

UTILITY SOLAR MARKET SNAPSHOT

Solar Market Comes of Age in 2013

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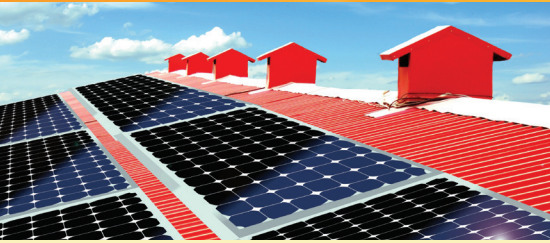


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UTILITY SOLAR MARKET INDEX



SEPA's annual Utility Solar Market Index is now available for purchase and includes data on over 900 of the most solar-active utilities in the United States. No other national data offers a similar level of market granularity by utility and customer segment, including net metered systems and large power plants.

PARTICIPATING UTILITIES: ~~\$495~~ - discounted price of **\$295** until 7/31/2014

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PURCHASE

DATA BY UTILITY INCLUDES:

- Solar capacity in megawatts (AC)
- Number of solar installations

DATA CAN BE ANALYZED BY/FOR:

- Utility, utility type, state, region, utility size (customers)
- Residential, non-residential, centralized utility-scale and off-grid segments
- Photovoltaic and CSP Technologies
- Annual (2013) and cumulative timeframes
- Net metered and wholesale projects
- Utility ownership

ALSO INCLUDED:

- All tables and figures from full report
- Unpublished summary statistics
- 2008, 2009, 2010, 2011 and 2012 data available upon special request
- Note: Utility contact information is not included

FORMAT:

- Microsoft Excel (.xlsx)
- Download Sample

FOR MORE INFORMATION CONTACT:

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SEPA can analyze data for you directly for a fee.



UTILITY SOLAR MARKET SNAPSHOT

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About the Report

In 2007, SEPA began surveying electric utilities on the amount of solar they integrated each year, driving to uncover the most accurate and granular solar market data in the industry. This year’s innovative infographic report format takes a fresh approach to presenting the 2013 solar market that combines significant data discovery with cutting edge takeaways.

UTILITY SOLAR MARKET SNAPSHOT

Executive Summary

Solar markets continued significant growth in 2013

- Added 4 GW across over 137,000 systems; totals are now 10.7 GW at more than 475,000 locations.
- However, varied significantly by market segment over the last two years:
 - Residential: 32% growth; continuing as third-party providers offer 'no-cost' solar in more states.
 - Commercial: 4% growth; low electricity rates and financing limiting market without incentives.
 - Utility: 58% growth; remains strong through 2016 but pipeline beyond needs filling.
- Solar cost is declining with an industry-wide drive to lower non-hardware soft costs in areas such as financing and customer acquisition.

The solar market is heavily concentrated to particular utilities and states

- The most solar-active utilities are in California, Arizona, North Carolina, Massachusetts, Georgia, New Jersey, Nevada, Colorado, and Hawaii.
- Median solar activity by utility type:
 - Investor-owned: 16 MW and 917 systems
 - Public Power: 0.2 MW and 10 systems
 - Cooperative: 0.3 MW and 22 systems
- Utilities need to plan and prepare today, even if solar is not currently overwhelming. The market moved more quickly than most utilities predicted it would.

Key utility-solar business issues remain for the next 2-3 years

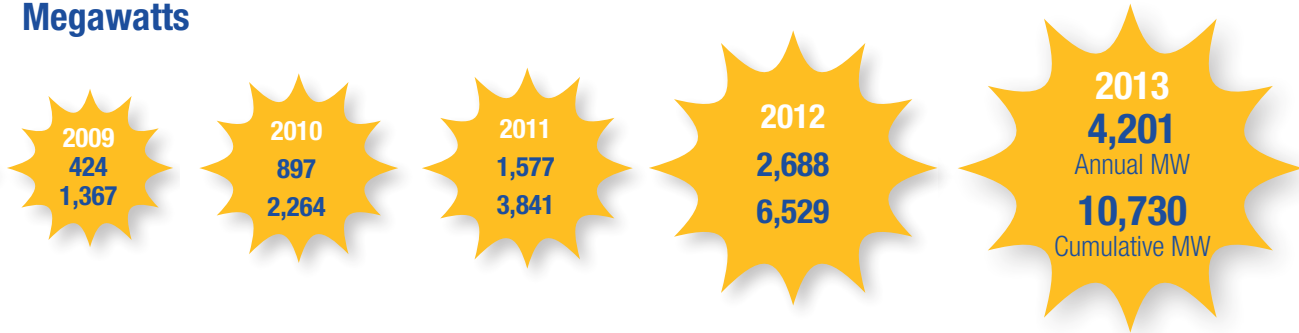
- Revisiting net metering is key to customer satisfaction, industry growth, and utility planning.
- There is significant uncertainty beyond 2016 with the planned federal tax credit step-down, leaving room for utilities to develop strategies for utility-scale projects.
- Customers have electricity choices with distributed solar and new third-party programs. Utilities need to innovate to stay ahead of the evolving customer marketplace.

