

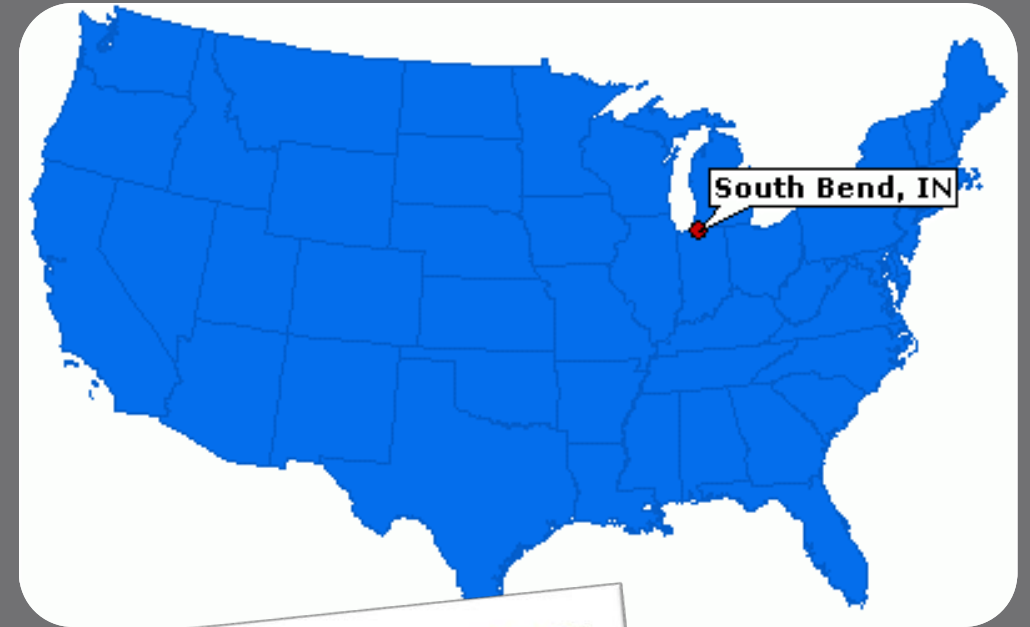


Building a Brilliant tomorrow

inovateus
S O L A R

Company History

- Founded in 2005 to promote solutions for America's increasing energy needs
- Corporate HQs in South Bend, Indiana
- Proven track record in roof mount, ground mount, carport, micro-grid, and large scale off-grid solar projects
- Turnkey process – Development to construction

