

A photograph of a single-story white house with a dark brown tiled roof. A large section of the roof is covered with dark blue solar panels. In the foreground, a man in an orange shirt and a woman in a purple shirt are sitting on a patio. A child is playing in the yard. The background shows a suburban neighborhood with other houses and a green hill.

SERA TU CASA ELEGIBLE  
PARA **SOLAR?**



**NUESTRA FUENTE PRINCIPAL DE ENERGIA  
VIENE DE LA ENERGIA SUCIA**

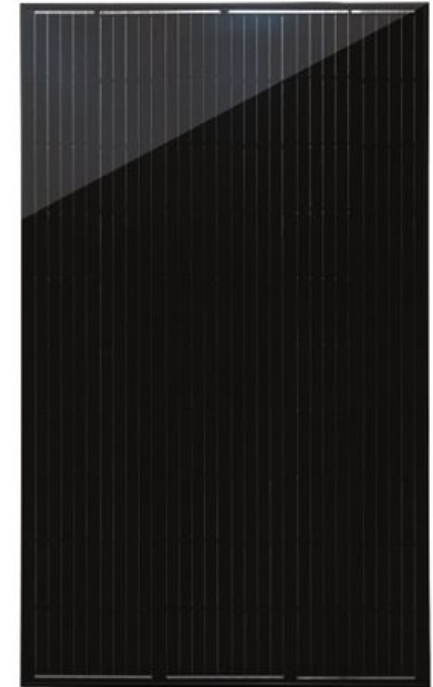
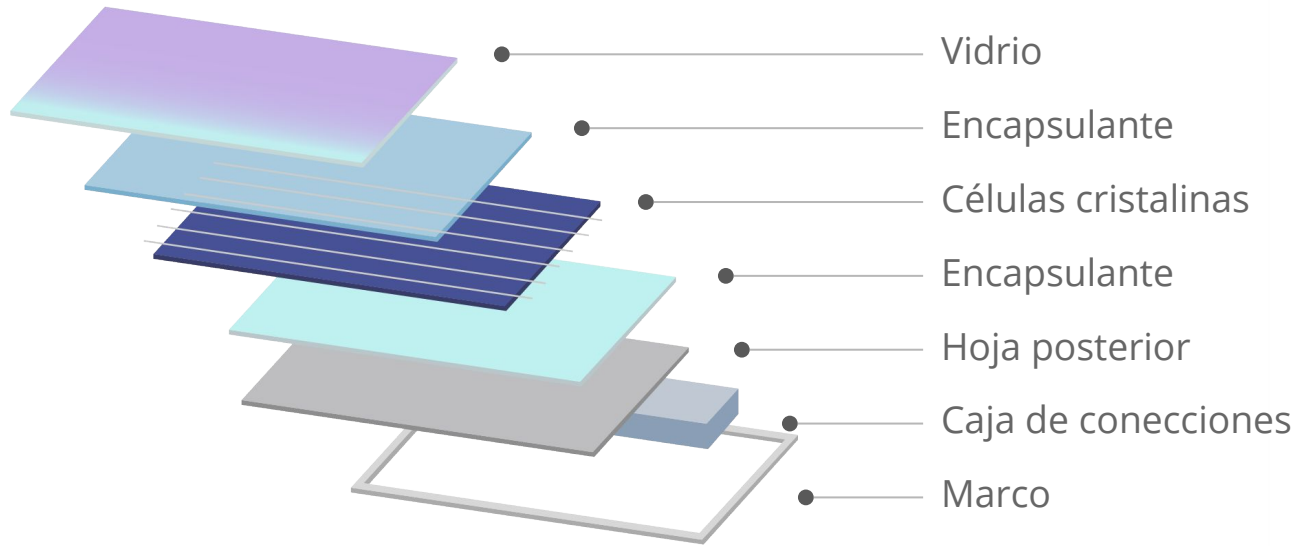
Carbón, Aceite, Gas, etc.

**CERCA DE 8,000 PLANTAS DE ENERGIA  
OPERATIVAS SOLO EN ESTADOS UNIDOS  
CAUSANDO DAÑOS AL MEDIOAMBIENTE  
Y AL FUTURO DE TU FAMILIA Y LOS TUYOS**



