



Overview of Solar Energy

Presentation to GreenTown

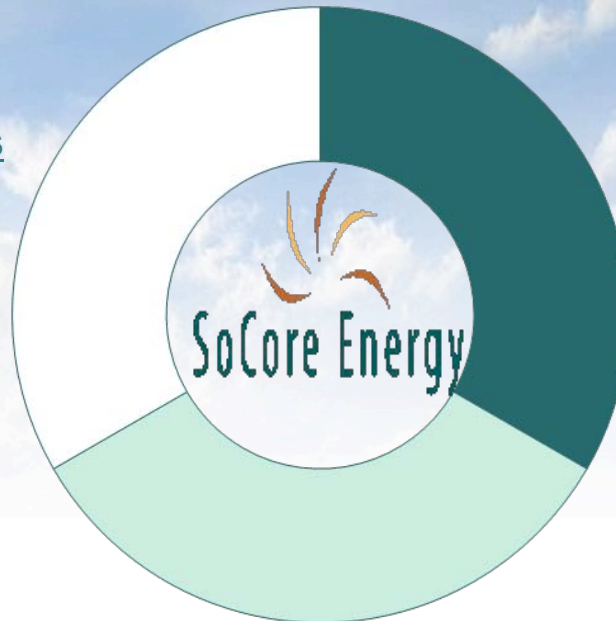
March 18, 2010

Pete Kadens, President, SoCore Energy

About SoCore

Customer Integration Services

- Full Market Analysis
- Site Design/Layout
- Equipment Procurement
- Product Analysis/Pricing
 - Financial Analysis
 - Installation
- Rebate Application/Capture
- SREC Administration



Credibility

- City of Evanston (IL)
- City of Naperville (IL)
 - Health Care REIT
 - Invenergy
 - JC Penney
 - Lowes
 - TJX Companies
- University of Illinois

Differentiators

- The SunLock™ Solution
- Lower System Installed Cost
 - Less Labor Required
- Education of Customers
- Financial Sophistication

Types of Solar Energy

Passive Solar Technologies

- Harness heat from the sun to provide hot water and to warm homes, buildings and other structures

