## **Opinion** | op-ed contributors

## By JUSTIN GILLIS and HAL HARVEY FEB. 6, 2018



Turbines at the Spring Canyon Wind Farm outside Peetz, Colo. The farm is owned by Invenergy, and produces energy under contract to Xcel Energy.

Ryan David Brown for The New York Times

DENVER — Imagine 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 as a result. Power bills in Colorado have been falling recently, and they are likely to fall further with this plan.

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 includes other pollutants, like the fine particles that can send children to the hospital with 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. It will be one of the cleanest large utility companies in the country.

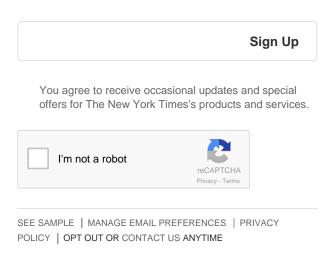
Now, to be clear, the low bids that Xcel is getting include some federal subsidies for clean power. Those subsidies are entirely defensible, but both parties in Congress have agreed to phase them out in a couple of years. Mr. Fowke is jumping now in part to lock in the subsidized prices.

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.

## Sign Up for the Opinion Today Newsletter

Every weekday, get thought-provoking commentary from Op-Ed columnists, the Times editorial board and contributing writers from around the world.



The same trend is occurring all over the world, even in countries that do not offer subsidies, with renewable projects routinely beating fossil-fuel projects in countries like Mexico and India. We are confident more price declines are coming.

The costs of huge batteries are also falling, and it looks as if they will turn out to be a big help in managing the variability of wind and solar power. Xcel is already testing a battery project near Denver, and it may buy more batteries as part of the new plan.

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 Ts and cellphones, 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 saw the potential as early as the 1970s.

President Jimmy Carter was one. Jerry Brown, then serving as California's youngest-ever governor, was another. Republican leaders in windy states, like Terry Branstad and Charles Grassley of Iowa, also got on board.

A combination of state clean-power mandates and federal subsidies helped to increase the market, as did similar policies 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 coalburning power plants off the market.

Nowadays, of course, the Trump administration is trying to take the country backward. It recently offered a scheme to subsidize coal and nuclear plants, but the plan was so ludicrous, a federal panel dominated by Trump appointees <u>voted it down</u> 5-0.

More ominously, the administration 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.

The real question now is how fast can the fossil-fuel plants be shut down. Even with favorable economics, human and institutional inertia is such that the remaining coal plants 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. They also need to protect workers who lose their jobs, and compensate communities that stand to lose part of their tax base.

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? Justin Gillis is a contributing opinion writer. <u>Hal Harvey</u> is the chief executive of the research firm Energy Innovation.

Follow The New York Times Opinion section on <u>Facebook</u> and <u>Twitter (@NYTopinion)</u>, and sign up for the <u>Opinion Today newsletter</u>.

© 2018 The New York Times Company | Privacy | Terms of Service

Site Map | Help | Site Feedback