

U.S. DEPARTMENT OF ENERGY



SOLAR DECATHLON 2009

How Solar Works Residential Installation

Frank Greenfield
East Coast Regional Sales Manager



National Renewable
Energy Laboratory
Innovation for Our Energy Future



Your life. Plugged in.™





Presenters

BP Solar: Frank Greenfield
Crum Electric: David Lucier
Glory Energy: Tim Jones





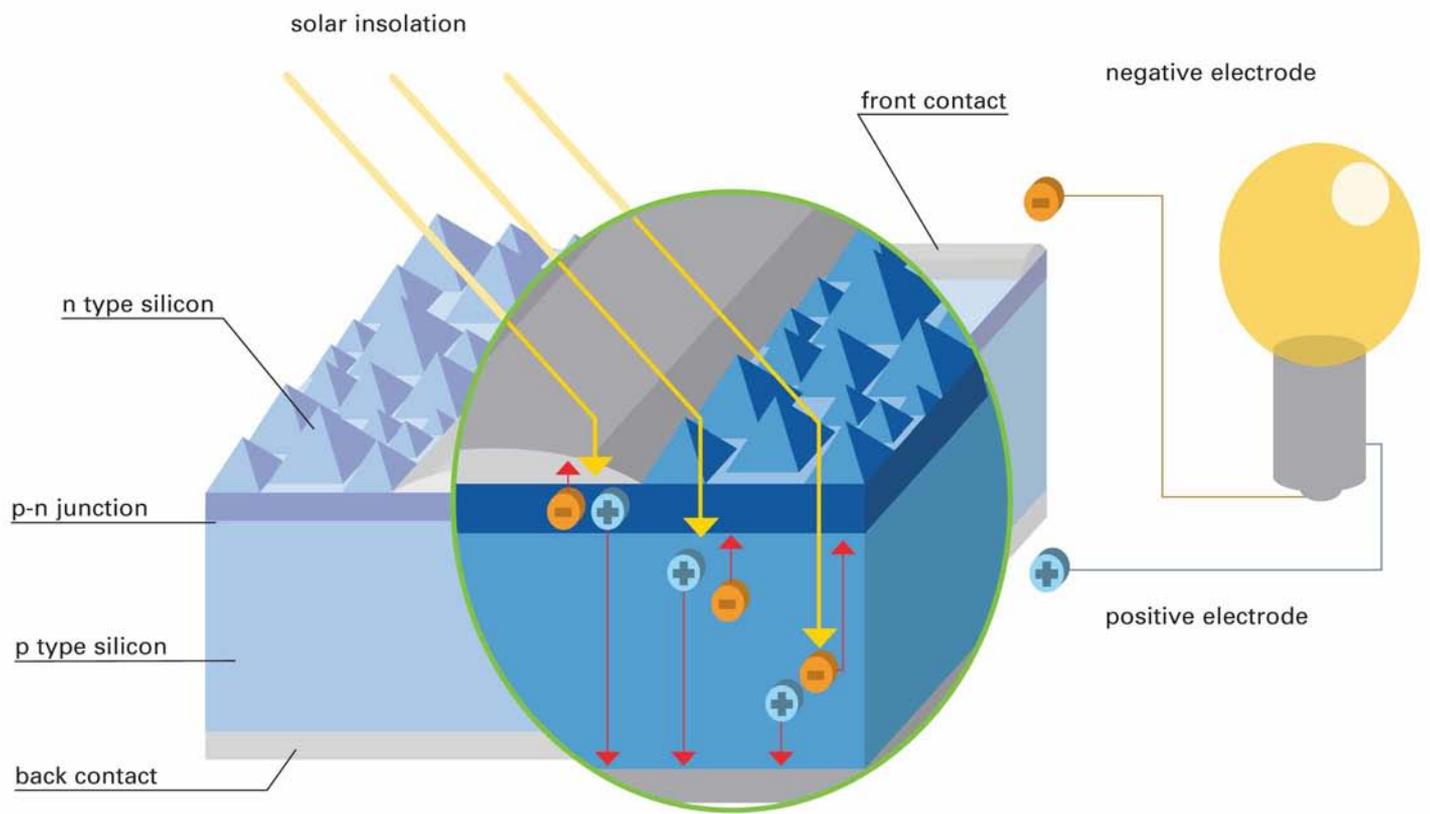
Topics

- How Solar Electric Systems Work
- Is Solar Right for You?
- From Initiation to Installation