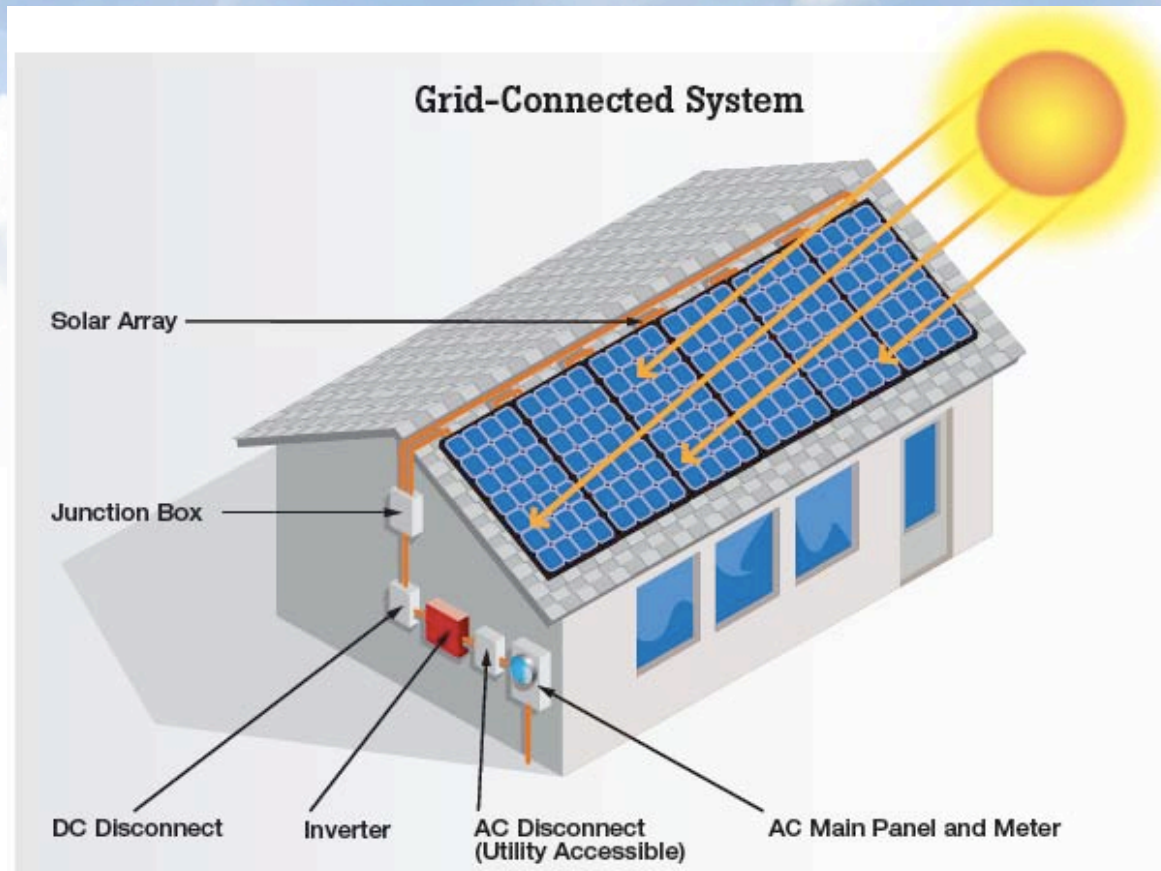
Solar Photovoltaic (PV) Technologies

- Convert sunlight directly into electricity to provide power for homes, businesses and other distributed applications
- PV just beginning to be applied to utility-scale power stations of 5 - 50 megawatts (MW)

Concentrating Solar Power (CSP)

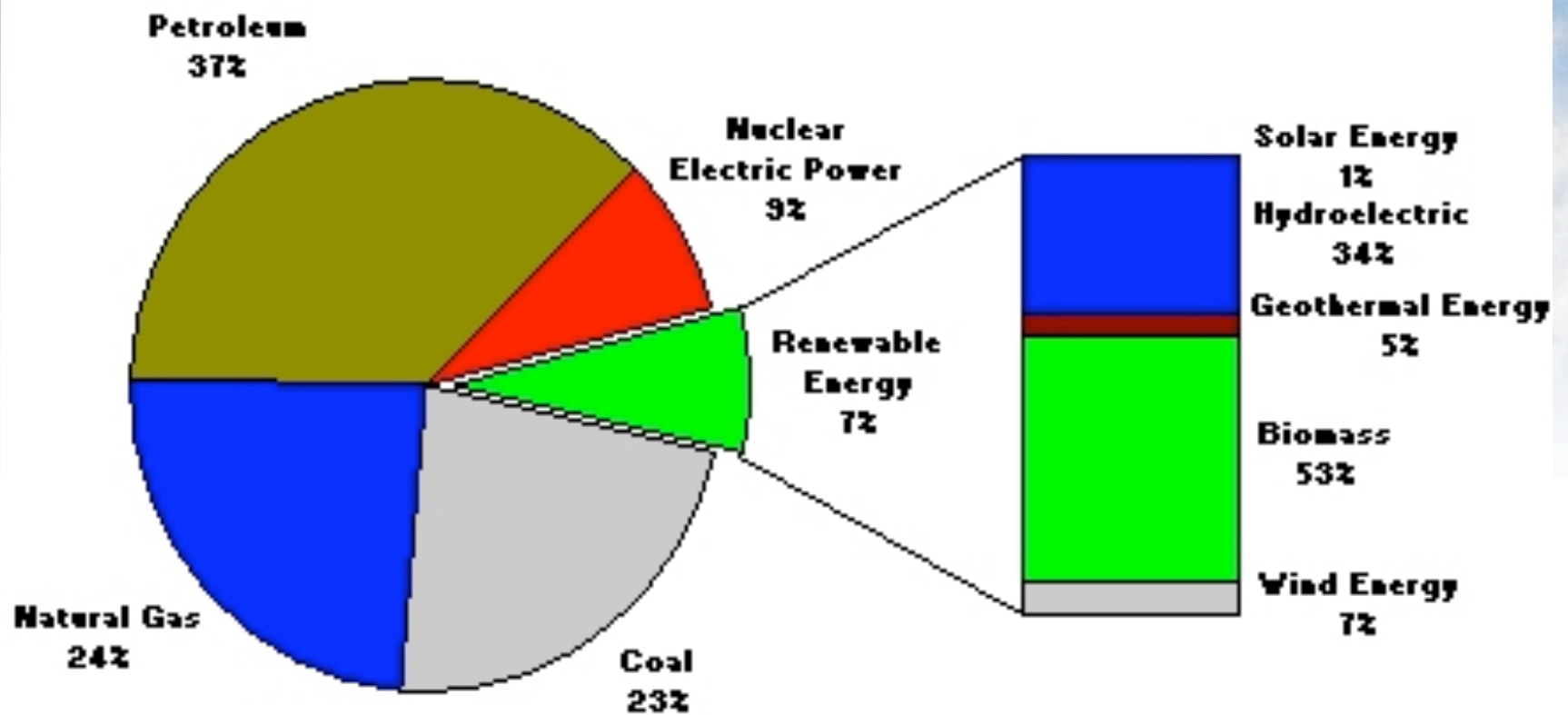
- Harness heat from the sun to boil fluid used to run steam turbines in utility-scale power stations of 50+ MW
- 9 “SEGS” plants in Mojave desert of California are largest solar plants in world (354 MW)