NATIONAL SOLAR MARKET SNAPSHOT

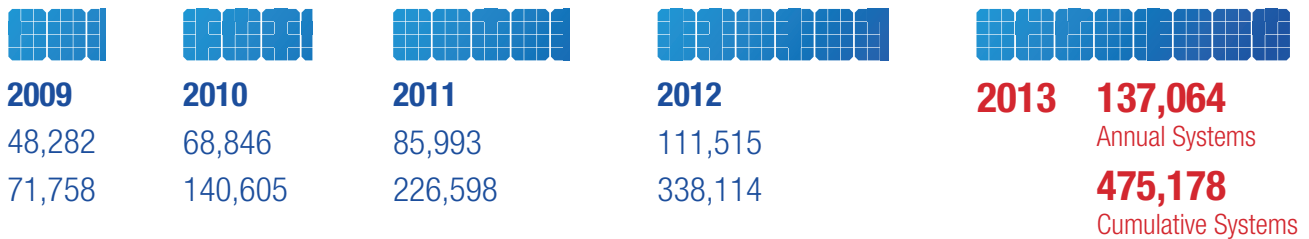
How much solar was installed?



Megawatts



Number of installations



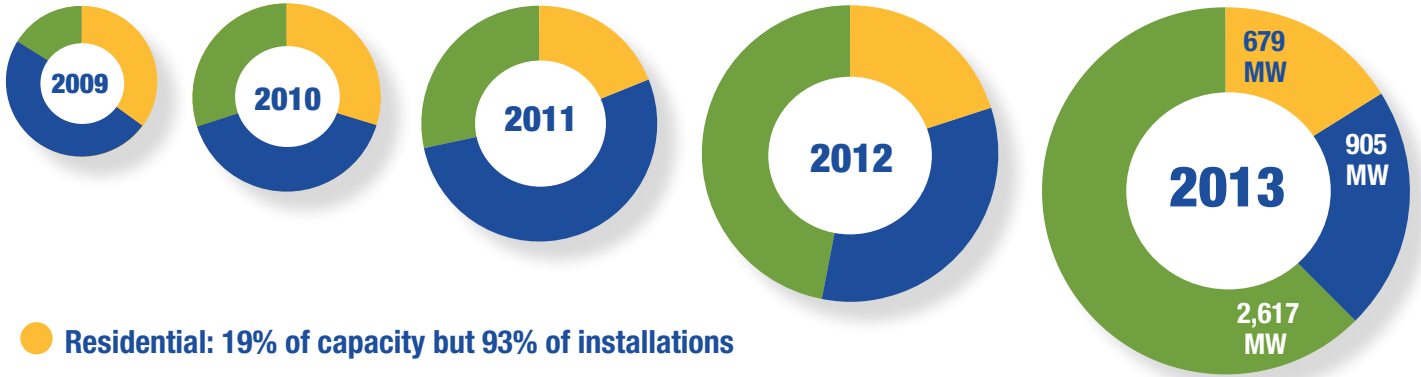
- **Continued high growth rates** are bringing solar into the national conversation as a major generating source for the future.
- **Solar added over 4 gigawatts (GW)** in 2013, bringing U.S. solar capacity to over 10.7 GW. This included over 137,000 new systems, bringing national totals to over 475,000.
- **There are more solar systems installed in the U.S.** than any other power source and solar is driving an emerging decentralization of part of the power sector.
- **The reasons behind the growth** include declining solar costs and maturing business and financing models along with utility-specific policy, market drivers and customer programs.

Under current projections, the U.S. will have 25 GW and 1,000,000 solar systems by Q1 2017.

SEPA uses MW-ac instead of MW-dc in this report because it represents the effective power produced by a solar energy facility.

NATIONAL SOLAR MARKET SNAPSHOT

What types of solar systems were installed?



- Residential: 19% of capacity but 93% of installations
- Commercial: 33% of capacity and 6.9% of installations
- Utility-Scale: 48% of capacity and 0.1% of installations

■ **The Residential market** continues to see a significant growth, averaging 32% annually over the last two years. In 2013, 679 MW of residential solar were installed, compared to 511 and 273 MW in 2012 and 2011 respectively.

■ **The Commercial market** currently represents more megawatts than residential, but has only averaged 4% growth over the last two years. These larger customers typically have lower energy rates and more stringent capital investment requirements, while key state incentives have ended.

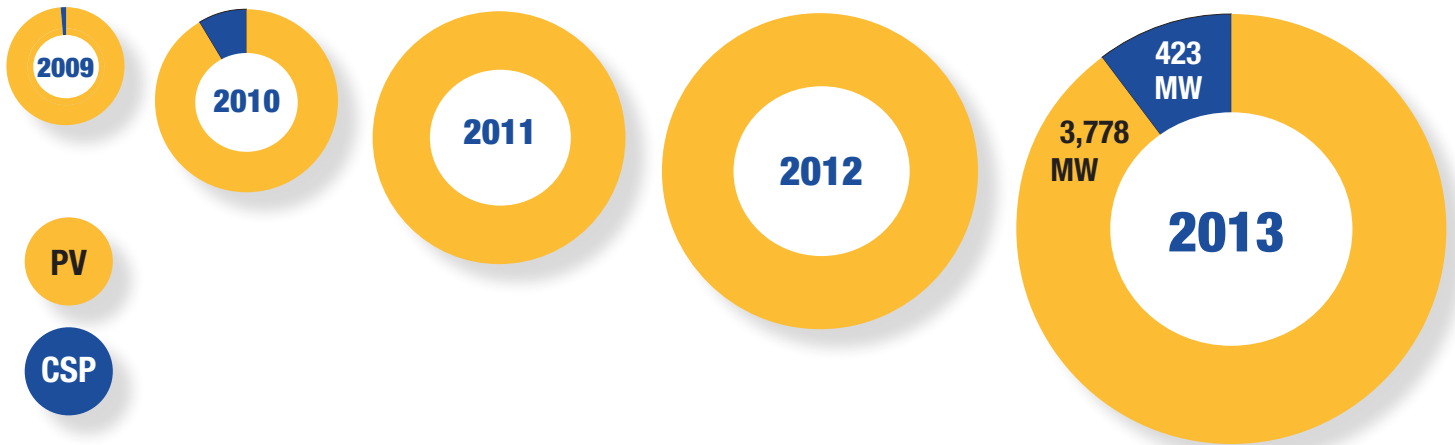
■ **The Utility-Scale market** has boomed averaging 58% annual growth over the last two years and surpassed the distributed market in size for the first time in 2013. Expect this to continue for the next few years, however, the project pipeline after 2016 is less clear (see p12 for more information).

