

Solar Powering Your Community

Incorporating Solar in Your Work



 Powered by
SunShot
U.S. Department of Energy

About the SunShot Solar Outreach Partnership



The SunShot Solar Outreach Partnership (SolarOPs) is a U.S. Department of Energy (DOE) program designed to increase the use and integration of solar energy in communities across the US.

Free Stuff!

PROFILES IN
REGIONAL SOLAR PLANNING:
A HANDBOOK AND RESOURCE GUIDE



Our Panel

Philip Haddix,
Project Manager



Colleen Crowninshield,
Clean Cities Manager



Georgia Nesselrode,
*Director of Local Government
Services*

David Warm,
Executive Director



Agenda

- | | |
|-------------|---|
| 1:45 – 2:00 | Making the Case for Solar |
| 2:00 – 2:15 | Case Study: Pima Association of Governments |
| 2:15 – 2:30 | Case Study: Mid-America Regional Council |
| 2:30 – 2:45 | Q & A |

Agenda

1:45 – 2:00

Making the Case for Solar

2:00 – 2:15

Case Study: Pima Association of Governments

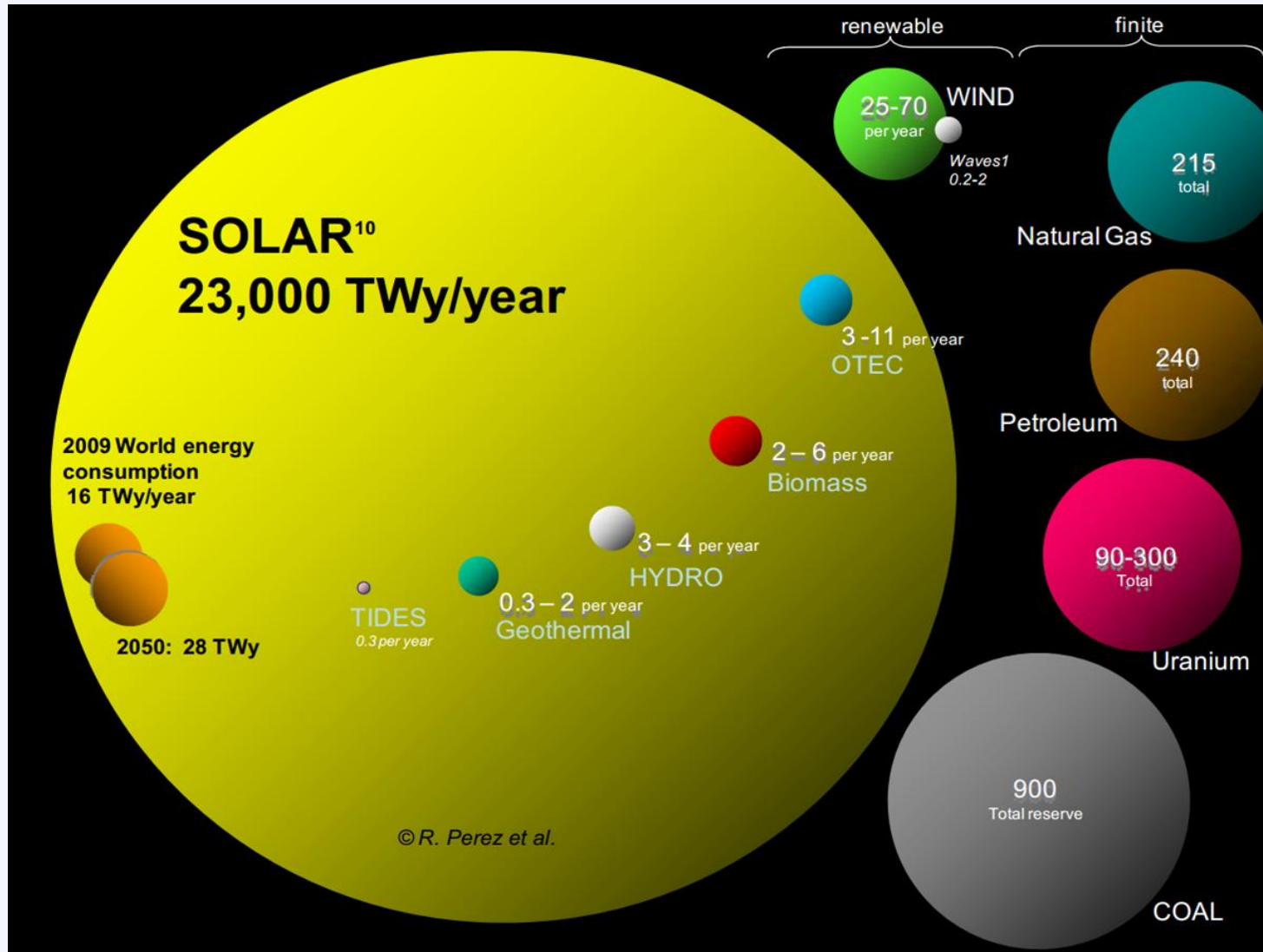
2:15 – 2:30

Case Study: Mid-America Regional Council

2:30 – 2:45

Q & A

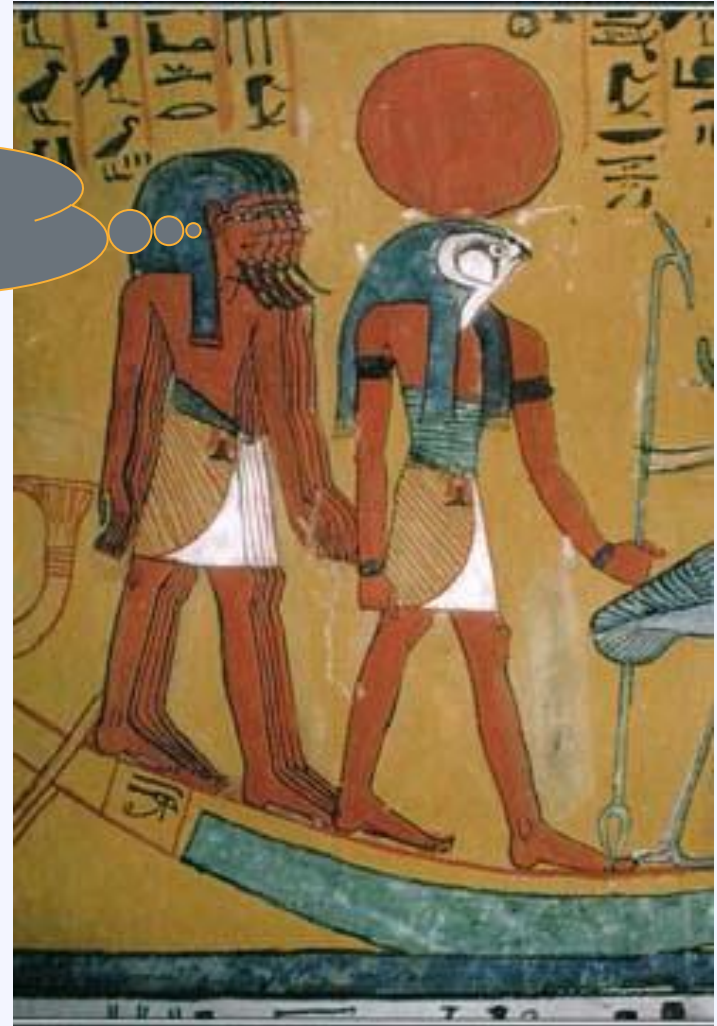
The Solar Energy Resource



Misconceptions and Myths

Location and Weather

My area isn't sunny enough for solar!



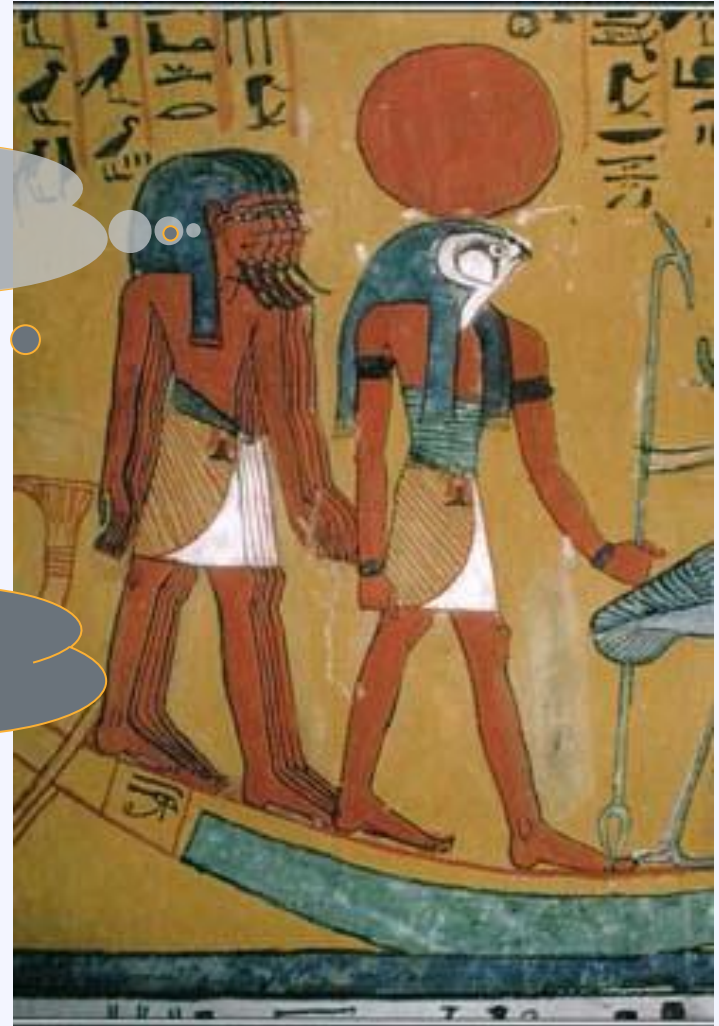
Misconceptions and Myths

Location and Weather

My area isn't sunny enough for solar!

High Costs

Going solar is too expensive!