**CUANDO TE VAS SOLAR CREAS UN MUNDO SUSTENTABLE  
PARA PRESENTES Y FUTURAS GENERACIONES**

# MUCHAS CELULAS SON LUEGO CONVERTIDAS EN UN PANEL



**LOS PANELES SOLARES NO TIENEN MOTOR POR LO TANTO  
NO HAY FRICCIÓN NI DESGASTE, NO SE DESCOMPONEN**

# PANELES SOLARES

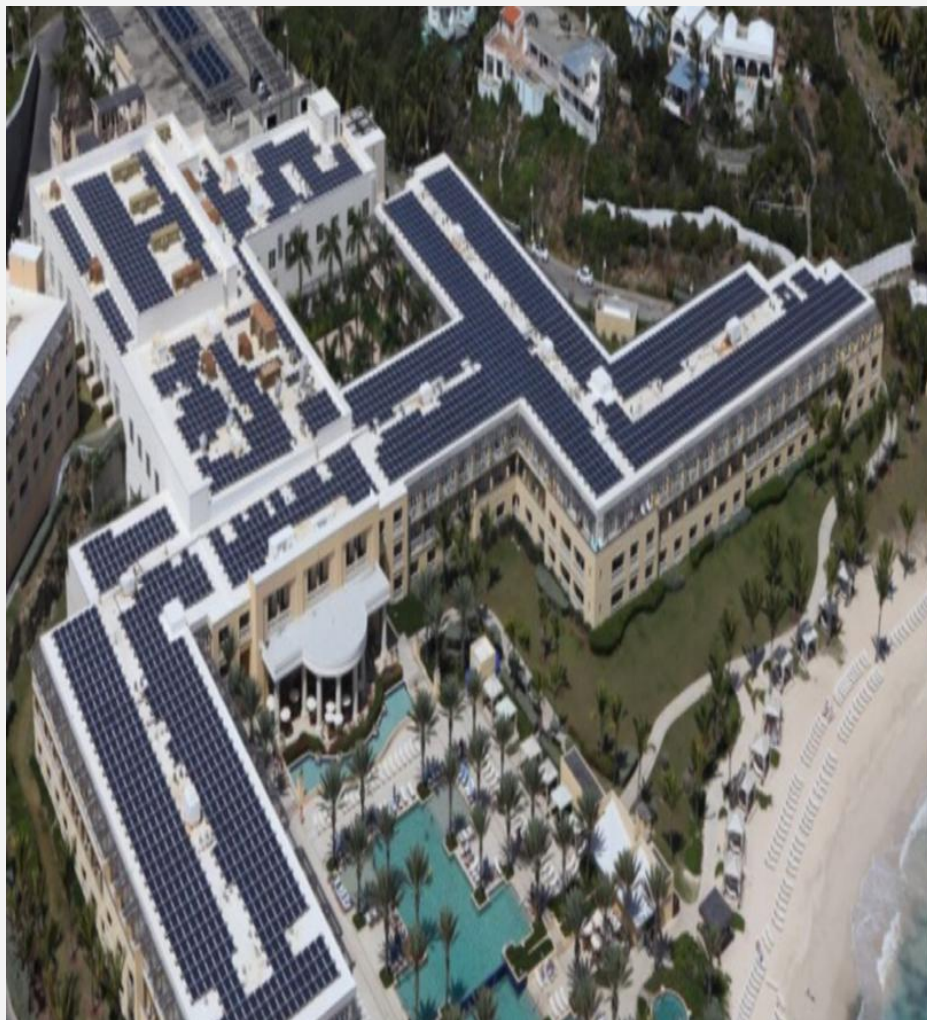
## RESISTEN BIEN

## GRANIZO

## Y TORMENTAS







Damage hurricane Irma St Maarten seen from naval helicopter

MORE VIDEOS

MAS DE UN PANEL FORMAN  
UN GRUPO O **CONJUNTO DE PANELES**

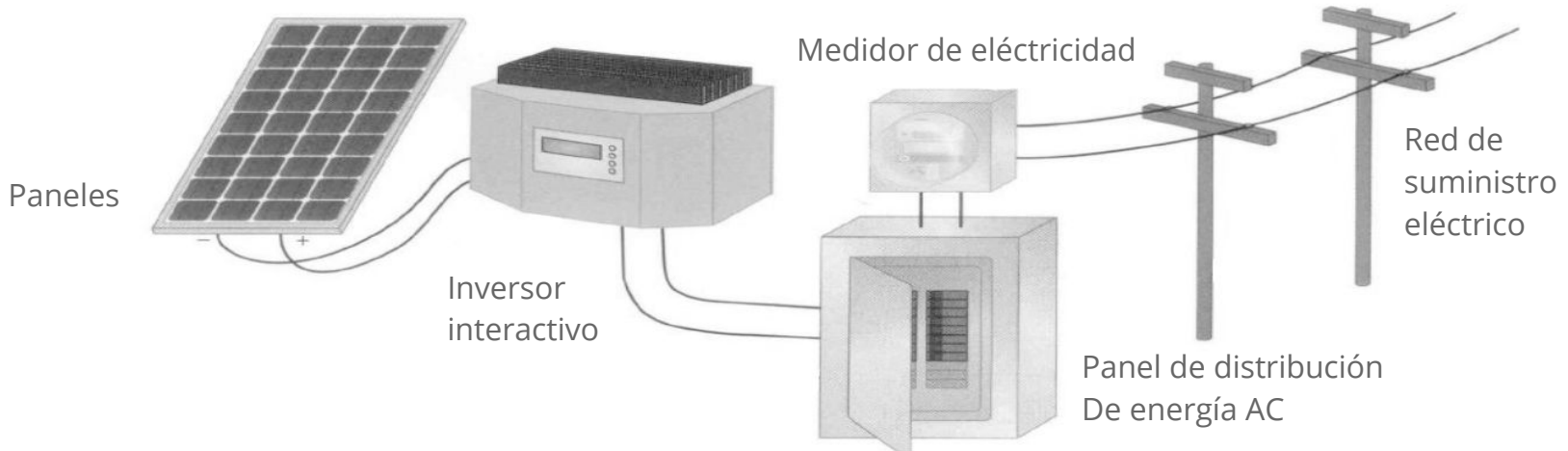
NOSOTROS DISEÑAMOS UN **GRUPO DE  
PANELES** PARA REEMPLAZAR LA  
ENERGIA QUE ESTAS **ALQUILANDO** DEL  
MONOPOLIO ELECTRICO...