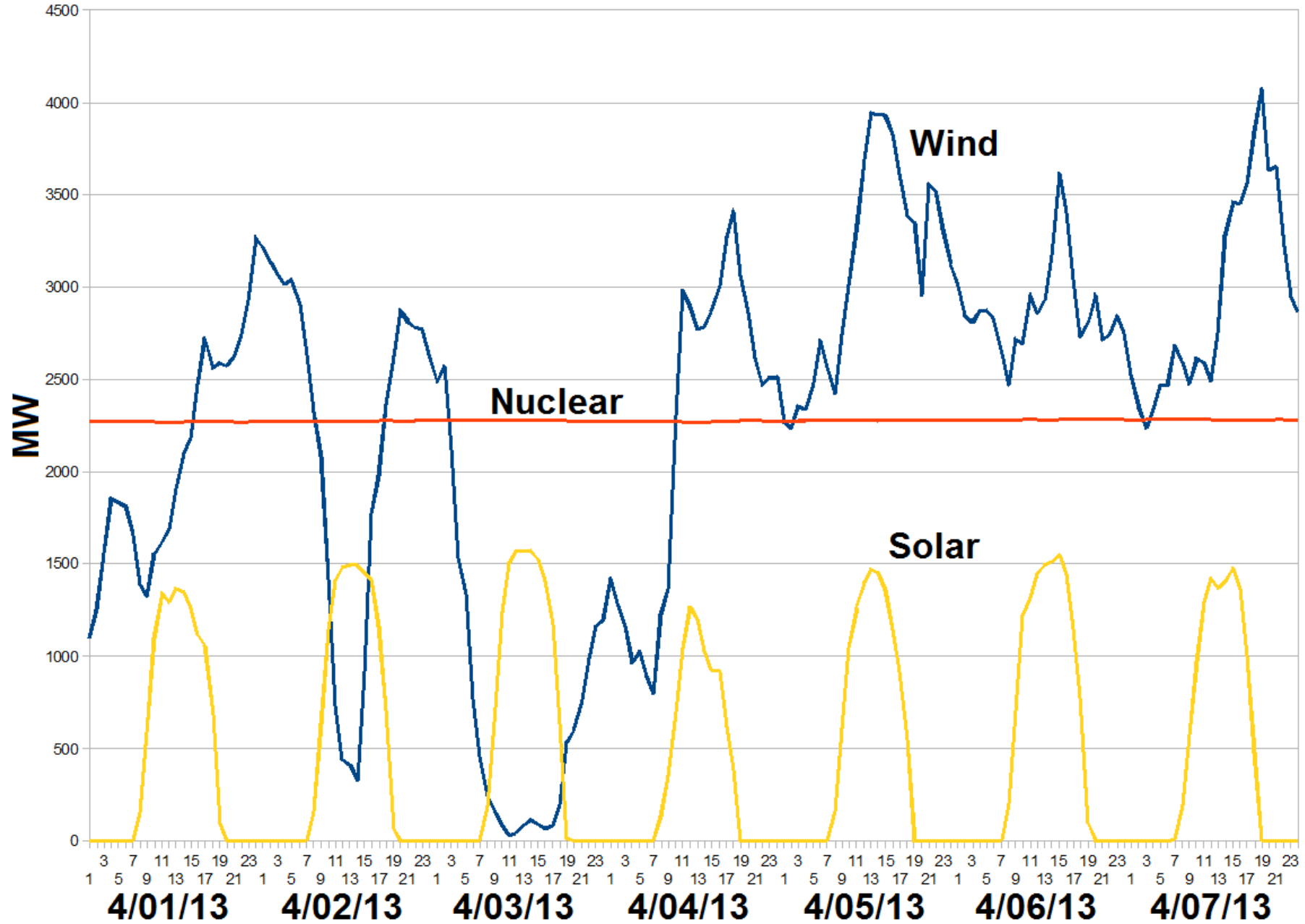


Generation



- Photons
- Solar Modules
- Inverter
- DC/AC
- Net Meter
- Utility Grid

Solar Wind and Nuclear Generation in California



Types of Solar Systems



Carport



Ground Mount



Rooftop



inspired by
EV





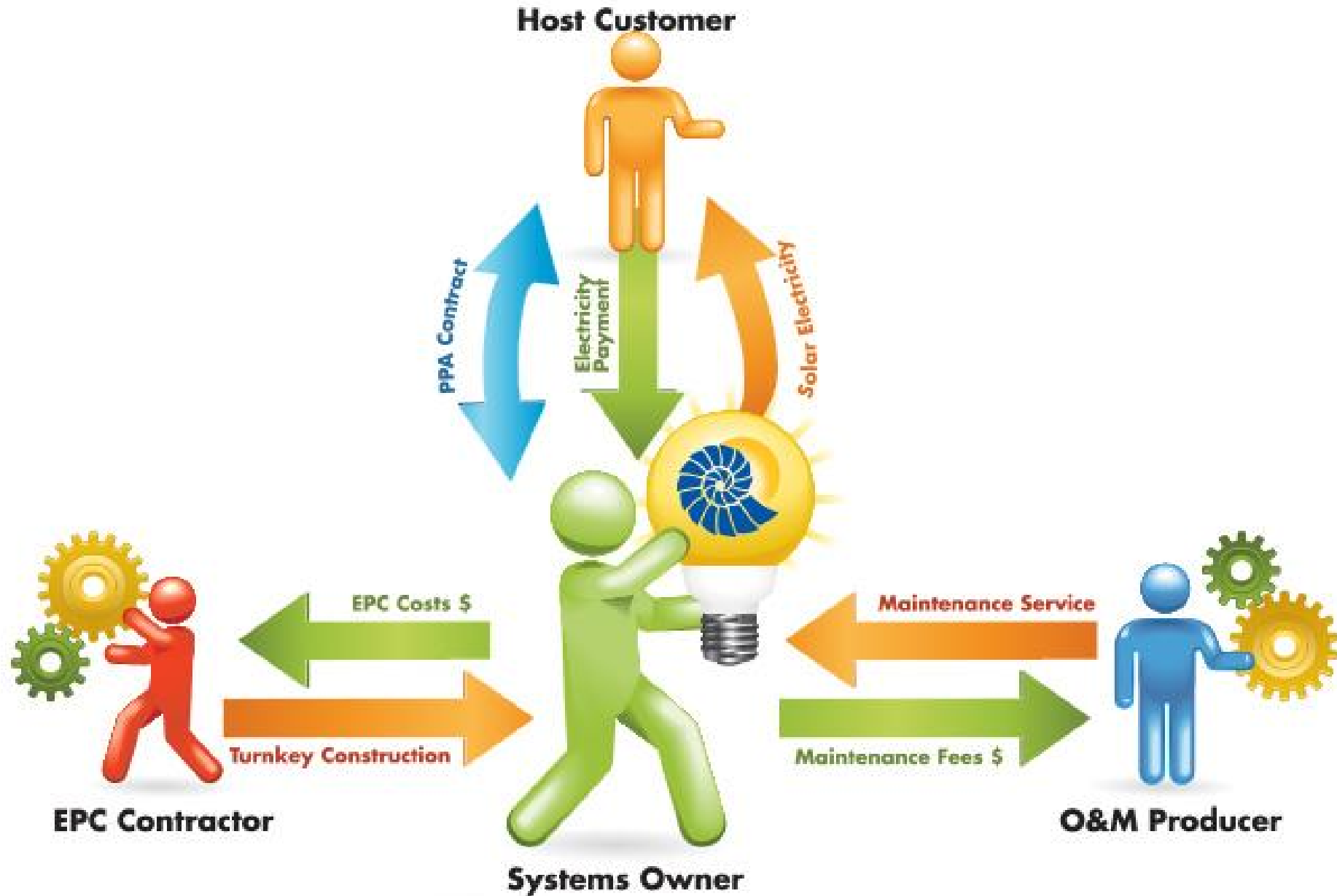


Incentives and Funding

- Federal Incentives
 - Tax Credits
 - MACRS (Modified Accelerated Cost Recovery System)
 - www.dsireusa.org
- Private Funding
 - Private funds are available to own and operate solar on a third parties building.



