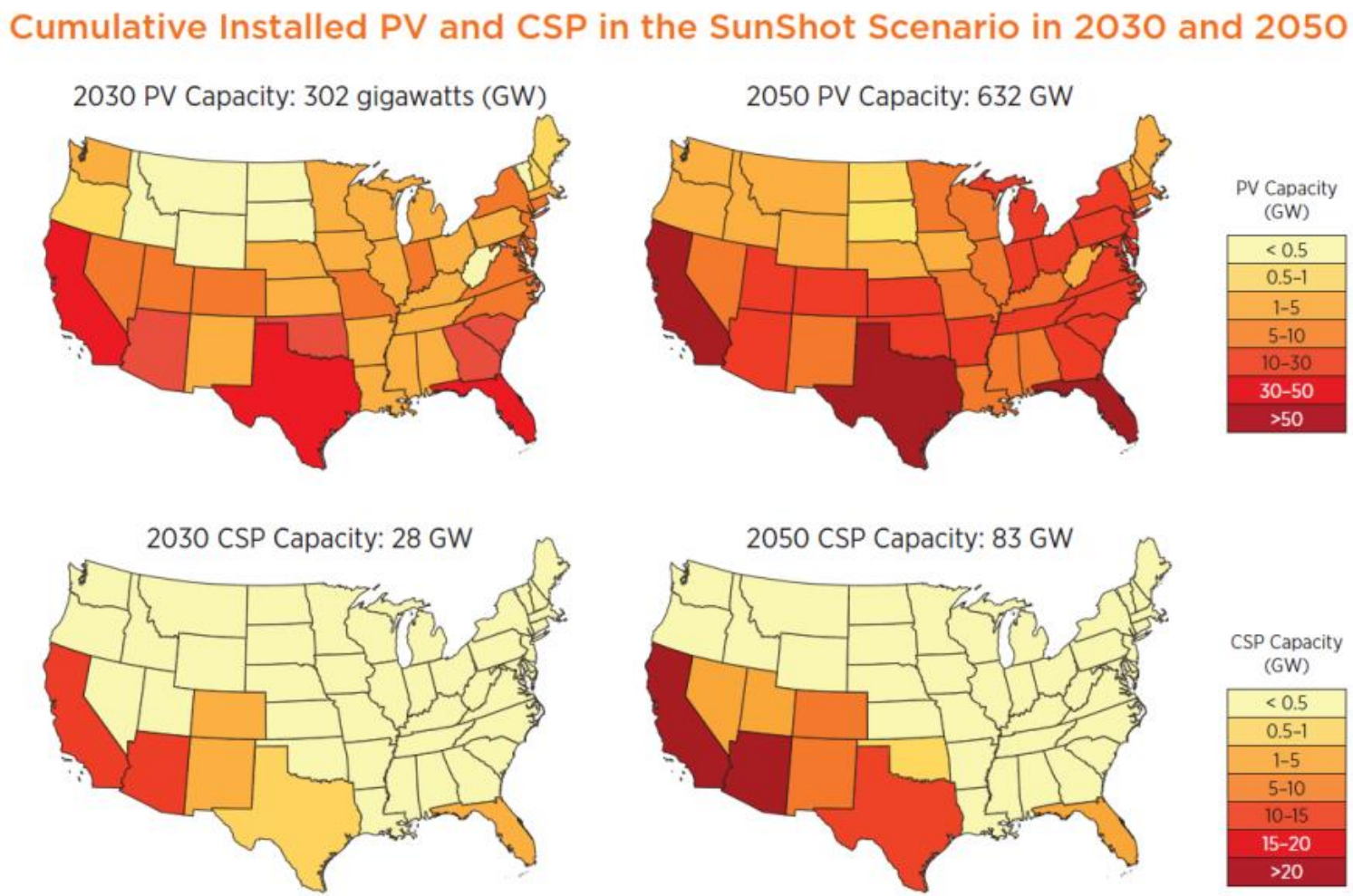