PV Systems



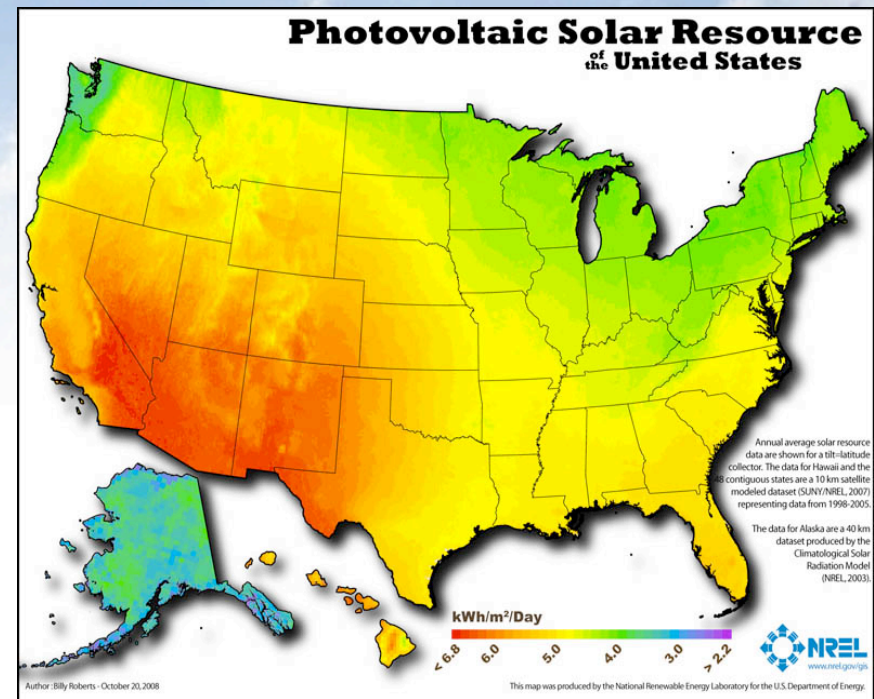
*Image Courtesy of US Department of Energy

US Supply Mix



Effectiveness of Solar PV

- Solar radiation varies continuously from sunup to sundown and depends on cloud cover, sun position, etc.
- The maximum “irradiance” occurs at solar noon, defined as the midpoint in time between sunrise and sunset
- Irradiance is the amount of solar power striking a given area and is a measure of the intensity of the sunshine



- Efficiency Gains-Not Moore's Law
 - Solar Tracking: Single vs. Multiple Axis
 - Manufacturing: Thin Film
- Advanced Research
 - Argonne-Northwestern Solar Energy Research
 - National Renewable Energy Lab



