

A Transitioning Electric Utility Industry: Embracing Solar Electricity

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Climate change concerns, economic development interests, electricity price volatility and resulting political actions around the world are changing the future of many businesses. One industry that is being significantly impacted is the U.S. electric utility industry, which must come to grips with the fact that “business as usual” is changing. In the short-term, these utilities must quickly find ways to acquire and integrate a large percentage of their electricity from clean renewable electricity sources in order to meet existing and anticipated state and federal requirements; in the medium- and long-term, many of these resources are expected to become least cost options.

Historically, electric utilities have not taken a lead in solar deployment, but instead taken a variety of positions ranging from minor interest to avoidance and hostility. While a handful of utilities *have* actively been supporting solar development in the past two decades, their engagement has largely been limited to facilitating customer systems at relatively small volumes, and these companies have been the exception rather than the rule. Largely due to cost, utilities themselves were not directly involved in solar electric procurement. Of the approximately one gigawatt of solar electricity installed in the U.S. by the end of 2008, only about 5 percent is on the utility side of the meter. But utility involvement is beginning to change rapidly.

Examples are popping up around the U.S., from California to New York. California utilities remain the leaders, with the grandest solar plans in the works. Both Pacific Gas and Electric and Southern California Edison have announced gigawatts of solar electricity deployment in the next 3 to 6 years. These plans include small distributed photovoltaic systems owned both by the utility and its customers, large photovoltaic central power plants, and large concentrating solar thermal central station plants. These two utilities alone are poised to exponentially increase the amount of solar electricity in the U.S. energy mix.

But California isn't the only place we are seeing substantial growth in utility integration of solar electricity. Arizona Public Service has announced two concentrating solar thermal plants that are more than 250 megawatts each, Austin Energy is building a 30 megawatt photovoltaic plant, Long Island Power Authority is building 2 photovoltaic plants totaling 50 megawatts, and Florida Power & Light has three photovoltaic plants in construction totaling 110 megawatts. These are just a handful of many utility-driven large scale solar electric projects underway.

Other utilities are focusing on ways to increase their customers' use of solar electricity. As one example, both Gainesville Regional Utilities and Sacramento Municipal Utility District are implementing “feed-in tariffs”, whereby the utility will pay customers a set rate for all solar electricity fed into the grid through a long-term contract, thus guaranteeing customers a rate of return on their investment.

All signs indicate that the current increase in utility integration of solar electricity is just the beginning of a major shift within the utility industry and much more is to come.

The Solar Electric Power Association has many free resources about utility activity in solar electricity, including:

[Top Ten Utility Solar Integration Rankings](#)
[Utility Solar Business Models](#)

Other resources are available online at www.solarelectricpower.org.