Power Purchase Agreement Structure





inovateus
SOLAR

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Field Museum of Natural History

L a k e M i c h i g a n

Burnham Park

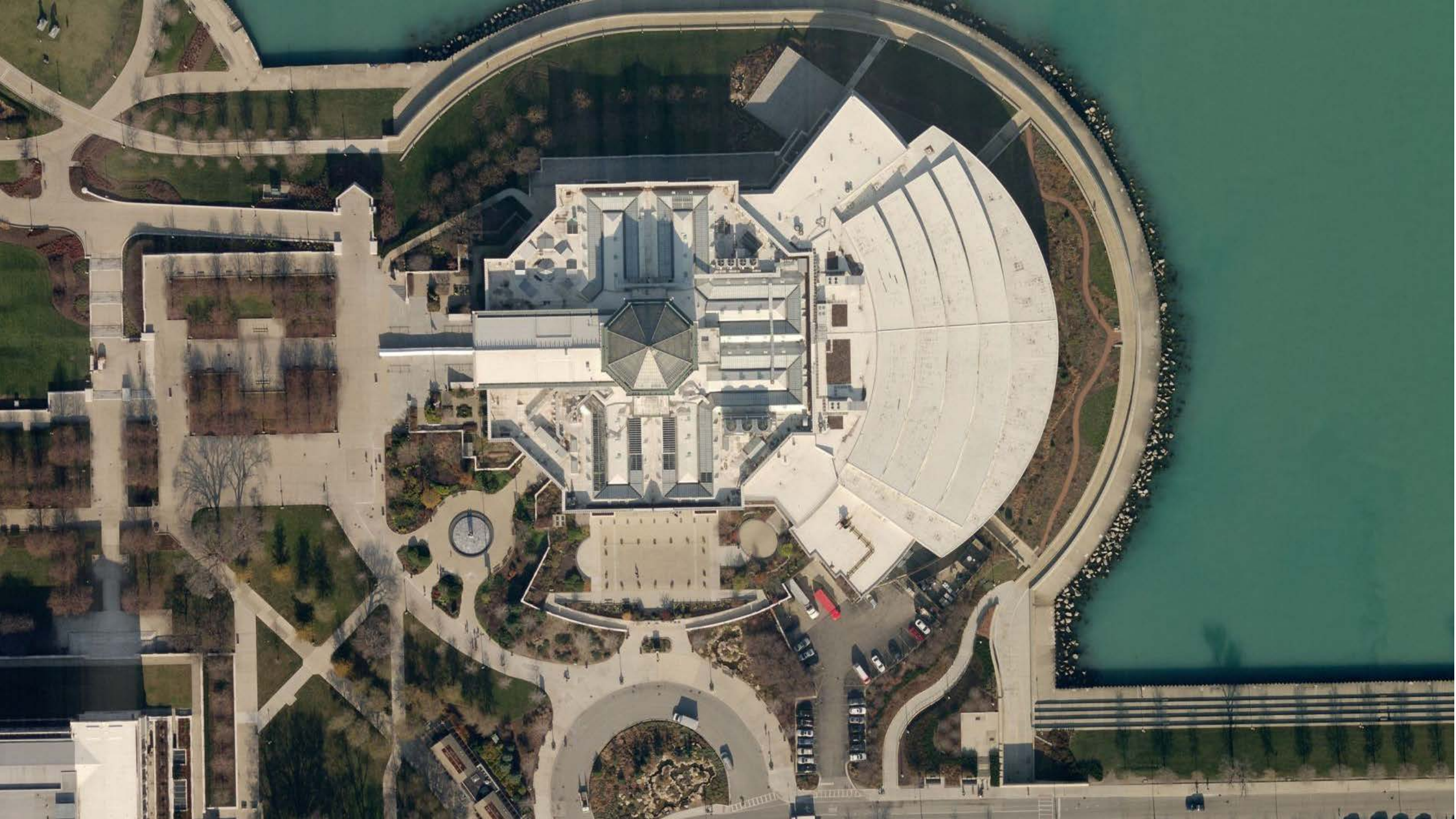
City Dr

E. Solidarity Dr

E. Solidarity Dr

John G Shedd Aquarium

Grant Park







OxBlueTM
Construction Camera Service

Georgia Power Advanced Solar Initiative

- In late 2012 Georgia Power announced they would be launching an Advanced Solar Initiative to install 100MW's of solar (20MW's small scale and 80MW's utility scale). The solar would be sold directly to GP for a fixed fee.
- Process:
 - Identify sites
 - Submit project to GP through a lottery system.