Average system size:

- Residential: 0.007 MW
- Commercial: 0.155 MW
- Utility-Scale: 28 MW

NATIONAL SOLAR MARKET SNAPSHOT

What kinds of solar technology were installed?

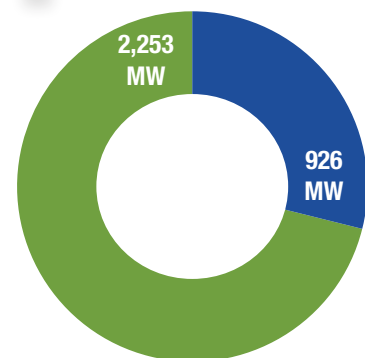


■ **Photovoltaics (PV)** are the technology of choice with 60% cost declines since 2011,¹ a diversity of market applications (residential to power plants), and rapid project cycles. State policies, cost declines, and business and financing innovations are driving growth.

■ **Concentrating Solar Power (CSP)** experienced a resurgence in 2013, with three projects totaling 423 MW completed, and an additional 800 MW anticipated in 2014. These large solar thermal power plants will continue with a number of large projects through 2017. But with a multi-year project lifecycle and costs higher than PV, the contract pipeline is more complicated and uncertain in the long term.

PV project average system size = 0.03 MW

CSP project average system size = 125 MW



● Cumulative CSP through 2013
● 2014-2017 CSP Forecast

¹ Source: GTM Research

UTILITY SOLAR SNAPSHOT

Which utilities integrated the most solar capacity?



Annual Solar Megawatts by Utility (MW)

1	Pacific Gas and Electric Company (CA)	1,471
2	San Diego Gas & Electric Company (CA)	643
3	Arizona Public Service (AZ)	416
4	Southern California Edison (CA)	373
5	Duke Energy Progress (NC, SC)	137
6	National Grid (MA, RI)	111
7	Public Service Electric & Gas Company (NJ)	103
8	Hawaiian Electric Company, Inc. (HI)	98
9	Georgia Power Company (GA)	59
10	Duke Carolinas (NC, SC)	58
	All Others	734
	Total	4,201

Cumulative Solar Megawatts by Utility (MW)

1	Pacific Gas and Electric Company (CA)	3,083
2	Southern California Edison (CA)	1,291
3	San Diego Gas & Electric Company (CA)	800
4	Arizona Public Service (AZ)	733
5	Public Service Electric & Gas Company (NJ)	547
6	Jersey Central Power & Light (NJ)	240
7	Xcel Energy (CO)	239
8	NV Energy (NV)	235
9	Duke Energy Progress (NC, SC)	219
10	Hawaiian Electric Company, Inc. (HI)	209
	All Others	3,134
	Total	10,730

Annual Watts-per-Customer (W-ac)

1	Sterling Municipal Light Dept (MA).	831
2	San Diego Gas & Electric Company (CA)	461
3	Silicon Valley Power/City of Santa Clara (CA)	427
4	Arizona Public Service (AZ)	367
5	Hawaiian Electric Company, Inc. (HI)	329
6	Pacific Gas and Electric Company (CA)	281
7	Hawaii Electric Light Company (HI)	182
8	Maui Electric Company Ltd (HI)	178
9	Kauai Island Utility Cooperative (HI)	167
10	Imperial Irrigation District (CA)	159
	Median - All Others	3.1

Cumulative Watts-per-Customer (W-ac)

1	City of Milford (DE)	1,786
2	Vineland Municipal Electric Utility (NJ)	1,119
3	Sterling Municipal Light Dept (MA).	831
4	Hawaiian Electric Company, Inc. (HI)	703
5	Arizona Public Service (AZ)	647
6	Kauai Island Utility Cooperative (HI)	638
7	Pacific Gas and Electric Company (CA)	588
8	Maui Electric Company Ltd (HI)	580
9	San Diego Gas & Electric Company (CA)	574
10	Silicon Valley Power (CA)	562
	Median - All Others	11

- The market is heavily concentrated within the top 10 utilities, which together accounted for 82% of all new capacity in 2013. Each of these top utilities all integrated more than 50 MW, the equivalent of a natural gas peaker plant, bringing many of their totals to over 200 MW.
- Several utilities, both large and small, have or are approaching a kilowatt of solar per customer, the equivalent of a small rooftop system on every home.
- The distribution of these top-ranking utilities distributed over ten different states, primarily in the western and eastern U.S.

In 2011, 22 utilities integrated more than 20 MW; in 2013, it had nearly doubled to 40.



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MW = Megawatt-ac

UTILITY SOLAR SNAPSHOT

Which utilities interconnected the most solar systems?