Misconceptions and Myths

Immature Technology and Industry

Solar is not ready to compete as a serious energy source.



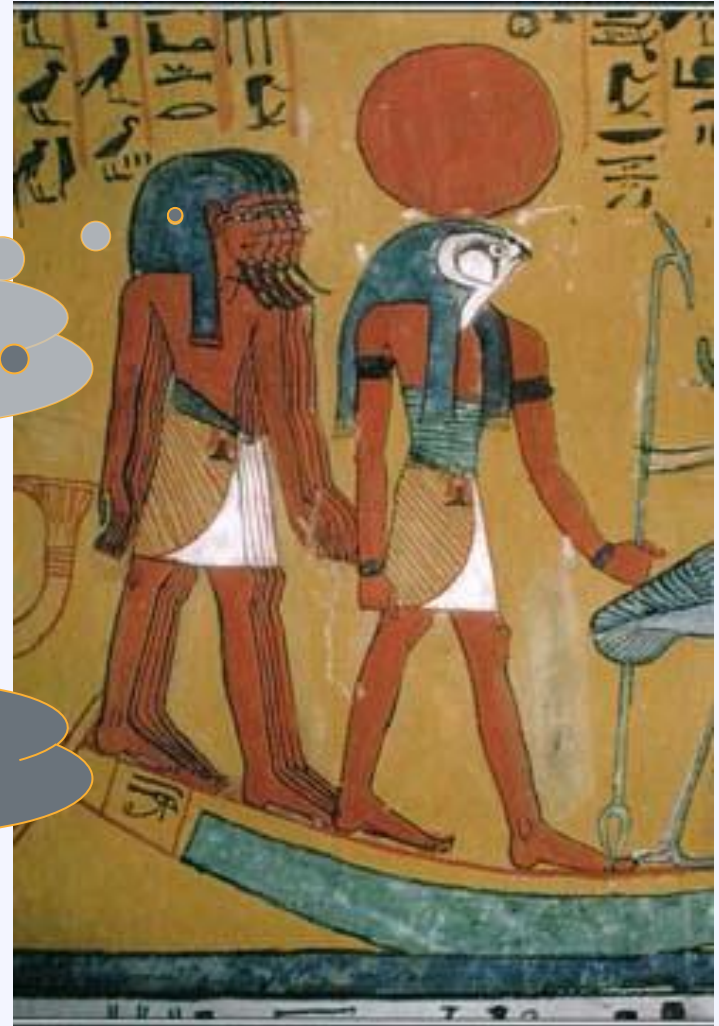
Misconceptions and Myths

Immature Technology and Industry

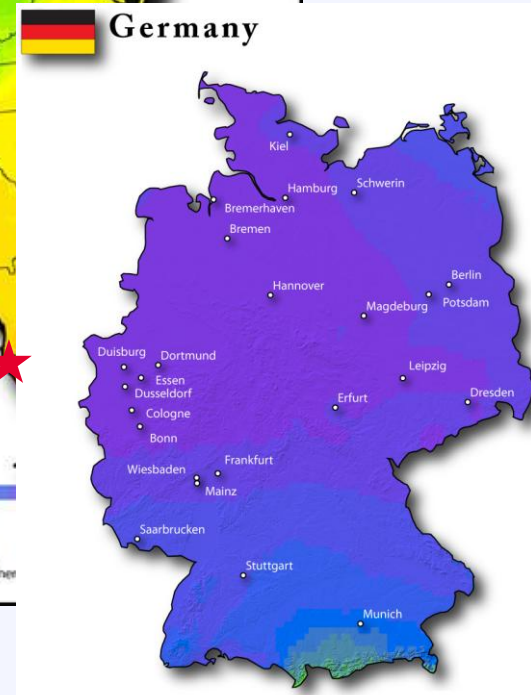
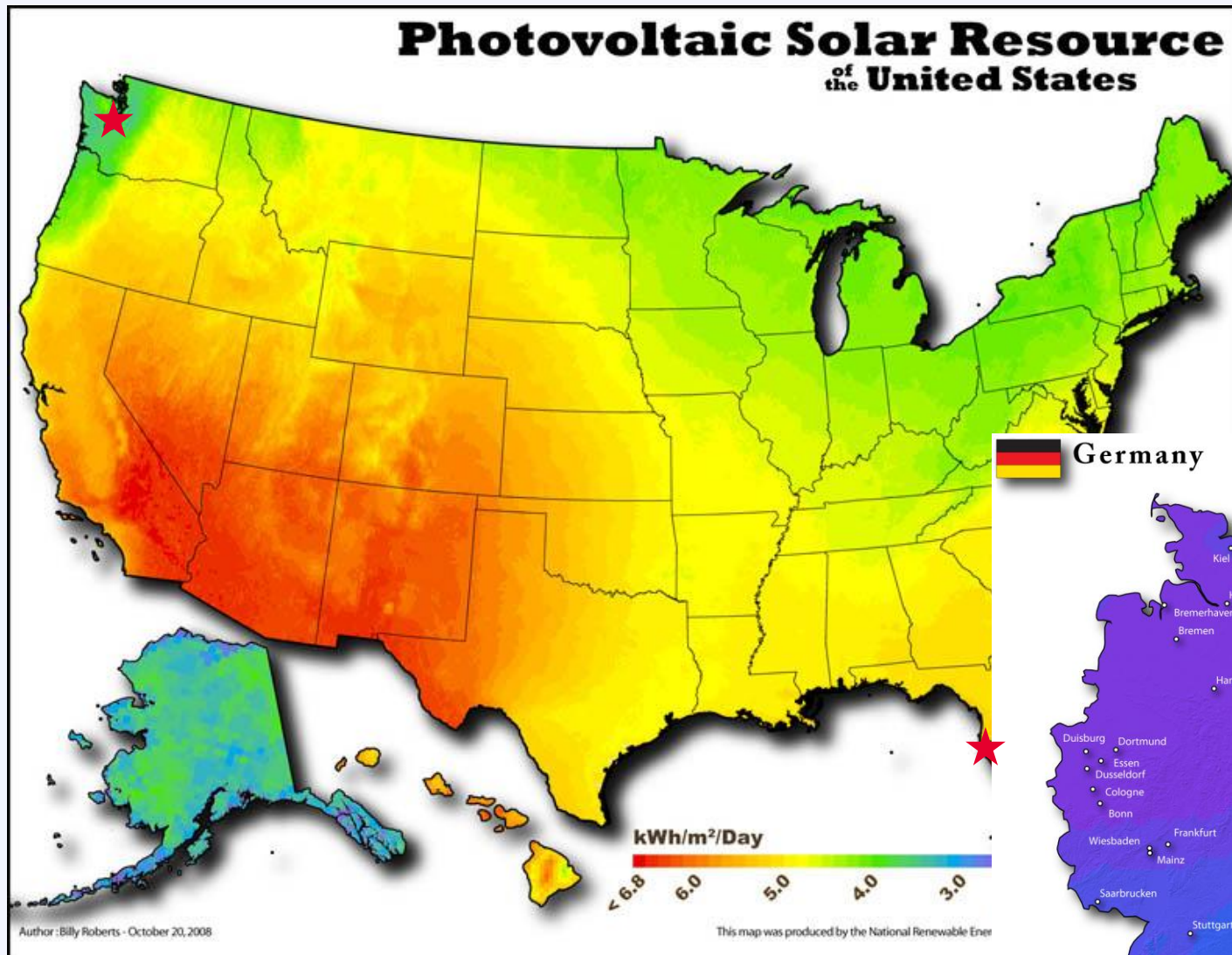
Solar is not ready to compete as a serious energy source.

Subsidies and Support

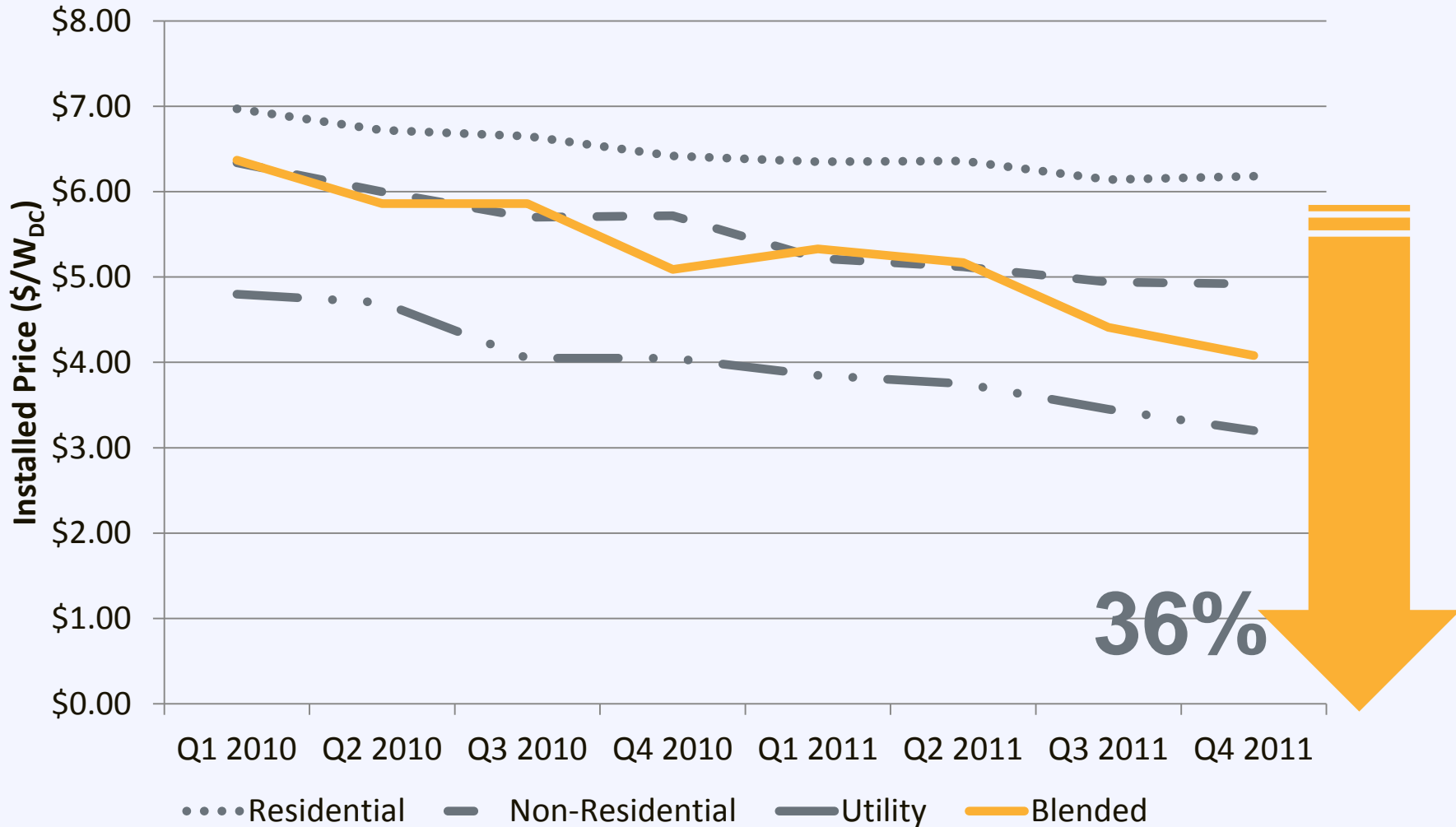
The government should not “pick winners and losers”.



