SEPA

solar electric power association

Executive Summary

SEPA Top 10 Utility Solar Rankings

2010

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SEpa report Finds 100 percent increase in Utility integrated Solar power

The Solar Electric Power Association's (SEPA) fourth annual Top 10 Utility Solar Rankings report analyzes utility solar electricity markets in the United States, focusing particularly on the top utilities that are driving solar electric power growth. The top 10 ranked utilities integrated 561 megawatts (MW[1]) of solar electricity capacity in 2010, representing 100 percent growth over one year.

In addition to continued growth, the Report shows two dramatic changes taking place in utilities' integration of solar power. 1) The report demonstrates that more and more growth came from areas outside the traditionally strong solar regions of California and the Southwest. Many utilities in other parts of the country now have sizeable solar portfolios, and tens of thousands of photovoltaic (PV) systems were installed nationwide. 2) With a growing trend toward more utility-owned solar projects and third-party power purchase agreements, the industry is no longer based solely on customer-owned, net-metered systems.

Among the Report's key conclusions:

- *Utility solar electric markets continue to expand rapidly across the country.* About 63 percent of the new solar capacity came from utilities outside California, the largest percentage on record. Seven of this year's top 10 solar megawatt utilities were from outside California, and four of the top-ranking utilities were located in the Eastern United States. Solar power is becoming recognized as an important element in the energy supply planning and customer energy management of utilities nationwide.

- *Two new growth trends are changing the profile of solar electric power in the United States: centralized projects and utility ownership.* Traditionally, solar markets have relied on distributed PV for most new capacity. However, centralized projects are gaining new traction – eight centralized projects greater than 10 MW each were installed in 2010. This included what are now the two largest PV projects in the United States – the 48 MW Copper Mountain project, in Nevada, with power purchased by Pacific Gas & Electric and the 30 MW Cimarron project, in New Mexico, purchased by Tri-State Generation & Transmission Cooperative Association. The largest concentrating solar power (CSP) project in nearly 20 years was also installed in 2010. It is a hybrid CSP-natural gas facility owned by Florida Power & Light. Centralized projects totaled 226 MW in 2010, up from two projects totaling 46 MW the year before.

  Thirty utilities reported owning 140 MW of solar, as opposed to purchasing the power from facilities owned by others. The utility ownership represents a more than 300 percent increase over the previous year[2]. Based on future announcements and plans in both categories, these two trends are expected to continue their growth and market penetration.

- *Individual utility solar portfolios reveal very different market dynamics and procurement strategies.* Utility solar portfolios differ by project technology (PV or CSP), type (distributed or centralized) and ownership (customer, third-party or utility). Some utilities are purchasing power from solar systems, such as rooftop PV, owned by their customers, while others are creating a solar electric market by procuring and/or owning large amounts of solar generation resources. Many are doing both. Like different investment portfolios varying in percentages of stocks, bonds and cash, the top 10 utilities' cumulative solar portfolios reflect varying amounts of utility ownership, CSP technology and distributed PV. Solar portfolios vary from utility to utility because of different state policies, utility preferences, solar resources, electricity prices, incentives available and other factors.

The SEPA Top 10 Utility Solar Rankings measure a utility's newly installed solar power and include PV and CSP technologies interconnected between January 1 and December 31, 2010. There are two rankings categories: *Solar Megawatts*, which measure a utility's total solar capacity added that year, and *Solar Watts-per-Customer*, which is a measure of the utility's new solar installed divided by its number of customers.

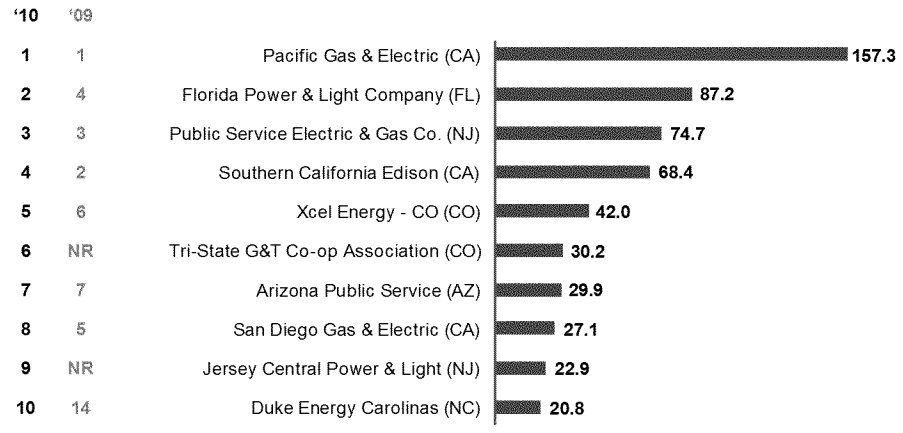
[1]All megawatts (and watts) are listed in utility-standard MW-ac grid capacity, comparable to other generating technologies. Significant differences from other consultants' solar data are often attributed to this nomenclature.