Annual Interconnections by Utility

1	Pacific Gas and Electric Company (CA)	28,807
2	Southern California Edison (CA)	26,372
3	Hawaiian Electric Company, Inc. (HI)	14,071
4	San Diego Gas & Electric Company (CA)	10,945
5	Arizona Public Service (AZ)	7,286
6	Xcel Energy (CO)	5,426
7	Los Angeles Dept. of Water & Power (CA)	4,156
8	Salt River Project (AZ)	2,676
9	Public Service Electric & Gas Company (NJ)	2,374
10	National Grid (MA, RI)	2,259
	All Others	32,692
	Total	137,064

Cumulative Interconnections by Utility

1	Pacific Gas and Electric Company (CA)	106,671
2	Southern California Edison (CA)	69,701
3	San Diego Gas & Electric Company (CA)	32,002
4	Hawaiian Electric Company, Inc. (HI)	29,558
5	Arizona Public Service (AZ)	23,785
6	Xcel Energy (CO)	18,305
7	Los Angeles Dept. of Water & Power (CA)	11,232
8	Jersey Central Power & Light (NJ)	9,902
9	Public Service Electric & Gas Company (NJ)	9,440
10	Salt River Project (AZ)	8,049
	All Others	156,533
	Total	475,178

Annual Percentage of Projects per Customer

1	Hawaiian Electric Company, Inc. (HI)	4.7%
2	Kauai Island Utility Cooperative (HI)	2.6%
3	Hawaii Electric Light Company (HI)	2.4%
4	Maui Electric Company Ltd (HI)	2.3%
5	Pennsylvania Electric Company (PA)	1.3%
6	San Diego Gas & Electric Company (CA)	0.8%
7	Sulphur Springs Valley Electric Co-op (AZ)	0.7%
8	Arizona Public Service (AZ)	0.6%
9	Pacific Gas and Electric Company (CA)	0.5%
10	Southern California Edison (CA)	0.5%
	Median - All Others	0.02%

Cumulative Percentage of Projects per Customer

1	Hawaiian Electric Company, Inc. (HI)	9.9%
2	Maui Electric Company Ltd (HI)	7.6%
3	Hawaii Electric Light Company (HI)	6.6%
4	Kauai Island Utility Cooperative (HI)	6.1%
5	Pennsylvania Electric Company (PA)	5.4%
6	Roseville Electric (CA)	2.6%
7	Sulphur Springs Valley Electric Co-op (AZ)	2.5%
8	San Diego Gas & Electric Company (CA)	2.3%
9	Arizona Public Service (AZ)	2.1%
10	City of Palo Alto Utilities (CA)	2.0%
	Median - All Others	0.07%

- The top 10 utilities accounted for 76% of the annual interconnections with over 100,000 installations in 2013. PG&E interconnected 2,400 systems per month or the equivalent of almost 14 per work hour. This volume is increasing utility management needs, from planning and contracting to inspections and interconnections.
- Hawaiian utilities saw large growth in the percentage of customers with solar – the state represents 13% of the installations nationally but only 0.4% of the population. Anywhere from 9% of Hawaiian utility customers now have solar.

42 utilities (15%) interconnected more than 25 PV systems per month in 2013



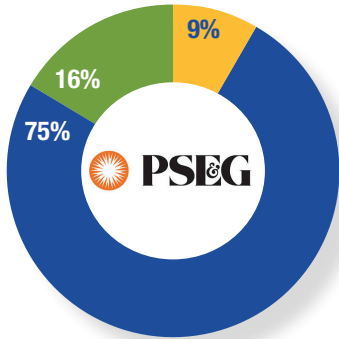
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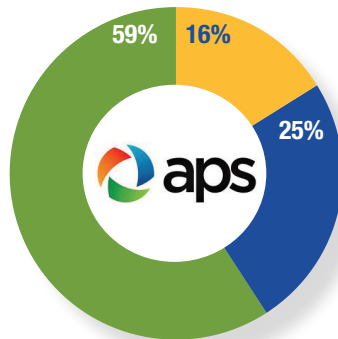
MW = Megawatt-ac

UTILITY SOLAR SNAPSHOT

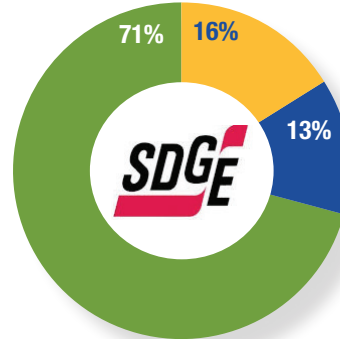
Are all utilities the same?



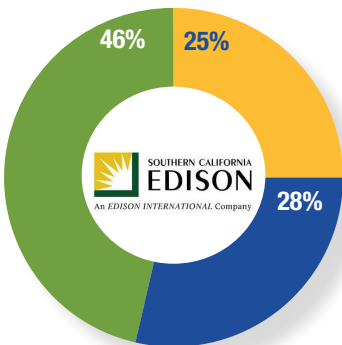
Public Service Electric & Gas Company (NJ)



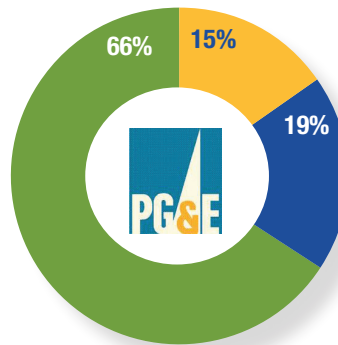
Arizona Public Service (AZ)



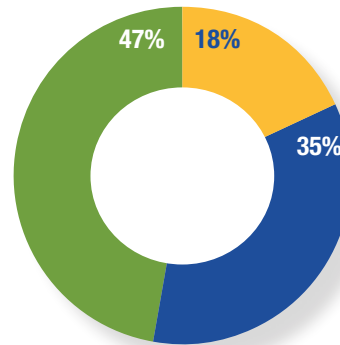
San Diego Gas & Electric Company (CA)



Southern California Edison (CA)



Pacific Gas & Electric Company (CA)



Average for all other utilities

- Residential
- Commercial
- Utility

■ **Utility solar portfolios** reflect the diversity of solar market drivers, ranging from state policies to utility procurement to customer interests – some are majority-customer segments, others utility scale, and others more balanced.

