



# Bringing Solar to DuPage County

January 29, 2018



# Illinois Solar Energy Association (ISEA)



The ISEA mission is to educate and advocate for the widespread application of solar, wind and other forms of renewable energy to the people of Illinois.

- Established in 1975
- 501(c)3 charitable organization
- Membership based organization, with 400 individual/family members & 100+ Businesses
- Hosts the annual IL Solar Tour as part of the National Solar Tour



# Agenda

- Solar Myths
- Solar 101
- Getting Started for Your Home

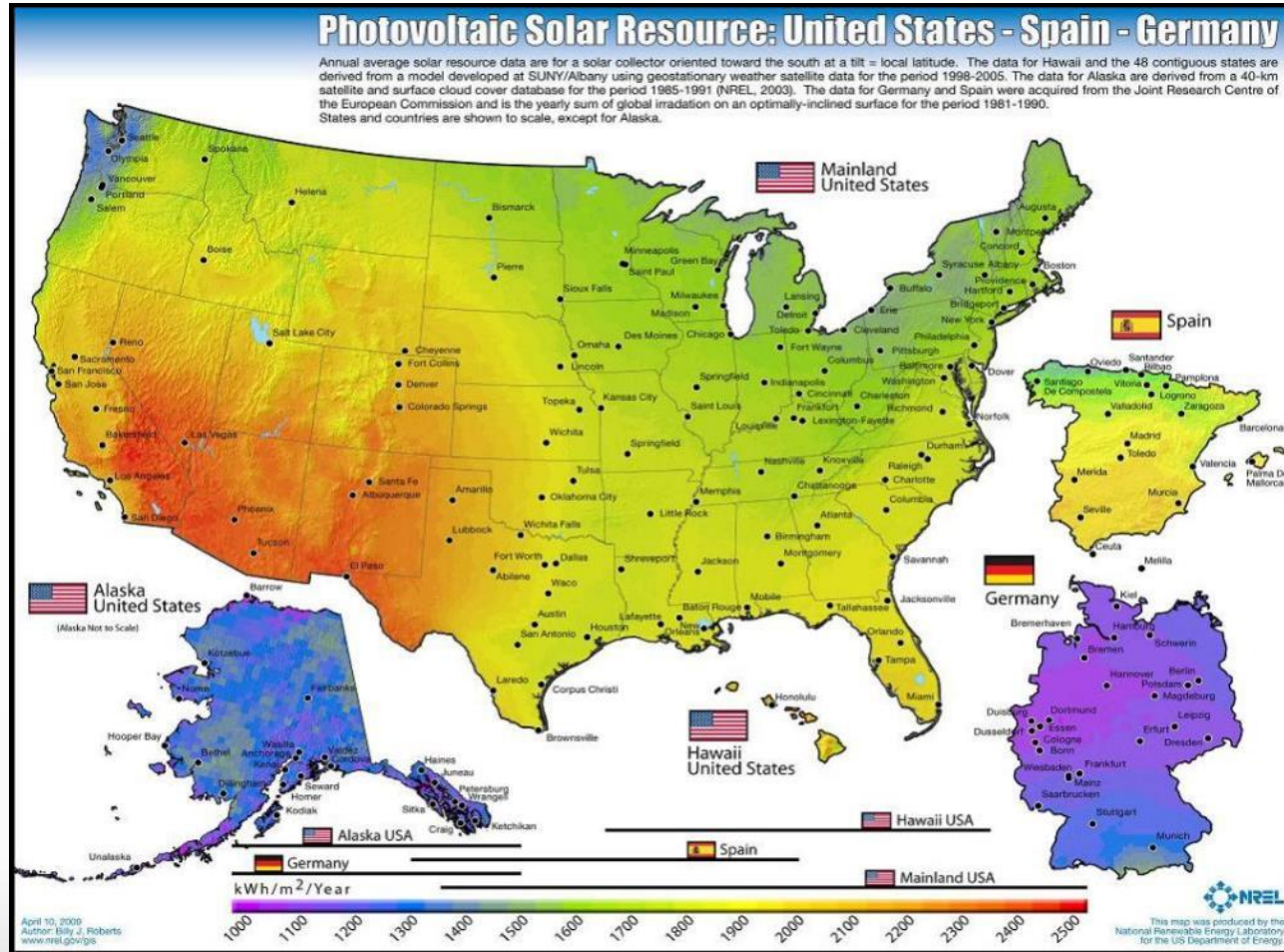


# Solar Myths

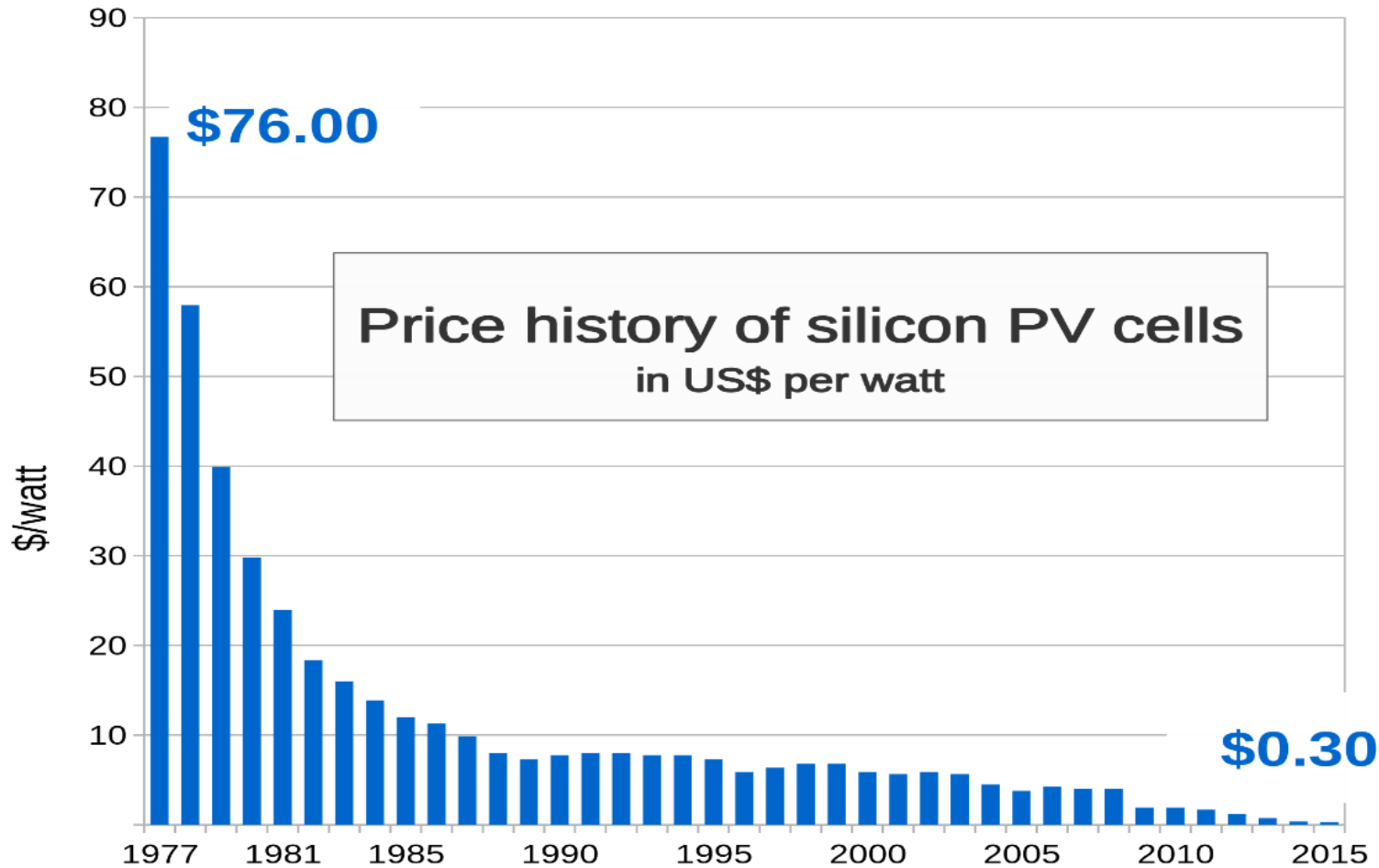
- Too Shady
- Too Expensive
- Too Hard
- Limited Ability
- Not Scalable