[2]One 75 MW and one 10 MW project were common to both categories.

Solar Megawatts

Pacific Gas & Electric (PG&E) installed 157 MW in 2010, securing the top position in the annual solar megawatts rankings. PG&E's 2010 solar portfolio was about two-thirds distributed, customer PV projects, with more than 10,000 projects totaling more than 104 MW. PG&E also purchased the output of the new 48 MW Copper Mountain PV facility, the largest in the country. In contrast, Florida Power & Light, the second ranked utility, installed 87 MW, largely based on two utility-owned projects – a 10 MW PV project at the Kennedy Space Center and a 75 MW hybrid CSP power plant at a combined-cycle natural gas plant. Public Service Electric & Gas (PSE&G), of New Jersey, maintained its third-place position in 2010 through a 75 MW portfolio, 30 percent of it utility-owned and 70 percent customer-rooftop projects.

Figure 1: 2010 annual Solar Megawatts (MW-ac)



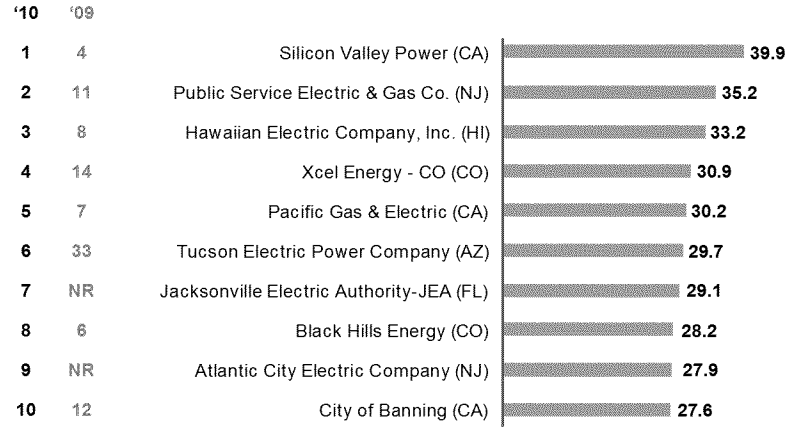
NR = No Rank; the utility either did not participate in or was not ranked in the previous year's rankings.

Tri-State Generation & Transmission Cooperative Association, in Colorado, at sixth on the list, was the highest ranked cooperative utility, based on a power purchase agreement (PPA) with the 30 MW Cimarron PV project. The top ranked municipal utilities were CPS Energy, in San Antonio, at #11 and the Jacksonville Electric Authority, in Florida, at #13. Both utilities achieved these rankings by purchasing power from a respective large PV project.

Solar Watts-per-Customer

Silicon Valley Power ranked first nationally with nearly 40 watts-per-customer, followed by PSE&G. The two utilities are very different. Silicon Valley is a California municipal utility with just under 52,000 customers, average electricity rates and a better than average solar resource, which interconnected just over 1.8 MW of PV from 74 distributed customer systems. PSE&G, in contrast, is a large New Jersey investor-owned utility with more than 2.1 million customers, in a region with higher than average electricity rates and a lower than average solar resource, which interconnected 75 MW from 1,057 PV systems, of which 13 percent is utility owned. This comparison shows how standardizing the rankings by the number of customers levels the playing field between big and small utilities.

