x \$0.06485	\$10.44
Lvl 2 (more than 130%)	163 kWh x \$0.06485	\$10.57

DWR bond charge	-119 kWh x \$0.00493	-\$0.59
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#### Generation charges

##### DWR

DWR energy credit	-119 kWh x -\$0.00097	\$0.12
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##### SCE

##### Energy-Winter On Peak

Lvl 1 (1% to 130% of bsln)	-220 kWh x \$0.11454	-\$25.20
Lvl 2 (more than 130%)	-225 kWh x \$0.11454	-\$25.77

##### Energy-Winter Off Peak

Lvl 1 (1% to 130% of bsln)	1 kWh x \$0.06093	\$0.06
Lvl 2 (more than 130%)	1 kWh x \$0.06093	\$0.06

##### Energy-Winter Sup Off Pk

Lvl 1 (1% to 130% of bsln)	161 kWh x \$0.03187	\$5.13
Lvl 2 (more than 130%)	163 kWh x \$0.03187	\$5.19

<b>Energy Charge Total</b>		<b>-\$80.30</b>
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#### Additional information regarding your Net Consumption/Generation:

- Your cumulative energy charge total as of previous month: -\$1,425.04
- Your current month energy charge total: -\$80.30
- Your cumulative energy charge Year-to-Date: -\$1,505.34
- Your cumulative kWh Year-to-Date: -3,749 kWh
- Your winter Level 1 allowance: 382.00kWh
  - 57.72% applied to On-Peak
  - 0.26% applied to Off-Peak
  - 42.02% applied to Super Off-Peak

# WHERE TO FIND OUT MORE

**Joe Galliani - [joe@creativegreenius.com](mailto:joe@creativegreenius.com)**  
**[www.creativegreenius.com](http://www.creativegreenius.com)**

**Dency Nelson - [dlN52@verizon.net](mailto:dlN52@verizon.net)**

**Robert Fortunato Green Idea House**  
**[www.greenideahouse.com](http://www.greenideahouse.com)**