Georgia Power Advanced Solar Initiative

Process:

- Inovateus made several trips to Georgia and worked with our partners to identify ideal site.
- Submitted 13 sites into the lottery. 200 sites were submitted total.
- 3 sites were selected (including Peachtree)
- Started construction August 2013 and reached Commercial Operation by December 2013 (thanks to David Dodge!)





Georgia Power Advanced Solar Initiative

- 500kW Solar Installed Cost = \$1,000,000
- Federal Tax Credit = \$300,000
- MACRS Depreciation Savings = \$315,000
- Post Tax Benefit Remaining = \$400,000
- 600,000 kWh's per year
- Georgia Power Pays = \$0.13 per kWh or \$78,000 per year
- Payback = $\$400,000 / \$78,000 = 5$ Year Payback



Interesting Facts...

- \$1,000,000 project created 20 construction jobs for 6 months.
- \$200,000 of local material was used.
- \$150,000 of local labor.
- \$700,000 of the money was spent on US product.
- Had companies from Georgia, South Carolina, Indiana, Arkansas, and Louisiana come together to build the project.
- Creates a 30 year income stream for McElroy

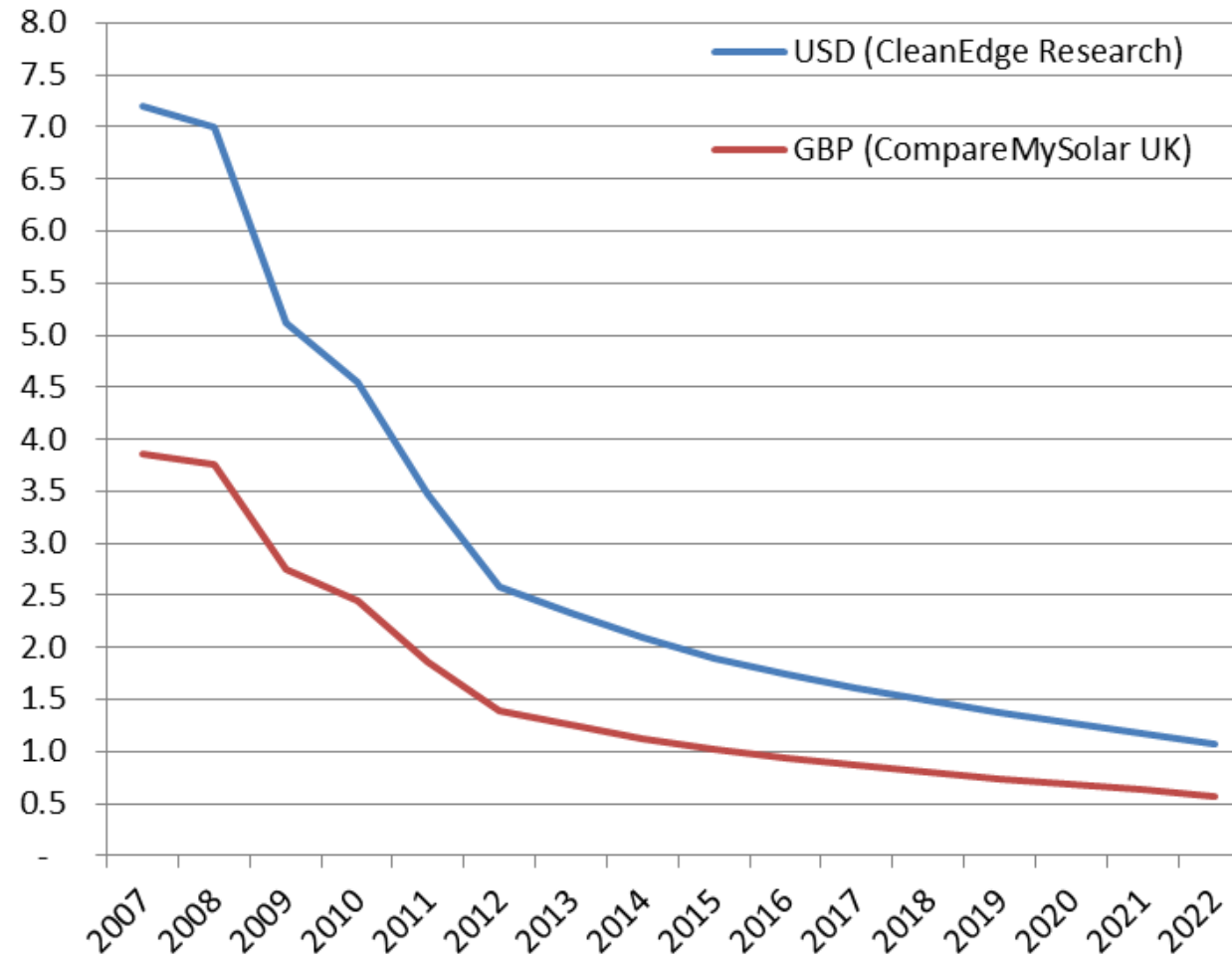




Solar in a Nutshell

- Generation
- Installation
- LCOE
- Incentives
- Funding
- Pricing

Price per Wp of Solar PV (Fully Installed): 2007 - 2022



Obstacles to Growing the Market

- Permitting
- Utility Regulation
- Energy Costs
- Education
- Available Space (lease terms, roof, site)