# COMPONENTES DEL SISTEMA (FOTOVOLTAICO) SOLAR

Formación PV se refiere a todos los componentes del sistema

- » Paneles
- » Inversores
- » Cableado
- » Sistema de enganche y/o rieles de soporte (no se muestran)



# Incentivo Fiscal Federal para La Energía Solar

Al instalar equipamientos de energía alternativa en tu hogar puedes calificar para un crédito igual al 30% de tus gastos totales en tu Sistema Solar. Válido si instalas antes del final del 2022

Este incentivo es válido para mejoras en tu residencia, y aplica a segundas también.

Form <b>5695</b>		Residential Energy Credit		OMB No. 1545-0074	
Department of the Treasury Internal Revenue Service		▶ Go to <a href="http://www.irs.gov/Form5695">www.irs.gov/Form5695</a> for instructions and the latest information. ▶ Attach to Form 1040 or Form 1040NR.		<b>2022</b> Attachment Sequence No. 158	
Name(s) shown on return				Your social security number	
<b>Part I Residential Energy Efficient Property Credit</b> (See instructions before completing this part.)					
Note: Skip lines 1 through 11 if you only have a credit carryforward from 2017.					
1	Qualified solar electric property costs	1			
2	Qualified solar water heating property costs	2			
3	Qualified small wind energy property costs	3			
4	Qualified geothermal heat pump property costs	4			
5	Add lines 1 through 4	5			
6	Multiply line 5 by 30% (0.30)	6			
7a	Qualified fuel cell property. Was qualified fuel cell property installed on, or in connection with, your main home located in the United States? (See instructions.) ▶	7a	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Caution: If you checked the "No" box, you cannot take a credit for qualified fuel cell property. Skip lines 7b through 11.					
b Print the complete address of the main home where you installed the fuel cell property.					
		Number and street		Unit No.	
		City, State, and ZIP code			
8	Qualified fuel cell property costs	8			
9	Multiply line 8 by 30% (0.30)	9			
10	Kilowatt capacity of property on line 8 above ▶ _____ x \$1,000	10			
11	Enter the smaller of line 9 or line 10	11			
12	Credit carryforward from 2017. Enter the amount, if any, from your 2017 Form 5695, line 16	12			
13	Add lines 6, 11, and 12	13			
14	Limitation based on tax liability. Enter the amount from the Residential Energy Efficient Property Credit Limit Worksheet (see instructions)	14			
15	Residential energy efficient property credit. Enter the smaller of line 13 or line 14. Also include this amount on Schedule 3 (Form 1040), line 53; or Form 1040NR, line 50	15			
16	Credit carryforward to 2019. If line 15 is less than line 13, subtract line 15 from line 13	16			

# EXISTEN NUEVAS LEYES QUE REQUIEREN QUE ESTADOS Y CIUDADES INSTALEN SOLAR



## **It's officially official: California has approved the mandate for solar on all new homes beginning in 2020**

**By Kelly Pickerel | December 5, 2018**

Making it official, the California Building Standards Commission (CBSC) unanimously confirmed the new standards that require solar on new homes in California starting in 2020. This final regulatory vote confirms that the California Energy Commission (CEC) followed the correct process in developing the new rules established in May, making California the first state in the country with the clean energy requirement. The new rules include a solar plus storage option to give consumers more clean energy choices.

"It's officially official. Solar will be required on new California homes starting in 2020," said Kelly Knutsen, Director of Technology Advancement for the California Solar & Storage Association (CALSSA). "These highly energy efficient and solar-powered homes will save families money on their energy bills from the moment they walk through their front door. Homebuyers will also have a solar plus storage option, allowing their home-grown clean energy to work for them day and night."

