

# Why a big Utility is embracing WIND and SOLAR

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## Clean Power Becomes Cheap Power

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**I**MAGINE planning your next trip and finding that Delta was selling first-class seats for less than the cramped middle seats in the back of the plane.

So you fly first class to New York and walk into the best French restaurant, only to discover that every dish is cheaper than the burger and fries down the street. Waiter, bring the duck à l'orange!

Fanciful as that might sound, something a bit like it is happening right now in the world of electricity.

Xcel Energy is a utility company with millions of electric customers in the middle of the country, from Texas to Michigan. In booming Colorado, the company asked for proposals to construct big power plants using wind turbines and solar panels.

The bids have come in so low that the company will be able to build and operate the new plants for less money than it would have to pay just to keep running its old, coal-burning power plants.

You read that right: In parts of the country, wind and solar plants built from scratch now offer the cheapest power available, even counting old coal, which was long seen as unbeatable.

Xcel, Colorado's biggest power company, has pitched a plan to regulators that will involve replacing two large coal-burning units with renewable energy and possibly some natural gas. The company expects to save tens of millions of dollars.

So the plan will be cheaper, but why will it be better?

Because it will cut Xcel's emissions. That includes the carbon dioxide that is warming the planet, of course, but it also

### Colorado's largest energy company turns to wind and solar in a big way.

includes other pollutants, like the fine particles that can cause asthma attacks.

Under the leadership of Benjamin Fowke, a gray-haired chief executive trained in finance, Xcel intends to get far ahead of the clean-power requirements that have been imposed by its regulators. Across its eight-state system, Xcel predicts that well over half its electricity will come from renewable sources by the mid-2020s.

Now, to be clear, the low bids that Xcel is getting include some federal subsidies for clean power. Those subsidies are entirely defensible, but both parties in Congress have agreed to phase them out in a couple of years. Mr. Fowke is jumping now in part to lock in the subsidized prices.

Yet costs for renewable technologies are coming down so much that by the time the federal subsidies expire, wind turbines and large-scale solar arrays will still be competitive in large parts of the country. The same trend is occurring all over the world, even in countries that do not offer subsidies.

How, exactly, did the cleanest energy technologies get on a path to become the cheapest?

In a way, the story is as old as Henry Ford and his Model T, or in more recent times, the amazing progress of computer chips.

As they scale up, new technologies often follow a "learning curve" that cuts the cost. But it's not automatic. You have to build more and more units to drive the prices down.

That happened naturally with consumer products like Model T's and cell-phones, since everybody who saw the things wanted one. But the electricity system was a hidebound, monopolistic industry that used to spend virtually nothing on innovation.

For decades, utility executives who were wedded to coal regarded solar panels and wind turbines as expensive trinkets. But some farsighted political leaders, Republicans as well as Democrats, saw the potential as early as the 1970s.

They put in place a set of clean-power mandates at the state level and subsidies at the federal level, increasing the size of the market. Similar policies were adopted in Europe. It has taken a couple of decades, but we are reaching a point where the new energy technologies are going to be cheap enough to drive a lot of the old coal-burning power plants off the market.

Nowadays, of course, the Trump administration is trying to take the country backward. It recently imposed costly tariffs on solar panels made in China. That is unquestionably bad for the solar industry, but we think it will turn out to be a temporary setback.

How fast can the remaining coal plants be shut down? Even with favorable economics, human and institutional inertia is such that they could take a long time to die. States need to find ways to help utilities make the right decisions, perhaps by sharing some of the short-term costs of the shutdowns.

Despite such concerns, the cost trends are clear, and inexorable. Mr. Fowke has positioned Xcel to take advantage of them, and a handful of other power companies across the country are taking similar steps.

But most utilities are still doing only what governments have required of them. With the best power plants becoming the cheapest, isn't it time for their leaders to seize the future, too? □

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