# Too Shady?

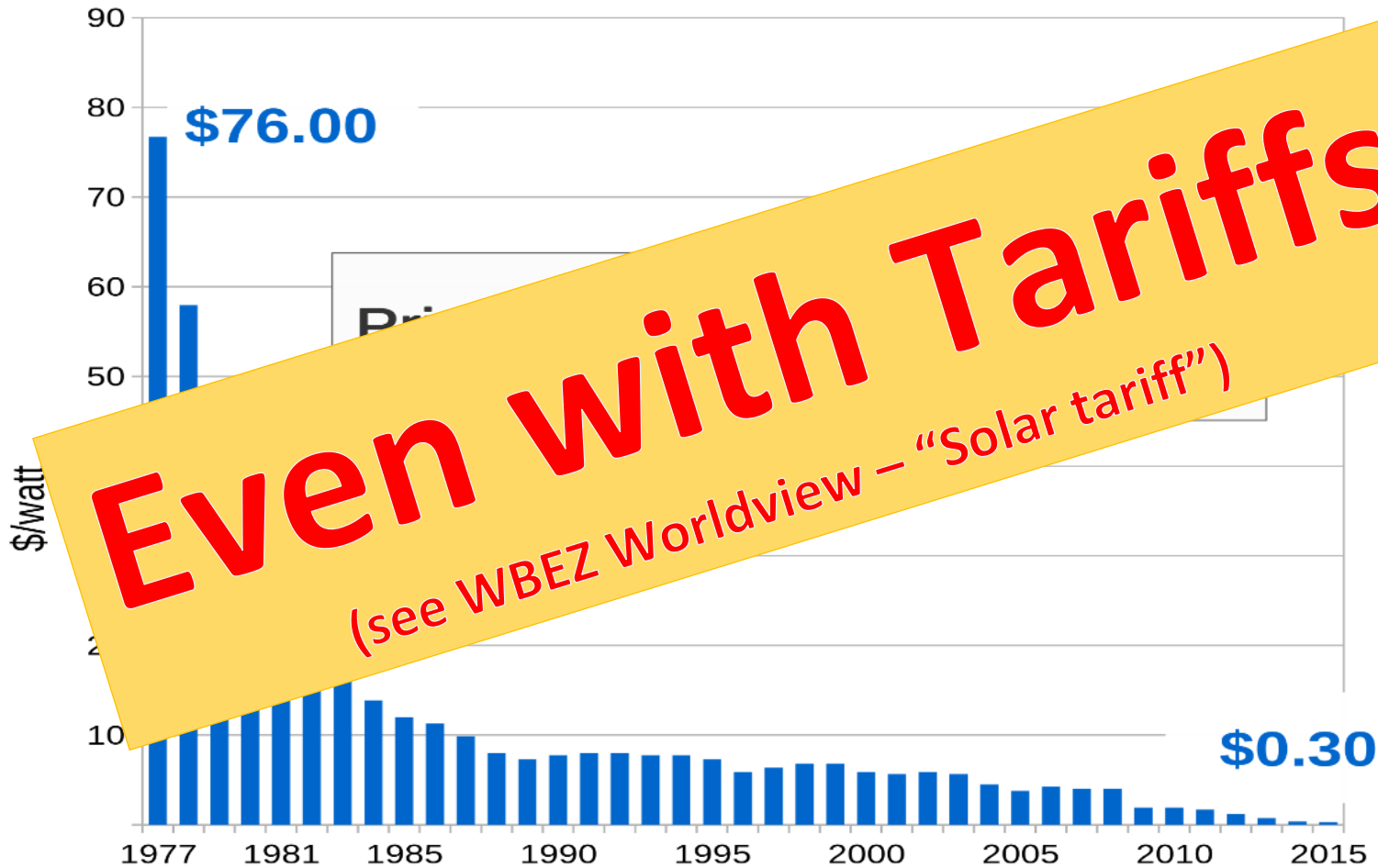


# Too Expensive?



Source: Bloomberg New Energy Finance & [pv.energytrend.com](http://pv.energytrend.com)

# Too Expensive?



Source: Bloomberg New Energy Finance & [pv.energytrend.com](http://pv.energytrend.com)

# Government Incentives



## State Incentives

- Renewable Energy Credits (RECs)
- Net Metering
- Grants for Commercial Thermal Projects

## Federal Incentives

- 30% Federal Tax Credit
- Accelerated Depreciation for Commercial Projects







# Future Energy Jobs Bill Provides Certainty

- Fixes variable funding issues - \$200M annually
- Creates IPA Long Term Planning Process
  - 15 Year REC contracts (Adjustable Block Program)
  - Community Solar
  - IL Solar for All Program (\$96M for low-income solar and job training)
  - Job Training Programs (Utility Funded/Administered)
- More Utility Scale Wind & Solar!!

Year	Wind	Solar
2020	650 MW	1,350 MW
2025	1,000 MW	2,000 MW
2030	1,350 MW	2,700 MW
* Currently 70 MW installed Renewable Energy		

Sec 16-111.5(b)(5) (p 397), Sec 1-75(c)[(1)(A) (p 76), (1)(B) (p 77), (1)(C) (p 79), (1)(E) (p 82), (1)(G) (p 85) ]



# Adjustable Block Program - example

Table 6-1: Block Group REC Prices (\$/REC)

Block Group	Block Category		9/29/17 Prices			10/6/17 Updated Prices		
			Block 1	Block 2	Block 3	Block 1	Block 2	Block 3
Group A (Ameren Illinois, Mt. Carmel, Rural Electric Cooperatives)	Small	<=10 kW	\$82.35	\$79.06	\$75.89	\$82.47	\$79.17	\$76.00
	Large	>10 - 100 kW	\$61.85	\$59.38	\$57.00	\$61.93	\$59.46	\$56.00
		>100 - 200 kW	\$41.35	\$39.88	\$38.00	\$41.43	\$39.96	\$36.00
		>200 - 500 kW	\$21.35	\$20.88	\$20.00	\$21.43	\$20.96	\$20.00
		>500 - 2,000 kW	\$11.35	\$10.88	\$10.00	\$11.43	\$10.96	\$10.00
						\$111.94		
					\$91.93			
Group B (ComEd, Mid-American, Municipal Utilities)	Community Solar	<=10 kW	\$21.61	\$20.75	\$19.92	\$22.73	\$21.82	\$20.94
		>10 - 100 kW	\$19.11	\$18.35	\$17.62	\$20.23	\$19.42	\$18.64
		>100 - 200 kW	\$11.61	\$11.75	\$11.92	\$12.73	\$12.82	\$12.94
		>200 - 500 kW	\$9.11	\$9.35	\$9.62	\$10.23	\$10.42	\$10.64
		>500 - 2,000 kW	\$7.11	\$7.35	\$7.62	\$8.23	\$8.42	\$8.64
							\$69.94	\$67.14