PV Module Comparison

	TRINA	SOLARFUN	SOLARWORLD
STC Watts	230	230	230
P Tolerance	-0/+3	-3/+3	-0/+3
PTC Watts	202	207.6	204.4
Min PTC Watts	202	201.4	204.4
Cell Tech	Poly	Poly	Mono
Mfg	China	China	US (CA)
Price	\$1.70*	\$1.70	\$1.90

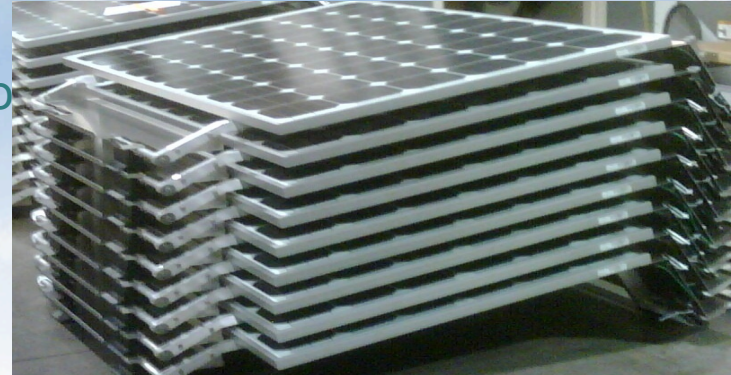
*Trina subject to limited availability in 2010

The Ideal Facility

Facility Attributes	Details
Roof Footprint	25,000 Sq Ft +
Remaining Roof Life	15+ Years
Facility Structure	Structure should have at least 8-10 PSF excess capacity
LEED	Facilities with LEED certification more likely to receive incentives
Budget	Budget dollars should be allocated for building upgrades

SoCore SunLock™ Innovations

- SunLock™ portable aluminum mounting solution comes fully assembled to the roof in stacks



- Enphase micro-inverter attached to each solar panel allows for system portability, modularity, and panel level monitoring

- SunLock™ units are placed on the roof without any tools and without risk of voiding roof warranties





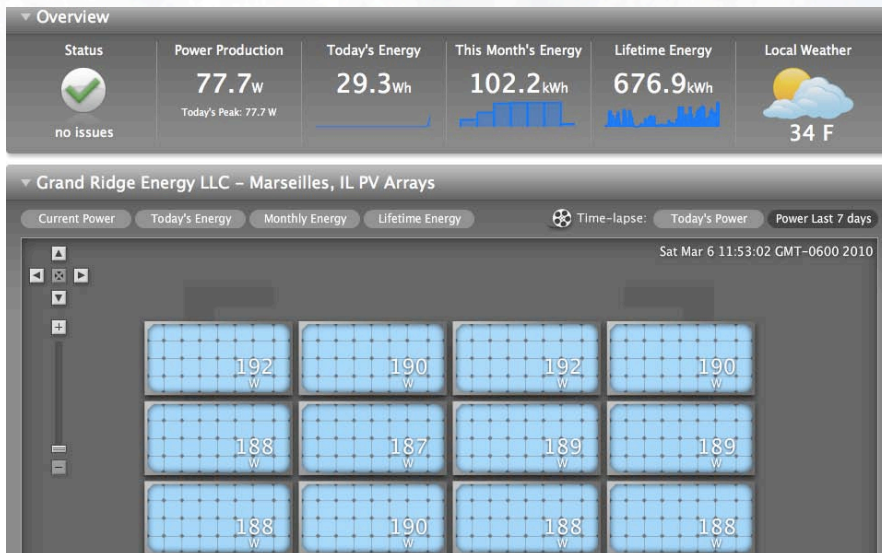
SunLock™ Micro-Inverter Advantages

Panel Level Monitoring

- Identify exactly what a problem is before sending a tech to the roof
- Catch problems early before they impact kWh production

Superior Design

- Industry leading 15 year standard warranty
- Fully sealed enclosure with no fans or other moving parts
- Industry leading 300 year+ mean time between failure