Obstacles

- Property tax on solar
- Permit Costs have skyrocketed for solar and have been an additional burden on the solar payback. The DOE Sunshot initiative is helping to reduce those costs. “\$1 per watt installed”!
- Example for 1MW:
 - Building permit = \$15,000
 - Electrical permit = \$7,500
 - Solar permit = \$45,000Total = \$67,500 or \$0.0675 per watt



Obstacles

- Utility Regulation
 - Utilities are threatened by distributed generation.
 - Net Metering is still significantly limited in the majority of states.
 - Cross state sale of Renewable Energy Credits is limited.
 - Regulatory Committee's will not allow the rate's to be passed on to their ratepayers while other upgrades are being passed on.



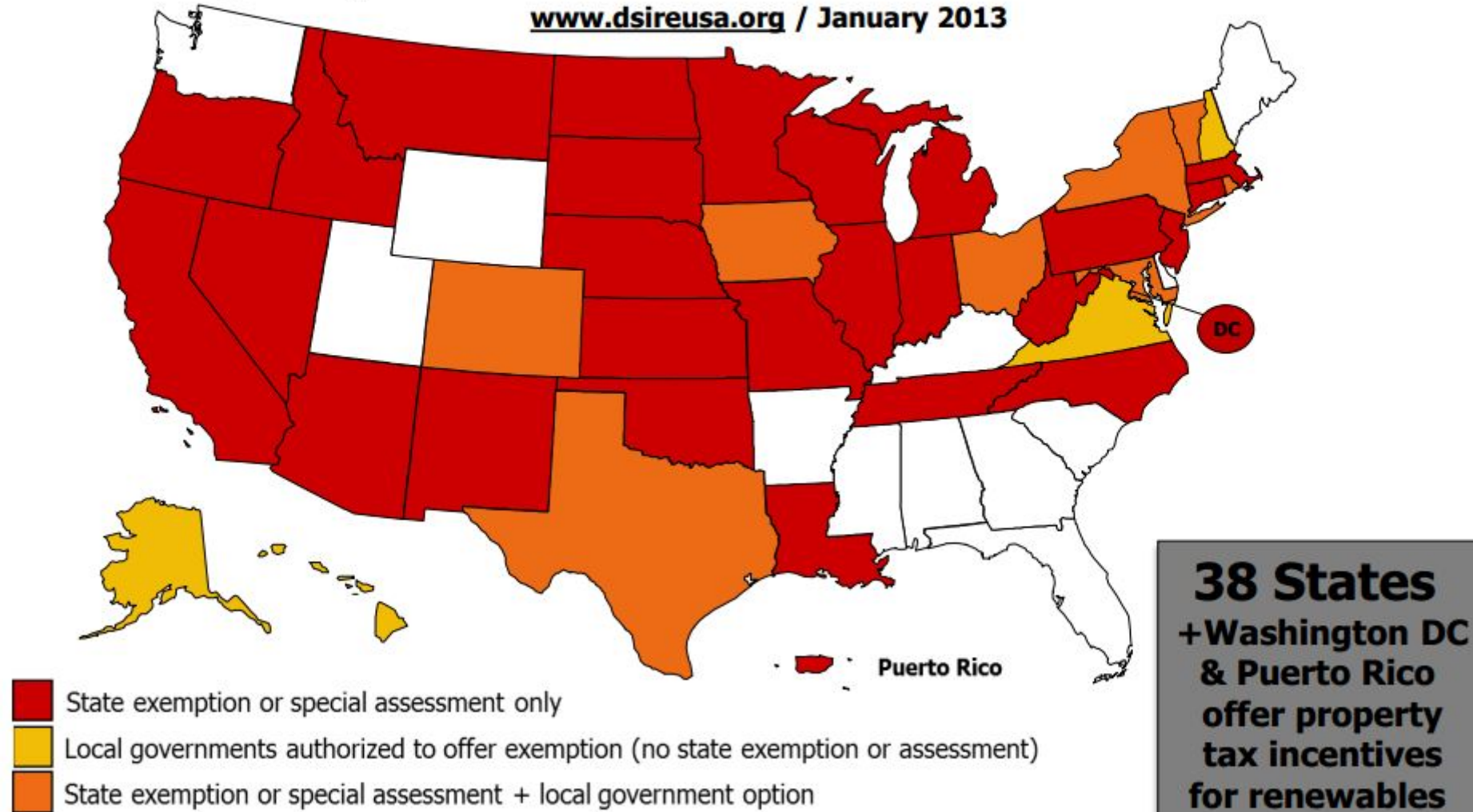
Obstacles

- Energy Costs
 - Energy costs are very low in quite a few progressive states.
 - The unsubsidized LCOE of solar averages \$0.10 per kWh. This is about 5-10 years away for most Midwest utilities.
- Education
 - While solar has been around since the 70's, people are still learning about its viability.
 - Installing solar in the built environment will help solve this issue.
- Available Space
 - The best place for solar is next to the source. Rooftops, parking lots, small fields.