■ **Investor-owned utilities** have the large majority of utility-scale projects, whereas public power and cooperative utilities trend towards customer-driven markets.

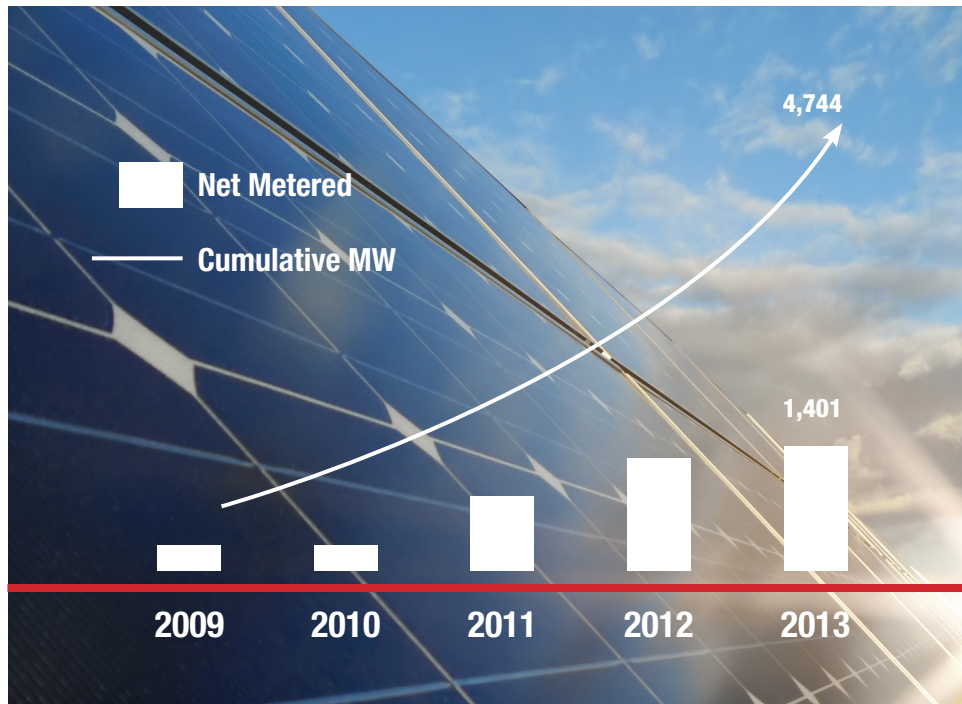
Average Utility Profile:

Investor-owned: 16 MW and 917 systems

Public Power: 0.2 MW and 10 systems

Cooperative: 0.3 MW and 22 systems

Net metering – a utility-solar stress point

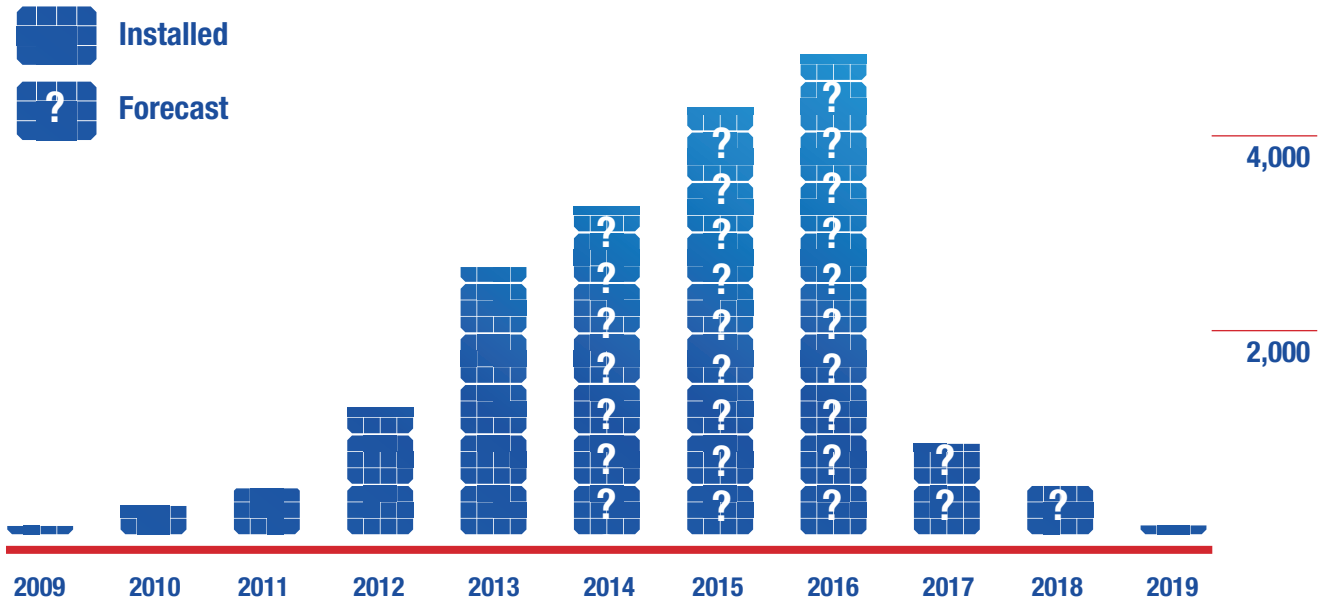


- **Questions around net metering and its impacts** on utility revenues and rates emerged driving utility solar policy discussions in 2013.² Cumulative net energy metered solar represented around 45% of the total megawatts and nearly 100% of the interconnections through 2013.
- **Studies, debates and regulatory reviews** will likely continue - about 75% of responding utilities indicated they have or are looking into restructuring rates and/or alternatives to net metering to manage net metering's revenue impacts.
- **Utilities in smaller solar markets** may think they can watch, learn and respond once solar achieves a greater penetration...but they may find that solar markets and innovation grow more quickly than they or the regulatory process can respond. Conversations are germane today for changes taking place over the next five years.