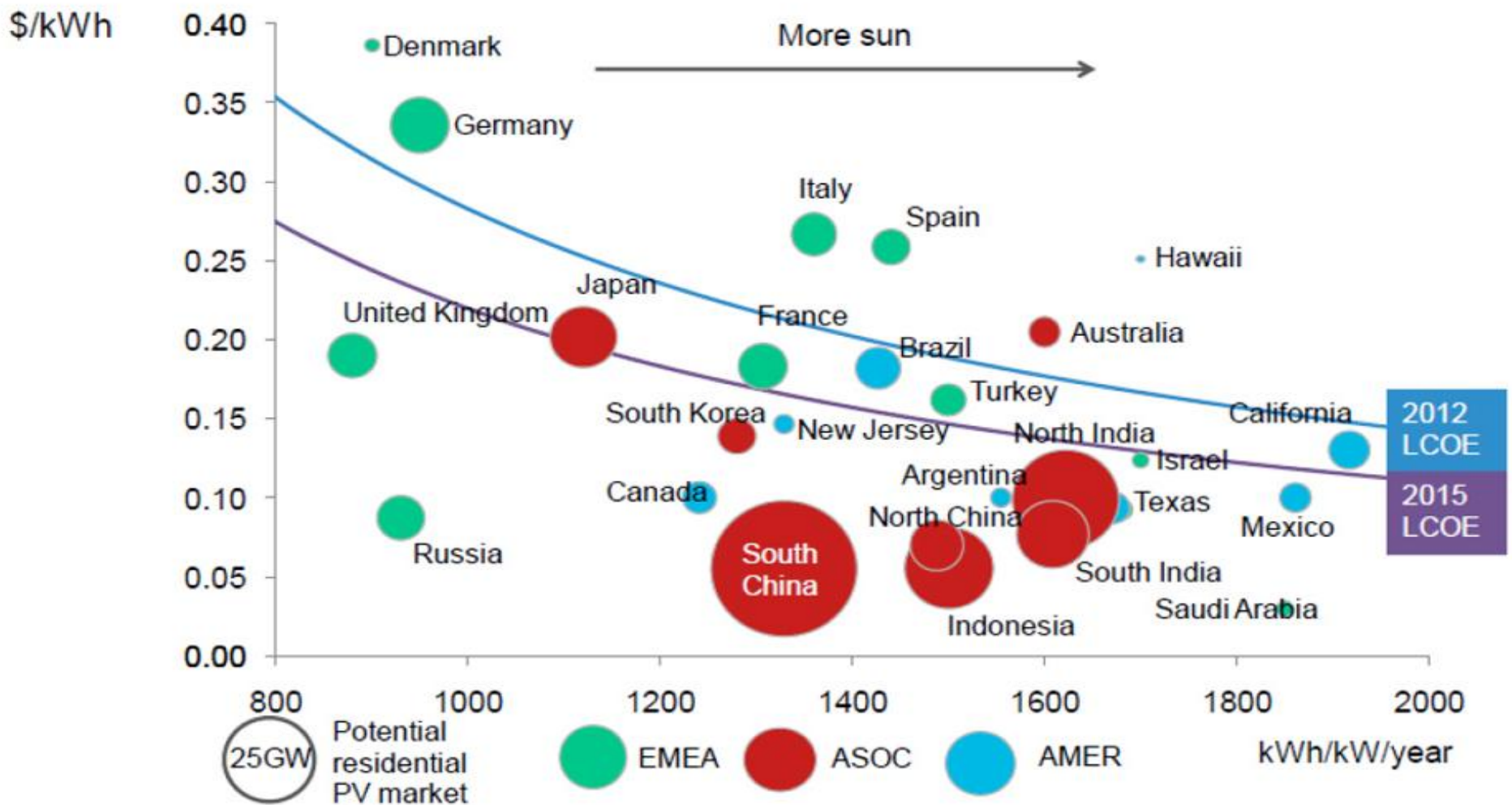
Location and Weather



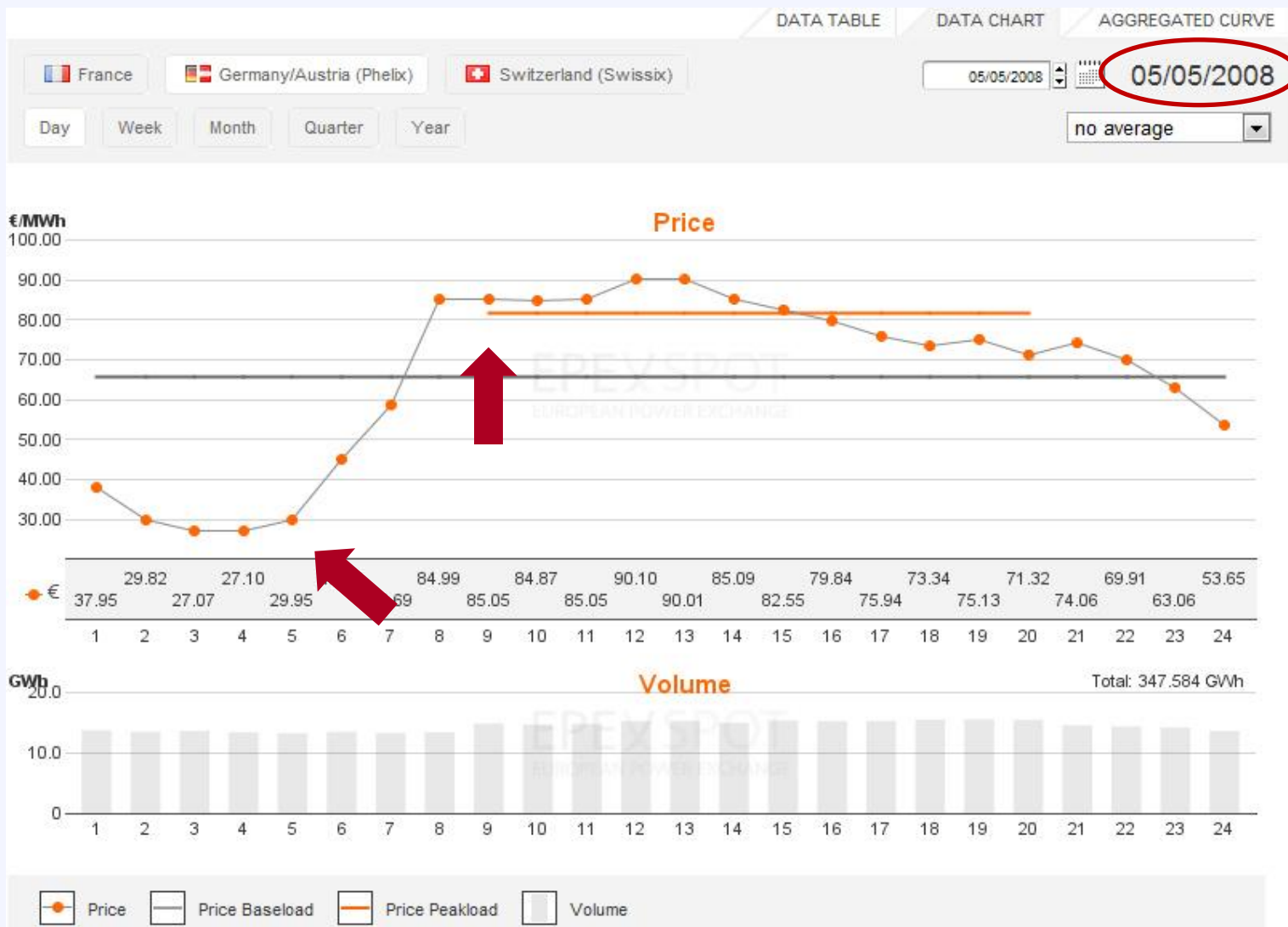
High Cost: *Installed Price is Falling*



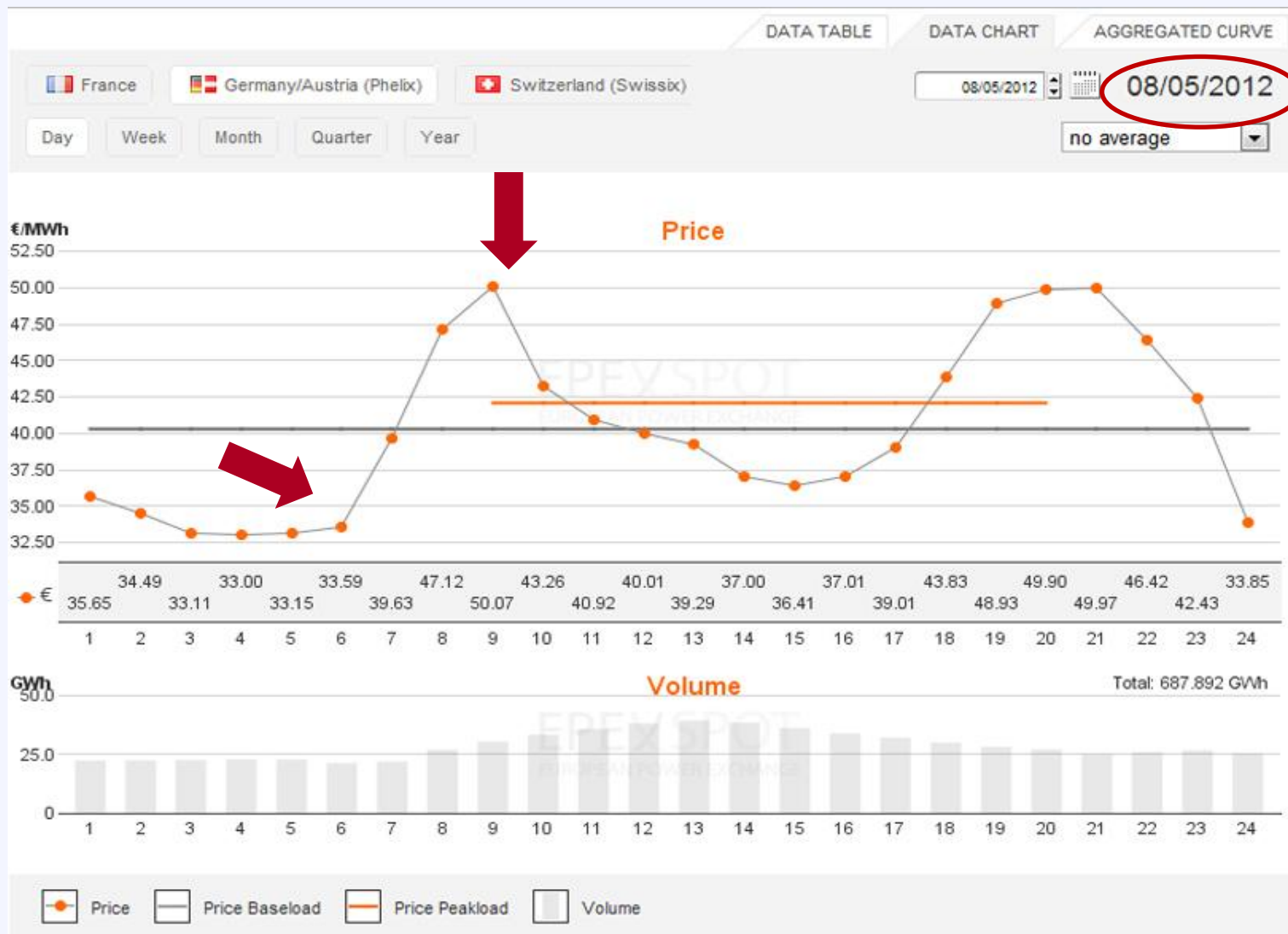
High Cost: LCOE and Grid Parity



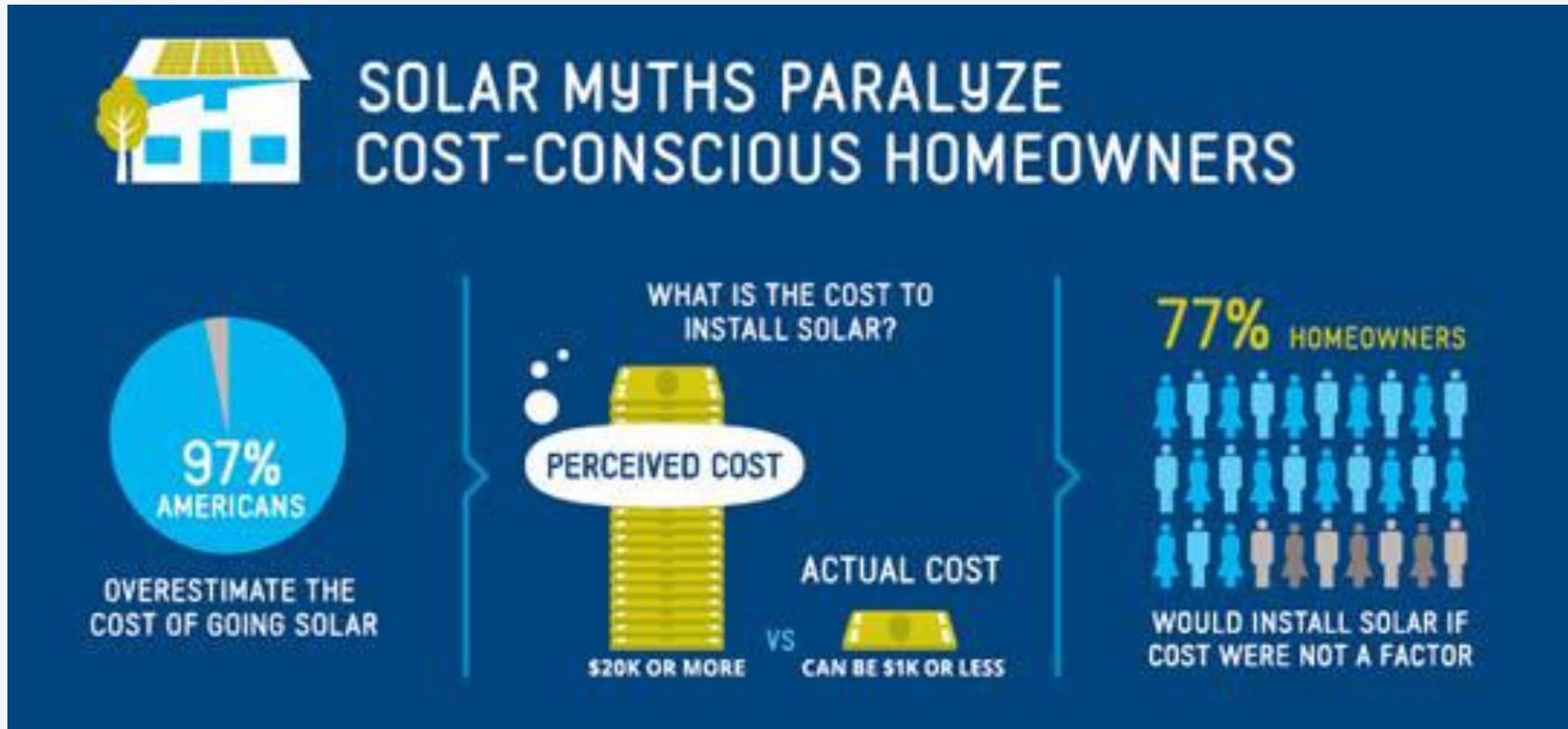
High Cost: Reductions in Peak Electricity Prices



