About SEIA

• Founded in 1974
• U.S. National Trade Association for Solar Energy
  • 1,000 member companies from around the world
  • Members from across 50 states
  • Largest companies in the world as well as small installers
• Our Mission: Build a strong solar industry to power America
• Our Goal: 10 gigawatts (GW) of annual installed solar capacity in the U.S. by 2015
Solar Continues to Boom—723 MW Installed in Q1 2013

U.S. PV Installations

- Installed Capacity (MW)
- Projected, Q1, Q2, Q3, Q4, Annual
- 2006 to 2013
Solar Is An Economic Engine

There are over **119,000 solar workers** in the U.S., employed at **5,600 companies** operating throughout the country.

![U.S. Solar Company Locations](source: SEIA, National Solar Database)

Over 5,600 companies in all 50 states

- Manufacturer
- Installer
- Other
Solar More Affordable Than Ever

Cost Reductions Driving Growth

- Installed Capacity (MW)
- Average System Price ($/W)

- 2002 to 2013:
  - Installations
  - Projected
  - Average System Price

August 19, 2013
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Solar to Continue to Grow With Effective Policies in Place

U.S. Solar Installation Forecast

Installed Capacity (MW)

- 2010
- 2011
- 2012
- 2013E
- 2014E
- 2015E
- 2016E

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Important State Policies

- Freedom to contract with third party providers/installers
- Efficient, transparent permitting and siting rules
- Renewable portfolio standards
- Net metering – allowing customers to connect and sell back to the grid
- Incentives such as favorable tax treatment
NEM Is a Fundamental Policy

Net Metering
www.dsireusa.org / February 2013

43 states, Washington DC & 4 territories have adopted net metering

Note: Numbers indicate individual system capacity limit in kilowatts. Some limits vary by customer type, technology and/or application. Other limits might also apply.
This map generally does not address statutory changes until administrative rules have been adopted to implement such changes.
How does NEM work?

Sample Customer Load by Hour in One Day

- **Morning**: In the morning hours when the solar system produces less electricity than needed, the customer will pull electricity from the grid.

- **Mid-day**: In the middle of the day when the solar system produces more energy than is needed onsite, the extra power is exported to the grid and the meter runs backward, building up a credit with the utility. Typically only ~1/3 of a system’s power supply is exported to the grid.

- **Evening**: In the evening and night hours, the customer will again pull electricity from the grid. Credits from the exports go toward “netting out” usage on a month-to-month or annual true-up.
16 states, plus Washington DC have Renewable Portfolio Standards with Solar and/or Distributed Generation provisions.
Third-Parties Facilitate Residential Engagement

- Third-party owned market is predicated on full retail net metering
- TPO share broke 90% in Arizona and neared 90% in Colorado
At Least 22 states, + Washington DC and Puerto Rico Authorize or Allow 3rd-Party Solar PV Purchase Power Agreements.

Note: This map is intended to serve as an unofficial guide; it does not constitute legal advice. Seek qualified legal expertise before making binding financial decisions related to a 3rd-party PPA. See following slides for additional important information and authority references.
Solar Powering the Military

- Over **130 MW** of PV deployed at military bases
- DOD has outlined plans for over **1 GW** of additional solar projects
- PV and SHC systems operating at military installations throughout the Southeast
- Saving the DOD, taxpayers millions of dollars

SWH at military homes at Camp Lejeune, Jacksonville, NC; FLS Energy

14 MW China Lake Solar Farm, China Lake, CA; SunPower
Positive to Neutral Trends 2013

- Few comprehensive or overarching pieces of legislation
- Most RPS “opposition” or weakening bills failed
- Tax credits and adjustments common
- Net metering adjustments common
Solar Creating Jobs in the Southeast

- Over 8,100 solar workers
- Over 760 solar companies operating up and down the supply chain
- 93 manufacturing facilities located throughout the region
Solar Means Business in the Southeast

Many companies, including **IKEA, Apple, SAS, REI** and **Boeing**, have invested in solar in the Southeast to reduce facility operating costs.

