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SEIA Solar Energy Industries Association®

Will Lent, Policy & Research Analyst, SEIA

Cory Honeyman, Solar Analyst, GTM Research

Antitrust Reminder

As a trade association of competitors, SEIA must comply with and be mindful of antitrust laws. It is important that competitively sensitive matters are not discussed on this call, including product prices or costs; sales terms or conditions; production levels; sales territories; marketing plans; industry forecasts; or bid terms. If any such topic is raised, I will stop the conversation and, if necessary, end the call. For more information, SEIA's antitrust guidelines are available on our website.

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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**

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Solar in America: Strong and Getting Stronger

- 119,000 American workers in solar – more than double the number in 2009 – at 5,600 companies across the country
- One of the fastest growing sectors of the U.S. economy – 2012 installations grew 76% over 2011
- Q2 2013 was the second largest first quarter on record. PV market installed 832 MW, growing 15% over last quarter
- 9,370 MW of cumulative installed solar electric capacity, enough to power 1.5 million average American homes

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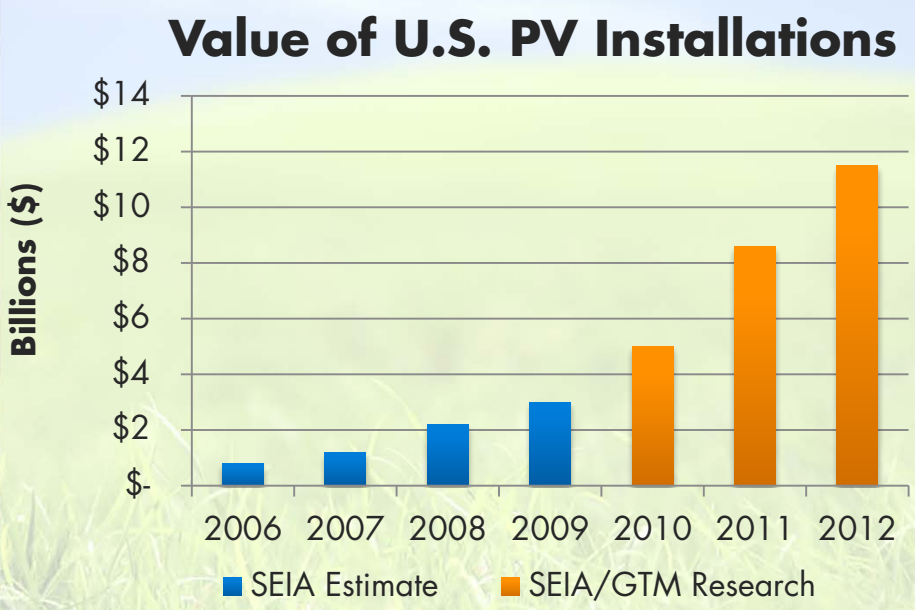
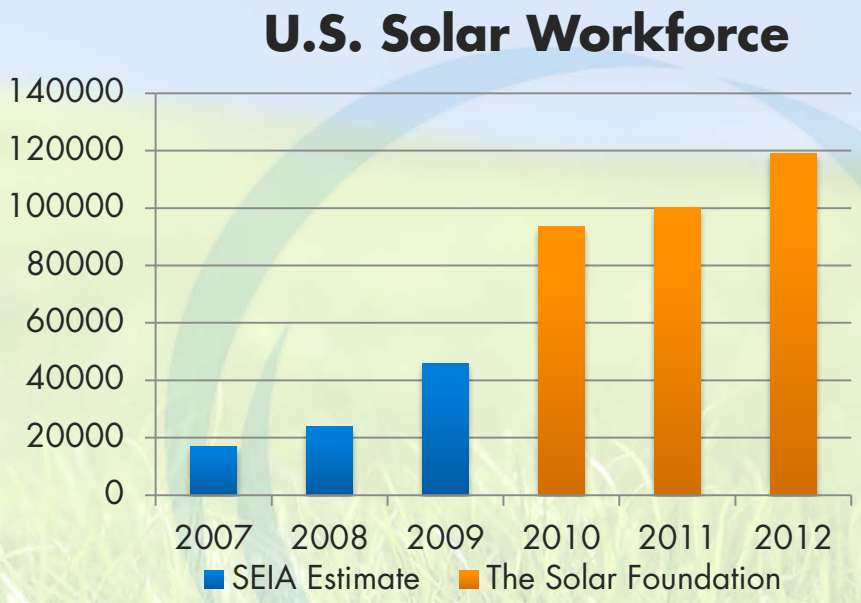
Solar Is an Economic Engine

- The value of U.S. solar installations was $11.5 billion in 2012, up from just $810 million in 2006.
- There are now over 119,000 solar workers in the U.S., a 13.2% increase over 2011 employment totals*





*(The Solar Foundation 2012 National Solar Jobs Census)

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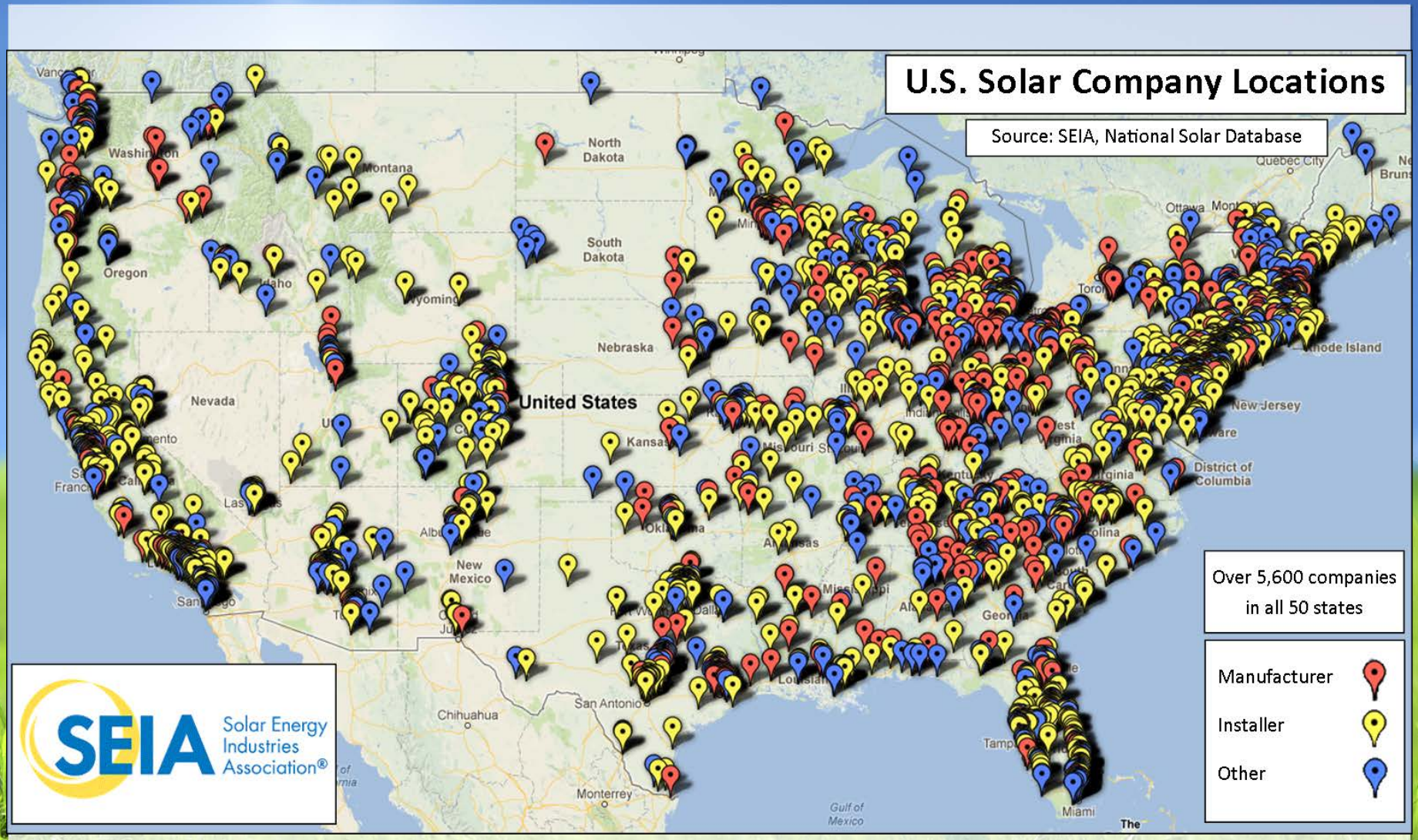
U.S. Solar Business Locations



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Solar Market Insight: Q2 2013

- Detailed data on markets in top 28 states plus DC available in full report.
- Free executive summary provides national aggregate data on installations, pricing, manufacturing and demand forecasts.
- Full report for sale (50% discount to SEIA members) includes quarterly forecasts as well as detailed market segment and state data.

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SEIA/GTM Research Partnership

- **Industry need for up-to-date and reliable market data**
  - Market reports issued every quarter
- **Member discount: benefit for SEIA members**
  - Reliable market intelligence
  - Member discount makes SMI the most affordable market research available
- **Data to support SEIA's advocacy mission**
- **SEIA-GTM conferences**
- **Email questions to research@seia.org or solaranalysts@gtmresearch.com**

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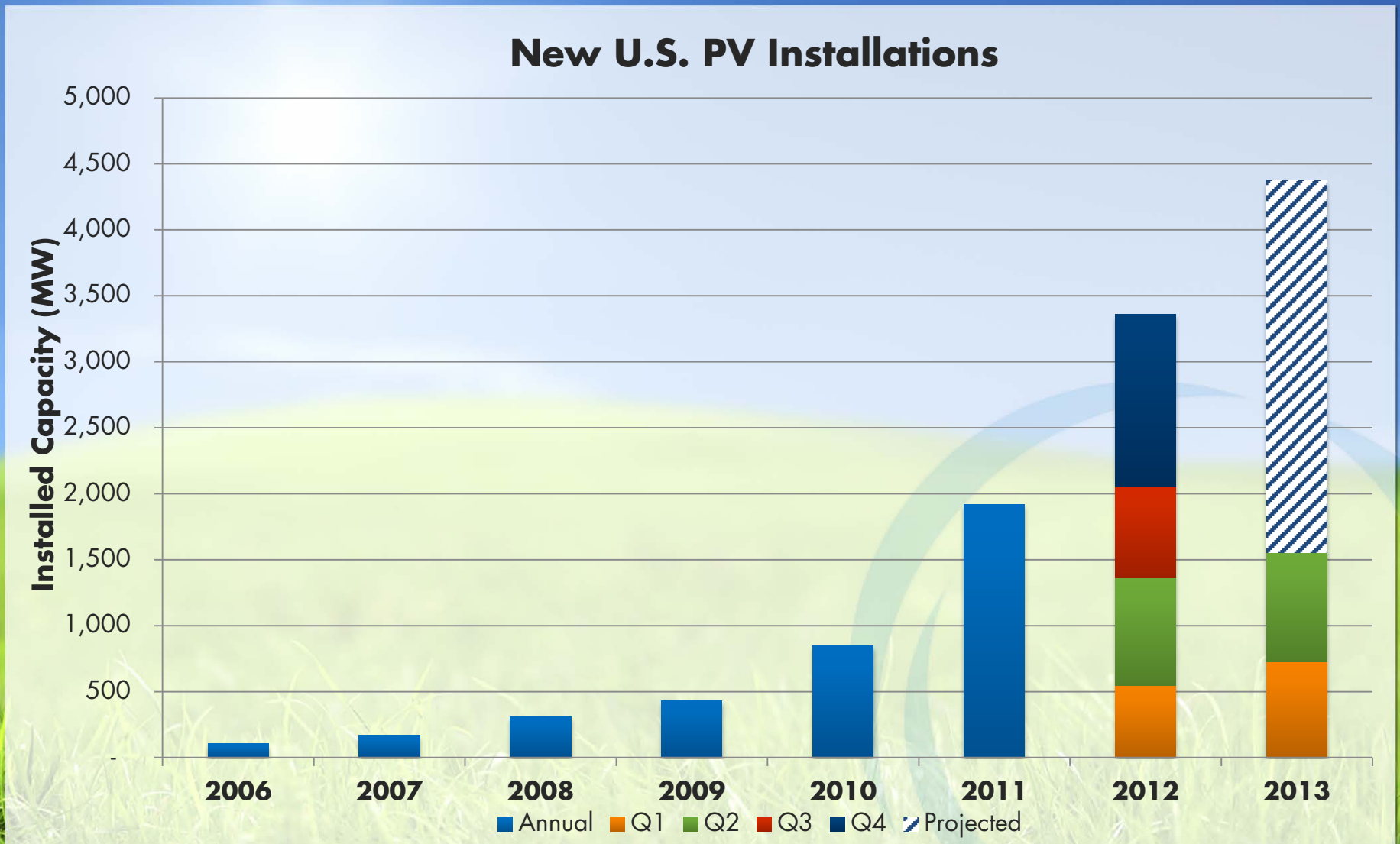
832 MW Installed in Q2 2013- Second Largest Quarter in History