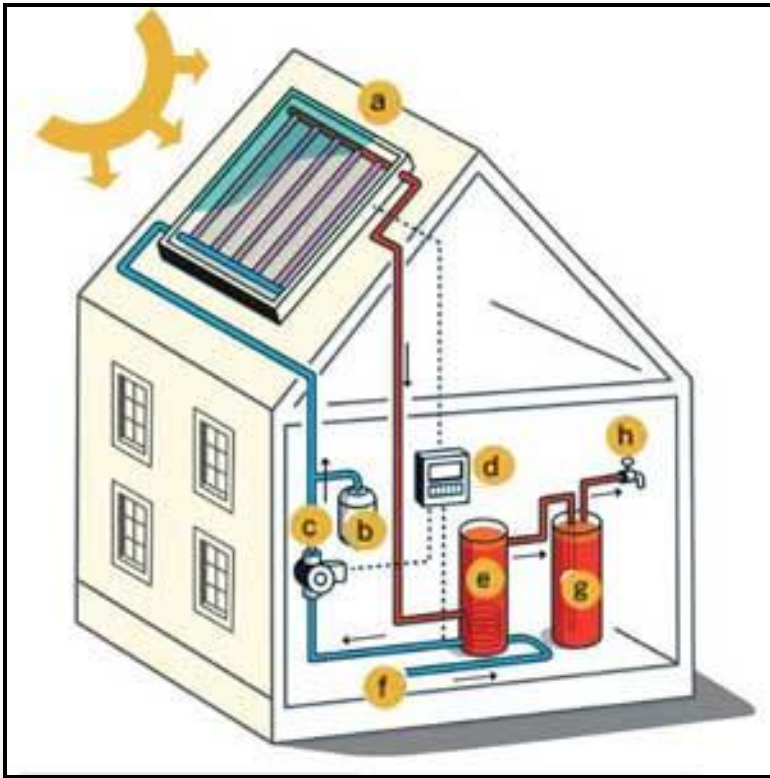
Sample Table  
Not for use



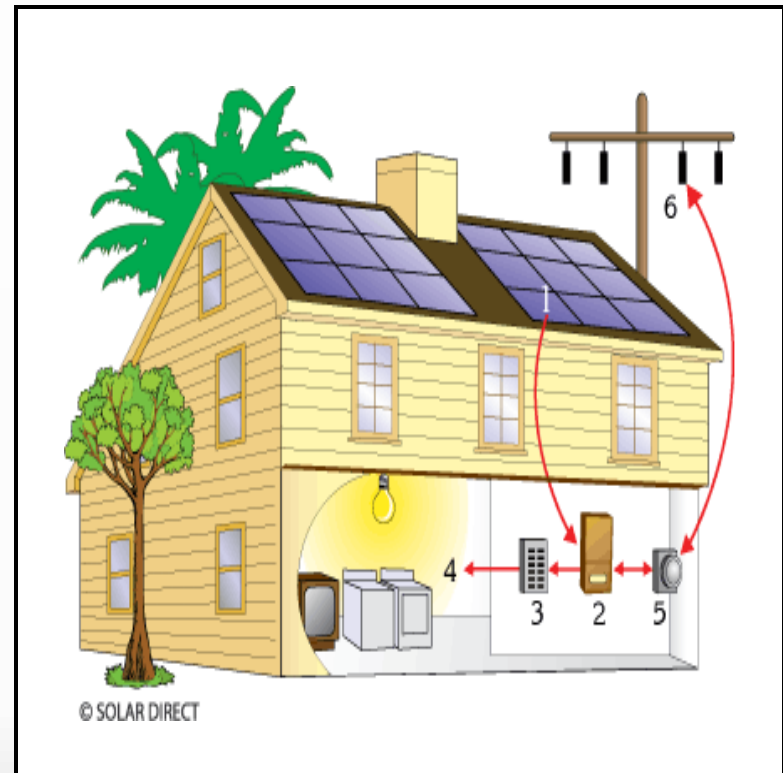
# Too Hard?