---

**LOS PRECIOS DE ENERGÍA SE HAN  
MANTENIDO SUBIENDO  
CONSTANTEMENTE.**

**DESDE EL 2003 HAN DOBLADO A  
NIVEL NACIONAL**

---

Customer Name: HOWARD HIGHTOWER  
 Account Number: 100053754149  
 Invoice Number: 054027846434

**Service Address Detail**

Address: 2752 FUSCHIA RD, COPPERAS COVE, TX 76522-9750  
 Account Number: 3720008880606 Contract Expiration Date: 10/28/2020

The price you paid for electric service this month was 10.3 cents per kWh excluding taxes and non-recurring charges or credits.  
 Distribution Utility (TDU): ONCOR ELECTRIC DELIVERY COMPANY

ID	Days In Reading	Read Type	Previous Read Date	Previous Meter Read	Current Read Date	Current Meter Read	Usage (kWh)	Multiplier	Billed Usage (kWh)
07LG	32	Actual	12/26/2019	49877	01/27/2020	52062	2185	1	2185

Season Pass 12 <sup>SM</sup>	\$ 9.95
Usage (2185 kWh x \$0.11600000)	\$ 253.46
Energy Savings (2185.00 kWh x \$0.0580)	\$ 126.73 CR
<b>Energy and Other Fees</b>	<b>\$ 136.68</b>
TDU Delivery Charges	\$ 87.43
Energy Costs Reimb	\$ 4.47
	\$ 91.90
	\$ 3.43
<b>Address Charges Subtotal</b>	<b>\$ 232.01</b>
<b>Charges</b>	<b>\$ 232.01</b>

**What are TDU Delivery Charges?**  
 They're state-regulated charges from Oncor to deliver electricity. These charges are the same regardless of your retail electric provider. They're based mostly on how much electricity you use each month, and we pass them through without markup. Learn more and see Oncor's pricing at [tducharges.com](#)



16.4 cents kWh

15 cents kWh avg

Bill Amount: \$23  
 kWh Usage: 2,185  
 kWh Cost: 10.6  
 2018 cost: 8.67  
 Increase: 1.93 c

**Percentage Increase**

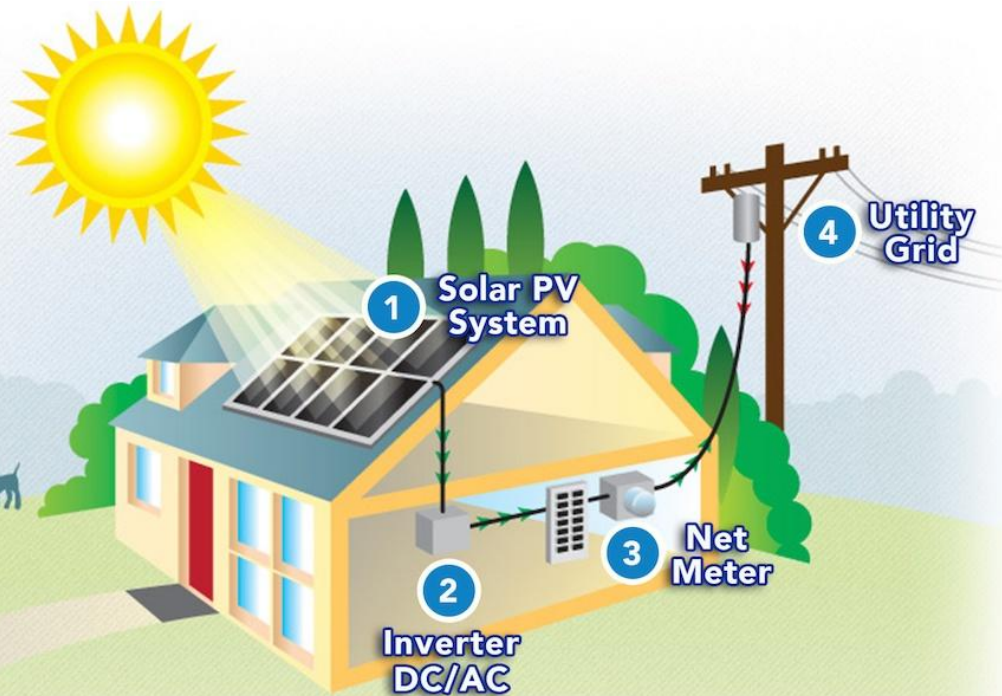
Starting Value:

Final Value:

Answer:   
 = 22.2607%

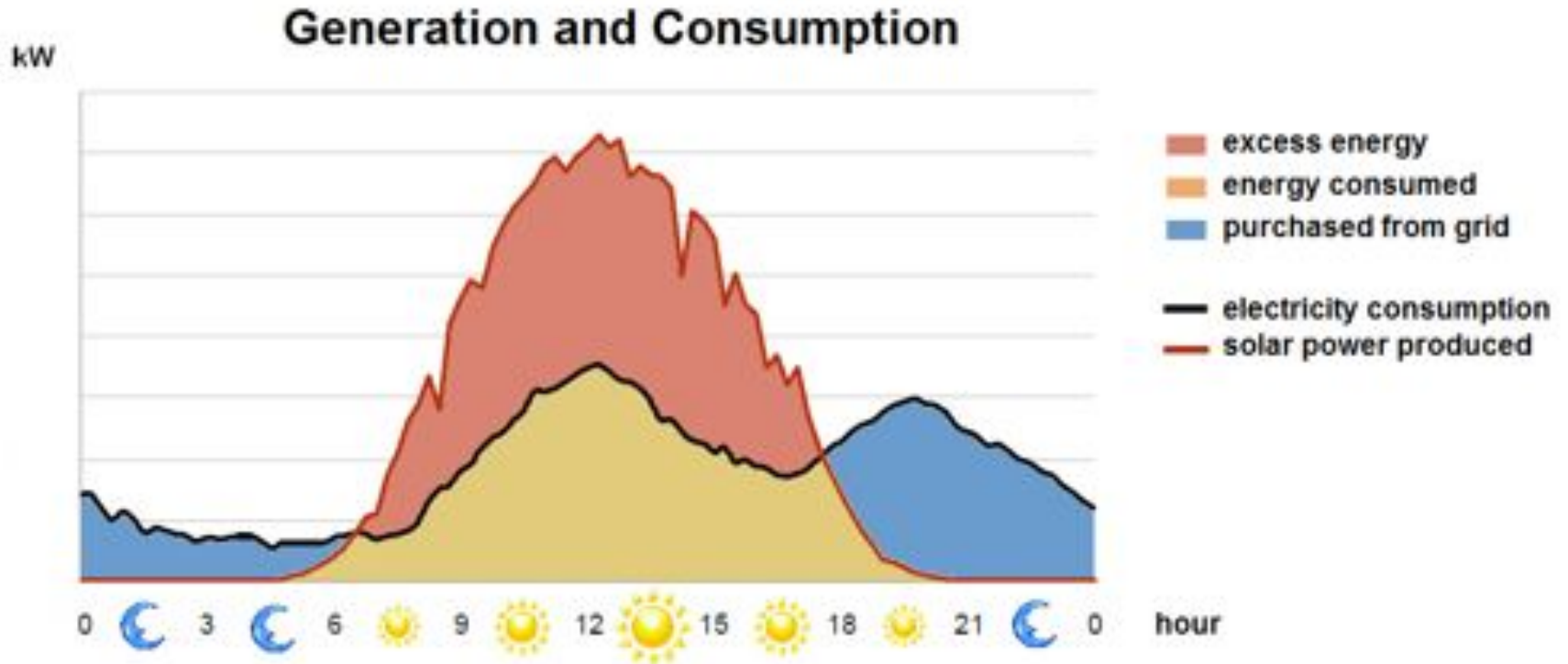
# CONVIERTETE DE INQUILINO A SOCIO DE LA COMPAÑÍA ELÉCTRICA

La energía es generada cuando los fotones del sol iluminan tus paneles



- El sistema solar es conectado con el proveedor eléctrico el cual actuará como una batería gigante
  - El proveedor eléctrico recibe el exceso de energía producido durante el día por tu sistema solar.
  - De noche recibirás la energía del proveedor eléctrico cuando no hay sol
- La compañía eléctrica te acreditará por toda la energía enviada a ellos y deducirá lo que te envían de noche cuadrando a fin de mes