² Utilities point to lost revenue from solar and the need to recover the costs of maintaining and balancing the electric grid; solar advocates counter that solar's value to utilities exceeds these costs.

UTILITY-SOLAR HOT TOPICS SNAPSHOT

Annual growth in utility-scale solar...will it last?



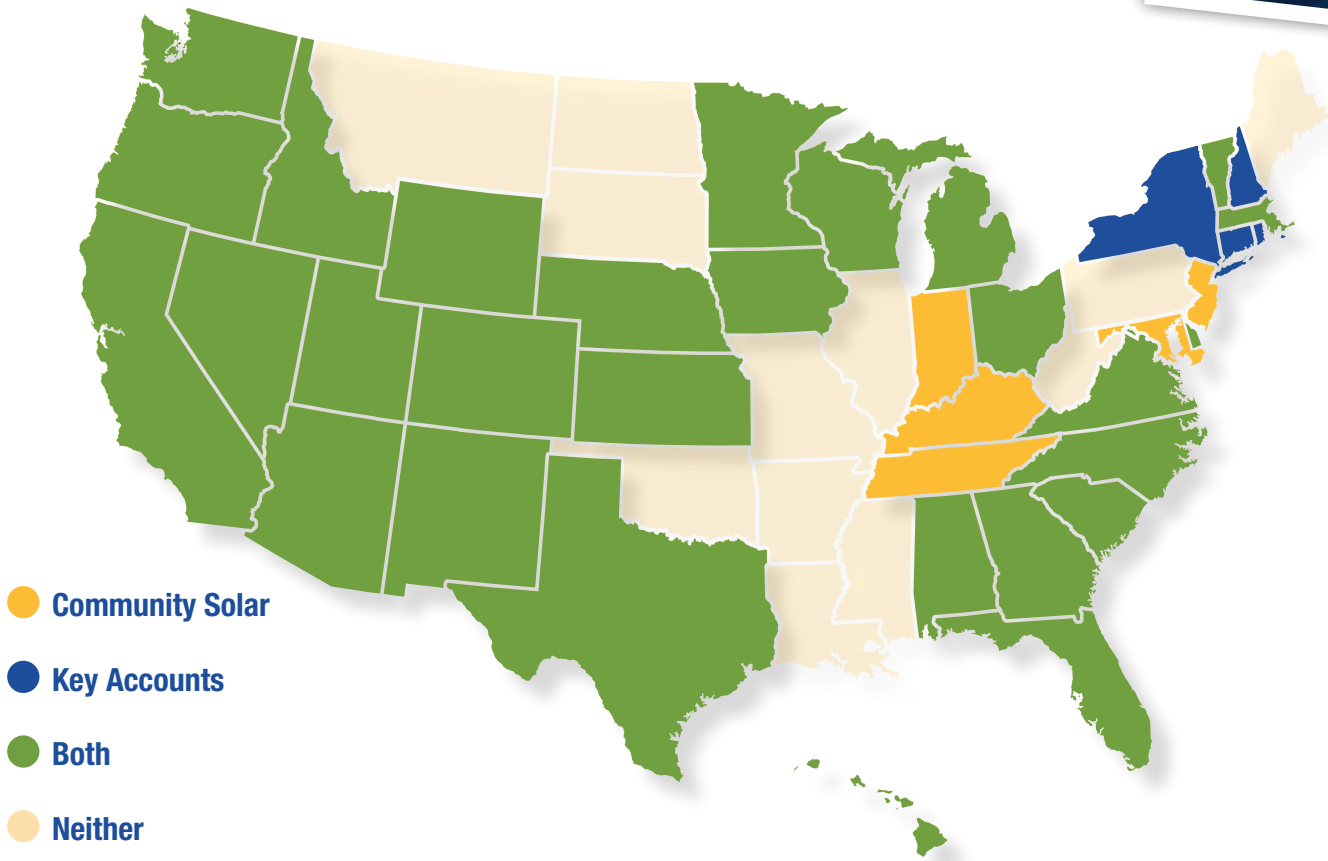
■ **Solar power plant capacity³** increased substantially from 2012 to 2013, with 2.6 GW coming online in 2013, more than 2012 capacity additions in all market segments combined. Continued growth is expected through at least 2016, driven in part by prices that are becoming competitive with natural gas in certain states.

■ **However, the project pipeline faces greater uncertainty** in 2017 and beyond as the federal investment tax credit declines from 30% to 10% and as some major utilities meet project and contract goals.

■ **In order to maintain momentum** in utility-scale projects, new markets will need to open-up with:

- New activity from smaller utilities or in less solar-active states;
- Expanded competitiveness with natural gas that makes solar an economic choice for utilities in resource planning;
- Updates in federal tax, compliance or environmental policies; and/or
- Advanced project development strategies by the industry, such as merchant plants that sell directly into wholesale electricity markets.

Customer programs: ripe for innovation



- **Utilities have long played an instrumental role** in consumer solar markets through grid integration and incentives. However, as more utility customers consider cost-effective solar options offered by non-utility providers, utilities can react or be proactive.
- **Community solar programs**, where utility customers "share" a larger solar installation, is one area of example of utilities responding to customer interest - 64% of recent utility survey respondents said they currently offer or are considering offering a utility-managed program.
- **Key accounts**, large utility electricity users such as national chain companies, data centers, or military bases are another area of focus – 68% of utilities said they currently offer or are considering offering a renewable energy program for this customer segment.
- **Utilities need to play to the customer's needs** and their own strengths in designing successful new options.