## Solar Hot Water

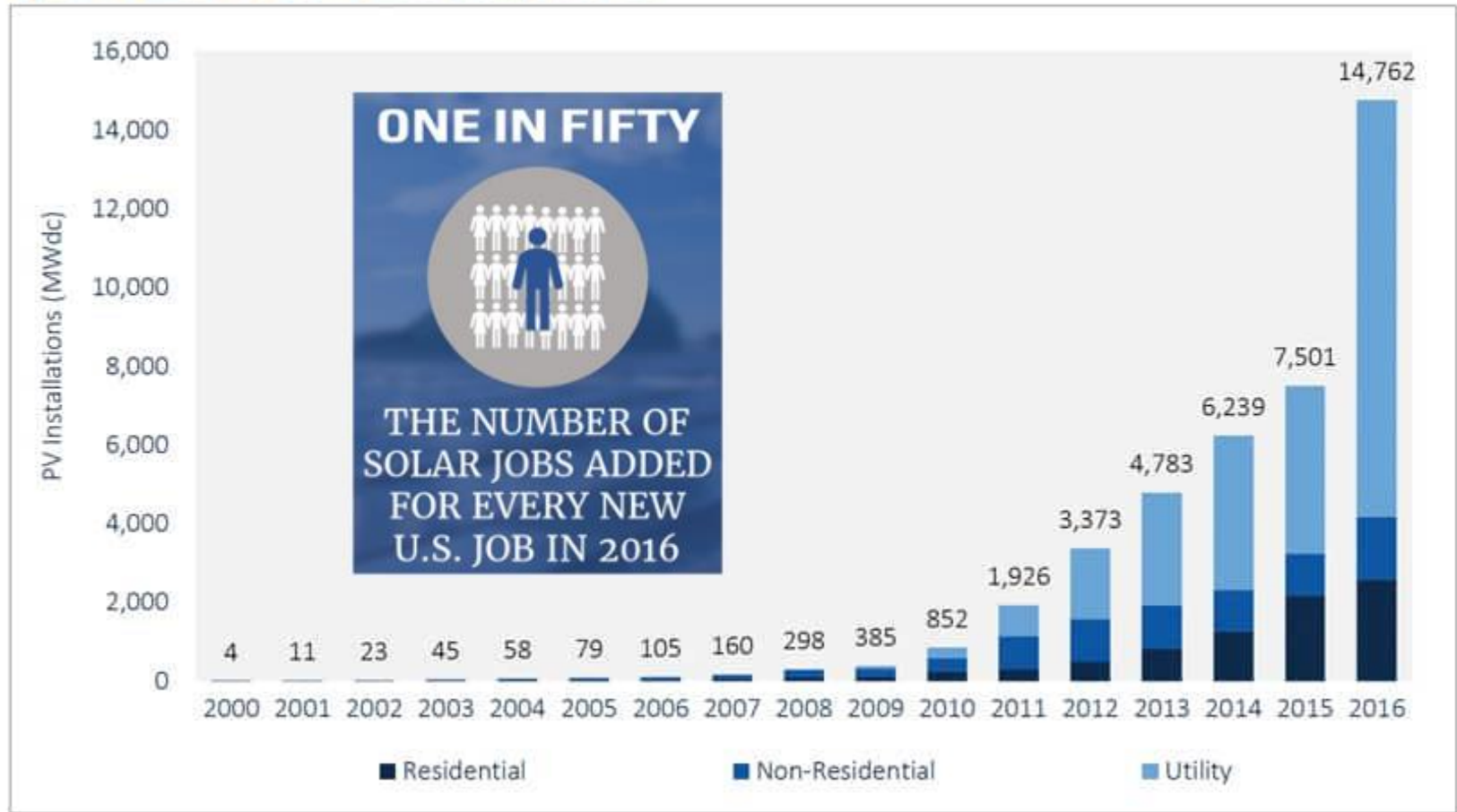


## Solar Electricity (PV)



# Not Scalable?