**IKEA; Atlanta, GA**
Positive to Neutral Trends

- Few comprehensive or overarching pieces of legislation
- Most RPS “opposition” or weakening bills failed
- Tax credits and adjustments common
- Net metering adjustments common
- New technology
- More customer awareness
- Declining Costs
APPENDIX
Arizona

- **SB 1313:**
  - Made administrative changes to commercial Solar Tax Credit Program.
  - The newly established pre-certification and carry forward process will hopefully improve the implementation of solar projects in Arizona.
  - Signed by the Governor and will be effective Sept 13, 2013.
• **SB 13-186 (NABCEP bill)**
  - Previous legislation required a 3:1 ratio of NABCEP certified installers
  - Legislation permits contractors to use supervisors certified by a nationally recognized professional association, therefore adding additional flexibility
  - Signed by the Governor

• **SB 252 (RPS bill)**
  - Increases the RES to 20% (from 10%) by 2020 for Tri-State and co-ops that provide service to 100,000 meters or more
  - Provides a 1% DG carve-out (smaller co-ops will have a lesser .75% DG requirements)
  - Expands the definition of “eligible energy resources” to include coal mine methane and municipal waste synthetic gas
  - Eliminates in-state preferences for new electricity generation resources built in Colorado after January 1, 2015
  - Signed by the Governor.
• Solar*Rewards Program
  – One issue that needed resolution was adding capacity to the Xcel Solar*Rewards Program
  – SEIA and COSEIA worked to prepare to introduce legislation, which prompted Xcel Energy to offer settlement negotiations
  – A settlement agreement was reached to introduce an additional 33.6 MW to the program (or when the new RES Compliance plan is approved, whichever is sooner and submitted to the CO PUC.
  – The agreement was approved by the CO PUC (as submitted) on June 13, 2013
Nevada

- **AB 428:**
  - Revises the Solar Generation Program include a PBI and eliminate an annual budget
  - Makes changes to net metering
    - Requires the Commission to open an investigatory docket relating to the costs and benefits attributed to net metering
    - Raises the cap to 3%
    - Imposes a non-bypassable charge (assessed upon kWh delivered to the customer) for NEM customers which are assessed against other customers in the same rate class
  - Signed by the Governor.

- **SB 252 (RPS):**
  - Revises the RPS by:
    - Gradually eliminating the ability to count energy efficiency for RPS credit
    - Eliminates the DG multiplier
    - Makes changes to the ability to carry-forward RECs
  - Signed by the Governor.
Nevada Cont.

- SB 123 (Nvision)
  - Prescribes minimum requirements of emission reduction/ capacity replacement plan
  - Elimination of at least 300 MW of coal-fired electric generating capacity by 2014, plus 250 MW by 2017, plus 250 MW by 2019
  - The construction or acquisition of 350 MW of electricity generation from renewable energy facilities and 550 MW from other electric generating plants
  - Provides for recovery of costs incurred in carrying out emissions reduction and capacity replacement
  - Signed by the Governor
Texas

• SEIA drafted and filed legislation establishing a grant program to support the installation of emission-free renewable generation systems that do not use water to produce electricity and are located on publicly owned land, government buildings, or parking facilities (HB 3450)
• SEIA drafted and filed legislation that would expand the definition of distributed renewable generation on publicly-owned land from 2 MW to 10 MW (SB 1586/HB 3702)
• Session is closed. One relevant statute passed – 313, which creates new opportunities for solar projects using econ development programs
HF 773: Solar Energy Jobs Act of 2013

- Establishes solar value rate utilities may pay to owners of solar PV systems
- Requires utilities to pay solar generators a “value of solar price” calculated by Department of Commerce
- Establishes a solar energy standard requiring utility retail electric sales to be generated by solar energy by target years
- Makes solar PV systems eligible to receive a renewable energy production incentive payment
- Requires production of studies on solar energy, thermal and electric, and the use of on-site storage systems
Other Activities of Note

- The North Carolina legislature retired without passing an anti RPS bill (S365 and H298)
- Connecticut passed SB 1138 reforming the RPS, broadening to include hydro
- Ohio still considering
- NC still considering 3rd party PPA for military
- Florida passed legislation that provides property tax abatement for residential solar installations
- SC: 3rd party PPA legislation postponed; efforts may resume next session
- MD: HB 1187/SB 0887- Projects 2MW+ to file application and deposit of 1% at least 6 months before construction commences; to enable PSC to track pipeline