Property Tax Incentives for Renewables

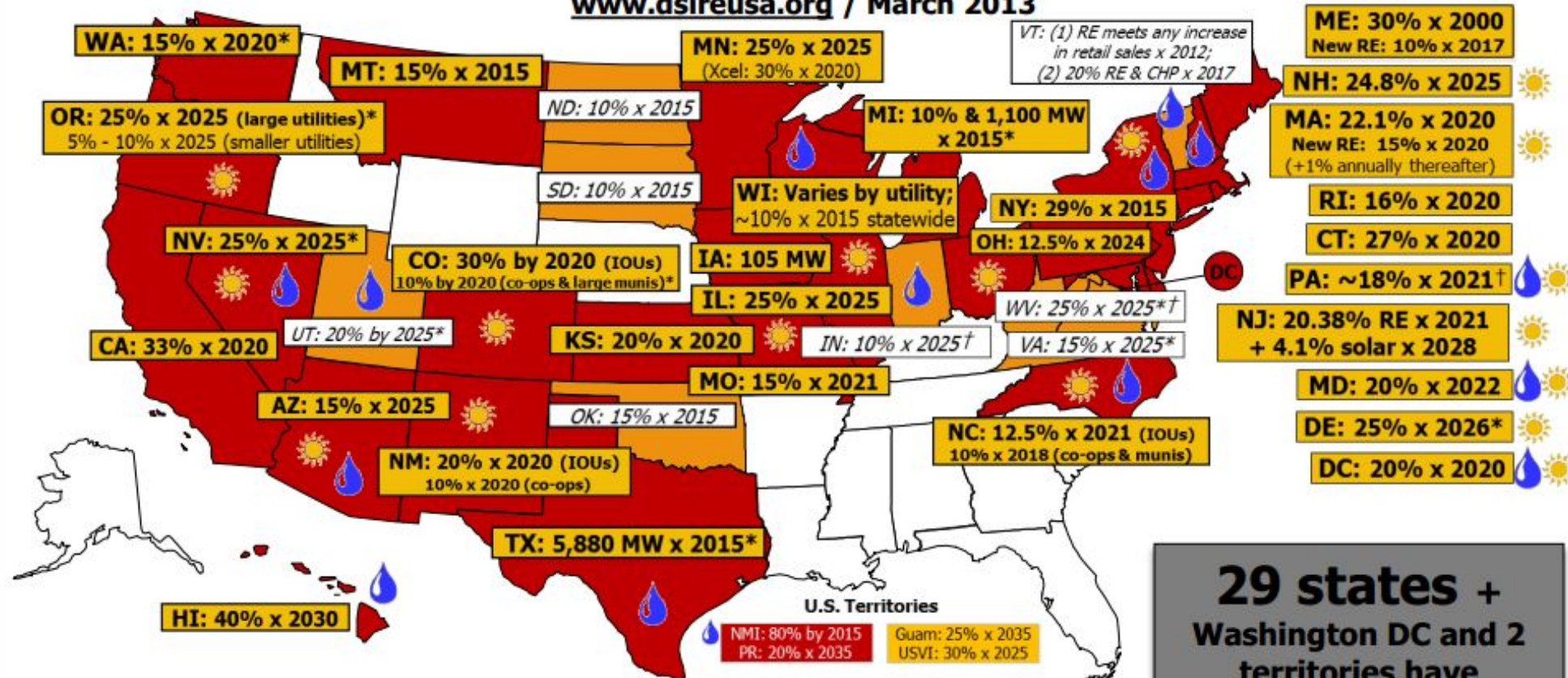
www.dsireusa.org / January 2013





Renewable Portfolio Standard Policies

www.dsireusa.org / March 2013

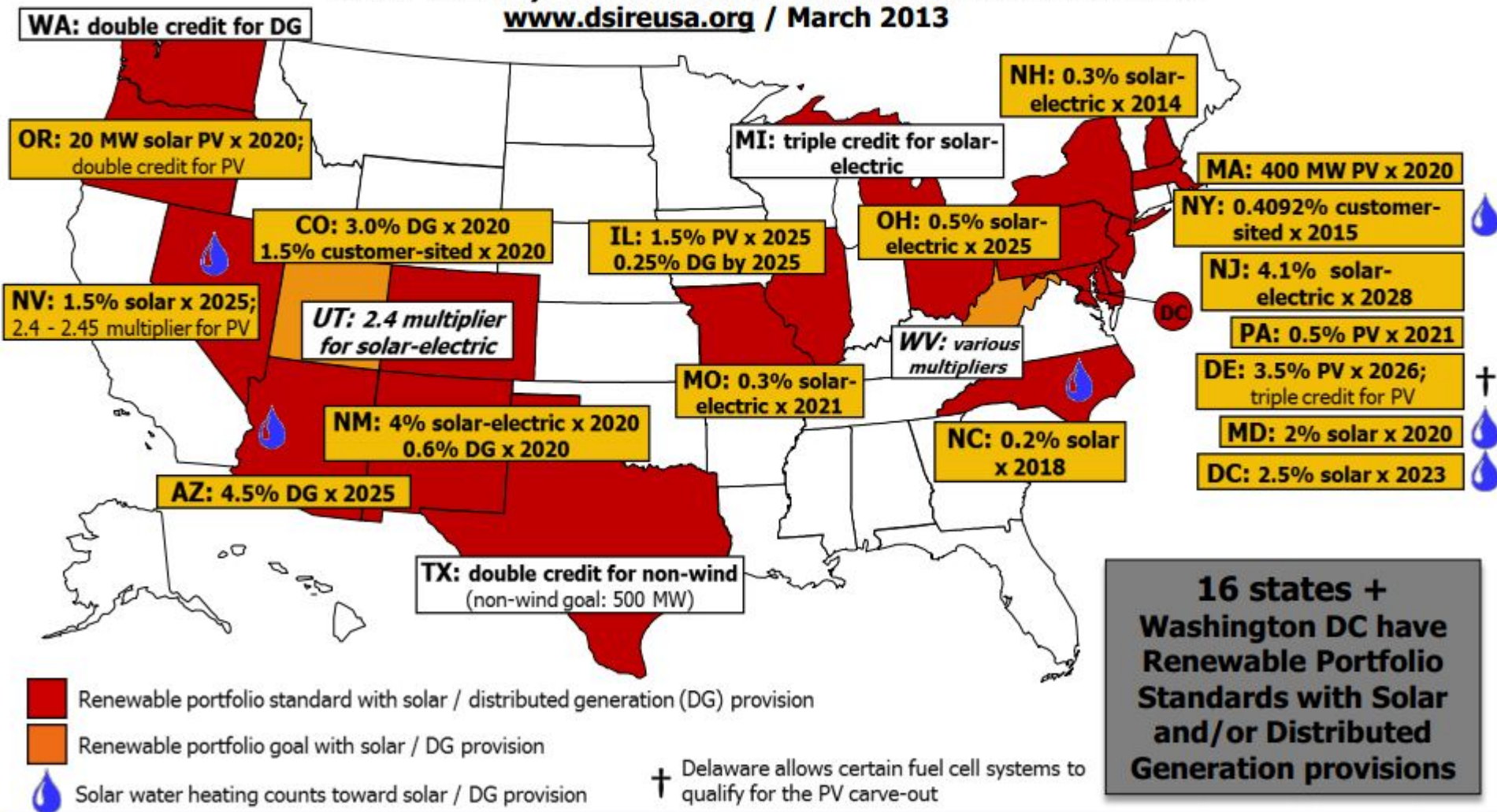


- Renewable portfolio standard
- Renewable portfolio goal
- Solar water heating eligible
- Minimum solar or customer-sited requirement