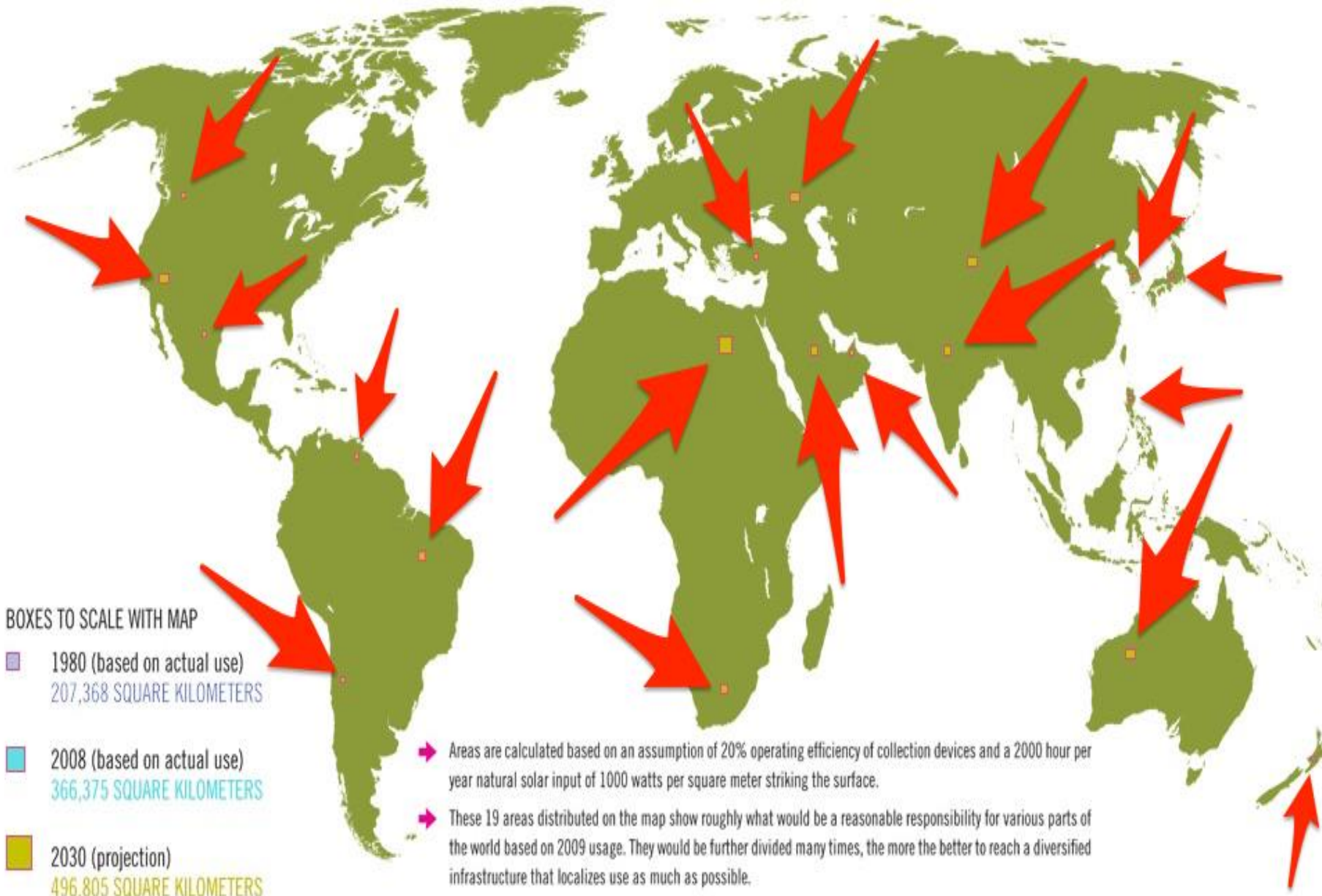
Figure 1.1 Annual U.S. Solar PV Installations, 2000-2016