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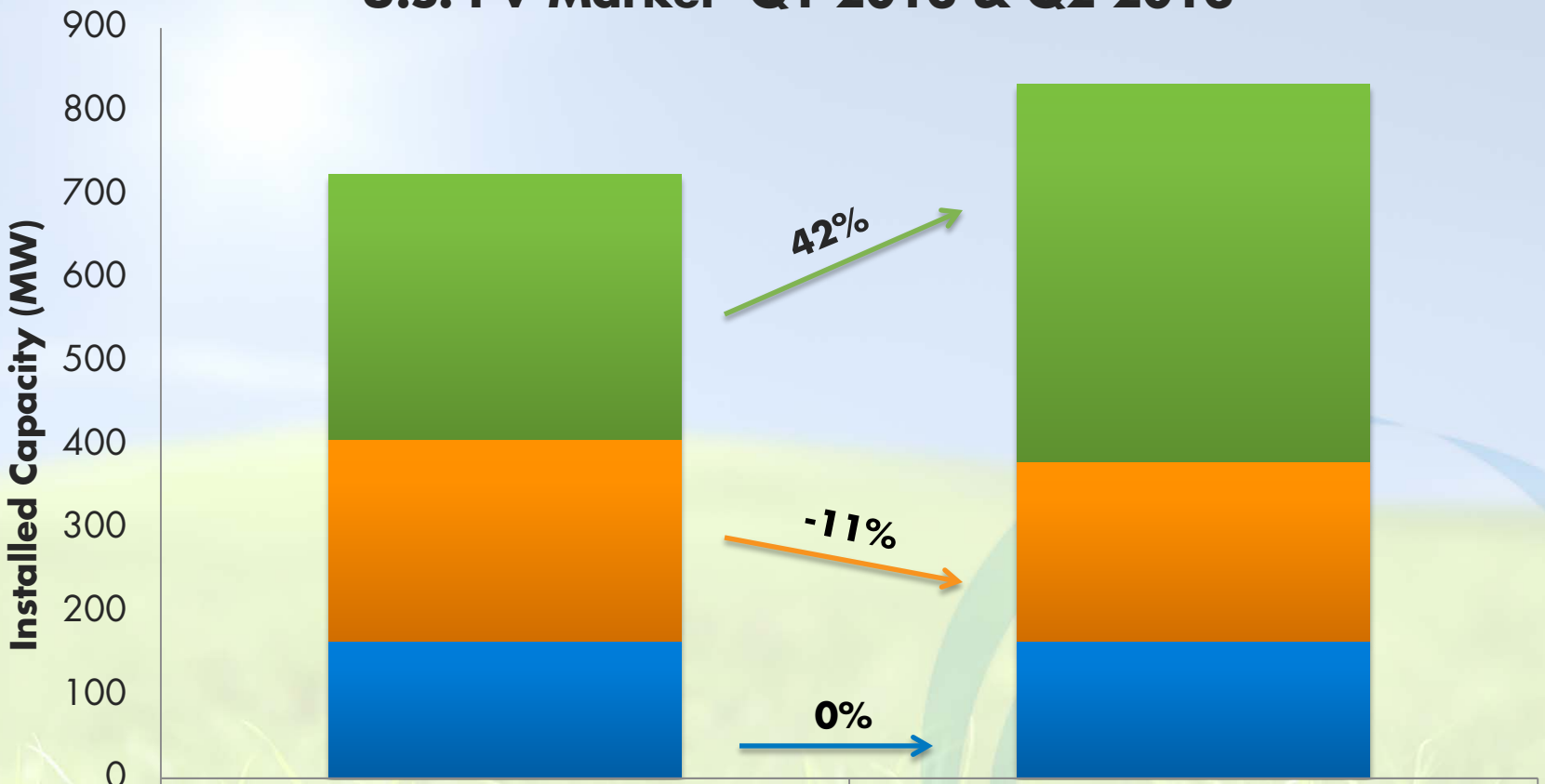
Q2 2013 Comparison



	Q1 2013	Q2 2013
Utility	318	452
Commercial	242	216
Residential	164	164

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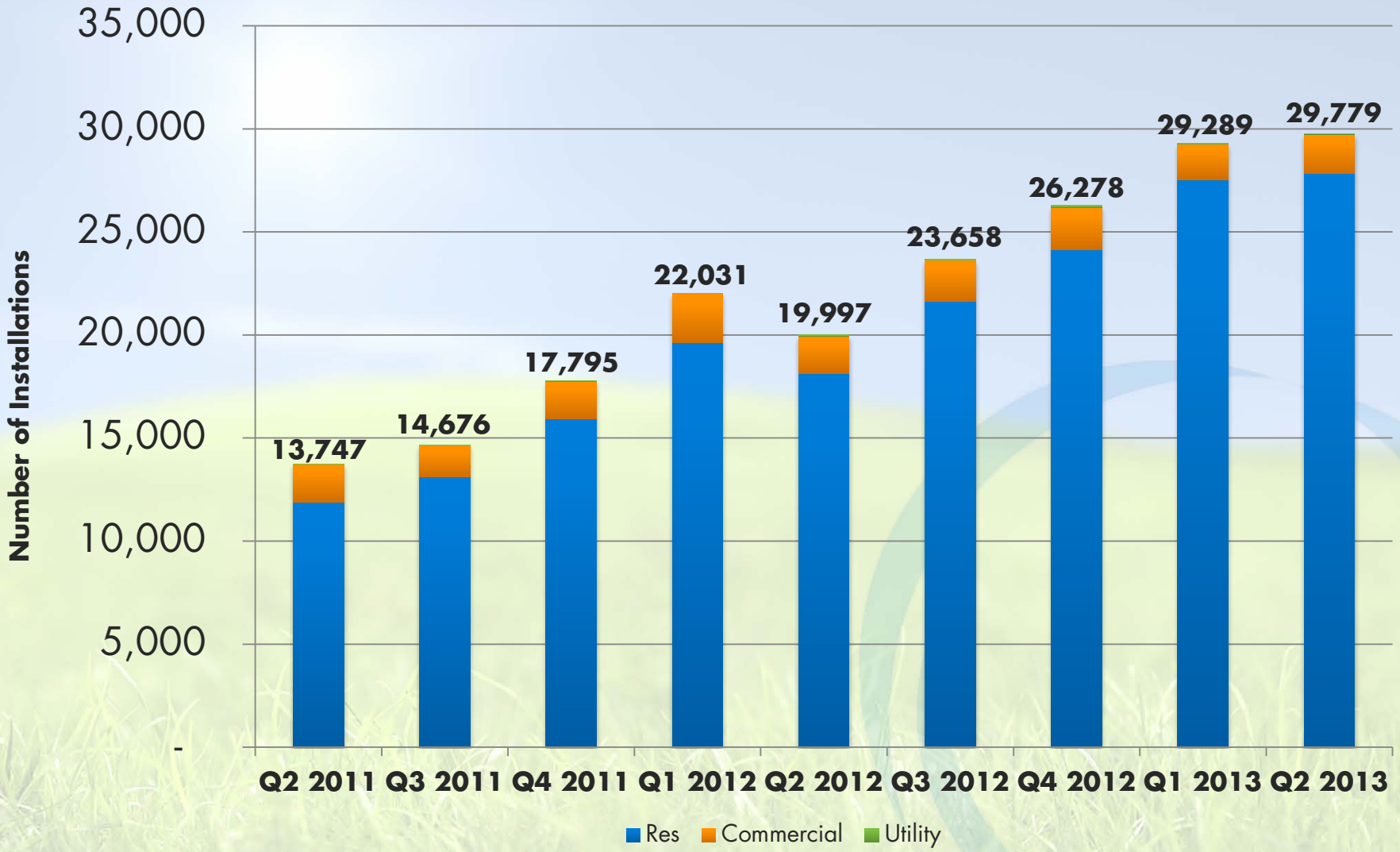
Over 362,000 PV Systems operating in the U.S.



