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BY JEFF SPROSS POSTED ON

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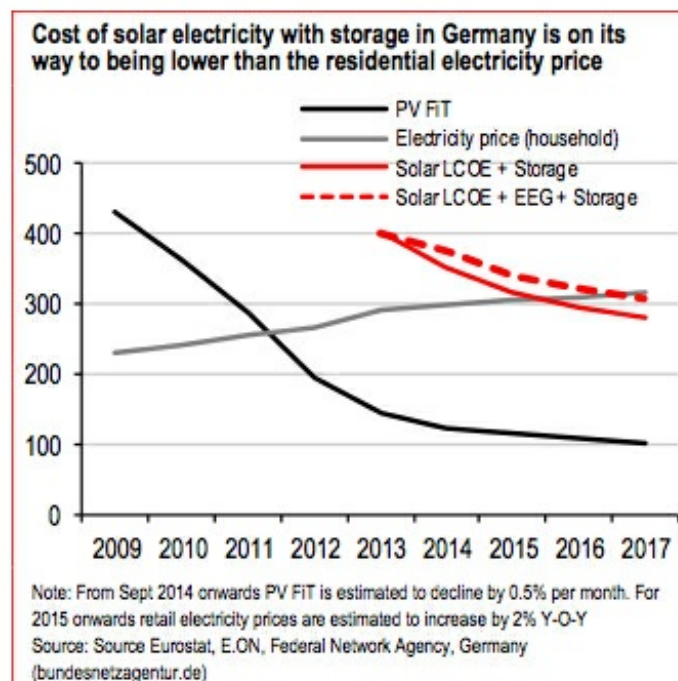
The cost of solar power plus battery storage is about to dip below the average electricity bill in Germany.

That's the word from a new analysis by the global investment bank HSBC, which projects that the dropping price of home solar arrays combined with home battery storage is about to massively disrupt traditional fossil fuel electricity generation. According to [a report](#) by RenewEconomy, which got a look at the analysis, HSBC took a look at the situation in Germany, and concluded that power generation units with a capacity of 10 megawatts or less will make up 50 percent of the country's power by 2025 — up from 30 percent now. "The process of re-localisation of power production appears unstoppable," HSBC says in its paper.

"Initially we expect that this will be small-scale in the form of household-based battery

storage of solar-generated power, and, further ahead, large-scale conversion of hydro-power to green gas for storage in the gas network.”

Germany has already demonstrated that the intermittency problem of renewables — the fact that the sun doesn’t always shine and the wind doesn’t always blow when electricity is needed — can largely be solved at the utility scale with better coordination on the grid. But for homes or businesses that want to generate solar power for themselves, batteries are still crucial for storing electricity to be used in the off-hours. This is where the long, slow grind of technology improvement — the process by which minor improvements in efficiency and methodology year after year, rather than sudden dramatic breakthroughs, lower a technology’s price — comes into play for both solar and batteries. Efforts like Tesla’s gigafactory to bring economies of scale to battery manufacturing are also likely to drop costs.



CREDIT: HSBC / RENEWECONOMY

Add it all together, and HSBC thinks the comprehensive cost of a home solar array plus battery storage will drop beneath the equivalent cost of residential electricity in Germany before the end of the decade. “There is no prospect of any return to anywhere near the level of profitability [for fossil fuel generation] seen in the latter part of the last decade in generation,” HSBC’s analysis continued.

Now, Germany has some of the highest residential electricity prices around, so it will arguably be longer before this effect spreads to other European countries or to America. The country’s policies to promote renewables include 20-year contracts to wind and solar suppliers guaranteeing high prices and grid access. But the German public’s support for those policies remain high, to no small degree because Germans themselves locally own half of the country’s renewable generation capacity.

So arguably what's going on in Germany is something of a pincer move: the grid itself is becoming more renewable and more localized, while at the same time more and more households are ditching the grid entirely for distributed solar.

That said, Germany's own residential prices may soon drop. As those renewables contracts expire, the significantly lower electricity prices in the whole sale power market — where big producers and distributors buy and sell power before passing it along to consumers — should make their way into residential costs.

But the fact remains that the costs of battery technology and solar power are headed nowhere but down. Another recent and very similar analysis by the investment bank UBS projected that by 2020, small-scale solar-plus-storage power generation will become economic enough for individual homeowners in Europe that there simply won't be any market incentive for building more fossil fuel power plants on the Continent.

Here in America, Tesla thinks the costs of battery storage could fall to \$100 per kilowatt-hour by the end of the decade. As John Aziz pointed out at The Week, that would drop the combined cost of a home solar array and a home battery to \$17,000 over the system's 20-year lifespan — well below the \$26,000 the average U.S. household currently spends on electricity from the grid.

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**John Saville** · ★ Top Commenter · Sebastopol, California

This is great news. However keep in mind the large energy production companies and the thousands of people who work for them or benefit from their stock prices will see this as a threat and exert tremendous political pressure to slow down, prevent or even make it illegal to own your personal energy production system.

Reply · Like · 6 · October 3, 2014 at 10:33am



**Gary Crosby** · ★ Top Commenter

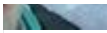
The stock holders will go where the money is headed and will re-arrange their portfolio to include Solar panel and Battery producers. They know they cannot stop progress but they can prosper from it.

Reply · Like · 7 · October 3, 2014 at 11:48am



**Michael Pettengill** · ★ Top Commenter · New Hampshire Community Technical Colleges

You mean that if the economics operate like economist claim. there will be no profit and stock



prices will equal actual capital asset value for a utility and dividends will simply be straight market ROIC, rather than stock prices being based on the job killing success of transferring power costs to customers in hidden costs like poor health, failing industries like forest products and fishing that require tax funded welfare, and being forced to buy bottled water?

Conservatives have been teaching free lunch pillage and plunder economics so Americans embrace them. By pillaging and plundering every factor of the economy, you can have lower prices and "create wealth" by higher prices by transferring costs to others, lowering wages and benefits, and - this is the free lunch part - the implied message is you will not pay a price because your wages will remain high, you will not lose your job, you will not be killed or maimed on the job, you will not be forced to buy bottled water because the coal industry polluted the water supply, and you will not be sickened by the air pollution.

A "cheap price" for what you buy is not a sign that your costs will be cheap.

[Reply](#) · [Like](#) ·  1 · October 3, 2014 at 12:47pm



**James Hynd** · Works at Landfall Rest. Maintenance + Carpenter/builder

Michael Pettengill WTF ??? What you smok'n fella .....oil "IS" almost gone...what is left we need for Lubrication of all industries.....only natural to evolve into wind and solar and better insulation .....as for power industries , they have to evolve or PERISH like the buggy and wagon Barons did ,(remember the new invention <<the CAR>> Nobody here said anything about "free" .....

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