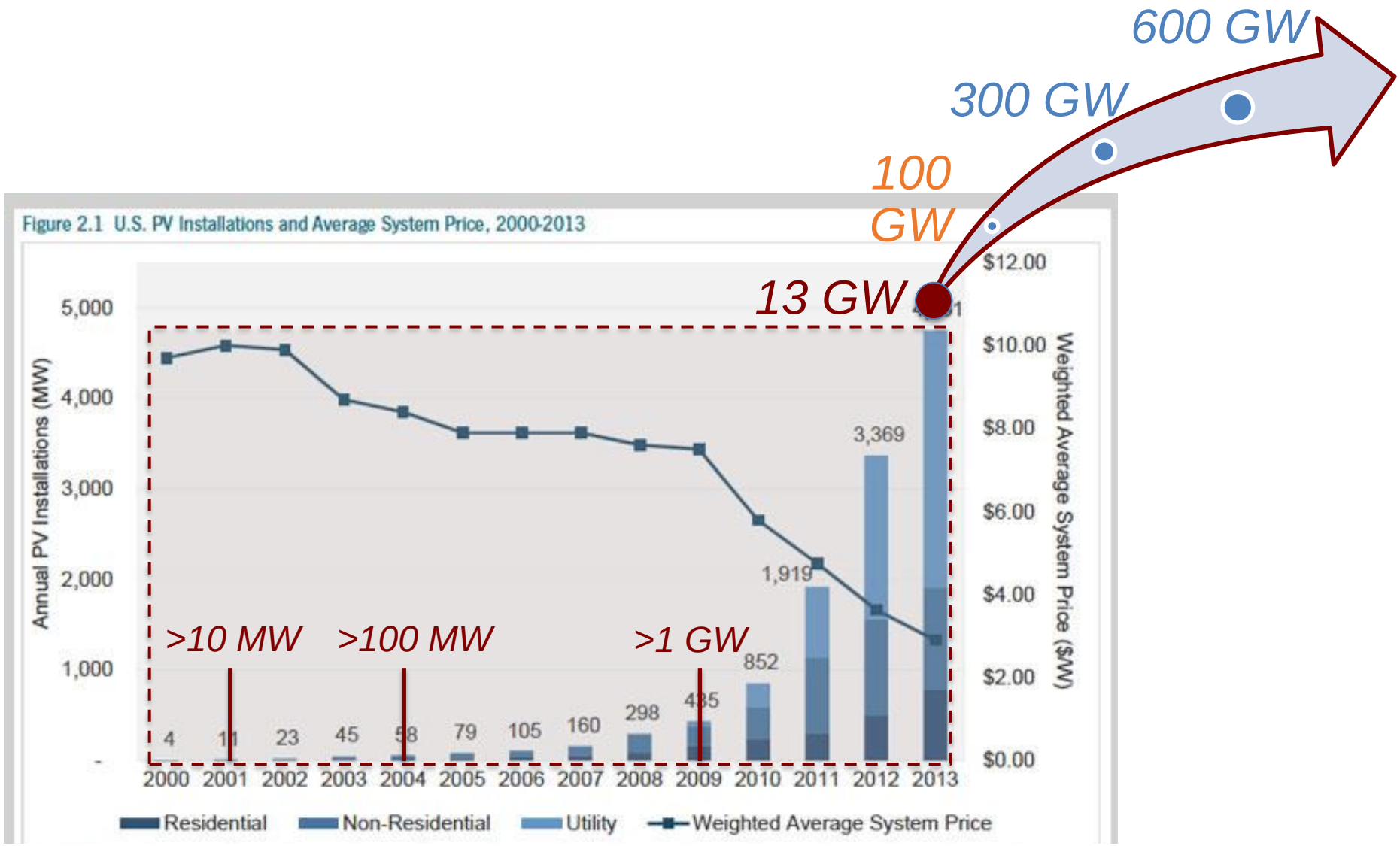
DOE SunShot Vision Study (2012)