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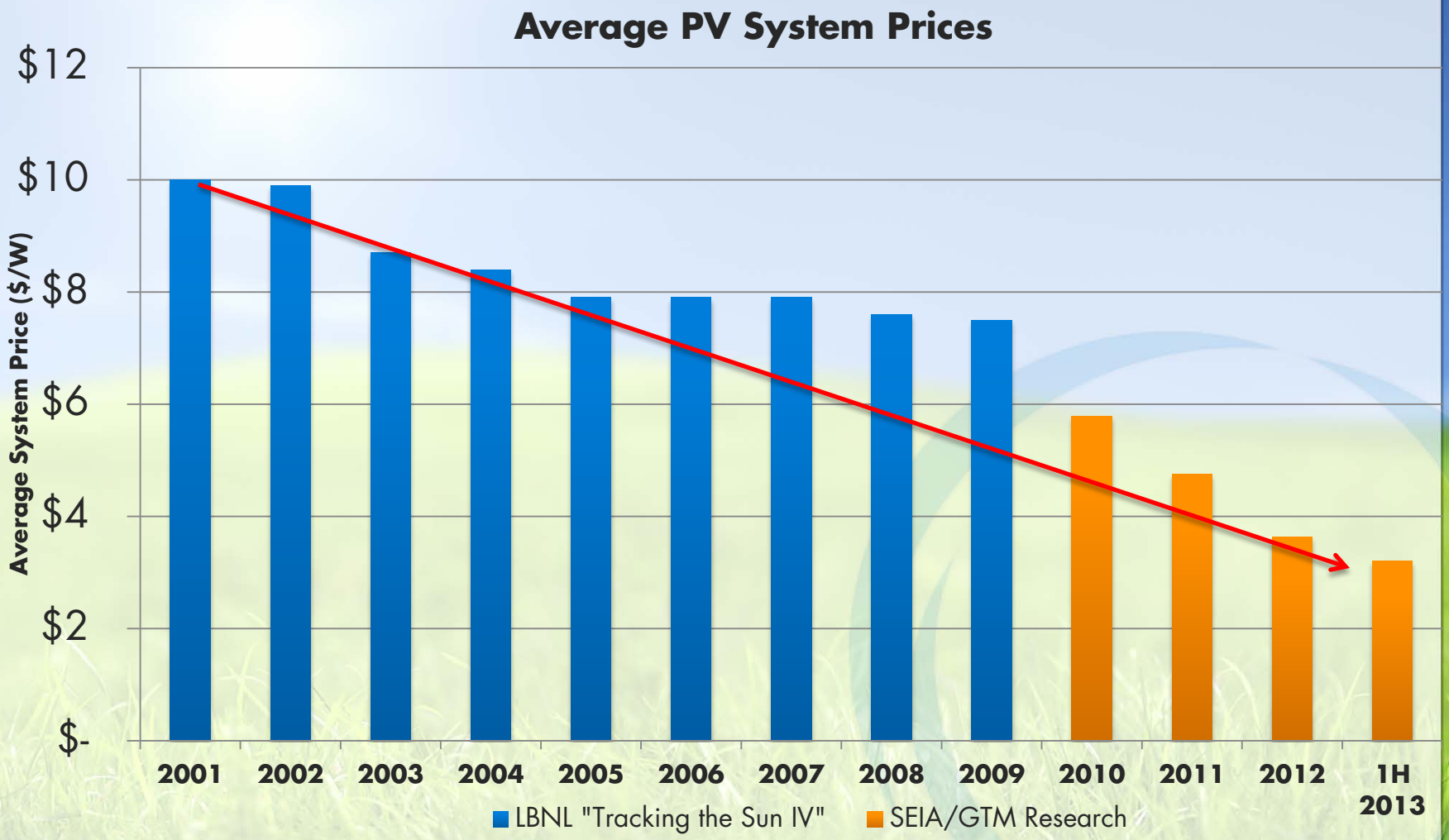
System Prices Continue to Fall

- Average system prices have dropped by over 40% since the beginning of 2011



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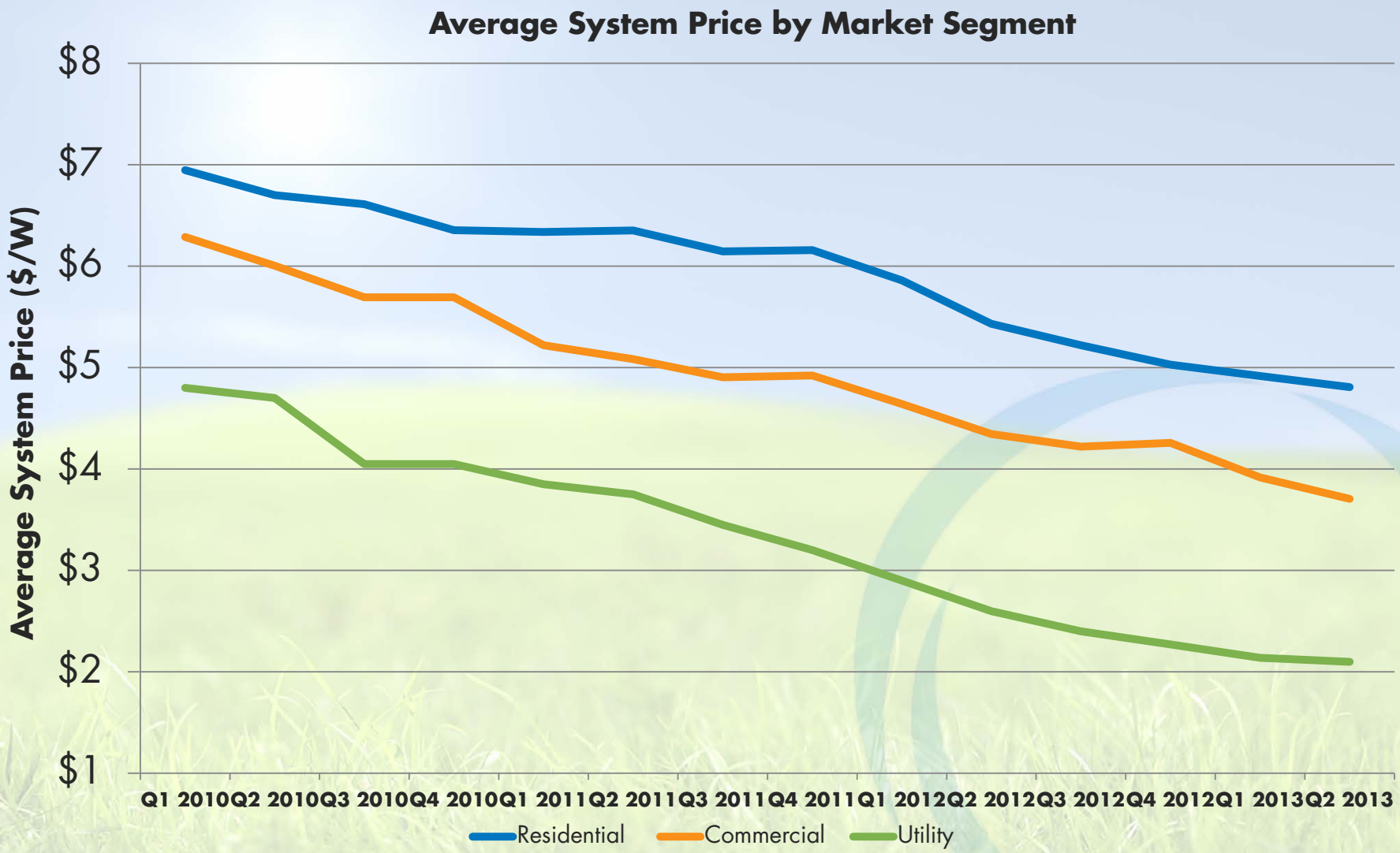
Pieces Declining Across All Market Segments



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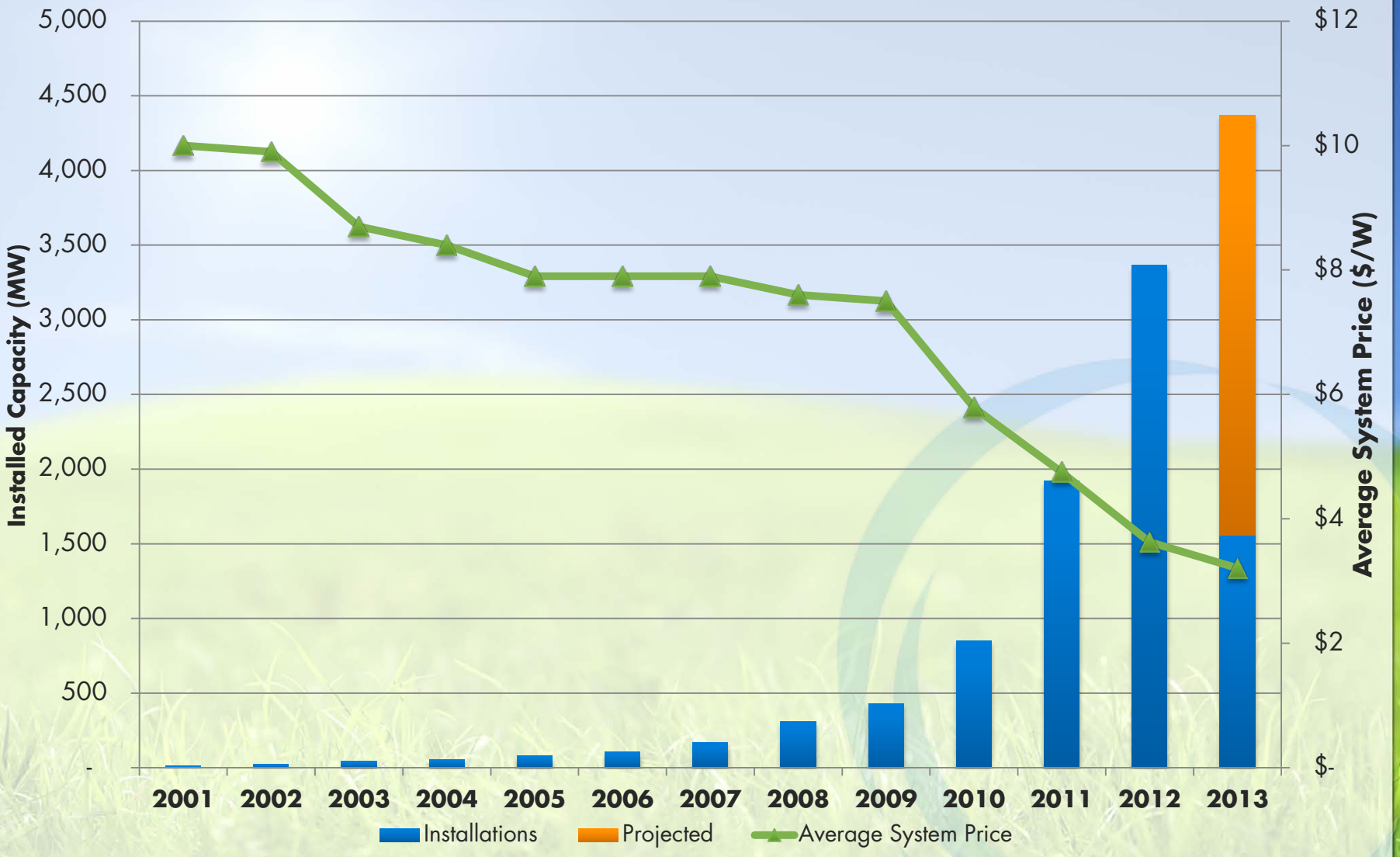
Price Declines Driving Growth