Figure 2: 2010 annual Solar Watts-per-Customer (Watts-ac)



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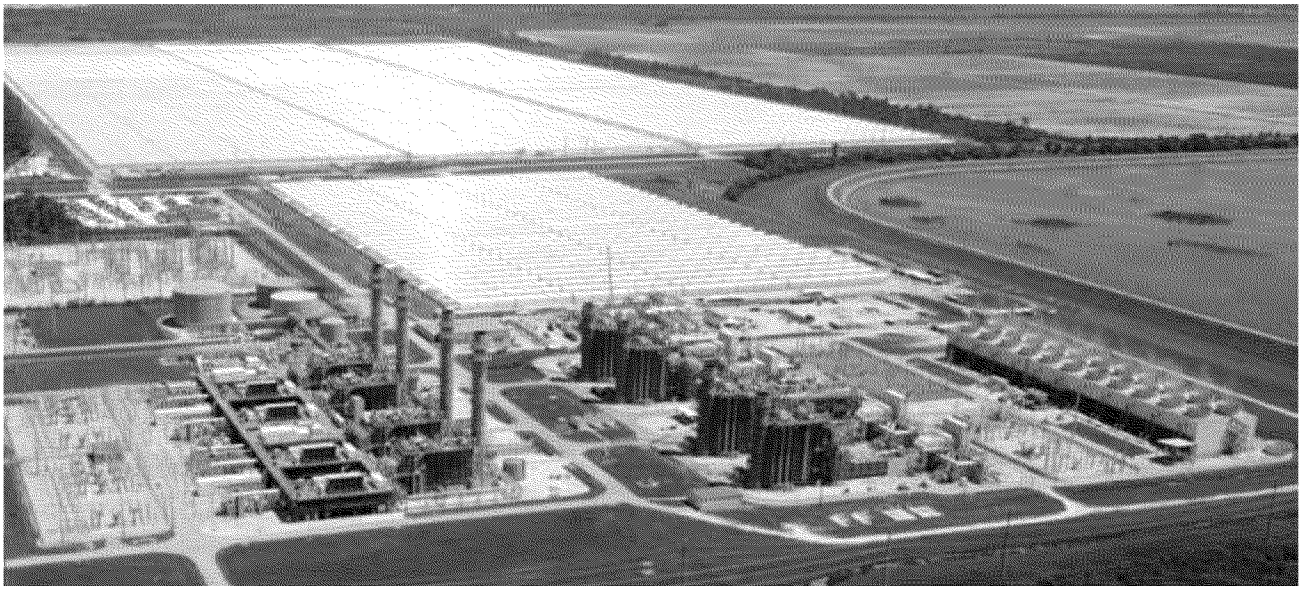
Jacksonville Electric Authority, in Florida, was the second-ranked municipal utility after installing a centralized 12 MW facility. Kauai Island Utility Cooperative, in Hawaii, and Kit Carson Electric Cooperative, in New Mexico, were the highest ranked cooperative utilities at #12 and #17.

Rankings are based on SEPA's 2010 survey of U.S. electric utilities.



The largest concentrating solar power (CSP) project in nearly 20 years in the United States was installed in 2010. It is a hybrid CSP-natural gas facility owned by Florida Power & Light.

Conclusion

The 2010 SEPA Top 10 Utility Solar Rankings report not only depicts a rapid rise in the amount of solar installed on utility grids, but a trend towards utility-led initiatives that is behind much of the expansion of the solar market. A few years ago, the solar installed at many utilities was dominated by customer-owned, net-metered systems. In 2010, the emphasis had shifted to large, centralized plants and utility-owned projects.

The full report includes additional discussion on the national rankings, including an analysis of the top 10 cumulative utilities' solar portfolios, as well as rankings by region (West, Central and East) and utility type (cooperative, investor-owned and municipal). Each rankings section includes detailed discussions about emerging trends in geographic diversity, project characteristics, technologies and utility ownership.

SEPA has developed a dedicated Utility Solar Rankings webpage which includes access to the full report, video presentation and slides, downloadable data and detailed maps. To access the information, visit **www.sepatop10.org**.

About SEPA

The Solar Electric Power Association (SEPA) is an educational non-profit organization dedicated to helping utilities integrate solar power into their energy portfolios. The SEPA Top 10 Utility Solar Rankings report is one of many market intelligence, educational and peer-to-peer networking services SEPA provides its utility and solar industry members. For more information about SEPA, please visit www.solarelectricpower.org.

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