Solar can meet 14% (300GW) by 2030 and 27% (600 GW) by 2050 of U.S. electricity demand

U.S. Solar Growth

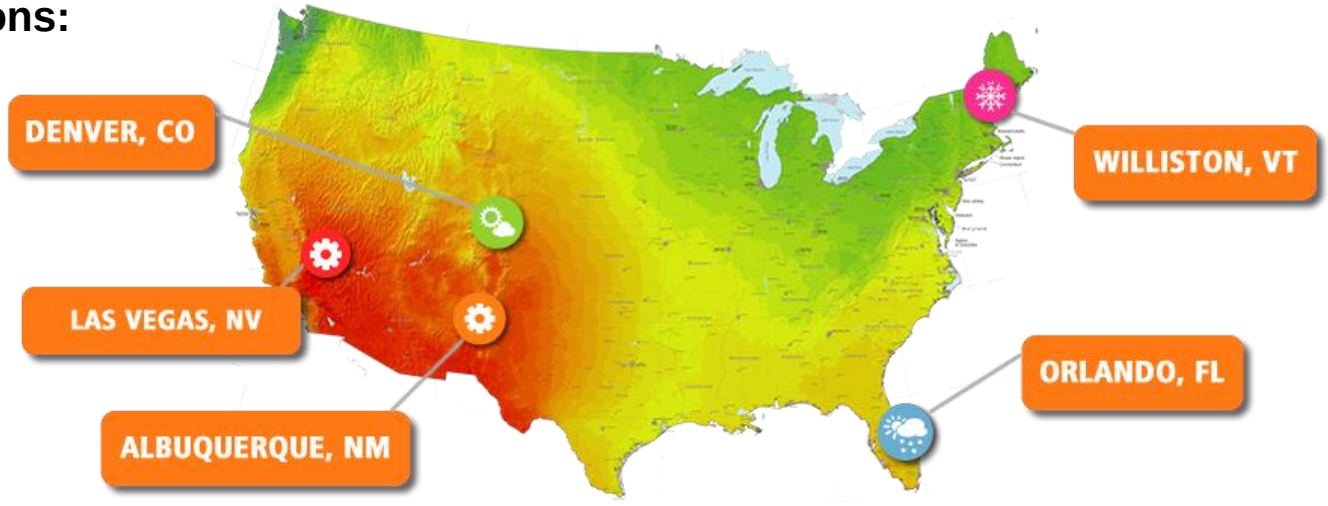


PV Regional Test Centers

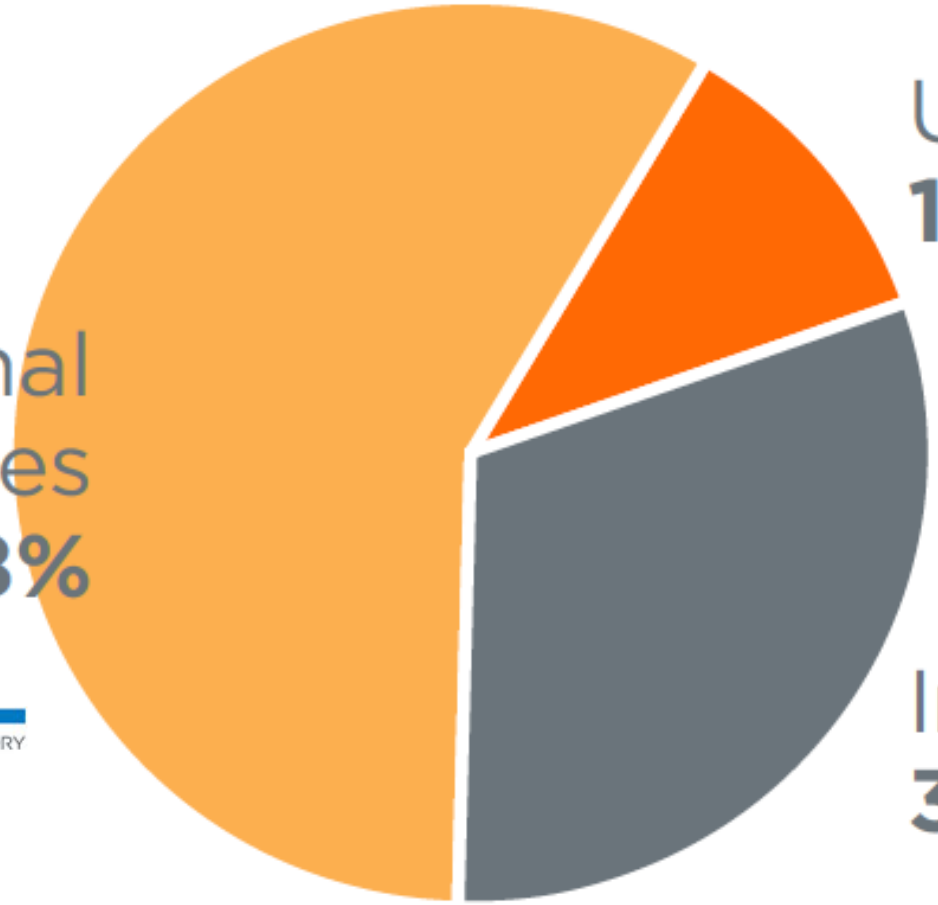
Differentiating PV Quality

- **Background / Vision:**
  - Accelerate adoption of renewable energy generation sources by helping U.S. PV manufacturers overcome the commercialization “Valley of Death”
  - Provide technical basis for bankability of PV systems
    - Installation size:
      - Module-level testing: 10-50kW per site
      - System-level testing: 50–300 kW per site
    - Test in multiple climates, using a comprehensive validation approach to compare performance and initial reliability against prediction

- **Locations:**



SI Funding Distribution



NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Sandia
National
Laboratories

SunShot SI Recent Highlights

SEGIS-AC awardees and partners are active contributors to the IEEE 1547 working groups, catalyzing the major revision of IEEE 1547 standards making smart PV inverters to be deployable in the U.S. for the first time.

FERC
FEDERAL ENERGY REGULATORY COMMISSION

- SunShot funded research at the National Labs was the basis of the recent FERC ruling to modify the Small Generator Interconnection Procedure (SGIP)

