

Is solar poised for shale-like breakthrough?

Bill Loveless, USA Today, 2-8-15

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Declining oil prices may be slowing the U.S. shale boom. But there's no denying that the nation will remain a leading global producer of oil and natural gas well into the future, thanks to advances in drilling technology.

So, what's next when it comes to big breakthroughs in U.S. energy supply?

The Scotland-based consultancy Wood Mackenzie sees solar energy as the best candidate now for such change.

In a new study called "Is Solar the Next Shale?", Wood Mackenzie says steep reductions in the costs of making solar modules put that technology in a strong position to compete with other forms of electric power in many parts of the U.S.

In fact, the economics for large-scale solar installations have already reached parity with those for gas combined-cycle and combustion plants in California and other parts of the U.S., according to Wood Mackenzie analysts. By 2020, they expect that parity will exist in 19 states, increasing to 38 by 2030.

"Just as shale extraction reconfigured oil and gas, no other technology is closer to transforming power markets than distributed and utility-scale solar," the study says.

Make no mistake about it, solar energy will continue to be a small part of total U.S. electric generating capacity. Wood Mackenzie estimates that solar will account for 6% of the nation's generating mix in 2035, compared to just 1% now.

But a relatively small amount of solar capacity can go a long way toward disrupting electric power markets. For example, solar power, obviously, contributes the most during the day, when the sun is shining and demand for electricity is often at its peak. That's also when fossil-fuel power plants, including natural gas units, whose market share has been growing with the shale boom, make most of their money.

Moreover, the trend is set to go on, Wood Mackenzie says, as the cost of solar continues to come down while the cost of combined-cycle gas plants, the preferred option for utilities, rises.

"We certainly see an upside to solar, a significant upside. And you really don't need that much solar to hurt the economics of fossil-fuel plants," explains Prajit Ghosh, a research director with Wood Mackenzie. "Even a small amount of solar can have a pretty significant impact on the value of gas and coal plants and reliability."

The growing challenge for the electric power industry and its regulators is to integrate solar into the grid without forcing gas-fired power plants offline and disrupting the reliability of utility systems. California is already grappling with the issue, and other regions with significant solar potential, like Arizona, New Jersey and Texas, will increasingly do so, Ghosh says.

By the way, Ghosh doesn't see any major setback for solar if a federal investment tax credit expires on

Dec. 31, 2016, as scheduled. The subsidy provides a 30% credit for solar systems on residential and commercial properties.

The Obama administration, in its recent budget proposal, calls for extending the tax break to support continued growth in solar energy, and the industry strongly supports the idea. But Ghosh says the incentive is no longer necessary.

"The level of cost savings we expect [in solar] will more than compensate for any reduction in tax credit support," he says.