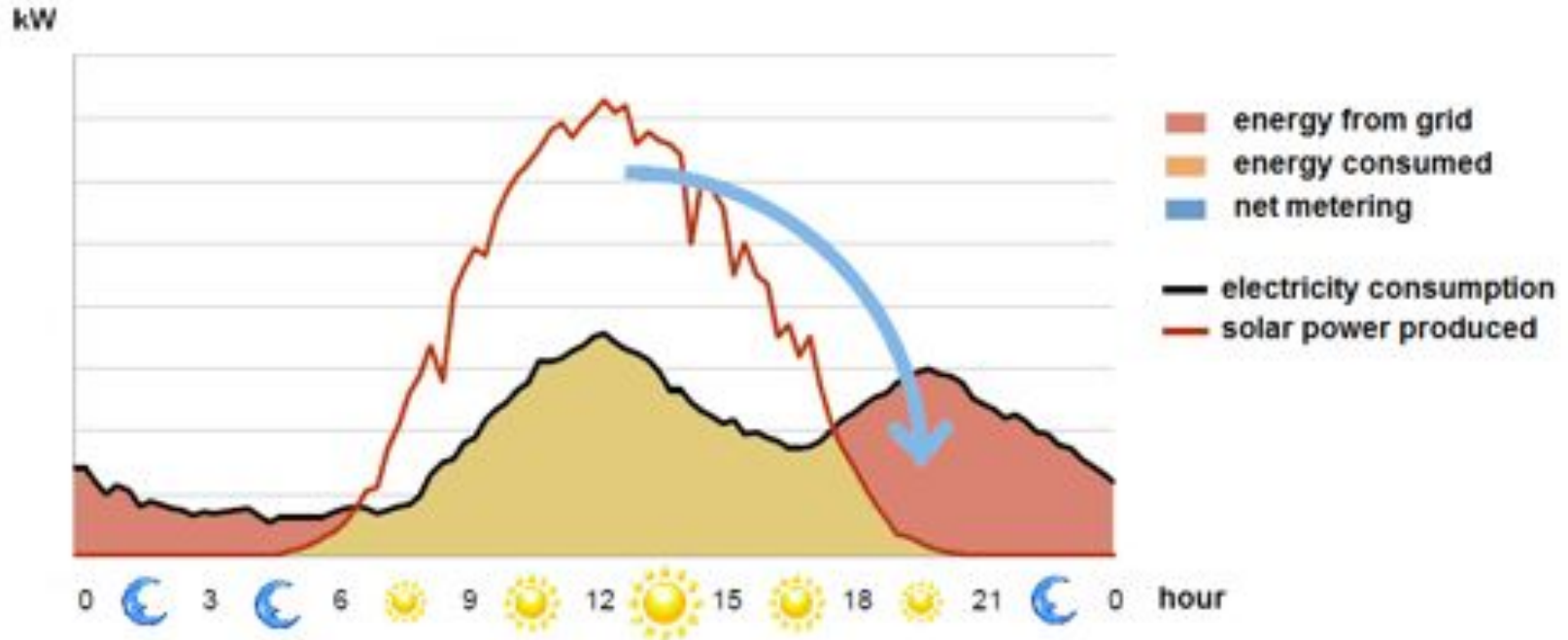
# GENERACION Y CONSUMO DE ENERGIA POR TU SISTEMA SOLAR





# LA MEDICIÓN NETA PERMITE QUE NO PAGUES POR LO QUE CONSUMES DEL PROVEEDOR ELÉCTRICO

## Net Metering Allows Electricity Consumption When Needed



GENERALMENTE, SOLAR  
REQUIERE UN PANEL DE  
200 AMP

EHEMOS UN  
VISTAZO A LA  
CLASIFICACION  
DE TU PANEL



**QUE  
PASA SI  
VENDO  
MI  
CASA?**





Fannie Mae

## HomeStyle<sup>®</sup> Energy Mortgage

Affordable financing for improving the energy and water efficiency and resiliency of homes

Research shows homeowners value features that save energy and provide a comfortable living space.<sup>1</sup> And, in many areas prone to natural disasters, homeowners are looking to strengthen the resiliency of their homes. With today's existing median home age approaching 40 years,<sup>2</sup> HomeStyle Energy makes it easy for buyers to invest in energy, water, and resiliency improvements— from high-rated insulation to energy-efficient windows to wind barriers—at the time of purchase or refinance.

### Simple options

- Finance improvements for water efficiency, renewable energy, radon remediation, resiliency, and repairs; finance up to \$3,500 for weatherization with no energy report.
- Finance energy improvements up to 15% of the as-completed appraised property value of a home.
- Pay off higher-interest energy-related improvement debt, including PACE.<sup>3</sup>

### Benefits

- Expand your market to new customers purchasing homes that need upgrades and strengthen your relationships with real estate professionals.

### No special approvals needed!

HomeStyle Energy mortgages can be originated by any Fannie Mae lender.



## New Solar Home Premiums: Calculating the Value Rooftop PV Adds to a Multi-State Sample of New U.S. Homes

*Ben Hoen & Ryan Wiser, Lawrence Berkeley National Laboratory; Sandra Adomatis, Adomatis Appraisal Services; Thomas Jackson, Real Property Analytics/Texas A&M University; Joshua Graff-Zivin, University of California at San Diego; Mark Thayer, San Diego State University; Geoffrey T. Klise, Sandia National Laboratories*

### Overview

Homes with solar photovoltaic (PV) systems have proliferated in the United States recently, reaching more than half a million in 2014, in part due to plummeting PV costs and innovative financing options. The U.S. Department of Energy estimates that achieving its SunShot PV price-reduction targets could result in 108 gigawatts of residential rooftop PV installed by 2050—equivalent to 30 million U.S. PV homes. As PV systems become an increasingly common feature of U.S. homes, the ability to value these homes appropriately will become increasingly important, and will facilitate a robust residential PV market.