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Methodology

Solar Electric Power Association (SEPA) first identified over 531 solar-active utilities with at least 1 MW-ac of installed solar capacity through previous surveys and Energy Information Administration Form 861 Net Metering data. These utilities were contacted via email and by phone in January and February of 2014, and 285 utilities responded by submitting either an Excel file, a Word document or through the online survey. The data includes the 285 responding utilities, 22 utilities from past surveys and 627 utilities from U.S. Energy Information Administration Form 861. SEPA vetted the accuracy of survey information through personal contacts at utilities and verifying with external data sources. For the Watts-per-Customer category, utilities must have at least 500 bundled customer accounts.

All megawatts are presented in alternating current megawatts and are comparable to other generating technologies but may be lower than other nationally cited data. Contact SEPA for more information.

Solar Electric Power Association

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Appendix A-1: Solar megawatts by utility type

Investor-owned Annual MW

1	Pacific Gas and Electric Company (CA)	1,471
2	San Diego Gas & Electric Company (CA)	643
3	Arizona Public Service (AZ)	416
4	Southern California Edison (CA)	373
5	Duke Energy Progress (NC, SC)	137
6	National Grid (MA, RI)	111
7	Public Service Electric & Gas Company (NJ)	103
8	Hawaiian Electric Company, Inc. (HI)	98
9	Georgia Power Company (GA)	59
10	Duke Carolinas (NC, SC)	58

Investor-owned Cumulative MW

1	Pacific Gas and Electric Company (CA)	3,083
2	Southern California Edison (CA)	1,291
3	San Diego Gas & Electric Company (CA)	800
4	Arizona Public Service (AZ)	733
5	Public Service Electric & Gas Company (NJ)	547
6	Jersey Central Power & Light (NJ)	240
7	Xcel Energy (CO)	239
8	NV Energy (NV)	235
9	Duke Energy Progress (NC, SC)	219
10	Hawaiian Electric Company, Inc. (HI)	209

Co-op Annual MW

1	Kauai Island Utility Cooperative (HI)	5
2	Delaware Electric Cooperative (DE)	4
3	Trico Electric Cooperative, Inc. (AZ)	4
4	Santee Cooper (SC)	3
5	Southern Maryland Electric Cooperative (MD)	2
6	Sulphur Springs Valley Electric Co-op (AZ)	2
7	West Kentucky Rural Electric Coop Corp (KY)	1
8	Holy Cross Energy (CO)	1
9	Volunteer Energy Cooperative (TN)	1
10	Holston Electric Cooperative (TN)	1

Co-op Cumulative MW

1	Kauai Island Utility Cooperative (HI)	21
2	Blue Ridge Mountain Electric Membership (GA, NC)	10
3	Southern Maryland Electric Cooperative (MD)	8
4	Chickasaw Electric Cooperative (TN)	8
5	Delaware Electric Cooperative (DE)	8
6	Trico Electric Cooperative, Inc. (AZ)	8
7	Sulphur Springs Valley Electric Co-op (AZ)	7
8	Kit Carson Electric Cooperative (NM)	6
9	Holy Cross Energy (CO)	4
10	Middle Tennessee Electric Membership Corp (TN)	4

Public Power Annual MW

1	CPS Energy (TX)	47
2	Los Angeles Department of Water & Power (CA)	40
3	Salt River Project (AZ)	24
4	Imperial Irrigation District (CA)	24
5	Silicon Valley Power/City of Santa Clara (CA)	22
6	Sacramento Municipal Utility District (CA)	13
7	Austin Energy (TX)	5
8	Gainesville Regional Utilities (FL)	4
9	Sterling Municipal Light Dept (MA)	3
10	South Carolina Public Service Authority (SC)	3

Public Power Cumulative MW

1	Sacramento Municipal Utility District (CA)	150
2	Long Island Power Authority (NY)	116
3	CPS Energy (TX)	93
4	Salt River Project (AZ)	93
5	Los Angeles Dept of Water & Power (CA)	93
6	Imperial Irrigation District (CA)	58
7	Austin Energy (TX)	43
8	Silicon Valley Power/City of Santa Clara (CA)	29
9	Vineland Municipal Electric Utility (NJ)	28
10	Gainesville Regional Utilities (FL)	16

Appendix A-2: Solar installations by utility type

Investor-owned Annual Systems

1	Pacific Gas and Electric Company (CA)	28,807
2	Southern California Edison (CA)	26,372
3	Hawaiian Electric Company, Inc. (HI)	14,071
4	San Diego Gas & Electric Company (CA)	10,945
5	Arizona Public Service (AZ)	7,286
6	Xcel Energy (CO)	5,426
7	Public Service Electric & Gas Company (NJ)	2,374
8	National Grid (MA, RI)	2,259
9	Hawaii Electric Light Company (HI)	1,962
10	Jersey Central Power & Light (NJ)	1,712

Investor-owned Cumulative Systems

1	Pacific Gas and Electric Company (CA)	106,671
2	Southern California Edison (CA)	69,701
3	San Diego Gas & Electric Company (CA)	32,002
4	Hawaiian Electric Company, Inc. (HI)	29,558
5	Arizona Public Service (AZ)	23,785
6	Xcel Energy (CO)	18,305
7	Jersey Central Power & Light (NJ)	9,902
8	Public Service Electric & Gas Company (NJ)	9,440
9	Tucson Electric Power Company (AZ)	6,350
10	National Grid (MA, RI)	5,393