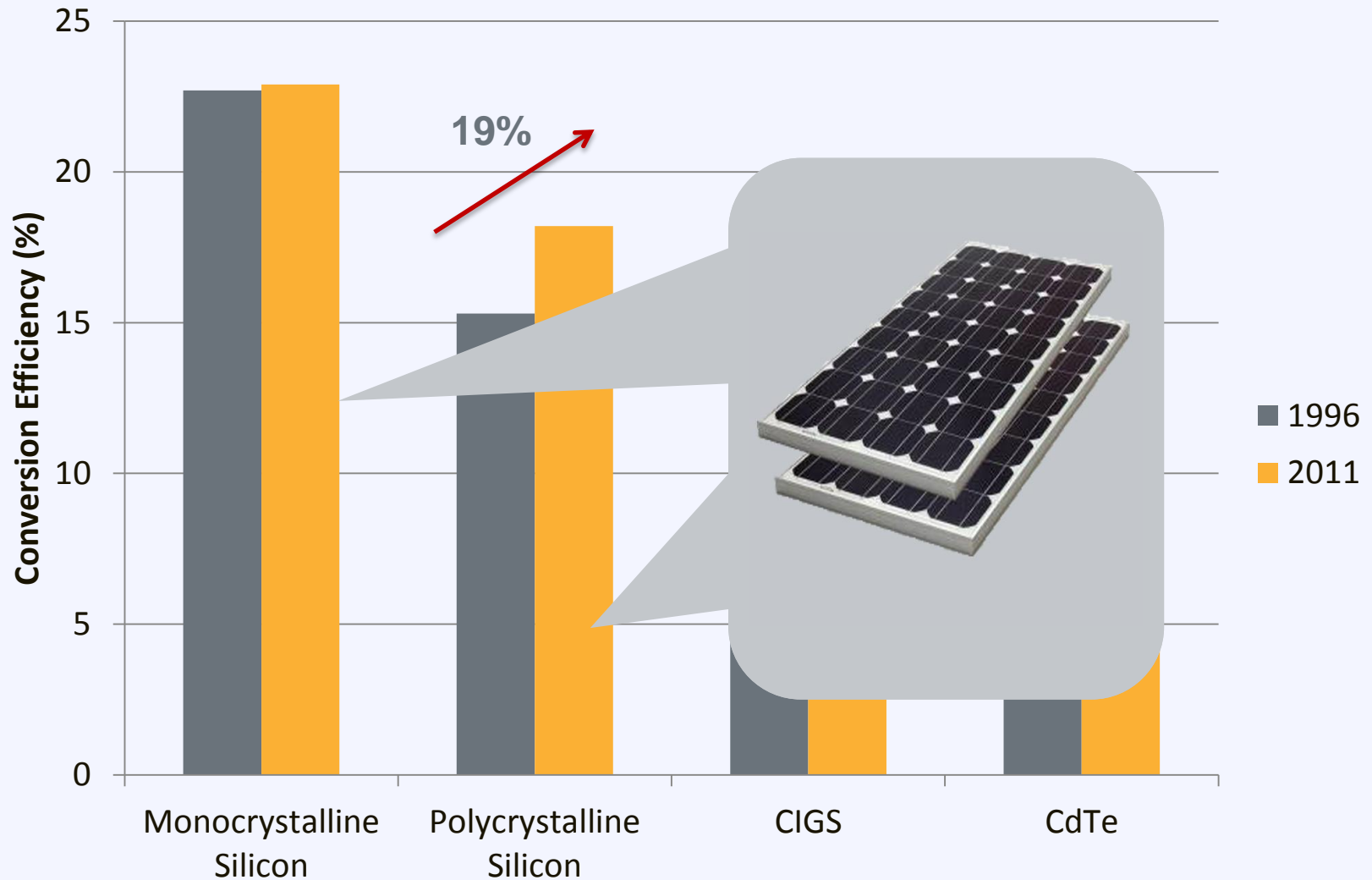
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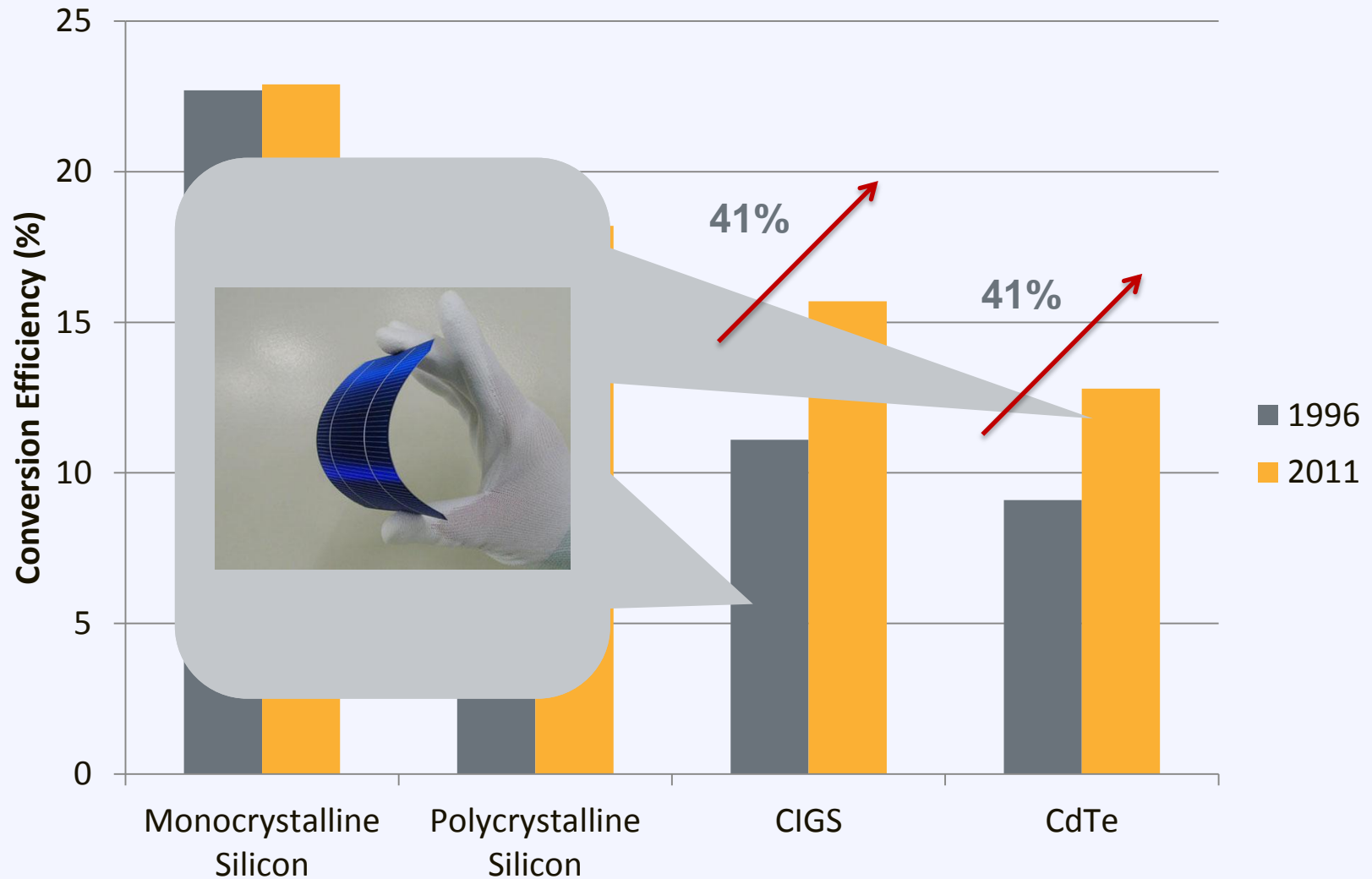
High Cost: *Misconceptions Prevail*



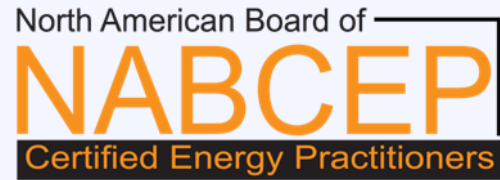