Appraisers, real estate agents, and other property valuers have made strides toward valuing PV homes, and several limited studies have suggested the presence of PV home premiums, but gaps remain in understanding these premiums for housing markets nationwide. To help fill these gaps, researchers from Lawrence Berkeley National Laboratory (LBNL) and their collaborators from other institutions conducted the most comprehensive PV home premium analysis to date. The study more than doubles the number of PV home sales previously analyzed, examines transactions in eight states, and spans the years 2002–2013. The results impart confidence that PV consistently adds value across a variety of states, housing and PV markets, and home types. This study summary focuses on premiums for newly built homes with PV (“new homes”) versus homes that were not new when PV was installed (“existing homes”).

## PV Premium Results for New and Existing Homes

Overall, this study finds that home buyers consistently have been willing to pay more for a property with PV across a variety of states, housing and PV markets, and home types. The study finds only a small and non-statistically significant difference between PV premiums for new and existing homes.

As Figure 1 shows, the average new home premium is estimated at \$3.58/watt

(W) and the existing home premium at \$4.51/W. Both estimates are highly statistically significant, indicating that the market for both new and existing homes clearly values PV in addition to the other features of a home. Although a difference of approximately \$1/W exists between the two estimates, this disparity is not statistically significant, thus the authors are unable to claim that one PV home type garners more in market value than the other. That notwithstanding, there appears to be a net PV cost difference of \$0.44/W between the home types, which might partially explain why the new home premium estimate is low

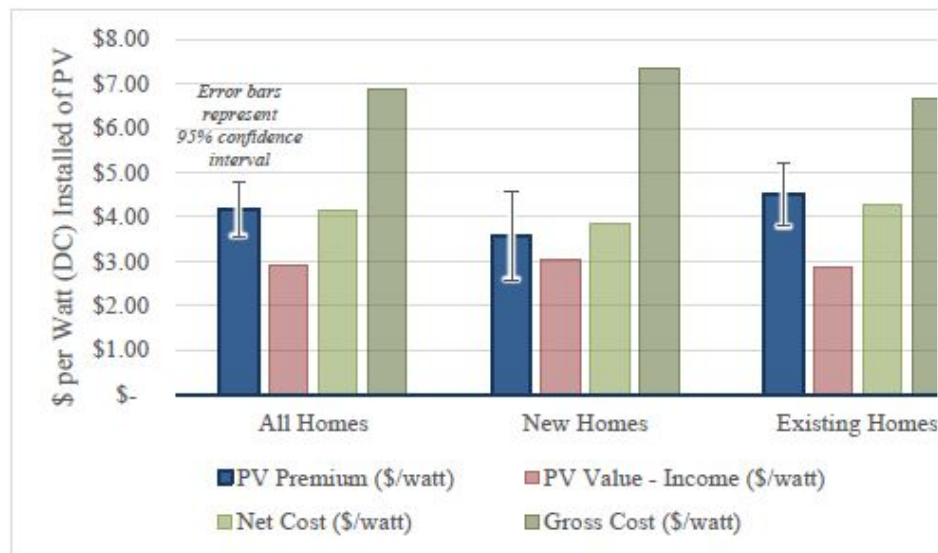


Figure 1: PV premium results for all homes, new homes, and existing homes compared with contributory-value estimates

## How Much Does Solar Increase Your Property's Value?

The [National Renewable Energy Laboratory](#) offers a useful guide when determining how much your property's value will go up. According to its research, each additional \$1 in energy bill savings (from your solar installation) adds \$20 to your home's total value.

This rule of thumb varies depending on a number of factors, including:

- The location of your home. Installations in active solar markets like New Jersey typically yield higher returns than comparable installations in less developed markets.
- The size of your installation. Property value increases are directly proportional to the number (and quality) of solar PV panels installed.
- The value of your home. Larger houses usually receive higher nominal boosts in property value. However, this increase often represents a smaller percentage of the total home value.

The exact numbers vary from property to property and installation to installation, but recent research shows an average increase in resale value being \$5,911 for each 1 kilowatt (kW) of solar installed. In a state like California, for example, a small 3.1-kilowatt (kW) system can add an average of \$18,324 to