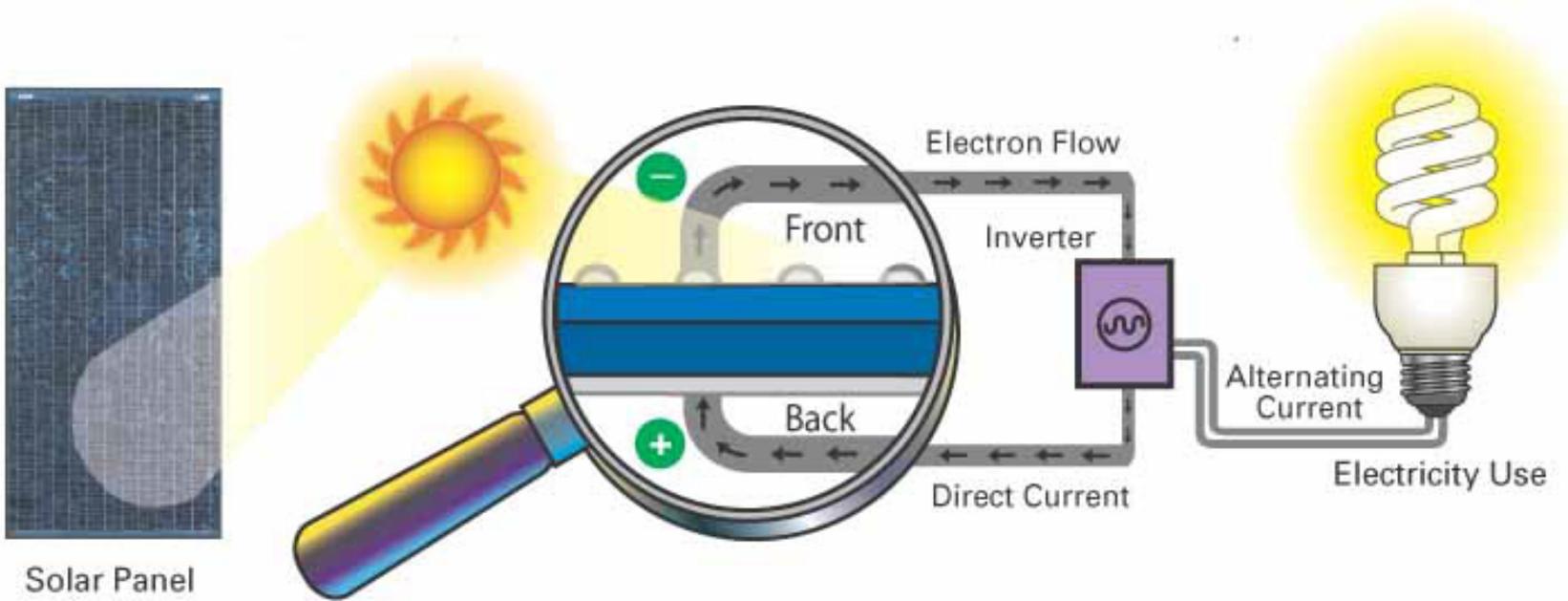


How a Solar Cell Works





How a Solar Panel Works



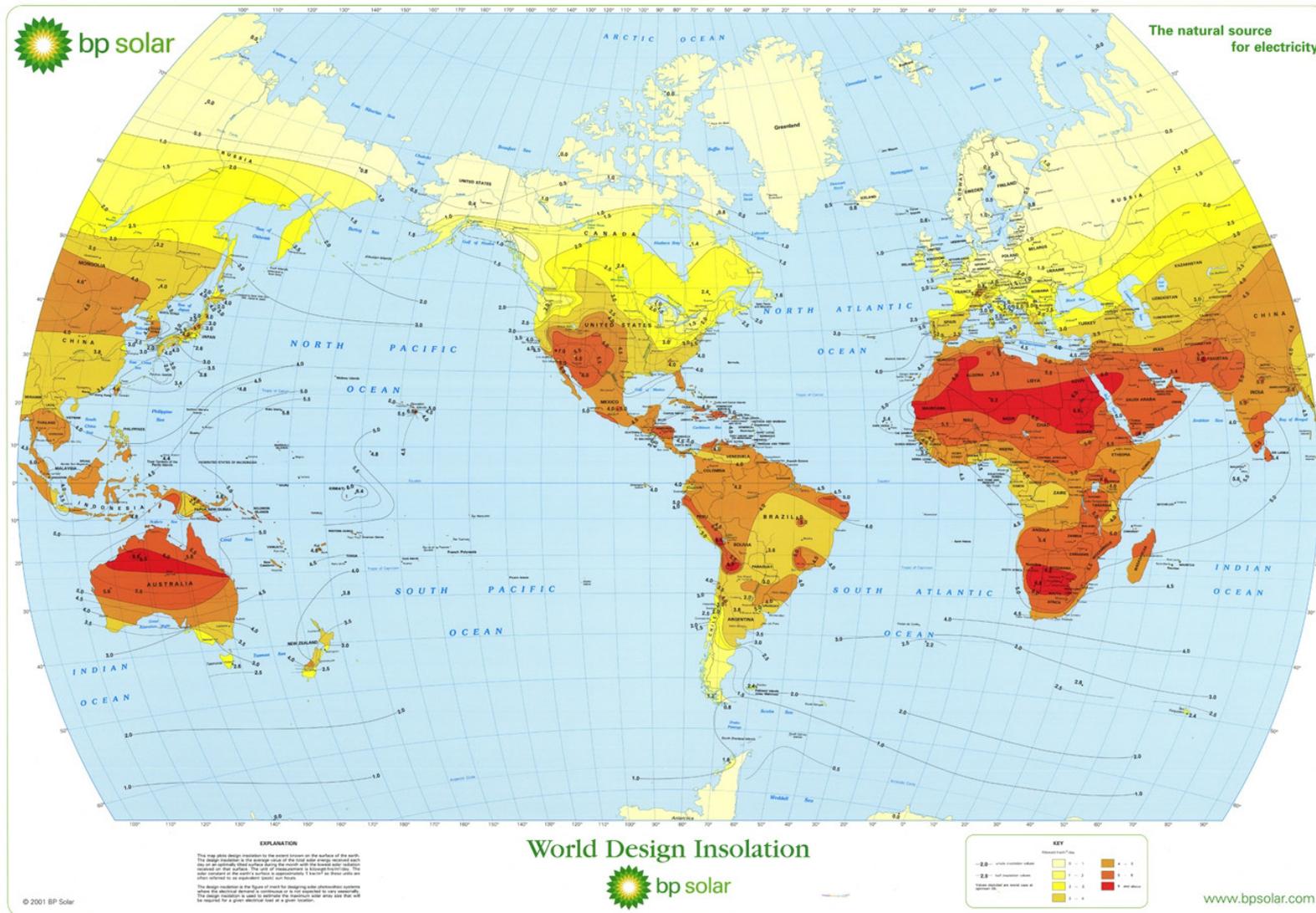


How a Solar System Works





Solar at Its Best – Solar Insolation





Is Solar Right for YOU?

- Rebates and incentives
- Understanding your roofline
- Solar panel solutions





Rebates and incentives

- Federal Investment Tax Credit
 - Uncapped 30% credit for homeowners
(as of October 4th, 2008)
- For more information on local and state incentives





Understanding your roofline

- Solar insolation in your region
- Southern exposure is best
- Roof should be free of obstructions
(shading from trees, hip roofs and chimneys)
- Roof replacements should be scheduled prior to installation
- Products can integrate with your roofline and roofing materials





Products that Work with Your Roofline



Flush mount



Roof-integrated



Rack mount

W PV in Pasadena, MD





From Initiation to Installation

Contacting a Certified Installer

- Look to reputable companies affiliated with DOE / SEPA / SEIA, manufacturer or manufacturer backed 3rd party (www.findsolar.com)

What to look for

- A company that has been around as long as the warranty
- A company with a strong bottom line to support the terms of the warranty

The In-home Consultation

- Get a quote with an accurate ROI estimate
- Products specified should be reliable
- Review the contract and permitting / rebate handling process





Next Steps

- Prior to Installation
 - Rebate Paperwork
 - Building Permits
- Installation Day
 - Courteous and timely installers arrive on the day of installation, on-time and equipped to install your system
 - Interconnection with the electric grid will be dependant upon inspection and coordination with the utility





Enjoy the Benefits of Solar Power

- No moving parts means little maintenance and no emissions
- Watch your meter spin backwards, generating a credit toward your next bill
- Protect yourself from rate hikes
- Protect the environment for future generations
- Increase the resale value of your home
- Why rent your energy when you can own it!





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Thank You!

