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6 Reasons For The Solar Boom

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Reduced cost is the most obvious reason solar energy has blossomed across the United States in the last five years, aided by improved technology, but many factors have contributed to the boom, system installers and manufacturers said in Chicago Tuesday.

“In 2010 there was only 2,323 megawatts of solar. As of Feb. 2014, there’s now 12,057 megawatts of solar energy,” said John Muller of G&W Electric, a manufacturer, at a symposium hosted by the Illinois Institute of Technology. “That represents 1.3 percent of the grid right now, as of February 2014.”

At IIT’s Great Lakes Symposium on Smart Grid and the New Energy Economy, Marc Lopata, president of Azimuth Energy, outlined six reasons solar has taken off:

1. The installed cost has dropped dramatically. “Systems that we were installing 5 years ago at \$8 a watt we are now installing at less than \$3 a watt,” Lopata said.

2. Technology improvements [explain](http://cleantechnica.com/2014/02/06/technological-advancements-drove-solar-panel-prices/)

(<http://cleantechnica.com/2014/02/06/technological-advancements-drove-solar-panel-prices/>) some of the drop in cost. Solar panels have become more efficient, and solar arrays have gotten smaller. “Not just the electronics but the smarts that people are putting in,” Lopata said.

3. Battery storage has made gains not only in efficiency, but in type. “We’re getting away from gigantic lead-plate batteries full of sulphuric acid that are expensive to make, they are polluting, the mining operations are terrible, and they have to be smelted,” Lopata said. “The only benefit to them is that they store energy. There are batteries now where basically the electrolyte in them is saltwater. And they’re lithium ion. There’s no thermal issues, there’s no fire hazard. And there are other things besides batteries.” Lopata mentioned flywheels and pumped hydrostorage. Other panelists said [miniature combined-heat-and-power units](#)

(<http://www.forbes.com/sites/jeffmcmahon/2014/09/24/backyard-power-plants-can-back-up-solar-rival-batteries/>) can also do the job of batteries.

4. Third-Party Financing. "Investors are becoming more comfortable, bankers are understanding the model, there's a lot of private equity, there's a lot of debt that's available that people are putting into the market and bringing to bear for these jobs." New financial instruments are helping solar as well, such as operating leases. "Now it's possible to lease a solar array just like five years ago you leased a copier or a car."

5. Streamlined Permitting. The city of Chicago adopted a one-day permitting schedule for solar installations and reduced its fees. Many state and local governments are changing procedures and laws to encourage solar energy. Laws have had to change to allow distributed generation to connect to the grid, and to allow individuals to sell energy back to the grid at wholesale or retail prices. "As we've gotten better and better as an industry, and people are getting more and more comfortable, these laws are starting to change."

6. Marketing and Cultural Demand. Many companies are now incorporating public solar displays on their buildings and campuses to advertise their interest in renewable energy. "People see solar, they want it, in some places its a status symbol. It's good for attracting people to a company." Many companies are trying to improve their environmental footprint, which requires them to pressure the less visible companies in their supply chain. "You're getting pressure from Ikea, K-mart, all these companies are pressuring their supply chain to do things like that."

Have you noticed other reasons for the solar boom? Please let us know in the comments below.

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