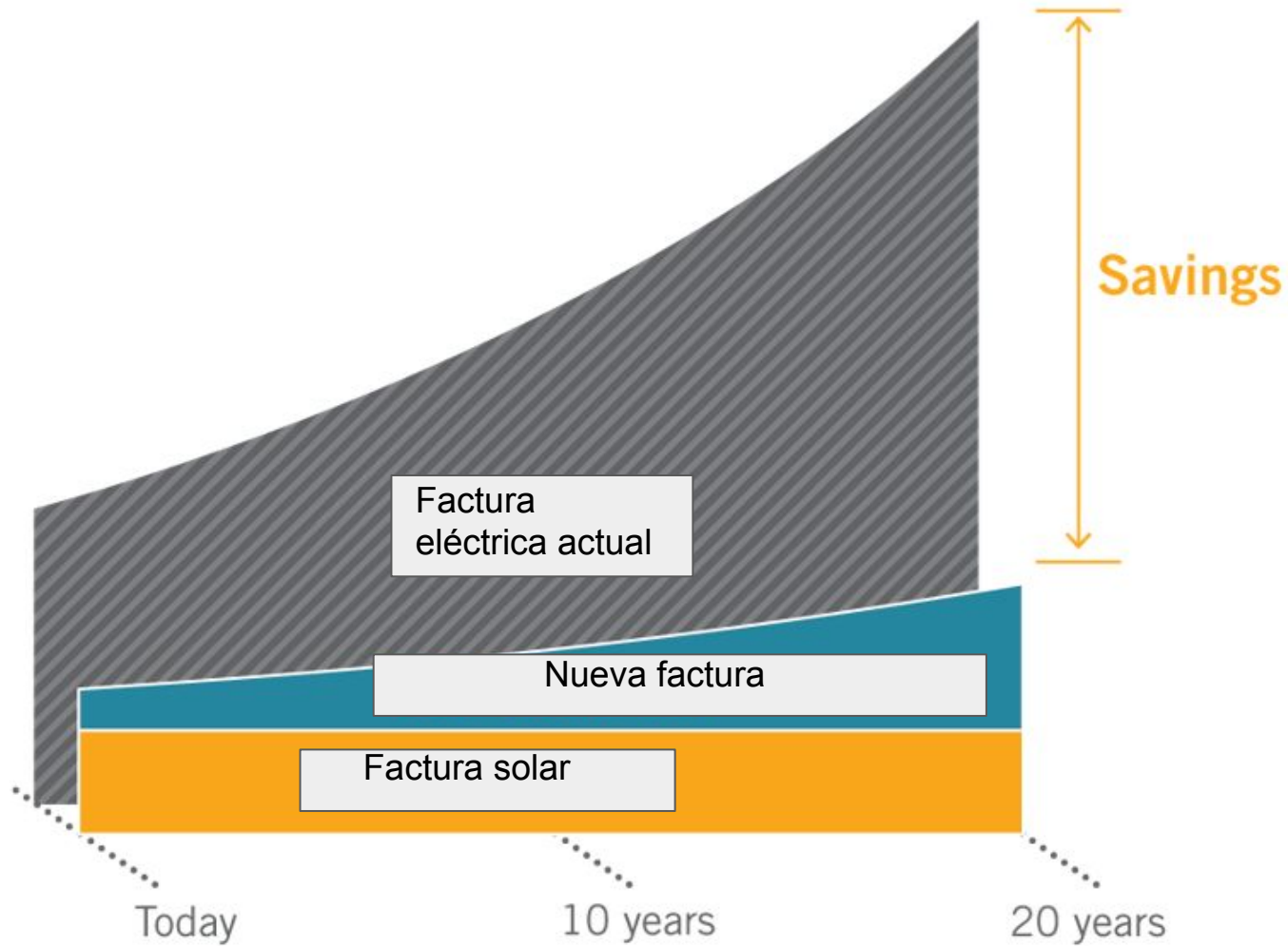
Tu pago al proveedor eléctrico es una deuda que no produce nada por lo cual no capitalizas ya que es un **pasivo**

Los pagos a tu Sistema Solar son una inversión aumentando el valor de tu propiedad por lo cual es un **activo**

Ya estas pagando por algo que no te rinde, paga tu sistema solar con ese dinero en vez de tirarlo a la basura







Activo  
Vs  
Deuda o pasivo



**Un estudio del NREL demuestra  
que una casa solar se vende 20%  
mas rápido por 17% más dinero**



# Casas con energía solar se venden más rápido

Homes with lower electricity bills also sell faster, spending less time on the market.



U.S. DEPARTMENT OF  
**ENERGY**

According to the U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy, a home with solar panels will sell twice as fast as a home without solar panels.

# Casas con energía solar se venden más rápido

Homes with lower electricity bills also sell faster, spending less time on the market.

The website for the **U.S. Department of Housing and Urban Development** states that energy saving improvements increase the potential resale value of your home and help it sell more quickly because they

“make your house more affordable to more people”,

“attract attention in a competitive market”,

and are

“improvements which will actually save money.”



# Tus opciones son...

- **Permaneces con el monopolio eléctrico**
  - Te seguirán subiendo tu factura
  - No te aumenta el valor de la propiedad
  - No recibes incentivos desaprovechando la ayuda del gobierno
  - Pagarás por el resto de tu vida
- **Si te vas solar**
  - 0\$ de enganche
  - Tu pago nunca sube
  - Te aumenta la casa de valor
  - Te aprovechas de los incentivos existentes
  - Un pago que tiene fin tal como tu casa y tu carro