Co-op Annual Systems

1	Kauai Island Utility Cooperative (HI)	863
2	Sulphur Springs Valley Electric Co-op (AZ)	358
3	Trico Electric Cooperative, Inc. (AZ)	167
4	Southern Maryland Electric Cooperative (MD)	119
5	La Plata Electric Association (CO)	95
6	Holy Cross Energy (CO)	55
7	West Kentucky Rural Electric Cooperative Corp (KY)	54
8	Kit Carson Electric Cooperative (NM)	50
9	Volunteer Energy Cooperative (TN)	43
10	United Power (CO)	39

Co-op Cumulative Systems

1	Kauai Island Utility Cooperative (HI)	2,003
2	Sulphur Springs Valley Electric Co-op (AZ)	1,252
3	Trico Electric Cooperative, Inc. (AZ)	600
4	La Plata Electric Association (CO)	477
5	Delaware Electric Cooperative (DE)	453
6	Holy Cross Energy (CO)	427
7	Southern Maryland Electric Cooperative (MD)	344
8	Verendrye Electric Coop. (ND)	235
9	Washington Electric Co-op (VT)	200
10	Kit Carson Electric Cooperative (NM)	199

Public Power Annual Systems

1	Los Angeles Department of Water and Power (CA)	4,156
2	Salt River Project (AZ)	2,676
3	Sacramento Municipal Utility District (CA)	2,128
4	Austin Energy (TX)	718
5	CPS Energy (TX)	617
6	Seattle City Light (WA)	452
7	Imperial Irrigation District (CA)	207
8	Anaheim Public Utilities	162
9	Snohomish County PUD (WA)	148
10	Roseville Electric (CA)	116

Public Power Cumulative Systems

1	Los Angeles Department of Water and Power (CA)	11,232
2	Salt River Project (AZ)	8,049
3	Sacramento Municipal Utility District (CA)	6,445
4	Long Island Power Authority (NY)	6,023
5	Austin Energy (TX)	2,985
6	CPS Energy (TX)	1,501
7	Roseville Electric (CA)	1,393
8	Seattle City Light (WA)	1,126
9	Riverside Public Utilities (CA)	862
10	Imperial Irrigation District (CA)	782



Appendix A-3: Solar penetration by utility type

Investor-owned Cumulative Watts per Customer

1	Hawaiian Electric Company, Inc. (HI)	703
2	Arizona Public Service (AZ)	647
3	Pacific Gas and Electric Company (CA)	588
4	Maui Electric Company Ltd (HI)	580
5	San Diego Gas & Electric Company (CA)	574
6	Xcel Energy (NM)	401
7	Hawaii Electric Light Company (HI)	384
8	Pennsylvania Electric Company (PA)	373
9	Tucson Electric Power Company (AZ)	371
10	Atlantic City Electric (NJ)	334

Investor-owned Cumulative %

1	Hawaiian Electric Company, Inc. (HI)	10%
2	Maui Electric Company Ltd (HI)	8%
3	Hawaii Electric Light Company (HI)	7%
4	Pennsylvania Electric Company (PA)	5%
5	San Diego Gas & Electric Company (CA)	2%
6	Arizona Public Service (AZ)	2%
7	Pacific Gas and Electric Company (CA)	2%
8	Tucson Electric Power Company (AZ)	2%
9	Green Mountain Power Corporation (VT)	1%
10	Southern California Edison (CA)	1%

Co-op Cumulative Watts per Customer

1	Kauai Island Utility Cooperative (HI)	638
2	Chickasaw Electric Cooperative (TN)	430
3	Kit Carson Electric Cooperative (NM)	230
4	Blue Ridge Mountain Electric Membership (GA, NC)	212
5	Trico Electric Cooperative (AZ)	185
6	Washington Electric Co-op (VT)	150
7	Sulphur Springs Valley Electric Co-op (AZ)	129
8	Plumas-Sierra Rural Electric Cooperative (CA)	112
9	San Miguel Power Association (CO)	110
10	Delaware Electric Cooperative (DE)	90

Co-op Cumulative %

1	Kauai Island Utility Cooperative (HI)	6%
2	Sulphur Springs Valley Electric Co-op (AZ)	2%
3	Washington Electric Co-op (VT)	2%
4	Verendrye Electric Coop. (ND)	2%
5	Trico Electric Cooperative, Inc. (AZ)	1%
6	Plumas-Sierra Rural Electric Cooperative (CA)	1%
7	San Miguel Power Association (CO)	1%
8	La Plata Electric Association (CO)	1%
9	Holy Cross Energy (CO)	1%
10	Kit Carson Electric Cooperative (NM)	1%

Public Power Cumulative Watts per Customer

1	City of Milford (DE)	1,786
2	Vineland Municipal Electric Utility (NJ)	1,119
3	Sterling Municipal Light Dept (MA)	831
4	City of St Marys (OH)	564
5	Silicon Valley Power (CA)	562
6	Imperial Irrigation District (CA)	392
7	City of Dover (DE)	354
8	Bryan Municipal Utilities (OH)	276
9	Sacramento Municipal Utility District (CA)	265
10	Fayetteville Public Utilities (TN)	240

Public Power Cumulative %

1	Roseville Electric (CA)	3%
2	City of Palo Alto Utilities (CA)	2%
3	Sacramento Municipal Utility District (CA)	1%
4	City of Banning (CA)	1%
5	Salt River Project (AZ)	1%
6	Pasadena Water and Power (CA)	1%
7	Riverside Public Utilities (CA)	1%
8	Los Angeles Department of Water and Power (CA)	1%
9	Austin Energy (TX)	1%
10	City of Lewes (DE)	1%