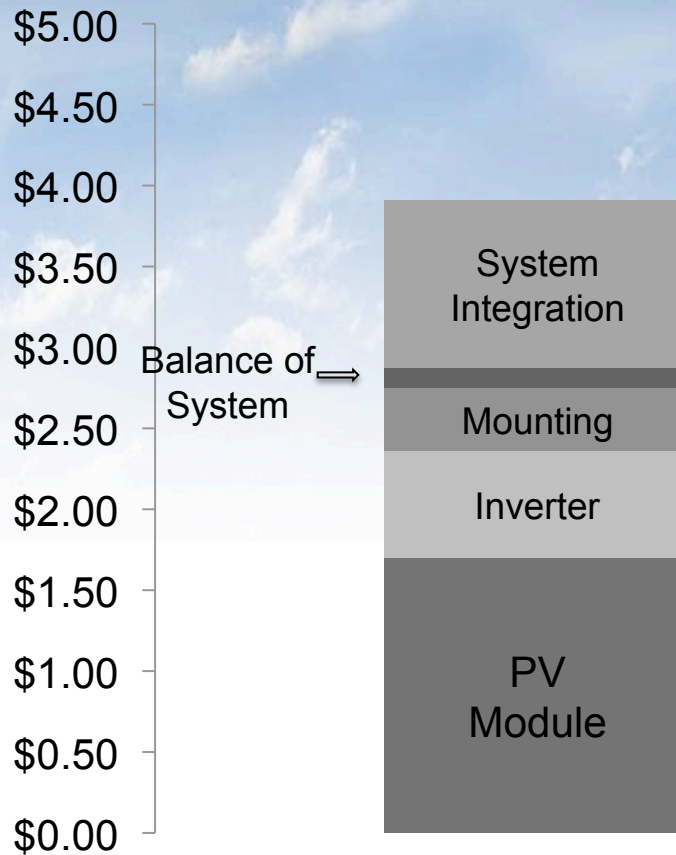
- Illinois' "RPS" requires electric utilities serving more than 100,000 customers in Illinois to obtain at least 10% of power from renewable energy sources by 2015
 - Law now mandates that 6% of the 10% RPS come from solar in Illinois by 2015
 - 12MW to 720MW in 5 years
- Procurement of renewable energy under the RPS is the responsibility of the Illinois Power Agency (IPA)

- RPS (30+ States & District of Columbia)
 - Renewable Energy Credits (“RECs” or “SRECS”)
 - National Renewable Electricity Standard
 - Waxman/Markey
 - Kerry/Boxer
 - Climate and Energy Bills Together?
- Tax Incentives
 - Federal and state tax credits (DOE Cash Grant, ITCs)
 - Accelerated depreciation (MACRS)



Solar Project Budget Summary (400kW project)

PV Module	\$1.70
Inverter	\$0.66
Mounting	\$0.39
Balance of System	\$0.12
System Integration	\$1.04
General Conditions/Contractor's Fee	\$0.87
Total	\$4.78