- Extra credit for solar or customer-sited renewables
- Includes non-renewable alternative resources

29 states + Washington DC and 2 territories have Renewable Portfolio Standards
(8 states and 2 territories have renewable portfolio goals)

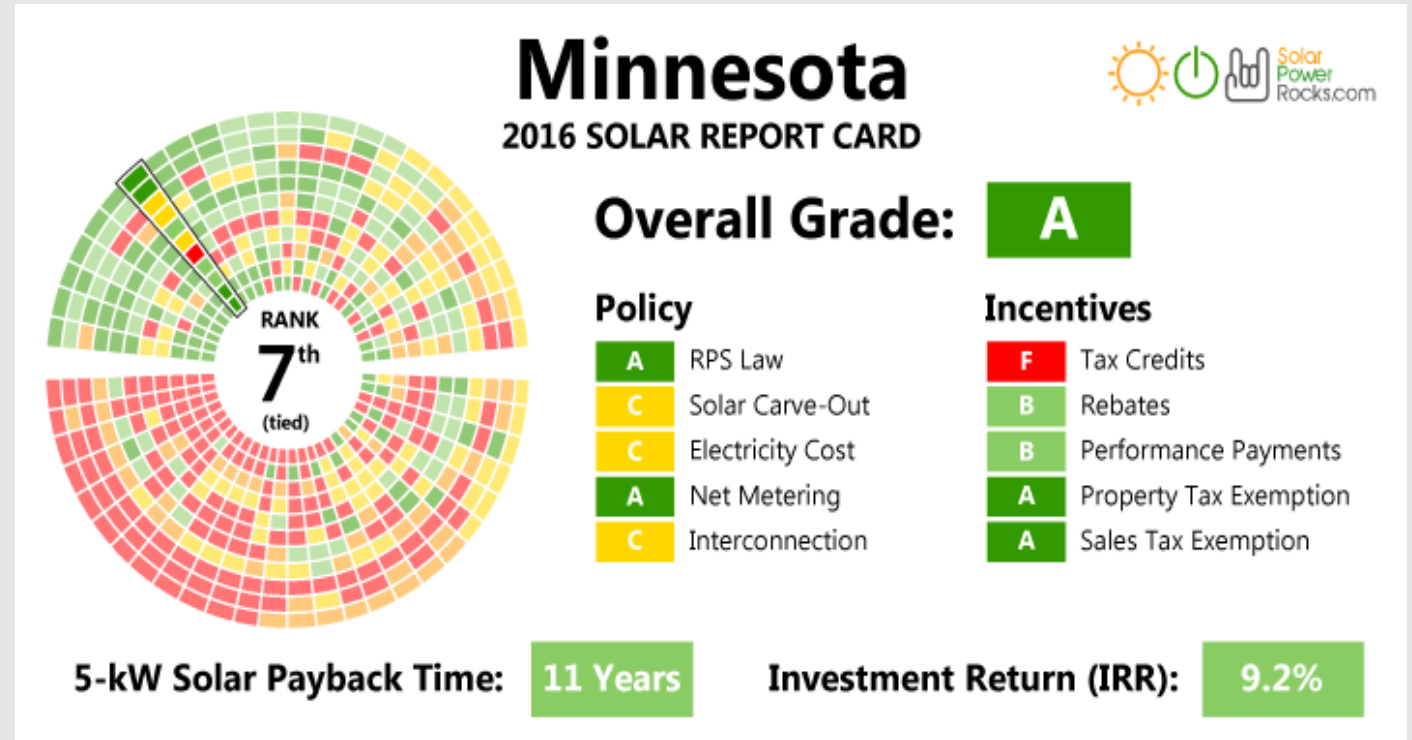
Renewable Portfolio Standard Policies with Solar / Distributed Generation Provisions