Immature Technology and Industry: Technological Improvements



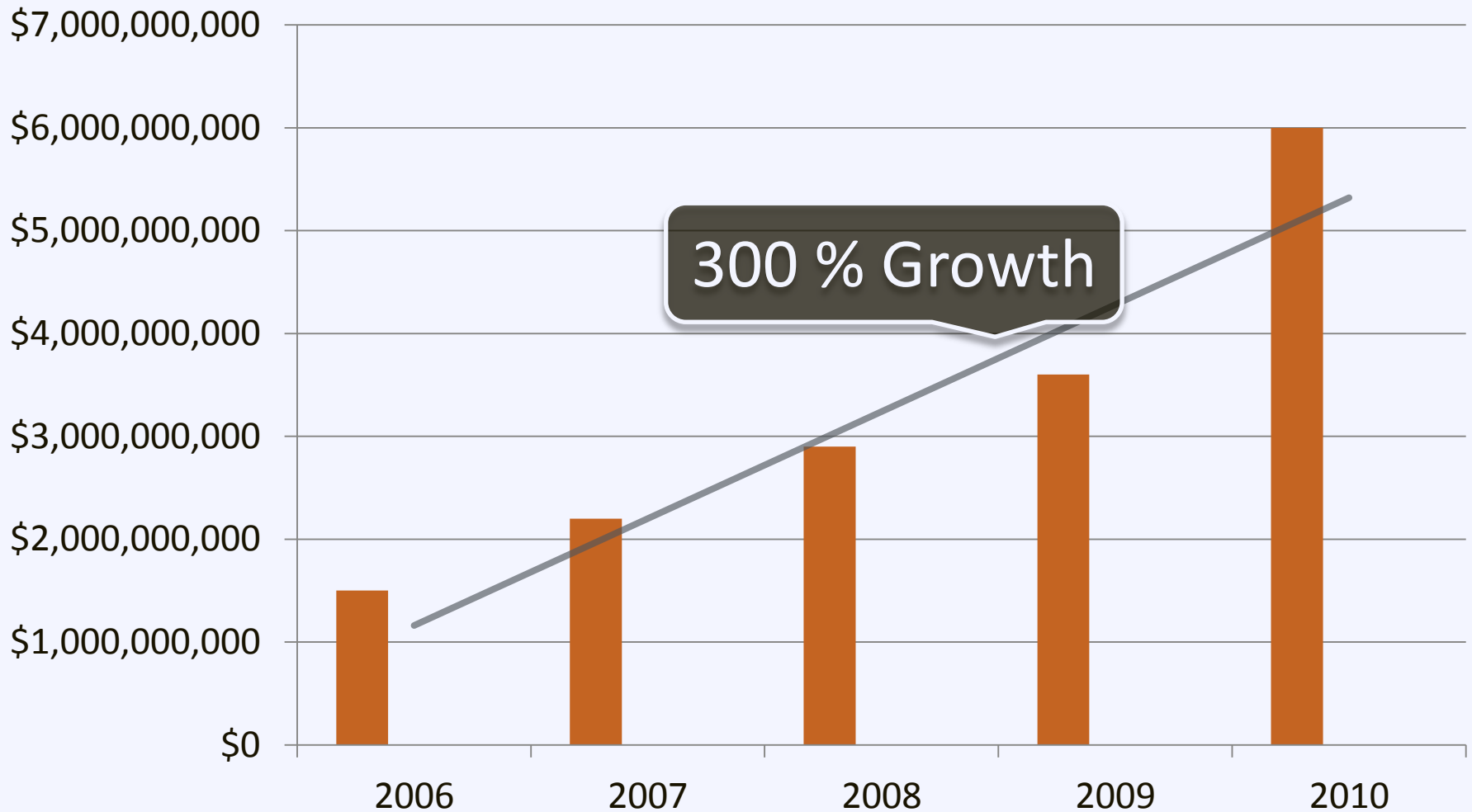
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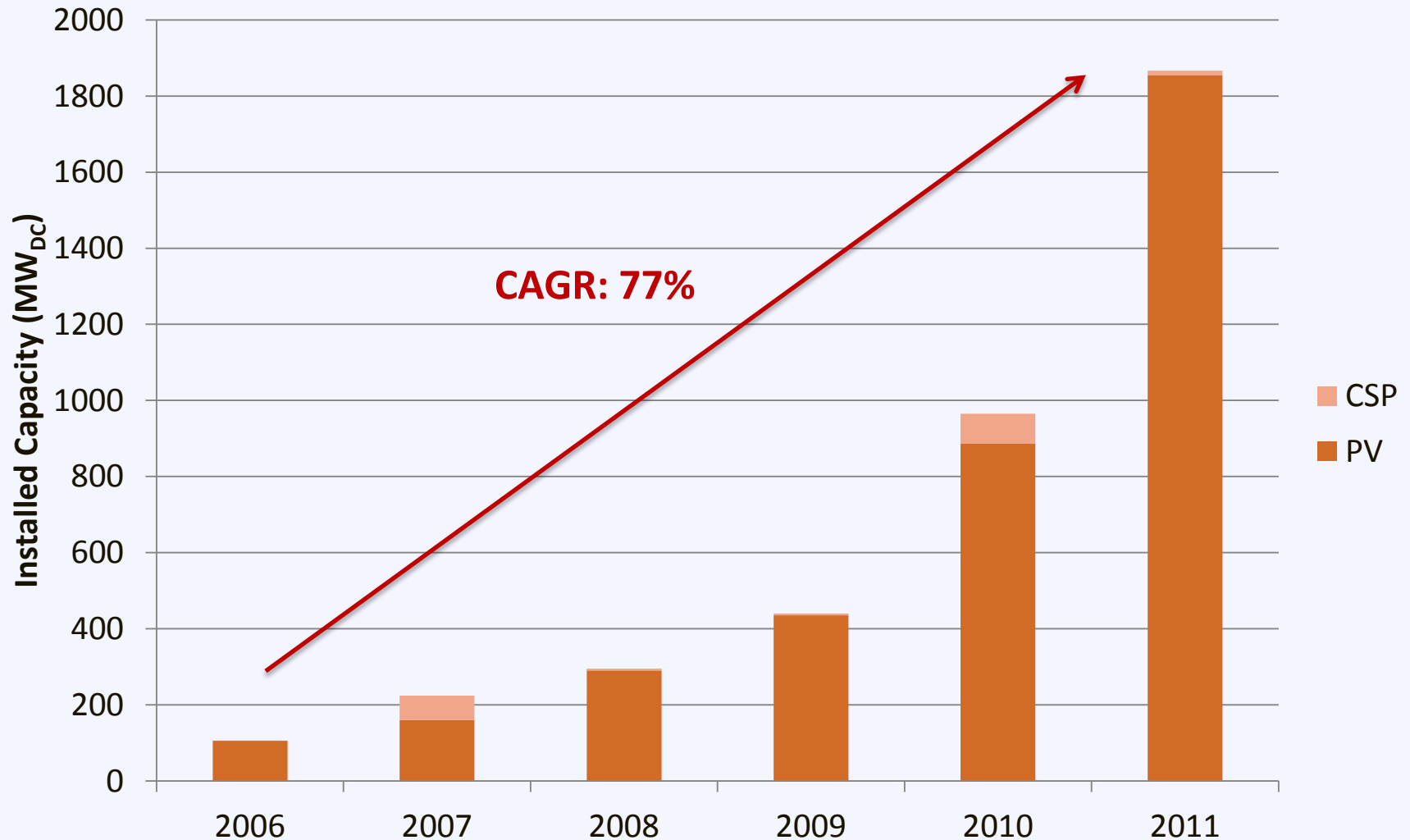
Immature Technology and Industry: *National Standards and Certifications*