Solar Purchase By The Numbers: BEFORE INCENTIVES

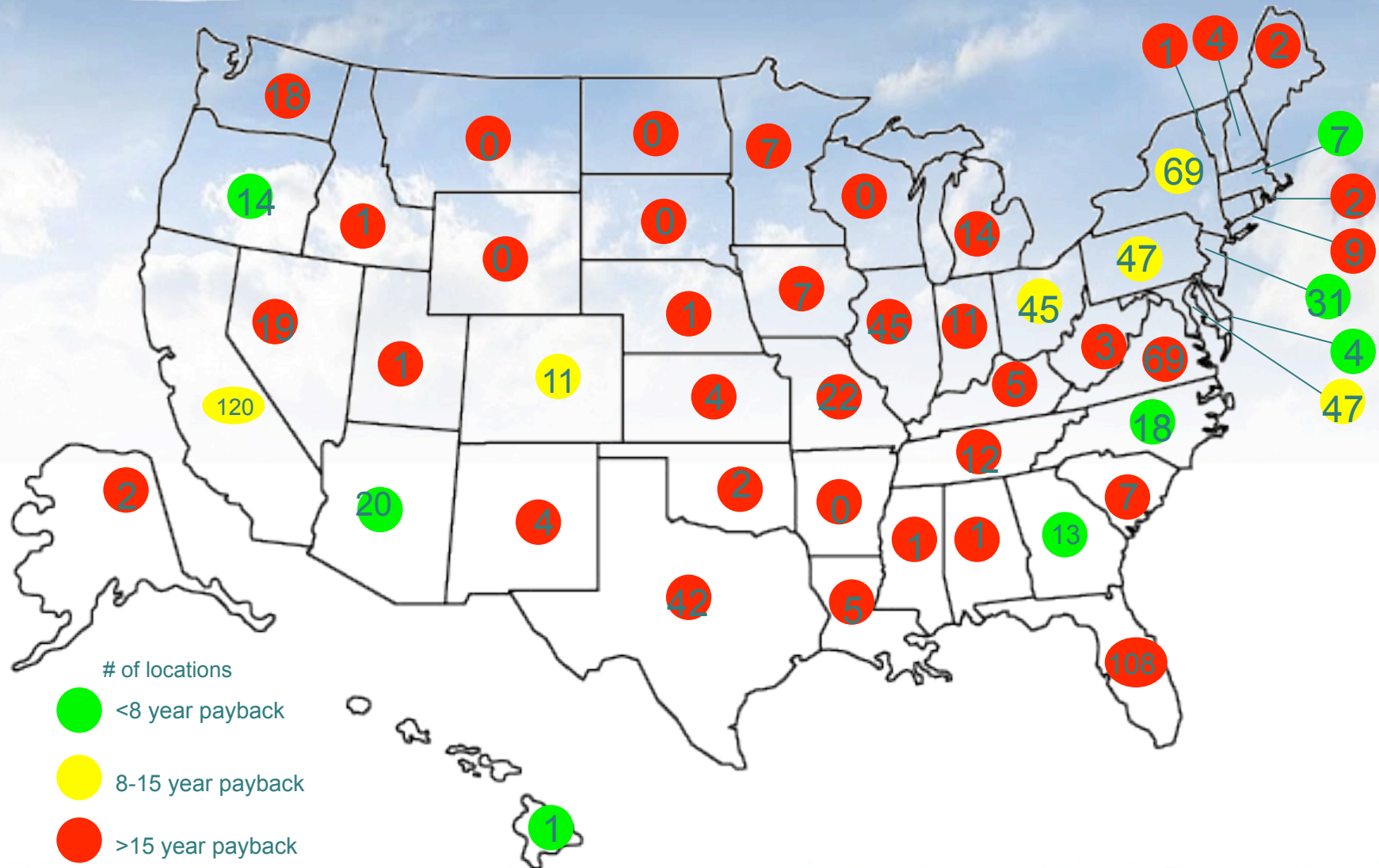
System Size	Upfront Cost	Cost After Rebates	Simple Payback	Annual Energy Generated	Cash/Savings Generated Over Warranted Lifetime	Annual SREC Generation	Metric Tons of CO2 Offset	Acres of Forest Replenished	Cars removed from road
25 kW	\$162,602	\$162,602	Year 33	30,084	\$93,354	30	23	0.8	4
50 kW	\$292,963	\$292,963	Year 31	60,168	\$186,708	60	46	1.5	8
75 kW	\$422,360	\$422,360	Year 31	89,976	\$279,205	90	69	2.3	11
100 kW	\$538,725	\$538,725	Year 30	120,060	\$372,559	120	92	3.1	15
200 kW	\$1,048,504	\$1,048,504	Year 29	240,120	\$745,119	240	184	6.1	31
300 kW	\$1,559,676	\$1,559,676	Year 29	359,904	\$1,116,822	360	275	9.2	46
400 kW	\$2,065,169	\$2,065,169	Year 29	479,964	\$1,489,381	480	367	12.2	61
500 kW	\$2,578,697	\$2,578,697	Year 29	600,024	\$1,861,941	600	459	15.3	77