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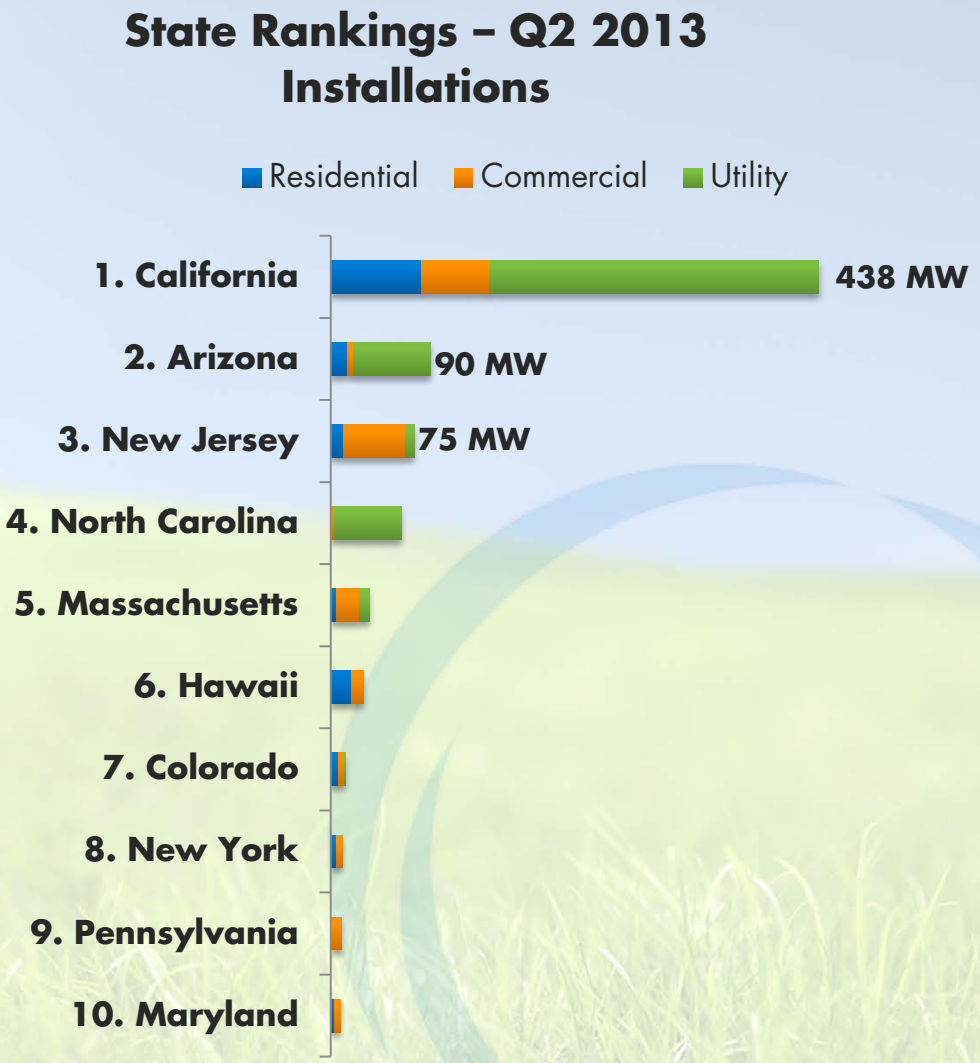
Q2 2013 State Performance

- 14 states reported growth over last year
- The California market nearly doubled compared to Q2 2012 deployment levels
- North Carolina's installation totals increased by 65% over Q1 2013



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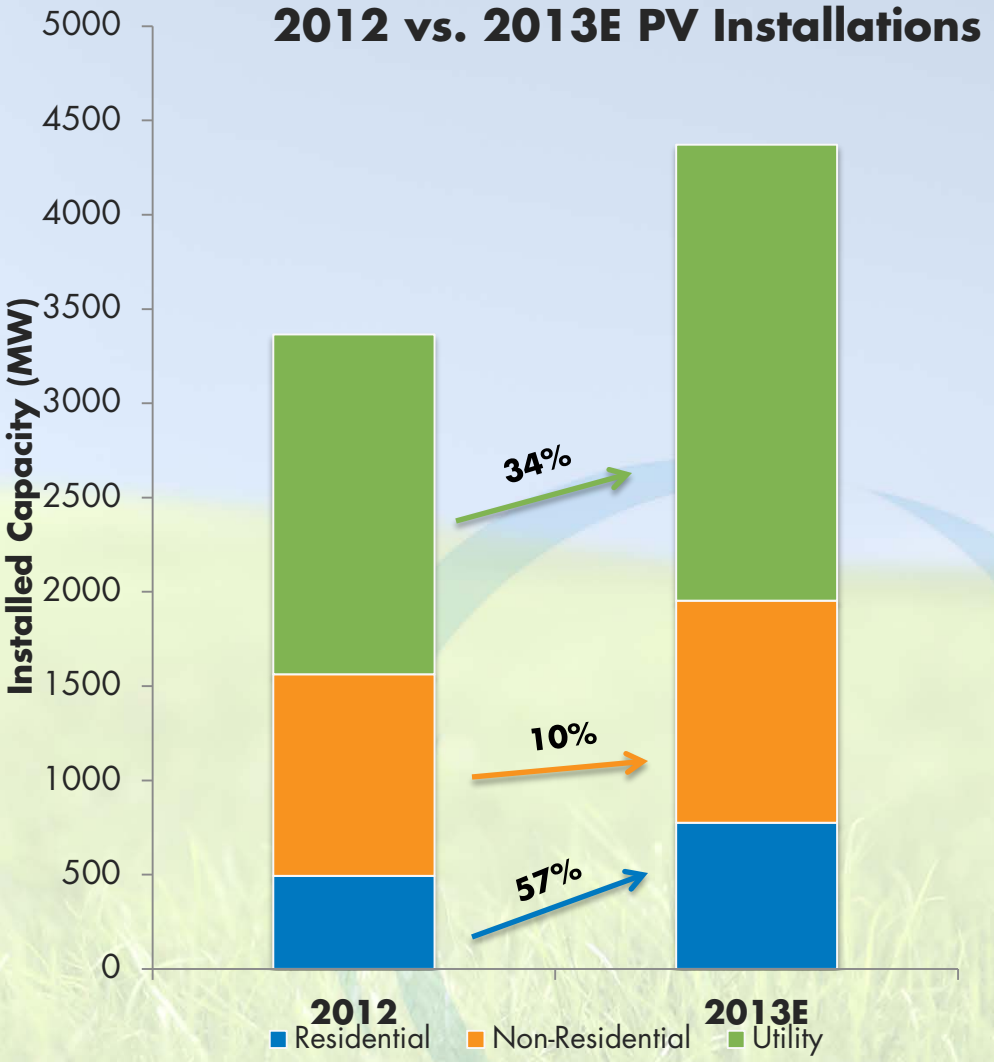
What to Expect For the 2nd Half of 2013

- **4,400 MW** of PV will come online in 2013
- Residential market to show the most significant growth
- 2013 will be a record year for CSP as over **900 MW** are expected to be commissioned
- Together, new solar electric capacity added in 2013 will generate enough clean energy to power over **860,000 homes**



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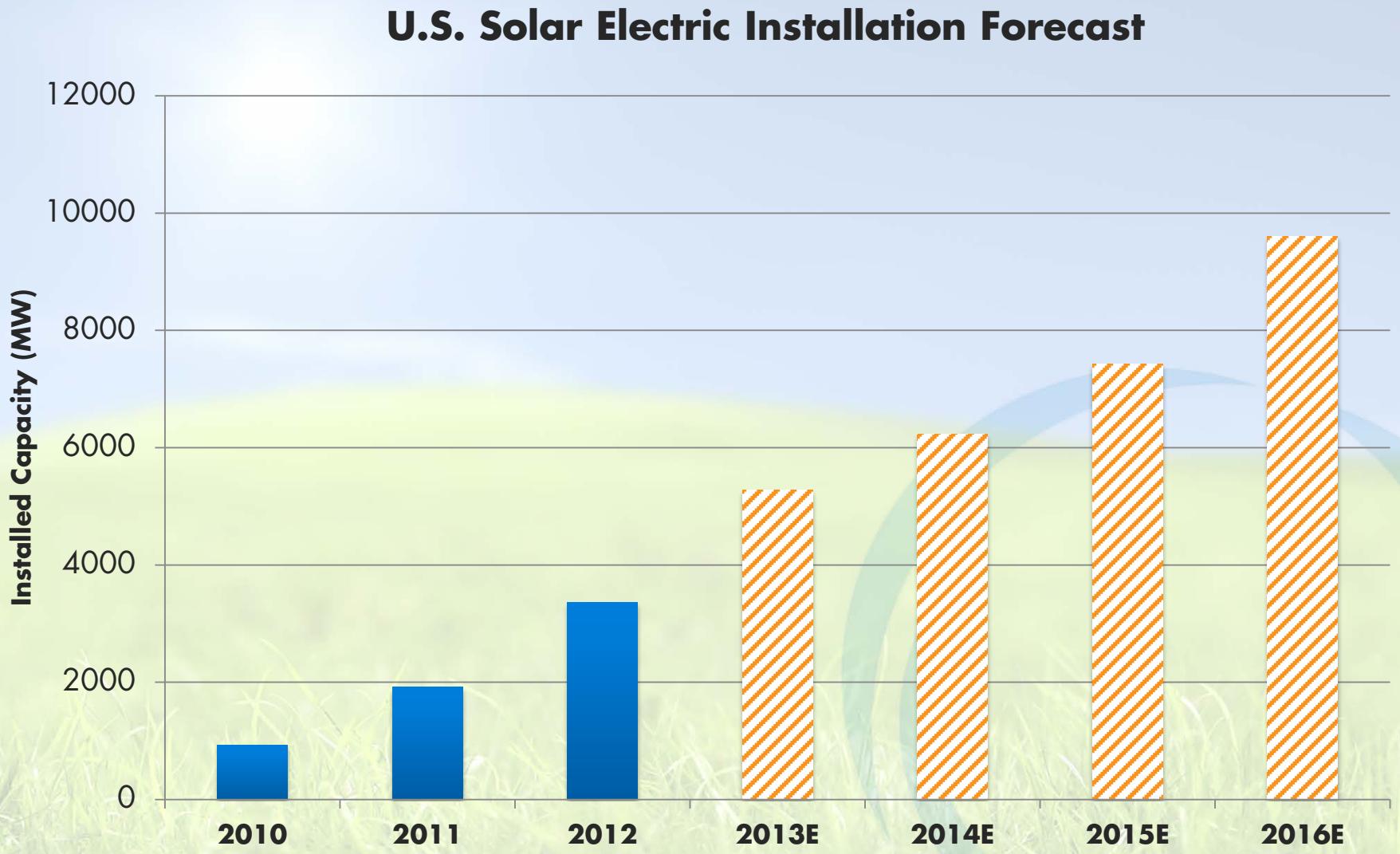
U.S. Solar Market Forecast- PV Market to Grow by 30% in 2013