www.dsireusa.org / March 2013



Minnesota Solar

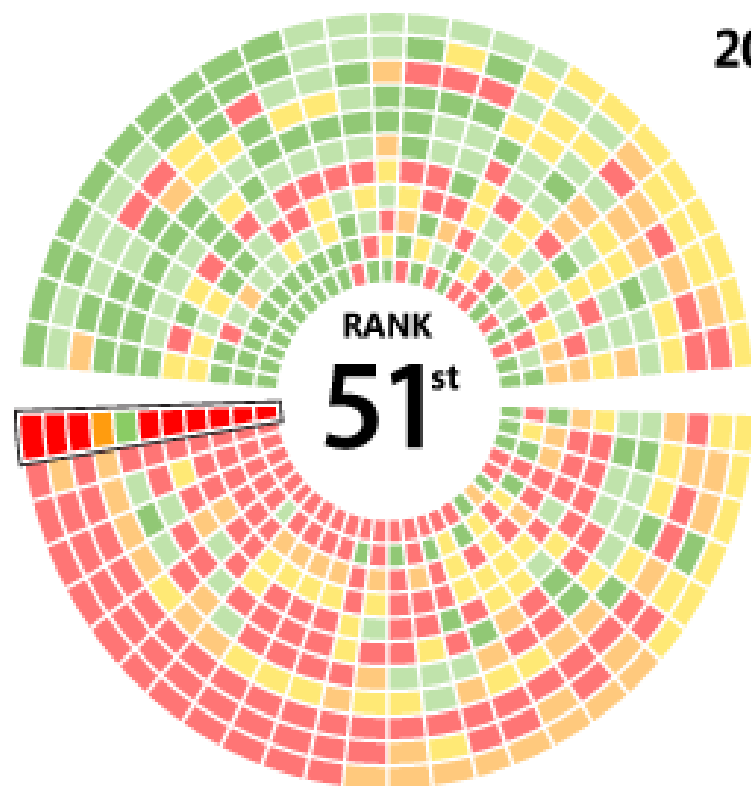
- MN Solar Quick Facts;
- RPS 26.5% by 2025, Xcel (utility) 31.5% by 2020
- 1.5% solar carve out by 020
- Same net metering as AR
- 18th highest electricity prices, \$.014/kwh
- Allows for solar leasing
- RPS 26.5% by 2025, Xcel (main utility) 31.5% by 2020
- 19th strongest economy (Forbes)





Arkansas

2016 SOLAR REPORT CARD



Overall Grade:

F

Policy

- F** RPS Law
- F** Solar Carve-Out
- D** Electricity Cost
- B** Net Metering
- F** Interconnection

Incentives

- F** Tax Credits
- F** Rebates
- F** Performance Payments
- F** Property Tax Exemption
- F** Sales Tax Exemption

5-kW Solar Payback Time:

18 Years

Investment Return (IRR):

3.9%



Arkansas Solar

- Arkansas installed 16.3 MW in 2015, currently has 20.1 MW installed, 40th nationally in total installed solar.
- Has the worst incentives in the country (tied with WV and WY) for solar. No RPS, IRR is lowest in the country at 3.9% (highest is NY at 19.8%).
- There are two large project underway that are being developed directly by utilities.



Arkansas Solar

- \$26 million invested in solar and 24 solar companies employing 260 people, majority of which are in Little Rock and Fayetteville
- In 2015 16.3 MW were installed, a 640% increase from 2014.
- PV prices dropped 6% in the same period and 48% since 2010.
- Solar is on the upswing in Arkansas. Last year, installed capacity ranked 23rd nationally, which is impressive considering the state ranks dead last in almost every category for initiatives and policies.



Opportunities

What can you do?

- Vote Solar
- Call your utilities
- Call your politicians
- Support your local advocacy groups

Thank you!

We look forward to further discussion
on future opportunities