Every day enough sunlight  
strikes  
the planet in a HOUR



To supply a YEAR of energy!



**BOXES TO SCALE WITH MAP**

- 1980 (based on actual use)  
207,368 SQUARE KILOMETERS
- 2008 (based on actual use)  
366,375 SQUARE KILOMETERS
- 2030 (projection)  
496,805 SQUARE KILOMETERS

➤ Areas are calculated based on an assumption of 20% operating efficiency of collection devices and a 2000 hour per year natural solar input of 1000 watts per square meter striking the surface.

➤ These 19 areas distributed on the map show roughly what would be a reasonable responsibility for various parts of the world based on 2009 usage. They would be further divided many times, the more the better to reach a diversified infrastructure that localizes use as much as possible.

# Solar 101

## A Simple Primer



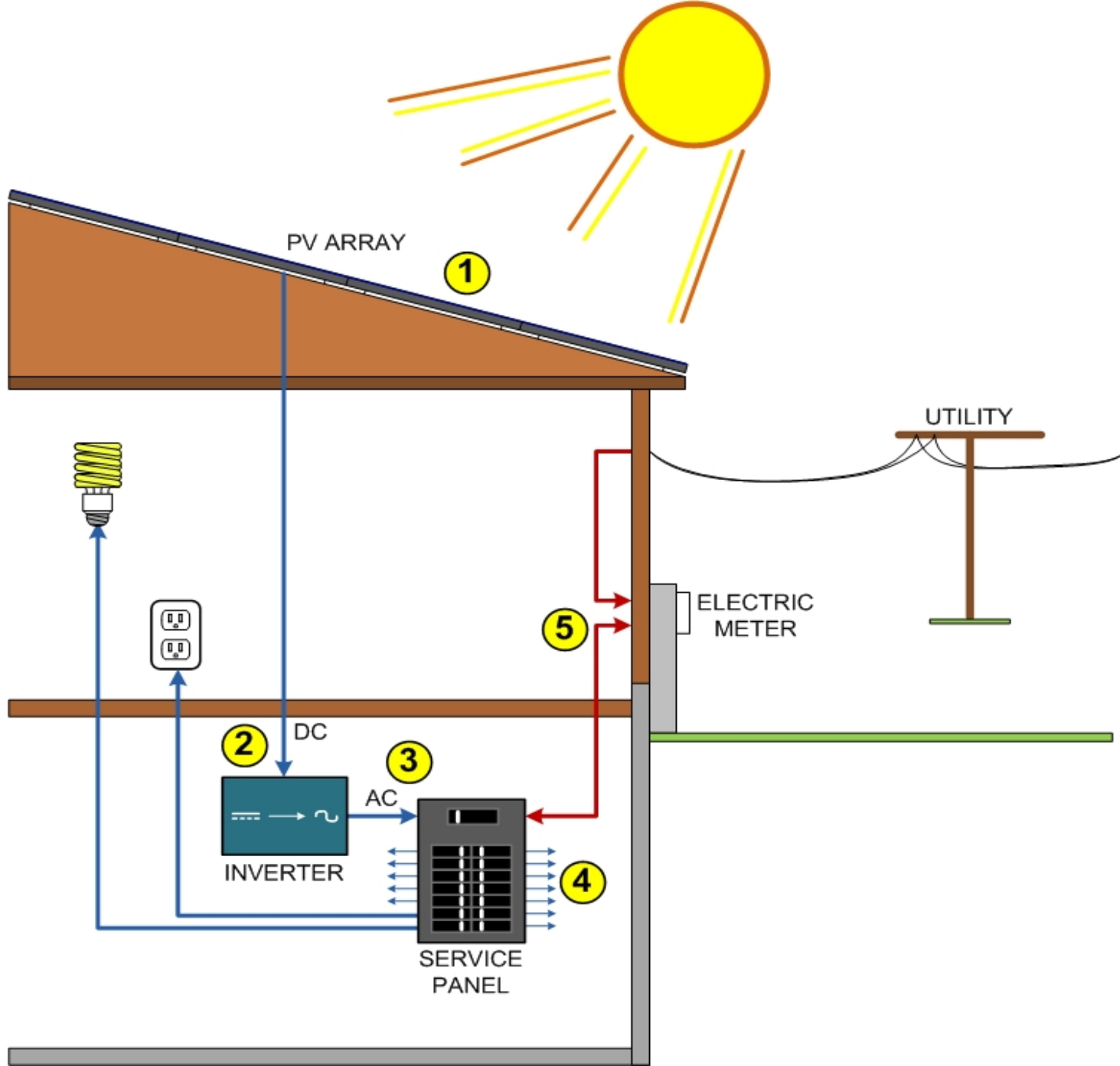
Produces Hot Water & Heat



Produces Electricity



# Photovoltaic (PV)





# Panels Facing South: Pitched Roofs



# Panels Facing South





# Getting Started A Home Owners Perspective




# Know Your Usage, Set Your Goals

**ComEd**  
An Exelon Company

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

**Customer Service / Power Outage**  
**English**  
 1-877-4COMED1 (1-877-426-6331)  
**Español**  
 1-800-95-LUCES (1-800-955-8237)  
**Hearing/Speech Impaired**  
 1-800-572-5789 (TTY)

**Your Usage Profile**  
 13-Month Usage (Total kWh)



Month	kWh
Apr-10	487
May-10	415
Jun-10	220
Jul-10	146
Aug-10	99
Sep-10	125
Oct-10	214
Nov-10	188
Dec-10	337
Jan-11	575
Feb-11	613
Mar-11	382
Apr-11	321

**Electric Usage**

Month	kWh
Apr-10	487
May-10	415
Jun-10	220
Jul-10	146
Aug-10	99
Sep-10	125
Oct-10	214
Nov-10	188
Dec-10	337
Jan-11	575
Feb-11	613
Mar-11	382
Apr-11	321