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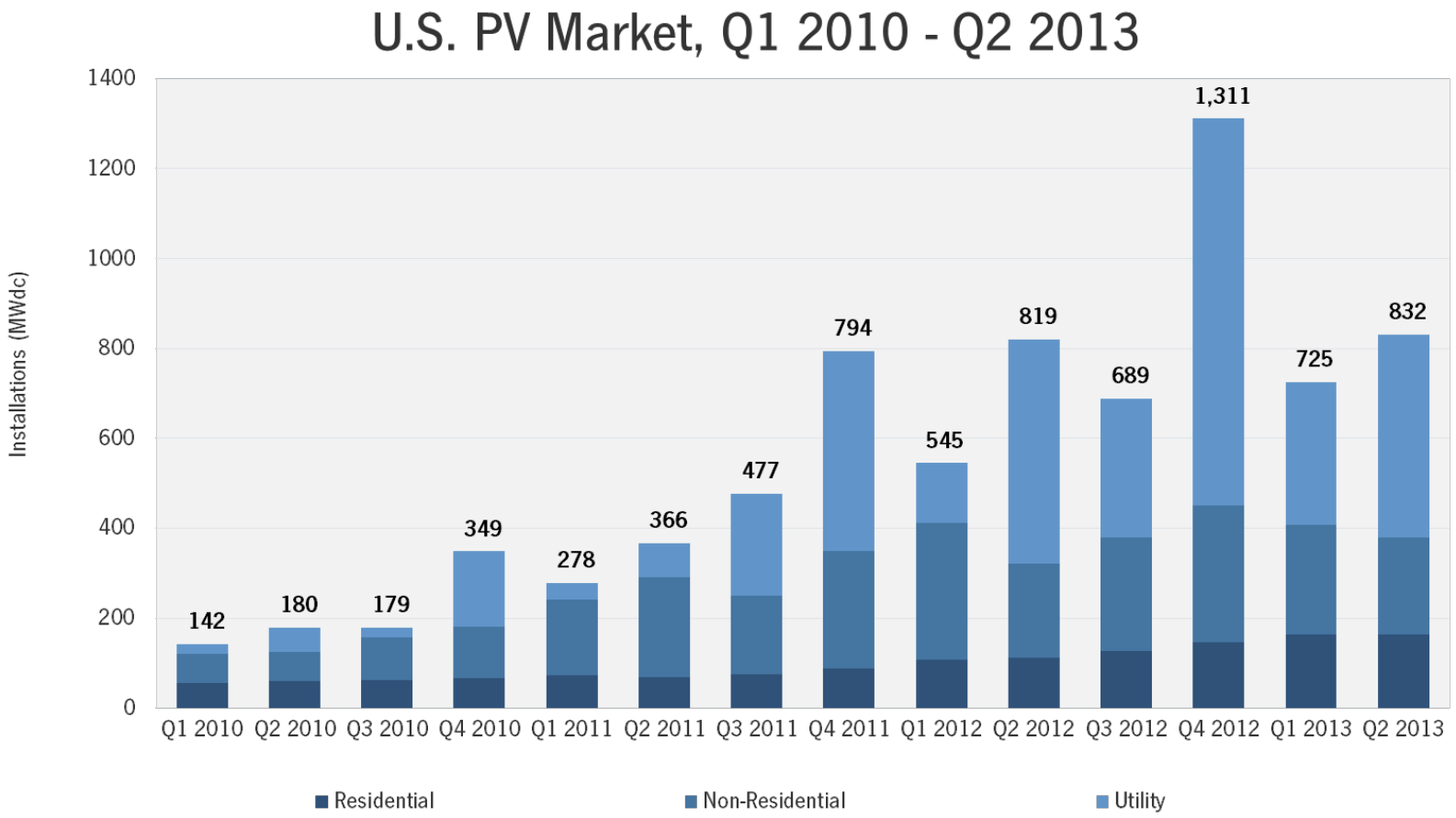
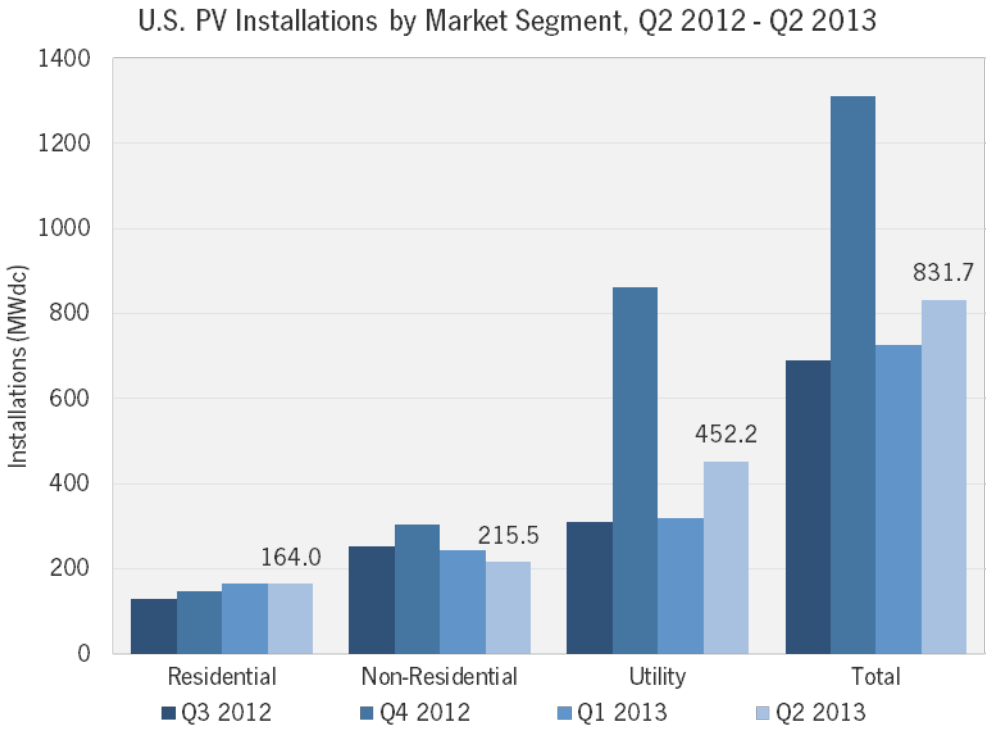
U.S. PV Installations by Market Segment



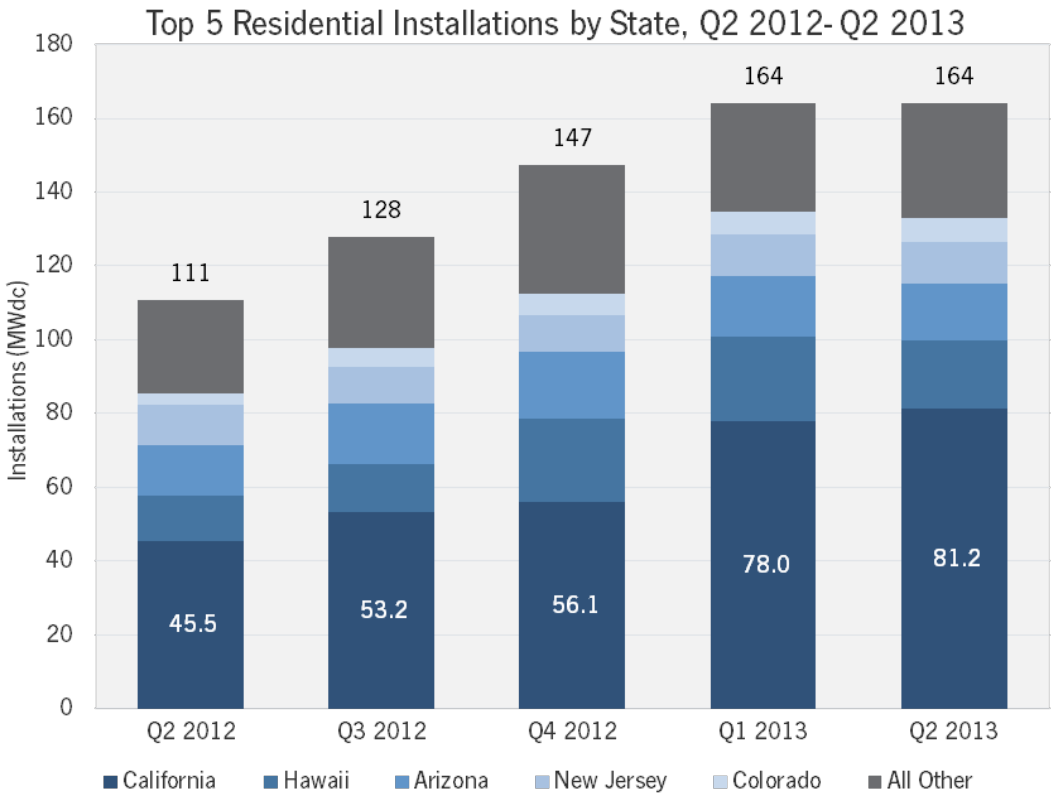
Market Segment Trends, Q2 2012 – Q2 2013

- The **residential** market plateaued after seven straight quarters of growth
- **Commercial** installations dropped 11% quarter-over-quarter; California was the only major state market to see quarterly growth
- The **utility** market added 452 MW, driving over 50% of new capacity installed across all sectors



Residential Market: Why Zero Growth?

- The residential market is now seeing the impact of late 2012 and early 2013 reductions or revisions to state level incentives
- **Hawaii:** Capped 35% in-state tax credit and new permitting rules
- **Arizona:** Upfront rebates reduced to $0.10/W for residential projects in APS and TEP territory
- **California:** Continues to account for the lion's share of installations, nearly 50% of the residential market



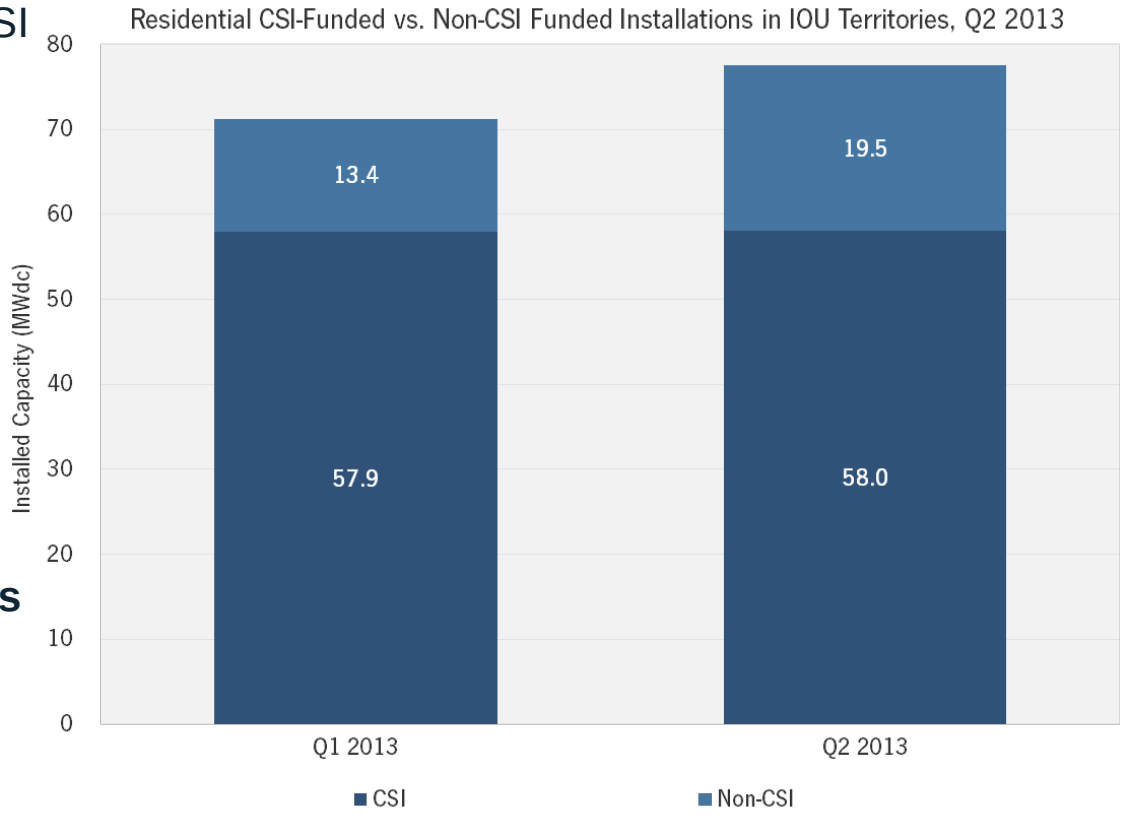
California: Growth Continues Post-CSI

Residential installers are forgoing the CSI rebate at higher rates for two reasons:

- Residential rebates exhausted in PG&E and SDG&E territories.
- **"Retail rate parity"** with only 30% ITC, net metering, and accelerated depreciation

Share of Non-CSI Funded Installations

- Increased from 20% in Q1 2013 to 25% in Q2 2013

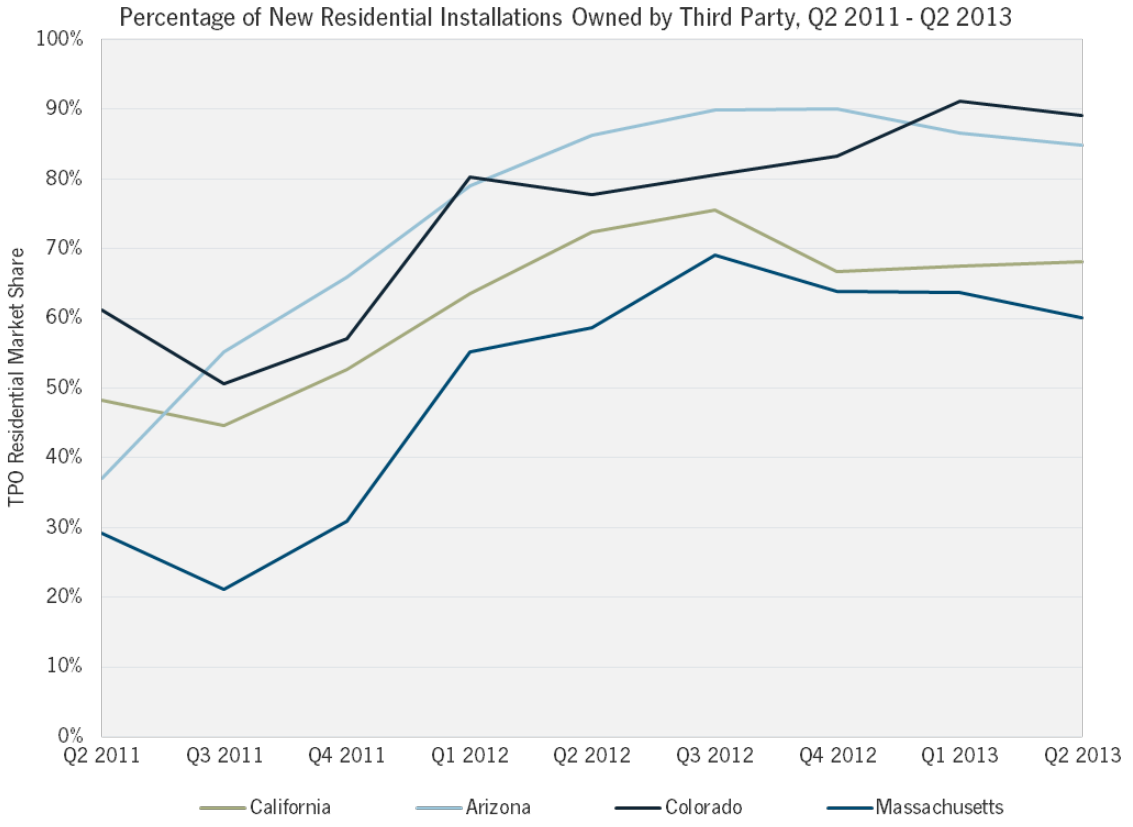


Third-Party Financing Continues to Drive Installs

- Third-party owned (TPO) systems continue to drive new residential installations
- CO: Ranked #1 in TPO market share for the second straight quarter at 89%

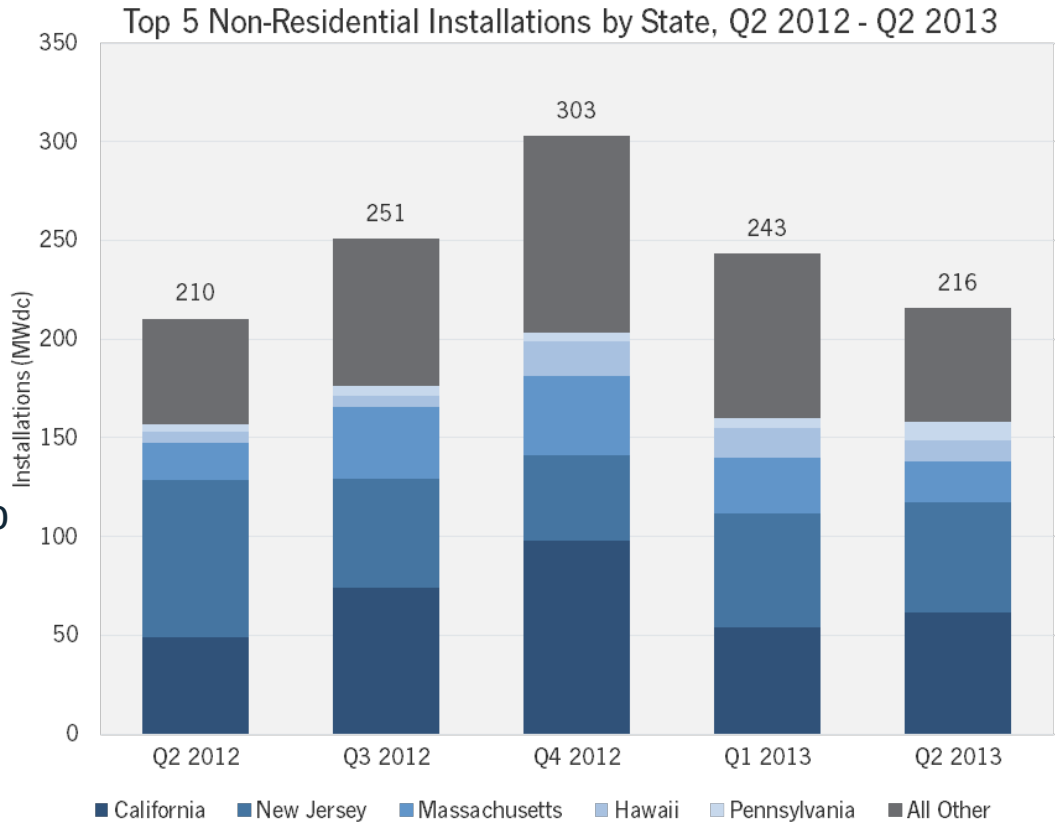
Top TPO Trends to Watch

- Utilities' evolving role and investment in the DG market
- Slight reversal of TPO market share due to increasing popularity of alternative debt products (i.e. PACE financing and residential solar loans)



Non-Residential Market: Slow First Half of 2013

- Most state markets shrank quarter-over-quarter including AZ (32%), MA (28%), and HI (28%)
- The non-residential market was hit hard by diminishing state incentives, regulatory uncertainty issues, and interconnection hurdles
- CA was the only major state market to see quarterly growth (61.4 MW In Q2 vs. 54 MW in Q1)
- We expect the non-residential market to see an uptick in 2H 2013 in emerging state markets such as NY and GA, coupled with continued growth from CA

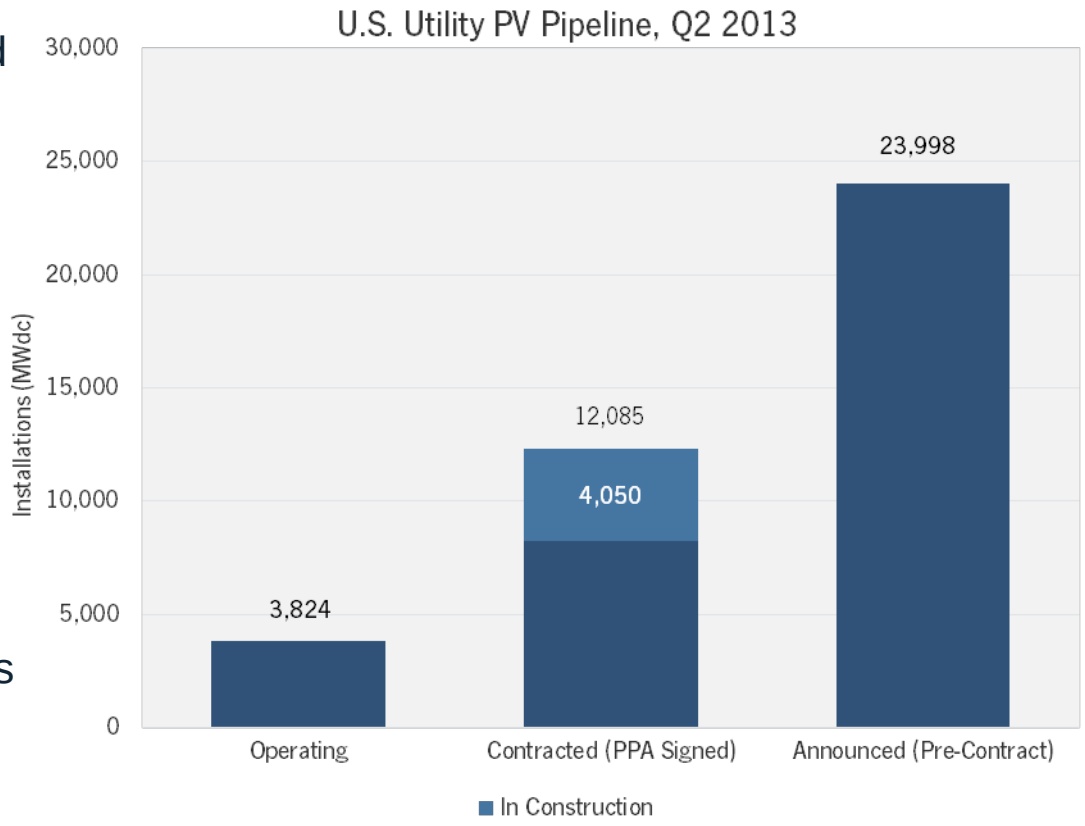


U.S. Utility Market: Top 10 Q2 Projects Completed

Project Name	Developer	Capacity (MWdc)	State	Power Offtaker	EPC Firm
Imperial Solar Energy Center South, Phase I	Tenaska Solar Ventures	138	CA	San Diego Gas & Electric	First Solar
Topaz Solar Farm, Phase I	First Solar	40	CA	Pacific Gas & Electric	First Solar
Agua Caliente Solar Project, Phase V	First Solar	32	AZ	Pacific Gas & Electric	First Solar
Cupertino Electric PG&E 500 MW PG&E Program, Project I	Cupertino Electric	23	CA	Pacific Gas & Electric	Cupertino Electric
Kansas South Project	Recurrent Energy	23	CA	Pacific Gas & Electric	-
PG&E UOG Program, Gates 1 Solar	Pacific Gas & Electric	23	CA	Pacific Gas & Electric	-
Arlington Valley Solar Energy II, Phase I	LS Power	22	AZ	San Diego Gas & Electric	Fluor Corp.
Highlander Solar I (SEPV8 - SCE RAM1)	SolarWorld	14	CA	Southern California Edison	SolarWorld
Valencia Solar Project	E.ON Climate & Renewables	13	AZ	Tucson Electric Power	E.ON Climate & Renewables
Cupertino Electric PG&E 500 MW PG&E Program, Project II	Cupertino Electric	12	CA	Pacific Gas & Electric	Cupertino Electric

