

# Bloomberg

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## GE Sees Solar Cheaper Than Fossil Power in Five Years

By Brian Wingfield - May 26, 2011

Solar power may be cheaper than electricity generated by fossil fuels and nuclear reactors within three to five years because of innovations, said Mark M. Little, the global research director for [General Electric Co. \(GE\)](#).

“If we can get solar at 15 cents a kilowatt-hour or lower, which I’m hopeful that we will do, you’re going to have a lot of people that are going to want to have solar at home,” Little said yesterday in an interview in Bloomberg’s Washington office. The 2009 average U.S. retail rate per kilowatt-hour for electricity ranges from 6.1 cents in [Wyoming](#) to 18.1 cents in [Connecticut](#), according to Energy Information Administration data released in April.

GE, based in Fairfield, Connecticut, announced in April that it had boosted the efficiency of thin-film solar panels to a record 12.8 percent. Improving efficiency, or the amount of sunlight converted to electricity, would help reduce the costs without relying on subsidies.

The thin-film panels will be manufactured at a plant that GE intends to open in 2013. The company said in April that the factory will have about 400 employees and make enough panels each year to power about 80,000 homes.

Solar-panel makers from [Arizona](#) to [Shanghai](#) are expanding factories to add more cost savings that analysts say will sustain the industry’s expansion. Installations may increase by as much as 50 percent in 2011, worth about \$140 billion, as cheaper panels and thin film make developers less dependent on government subsidies, Bloomberg New Energy Finance forecast.

### Solar Costs Dive

The cost of solar cells, the main component in standard panels, has fallen 21 percent so far this year, and the cost of solar power is now about the same as the rate utilities charge for conventional power in the sunniest parts of [California](#), [Italy](#) and [Turkey](#), the London-based research company said.

Most solar panels use silicon-based photovoltaic cells to transform sunlight into electricity. The thin-film versions, made of glass or other material coated with cadmium telluride or copper indium

gallium selenide alloys, account for about 15 percent of the \$28 billion in worldwide solar-panel sales.

[First Solar Inc. \(FSLR\)](#), based in Tempe, Arizona, is the world's largest producer of thin-film panels, with \$2.6 billion in yearly revenue.

## Smart Grid

Little also said the U.S. transition to a full smart grid will take “many, many years” to develop.

A complete smart grid would consist of millions of next-generation meters installed in businesses and homes, appliances that adjust their energy use when prices change, and advanced software to help utilities control electricity flows, he said.

“I think it's going to be a long time before we can realize the full potential of the smart grid,” he said. “But it is coming.”

GE this year plans to introduce the “Nucleus,” a device that will let consumers track their household electricity use with personal computers and smart phones. The company also is investing in its appliance and lighting unit, including \$432 million for U.S. refrigeration and design centers announced in October.

Utilities need to have incentives to put in place devices that save energy, and Congress needs to provide greater certainty on [tax policy](#) surrounding renewable energy, Little said.

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