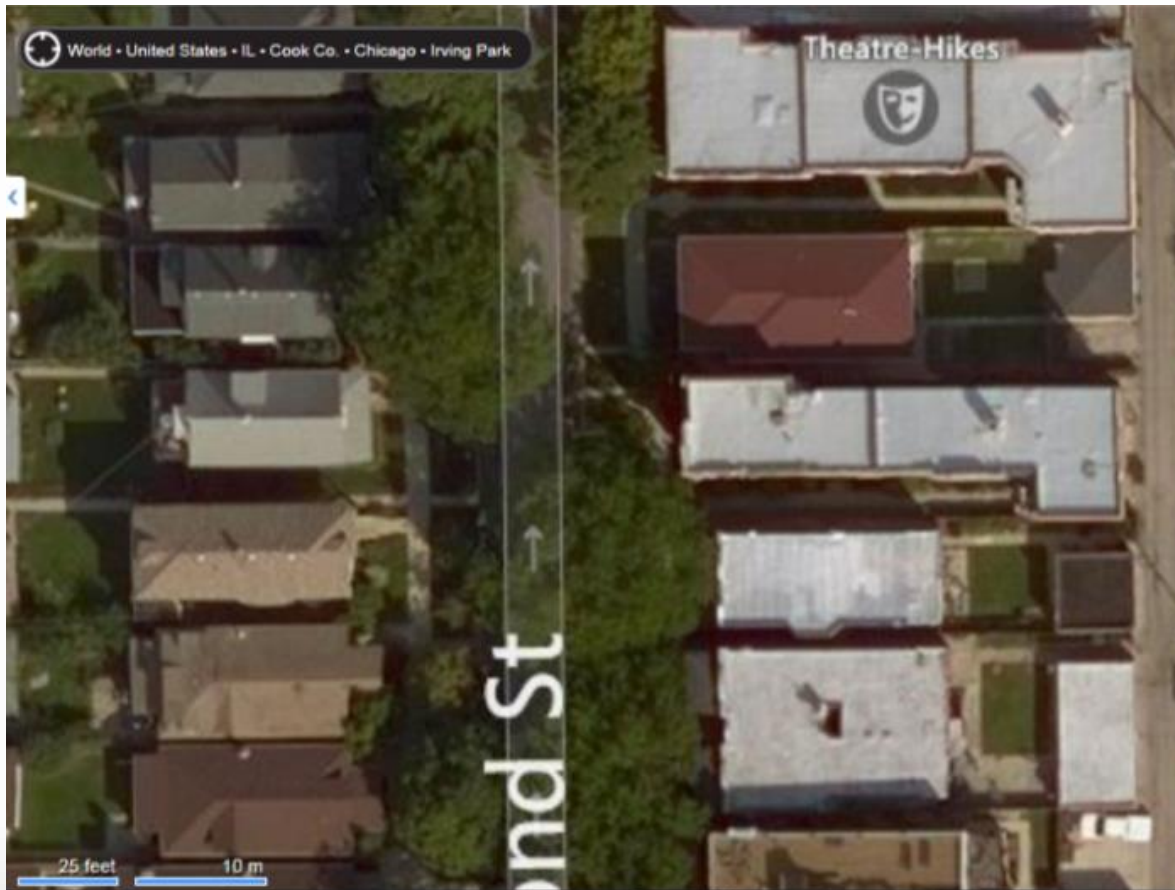
**Average Daily**

Month Billed	kWh	Temp
Last Year	17.4	48
Last Month	13.2	31
Current Month	11.1	40

**Electric Usage**

Month	kWh
Apr-10	487
May-10	415
Jun-10	220
Jul-10	146
Aug-10	99
Sep-10	125
Oct-10	214
Nov-10	188
Dec-10	337
Jan-11	575
Feb-11	613
Mar-11	382
Apr-11	321

# A Birds Eye View



[www.bing.com/maps](http://www.bing.com/maps)  
(4 views of roof)

[www.maps.google.com](http://www.maps.google.com) &  
Google Earth

Project SunRoof  
[www.google.com/get/sunroof](http://www.google.com/get/sunroof)  
Measures sun window

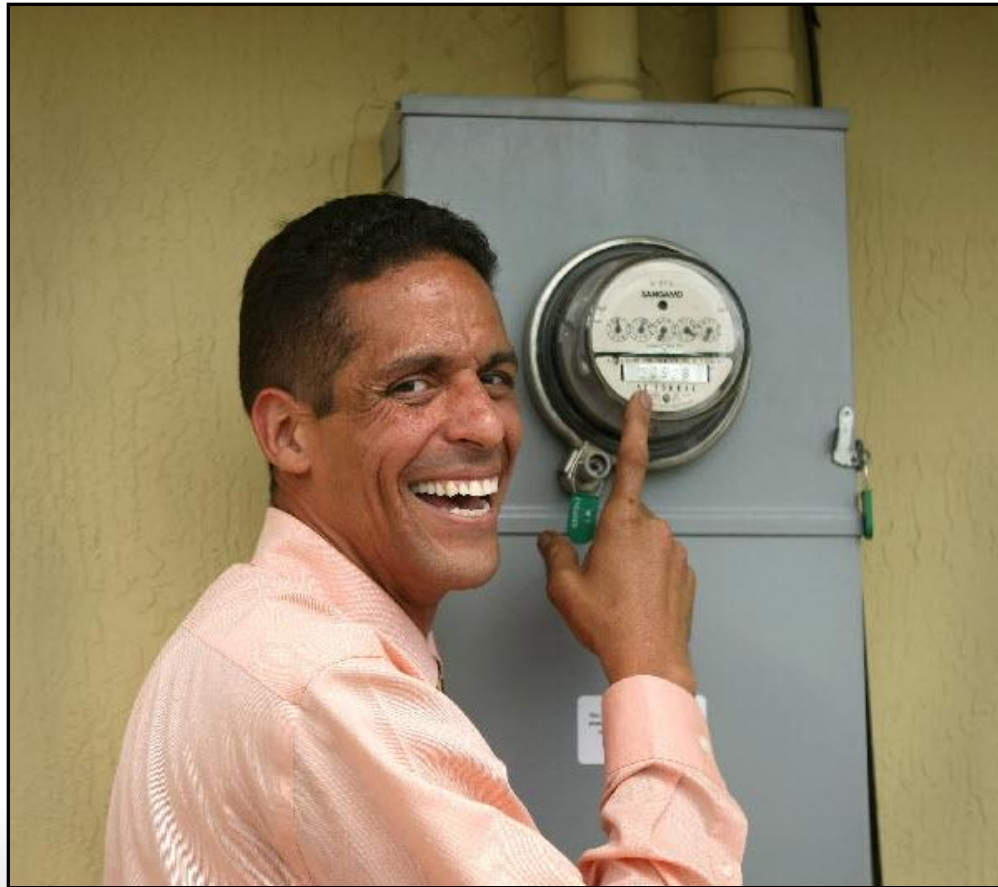
Many tools can even take  
measurements!



# Getting Started - A Checklist for System Owners



Sit Back and Enjoy!



# Community Solar – the FUTURE!



Only about ¼ of all homes in the US are suitable for solar. Community Solar solves that problem!





# Questions & Contact Info

✓ Website:

[www.illinoissolar.org](http://www.illinoissolar.org)

✓ Contact us:

[Lesley.mccain@illinoissolar.org](mailto:Lesley.mccain@illinoissolar.org)