Immature Technology and Industry: *Rapid Industry Growth*

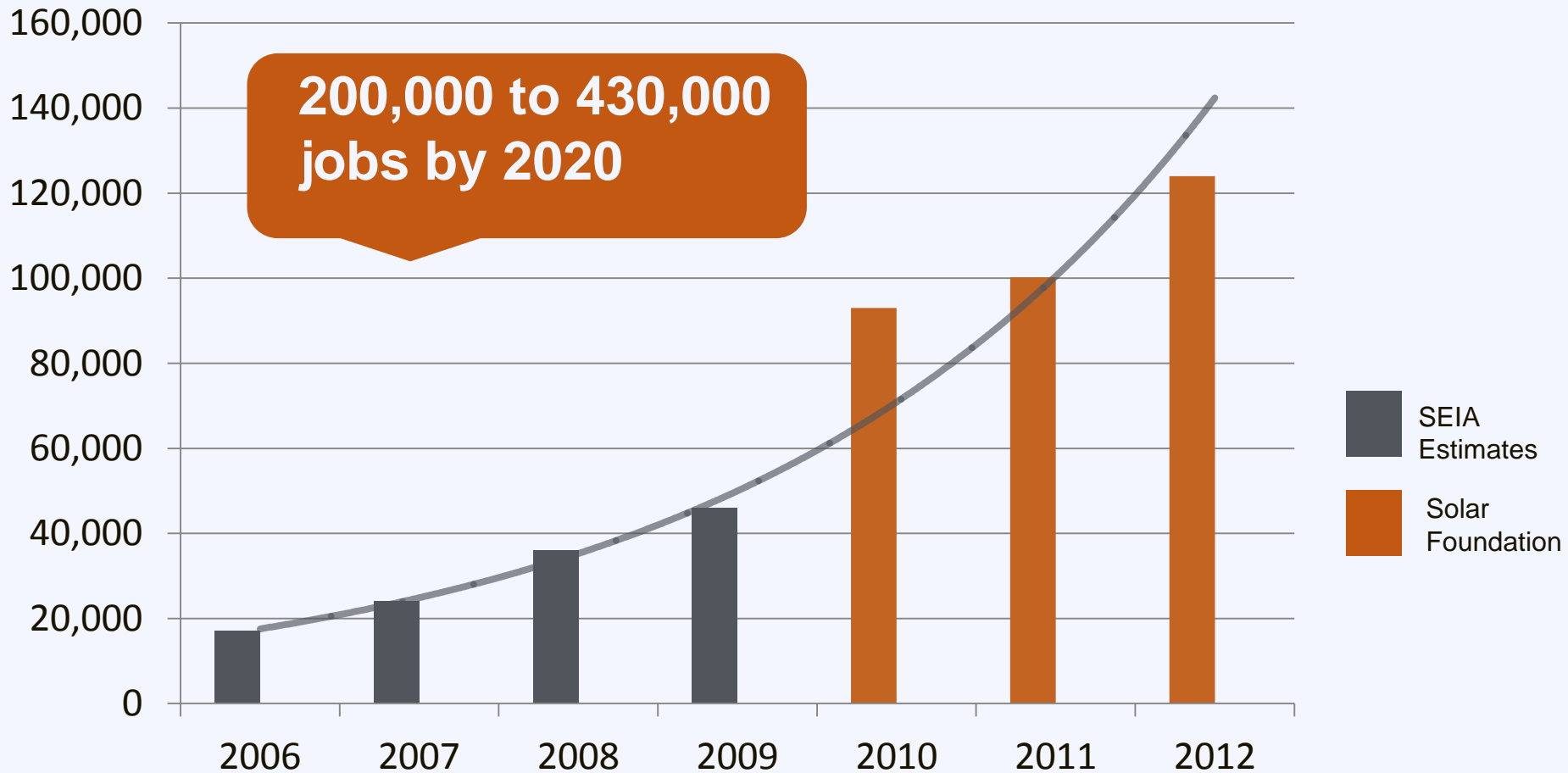


Immature Technology and Industry: *Rapid Industry Growth*

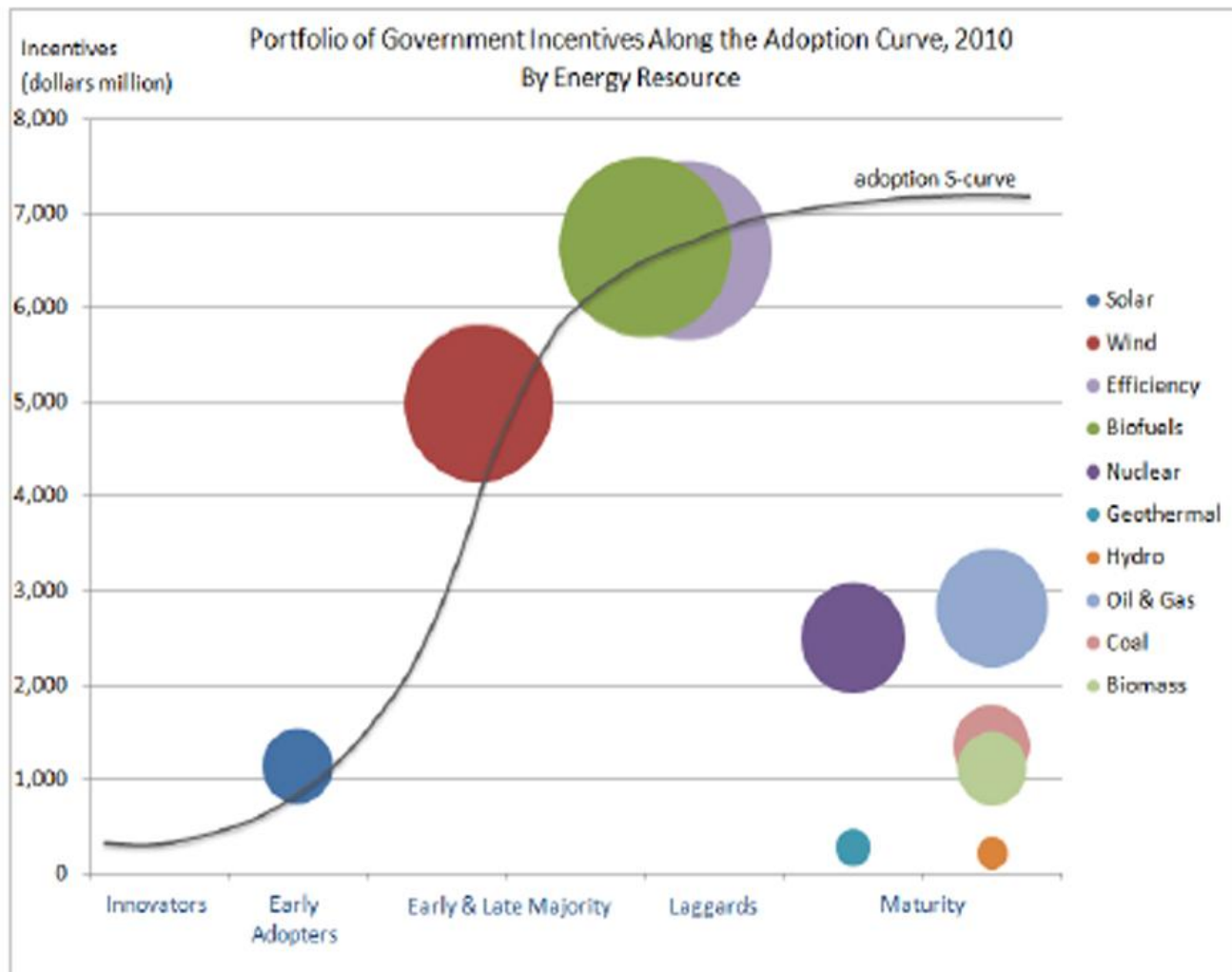


Immature Technology and Industry: Over 100,000 Jobs in U.S. Solar Industry

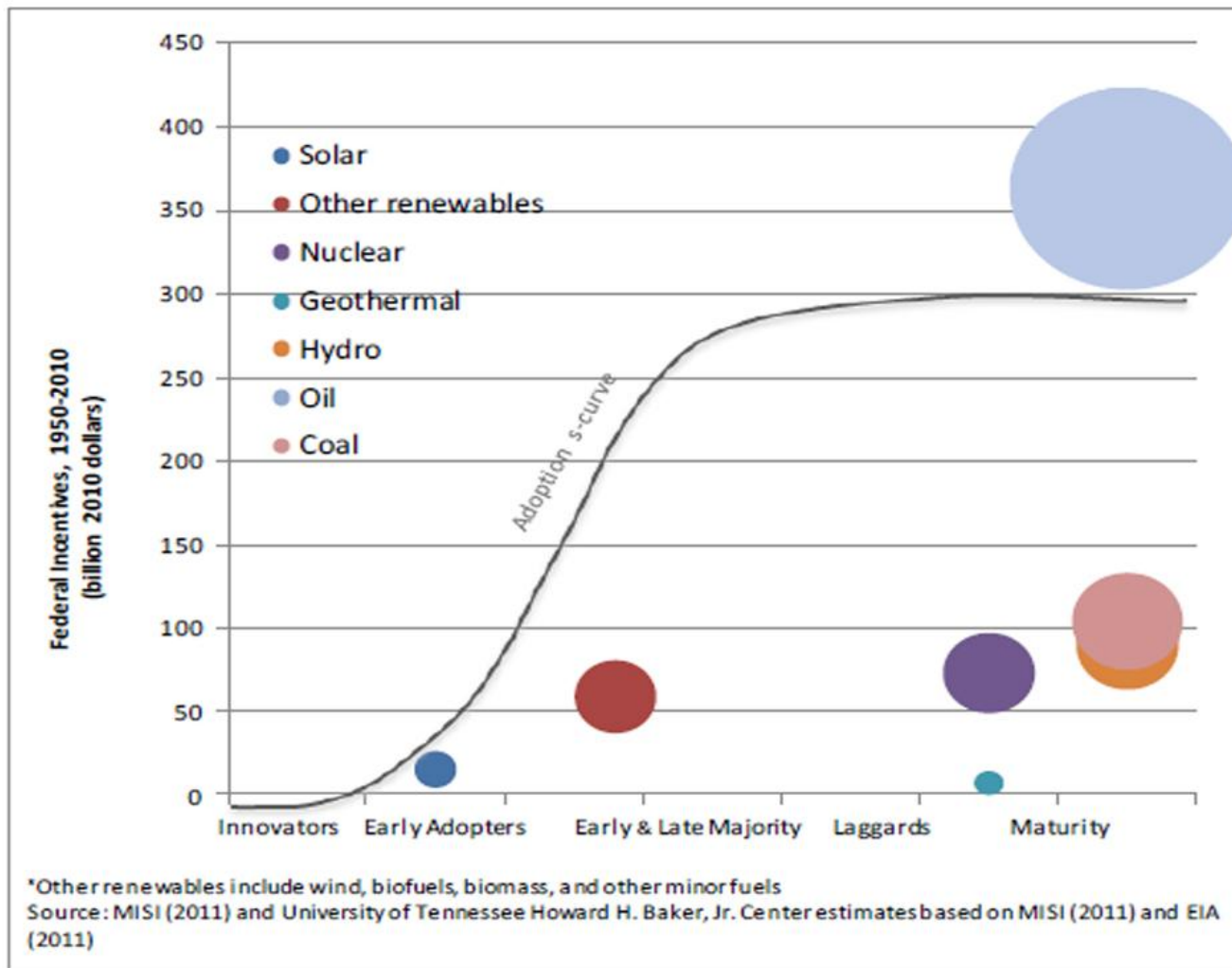
Solar Job Growth in the US



Subsidies and Support: Federal Energy Incentives in 2010



Subsidies and Support: Federal Energy Incentives Over Time





Philip Haddix, Project Manager

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Agenda

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Making the Case for Solar

2:00 – 2:15

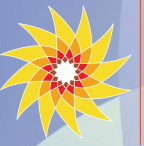
Case Study: Pima Association of Governments

2:15 – 2:30

Case Study: Mid-America Regional Council

2:30 – 2:45

Q & A



Southern
Arizona
Solar
Standards
Board

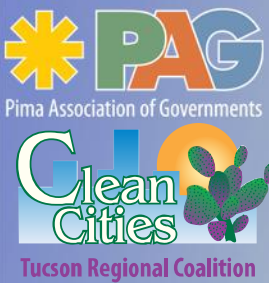
Pima Association of Governments Energy Programs Solar Partnership So. AZ Solar Standards Board Clean Cities Program



Colleen Crowninshield, Program Manager

ccrowninshield@pagnet.org

(520) 792-1093



U.S. Department of Energy Clean Cities Program

Sponsored by the U.S. Department of Energy's (DOE) Vehicle Technologies Program (VTP), Clean Cities is a government-industry partnership designed to reduce petroleum consumption in the transportation sector. Clean Cities contributes to