U.S. Utility Market Pipeline

- 452 MW of utility scale solar installed in Q2 2013
- 38 projects became operational, ranging from 600 kW to 138 MW
- All ten of the largest projects that came online were installed in either California or Arizona
- PG&E's 500 MW Solar PV Program drove 20% of utility scale installations in Q2 2013



Emerging Legislative Landscape for Solar

Key Solar Incentive and Procurement Updates

California

- Passage of SB 43 established the largest community solar program **(600 MW)**

Colorado

- CPUC approved Xcel Energy 's 2013 compliance plan for small scale solar **(33.6 MW)**
- Xcel Energy submitted its 2014 compliance Plan **(DG: 36 MW, Community Solar: 6.5 MW, Utility Scale: 170 MW)**

Georgia

- Georgia Power conducted a lottery for its 2013 Advanced Solar Initiative **(DG: 45 MW)**
- PSC added 525 MW of solar to Georgia Power's 2015 and 2016 Integrated Resource Plan **(DG: 100 MW, Utility: 425 MW)**

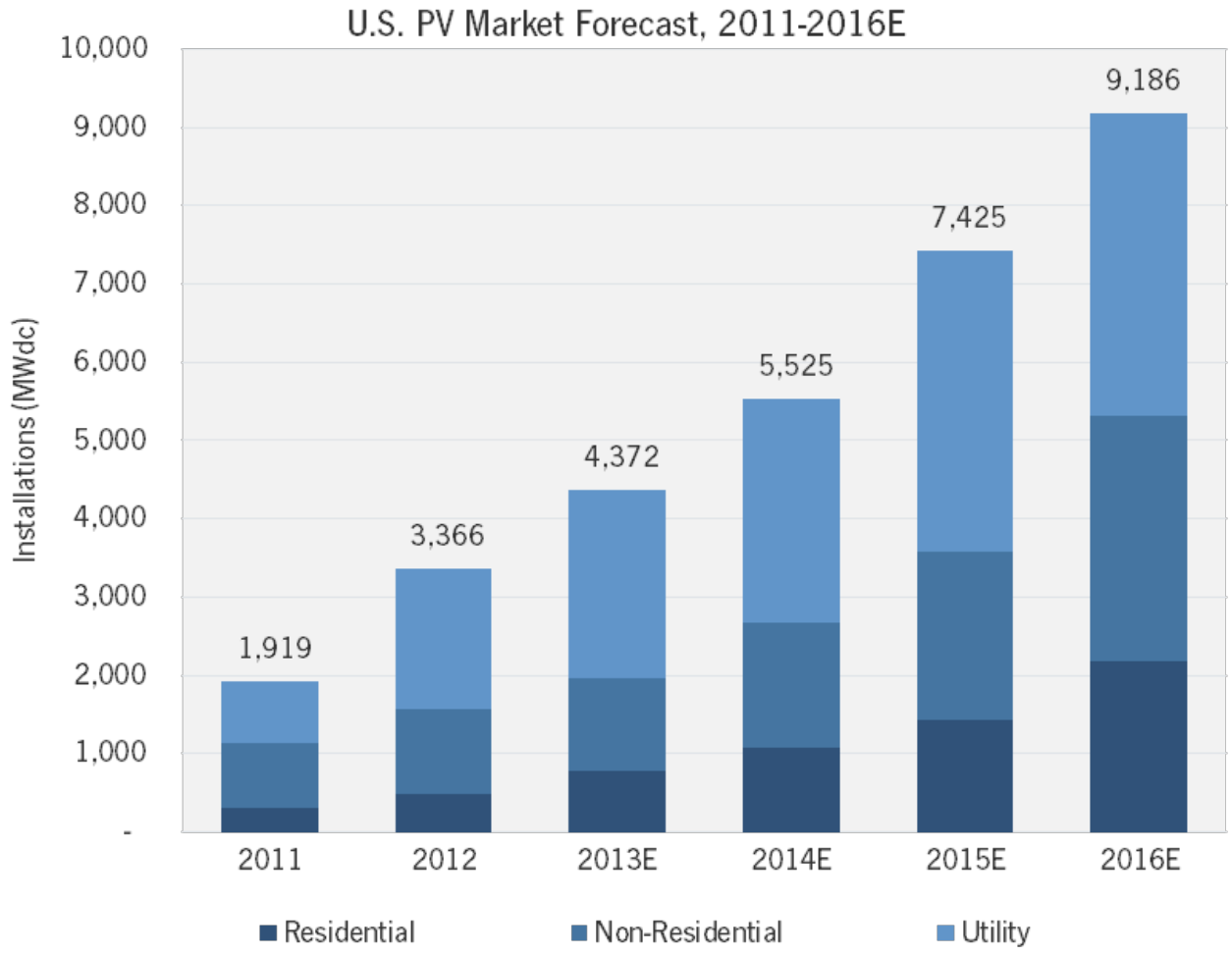
New York

- NYSERDA announced funding for its Competitive PV program **(150 MW)**
- LIPA released plans for its Clean Solar FIT II program **(100 MW)**

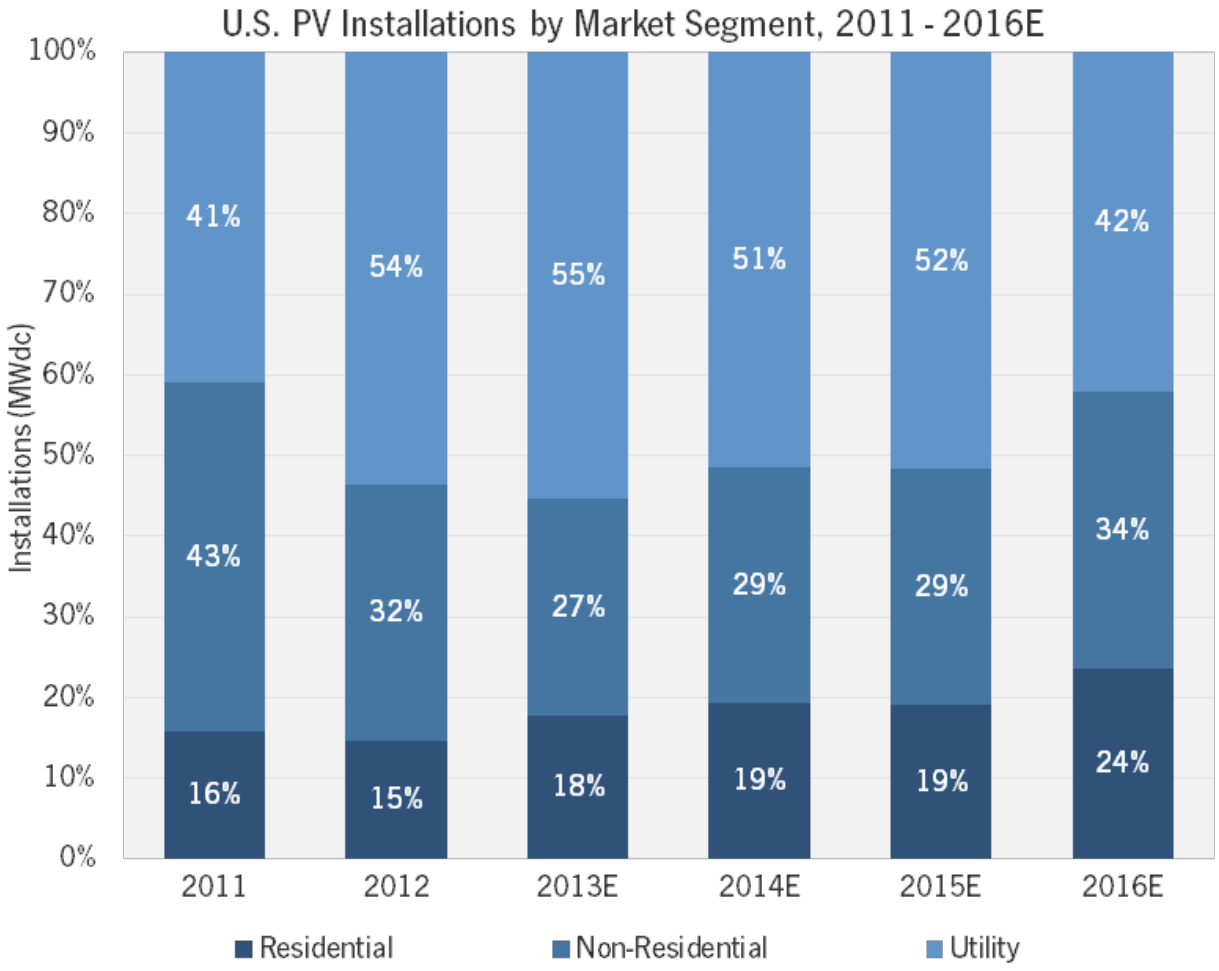
Net Metering and Rate Design Updates

- **CA:** Passage of AB 327 has provided near and long term certainty to the future of net metering, but also authorized the CPUC to flatten the tiered rate structure
- **NY:** Tripled its net metering cap from 1% to 3% of 2005 peak demand
- **AZ and CO:** APS and Xcel Energy submitted proposals to lower or replace net metering