Solar Purchase By The Numbers: AFTER INCENTIVES

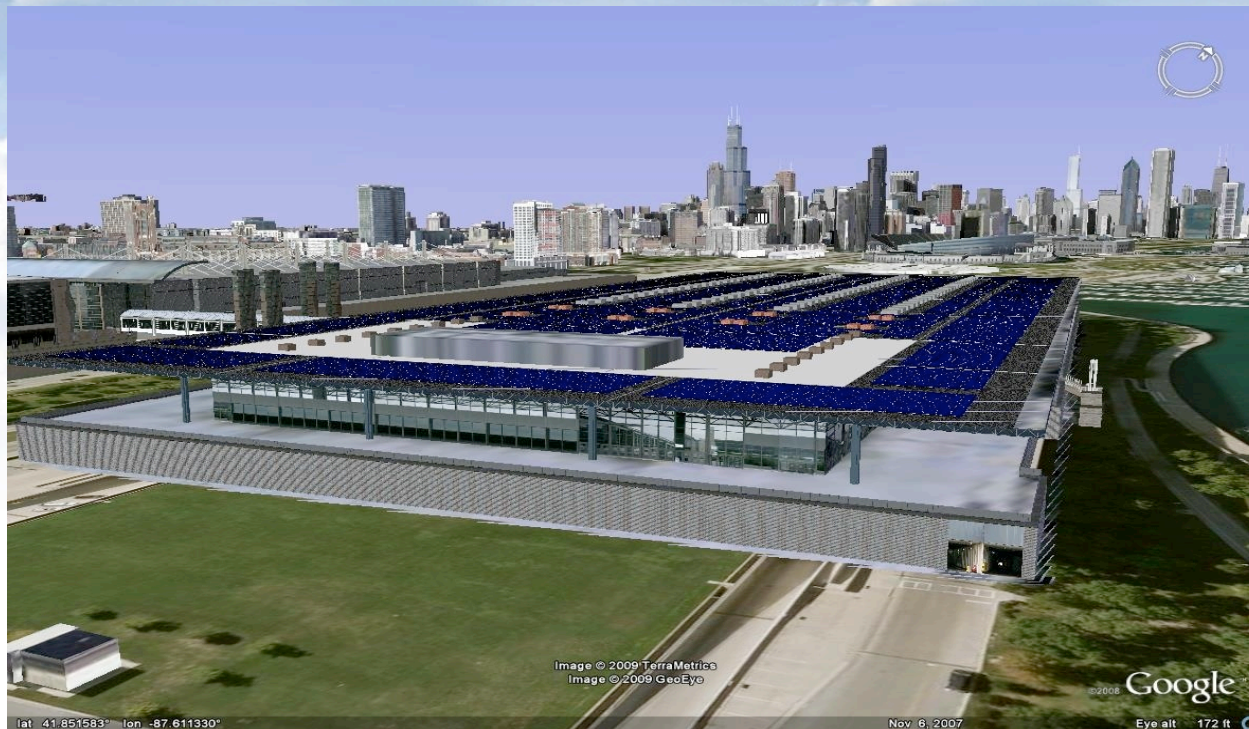
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25 kW	\$162,602	\$65,041	Year 18	30,084	\$93,354	30	23	0.8	4
50 kW	\$292,963	\$117,185	Year 16	60,168	\$186,708	60	46	1.5	8
75 kW	\$422,360	\$168,944	Year 16	89,976	\$279,205	90	69	2.3	11
100 kW	\$538,725	\$215,490	Year 15	120,060	\$372,559	120	92	3.1	15
200 kW	\$1,048,504	\$419,402	Year 15	240,120	\$745,119	240	184	6.1	31
300 kW	\$1,559,676	\$623,870	Year 15	359,904	\$1,116,822	360	275	9.2	46
400 kW	\$2,065,169	\$1,065,169	Year 18	479,964	\$1,489,381	480	367	12.2	61
500 kW	\$2,578,697	\$1,578,697	Year 21	600,024	\$1,861,941	600	459	15.3	77

Favorable Locations



Illinois can lead the greatest urban energy transformation this country has ever seen if we act now and we pioneer renewable energy solutions that customers value.

The Opportunity



MCCORMICK PLACE EAST

3,650 kW installation

15,876 solar panels

3,900,000 kWh produced annually

120 Temporary Green jobs created

15 Permanent Green jobs created

THE LARGEST ROOFTOP PV INSTALLATION IN THE US



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