the energy, environmental, and economic security of the United States by supporting local decisions to reduce our dependence on imported petroleum. Established in 1993 in response to the Energy Policy Act of 1992, the partnership provides tools and resources for voluntary, community-centered programs to reduce consumption of petroleum-based fuels.

- COORDINATOR STATUS
 - Full time
 - 40 + hours per week devoted to Coordinator Duties
 - The Southern Arizona Regional Solar Partnership (SARSP)
- TUCSON CLEAN CITIES STAFF
 - Colleen **Crowninshield**
 - **Ryan Gurnett**

Coalition Statistics

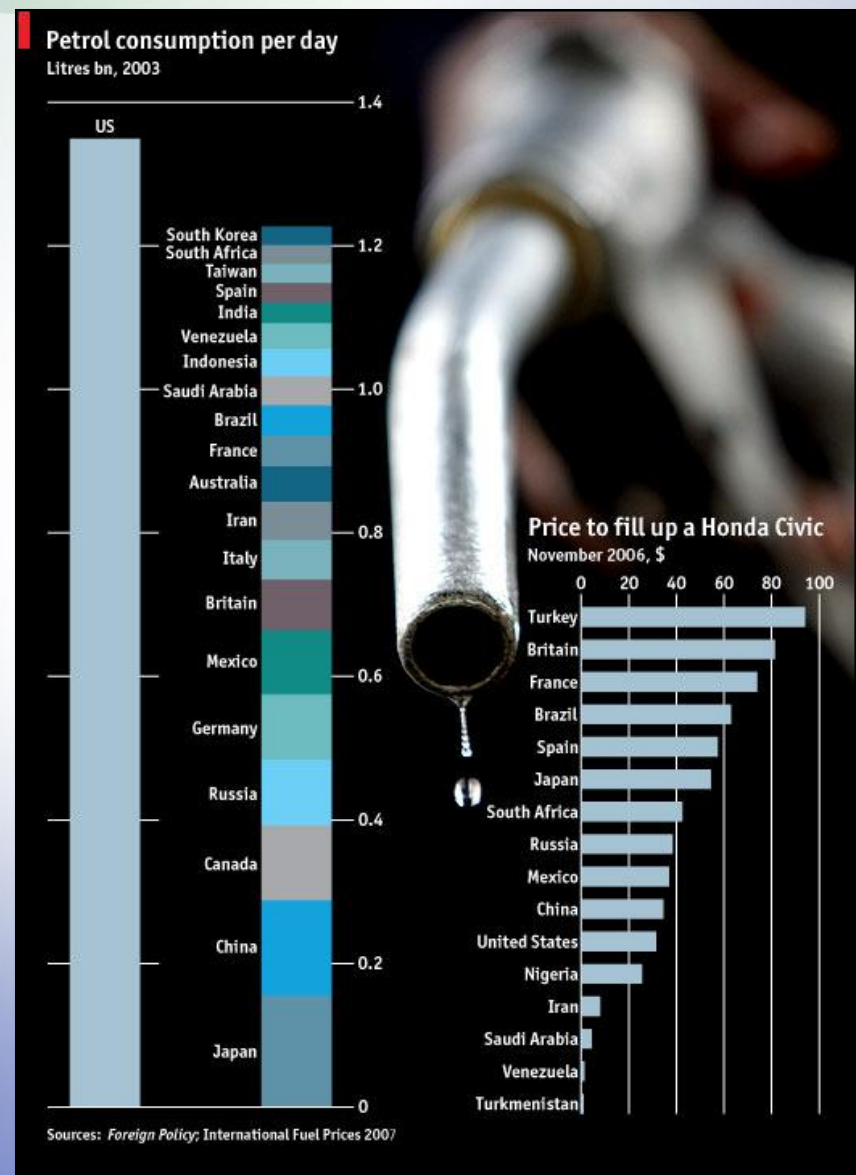
2010 Annual Survey

- **Stakeholders = 78**
- **Fueling Sites = 29**
- **GGE's Displaced = 12.1 million gallons**
- **Since 2005 Tucson Clean Cities has displaced more than 49 million gallons of petroleum.**

2011 Annual Survey

- **Stakeholders = 86**
- **Fueling Sites = 128**
- **GGE's Displaced = 12.5 million gallons**
- **Tucson is part of the EV Project. We have begun placing Level 2 EV charging infrastructure throughout Tucson. DC Fast Charging will be the next phase. At this time we have 102 Level 2 Charging Stations**

Why Clean Cities?



Southern Arizona Regional Solar Partnership



To foster and encourage a political and business environment in which solar energy becomes a major source of economic activity within southern Arizona.