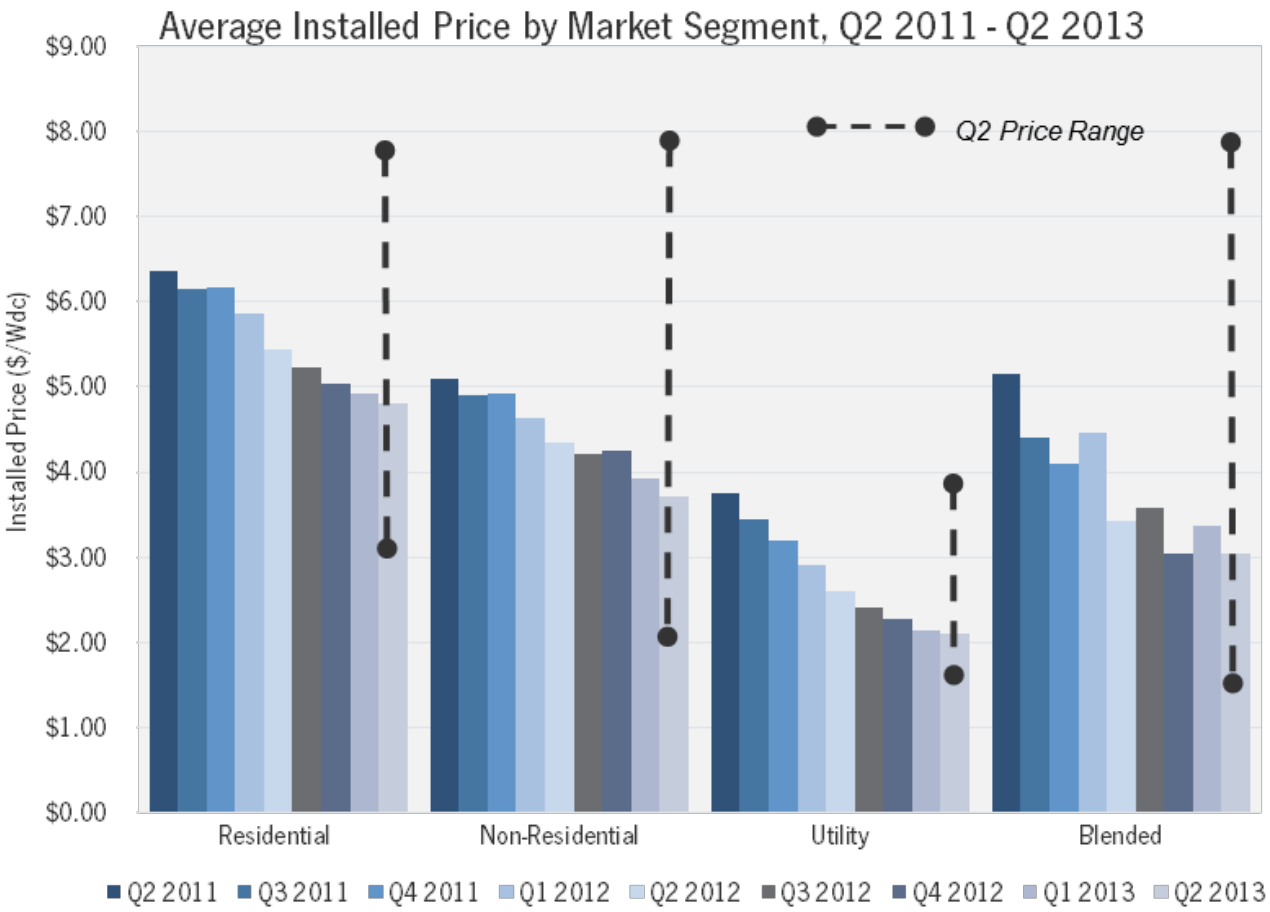
Four Year PV Market Outlook



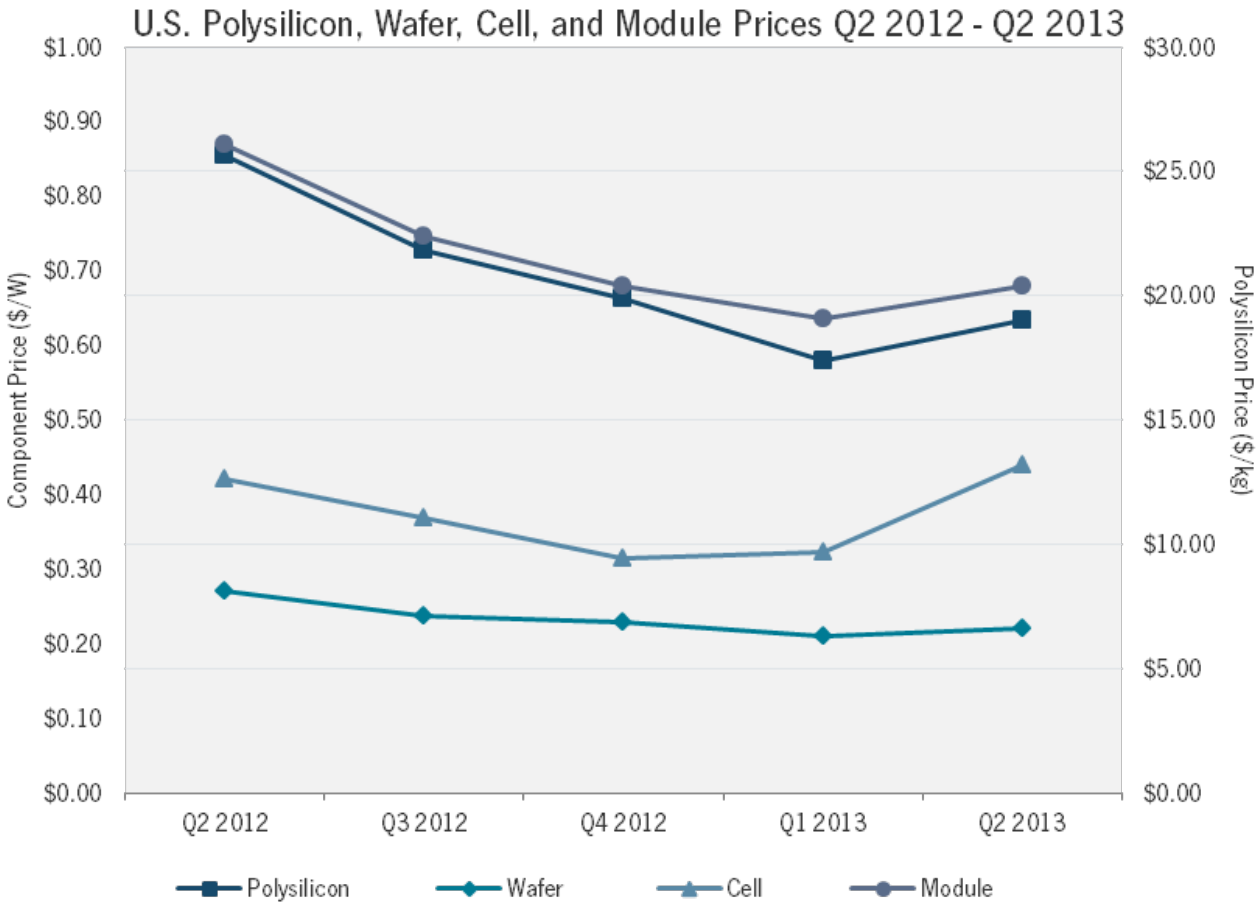
Four Year PV Market Outlook by Market Segment



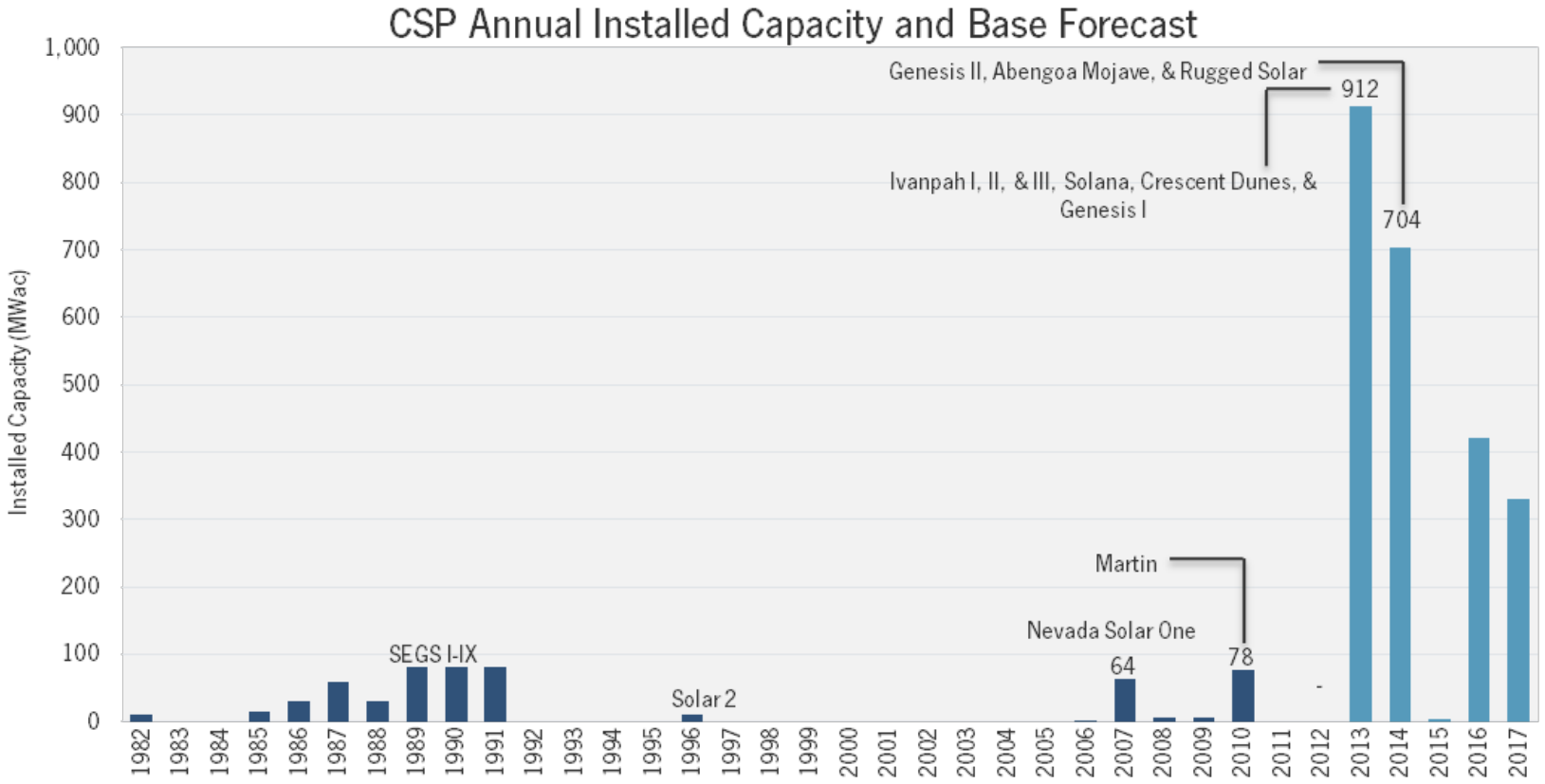
Average Installed Prices Continue to Decline



U.S. Component Prices Buck the Downward Trend



U.S. Concentrating Solar Update



Thank You and Contact Info

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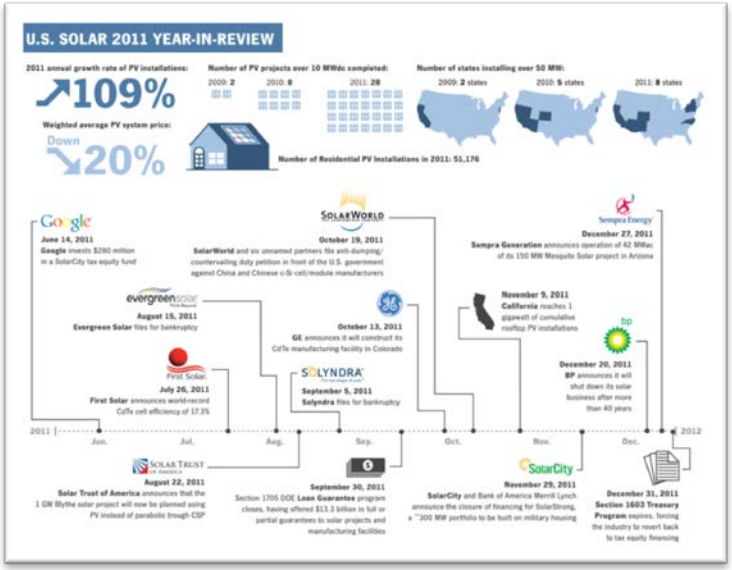

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Questions?

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