- Lowers the cost of interconnection through a “Fast Track” process, particularly at the high penetration levels.

Forbes

Peter Kelly-Detwiler, Contributor
I cover the forces and innovations that shape our energy future.

ENERGY | 8/07/2013 @ 8:57AM | 4,793 views

Plug-And-Play Residential Solar In Five Years? Fraunhofer USA And Partners Are Working To Make This A Reality

SI Events at the Summit

SunShot SI Portfolio Overview: Tuesday • 1:30 – 3:30 pm • Huntington A/B/C

Solar as a Base Load Power Source
Wednesday • 10:45 – 11:45 am • Huntington A/B/C

- Moderated discussion with panelists: *Mark Rothleder, VP, California ISO • Tony Tewelis, Director, Technology Innovation, Arizona Public Service • Hank Price, CTO, Abengoa Solar • Guy Slicker, Director of Clean Energy Technology, NY Power Authority*

Solar in the Connected Building
Wednesday • 1:15 – 2:15 pm • Huntington A/B/C

- Moderated discussion with panelists: *Byron Washom (UCSD) • Mohammad Shahidehpour (IIT) • Honorable Jeanne Fox (Commissioner, NJ Board of Public Utilities) • David Parsons (Hawaii PUC)*

SunShot Systems Integration Vision Workshop
Thursday • 10:30 am – 2:30 pm • Pacific A

Technology Forum: Tuesday, Wednesday • 4:00–7:00 pm • California C/D

www.solar.energy.gov/sunshot/systems_integration.html