Southern Arizona Regional Solar Partnership

- Formed in early 2008
 - Diverse membership
 - About 40 members
 - Flexible fee structure
- Principal products
 - Providing a local focus
 - Outreach and public education
 - Greater Tucson Solar Development Plan
 - Facilitation



Southern Arizona Regional Solar Partnership

- Providing a connection
 - A reason to interact
 - An opportunity to share information
 - Feedback and validation
 - A starting point for action
 - A coordinated response
 - Maintaining momentum

Southern Arizona Regional Solar Partnership

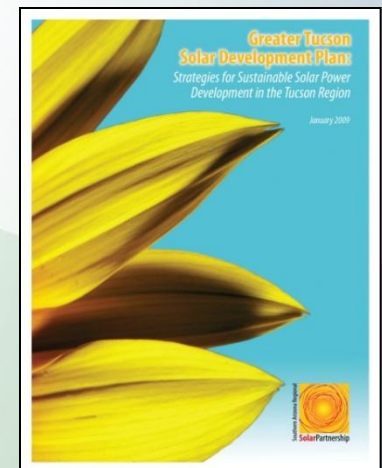
- Greater Tucson Solar Development Plan

– Access the plan at

<http://www.pagnet.org/documents/Committees/EPAC/TucsonRegionSolarPlan-2008-12-24.pdf>

- Web site

– Through [PAGnet.org](http://www.pagnet.org)





Southern Arizona Solar Standards Board

- *Protecting Consumers - Promoting Quality - Ensuring Performance*



Mission Statement

- To protect consumers and ensure the long-term success of the Arizona solar industry by promoting best practices, educating the general public and encouraging solar businesses to install long-lasting, quality installations.
- SASSB's goal is to bring together all parties interested in the lasting success of the solar community.



Accreditation



**Southern Arizona
Solar Standards Board**



**Southern Arizona
Solar Standards Board**



Services for Accredited Companies

- *Marketing:* SASSB conducts advertising campaigns to promote its accredited companies.
- *Training and Education:* SASSB conducts seminars and workshops to improve our members' businesses.
- *Communications:* SASSB distributes an e-mail newsletter and holds regular monthly meetings as well as special bulletins and events to share information with and among our accredited members.



Services to Public

- Educational Web site containing:
 - Accredited Installer List - With a company profile
 - In Progress Installer List
 - Watch List for scams and bad business practices
 - Education for consumers
 - Solar facts and steps
- Activities and events:
 - Breakfast/lunch/dinner meetings for education, networking and information sharing.
 - Participation in events, trade shows and other suitable venues.



CORE REQUIREMENTS

- At least one NABCEP certified FTE employee on staff primarily working in southern Arizona in the field(s) related to accreditation.
 - (9-month grace period)
- In business for two years and have at least 10 utility verified system installs (both hot water and PV) within one year of joining.
- No more than two verified violations every year
- In good standing with the Arizona Registrar of Contractors, deemed an "approved installer" with applicable utilities, and properly licensed through all applicable Southern Arizona entities. No work can be done outside of allowable scope of licenses.
- Must adhere to ethical sales practices.



SASSB Structure

- 501(c)3 organization
- 5-member voting board of installers
 - Elected by general members each year
- Regular public meetings at PAG's downtown office.
- Jurisdiction includes:
 - TEP, Unisource, SSVEC and Trico

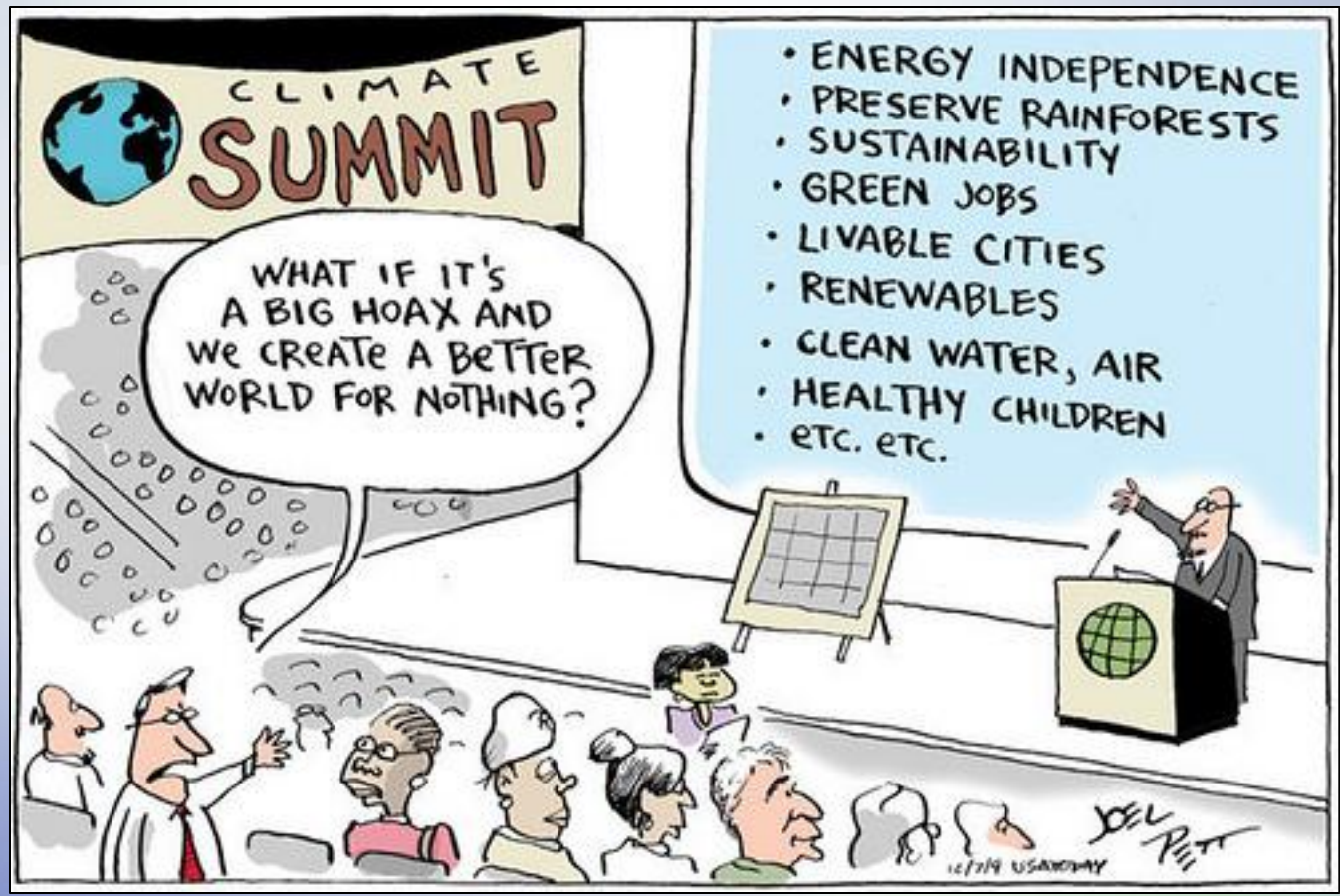


Next Steps

- Solar Development Plan
 - Access the plan at
<http://www.pagnet.org/documents/Committees/EPAC/TucsonRegionSolarPlan-2008-12-24.pdf>
 - SASSB.org



In closing.....



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2:30 – 2:45

Q & A

MID-AMERICA REGIONAL COUNCIL



MARC

Mid-America Regional Council

Advancing regional progress through

LEADERSHIP • PLANNING • ACTION

Mid-America Regional Council



- A nonprofit association of city and county governments
- The federally designated Metropolitan Planning Organization for the Greater Kansas City region
- A forum for the region to work together to advance social, economic and environmental progress



The Kansas City Region



- Two states
- Nine counties
- 120 cities
- 1.9 million people
- 4,400 square miles



MARC Policy Agenda Evolution



- MARC Board adopts key policy framework
 - 2007 sustainability framework
 - 2009 Transportation 2040 with sustainability/livability principles.
 - 2009 Regional Energy Efficiency Strategic Framework includes .renewable energy technology priority.
 - 2011 approval of Rooftop Solar Challenge grant and 2013 Solar Decathlon application.



REECS Strategic Framework



- *Lead by example by modeling innovative practices.*
- *Adopt and implement updated strategies for codes and standards.*
- *Establish effective partnerships among state, regional and local energy programs.*
- *Implement education, outreach and public involvement strategies.*
- *Create incentives for energy efficiency and conservation.*
- *Link energy strategies with related sustainability efforts.*
- *Assess, monitor and report the effectiveness of clean-energy strategies.*
- *Promote emerging solutions and technologies to encourage market transformation.*

Incorporating Solar



- Conducted survey of local governments to document current zoning and permitting policies.
 - 41 jurisdictions responded;
 - Issued report with data on aesthetic restrictions - panel coloring, placement restrictions: visible and not visible from public right-of-way;
 - Data provided basis for Rooftop Solar Challenge grant application.
- REECS jurisdictions signed on to be grant partners.

Integrating Solar



- MARC and its regional partners have received \$140 million (includes match) in grants since 2009.
 - Grant investments include funds from:
DOE; HUD; DOT; EPA, USDA, and EDA.
 - All have sustainability and/or energy in their guiding principles.
 - Solar has been integrated in 5 out of 12 grant initiatives.
 - Further integration is expected.

Solar Ready KC



Solar Ready KC | Kansas City, Mo. | Lee's Summit, Mo. | Olathe, Ks. | Clay County, Mo. | Johnson County, Ks.

Year	Key Milestones & Deliverables
1	<ul style="list-style-type: none">• Research: Produce best-practices manual and training curriculum• Education: Provide technical training for building officials and contractors, outreach to residents and businesses• Financing: Launch commercial PACE program in Kansas City metro; explore third-party power purchase options• Advocacy: Propose legislation addressing interconnection standards for Kansas and Missouri
2	Solar Ready KC strategies deployed in other Midwest regions; state consideration of new standards ; solar ready mapping targets commercial installations.
3	Up to 25 local governments adopt solar-friendly permitting and zoning ordinances; economic development incentives in place





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