Renewable Energy Sources Rise as Coal-generated Power Declines

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Recently, I was on the U.S. Energy Information Administration website (eia.gov) shopping for a wind or solar energy plant.

Renewable energy is getting less expensive. I thought I would see what the costs really are, rather than those offered with distorted facts and misinformation found in a recent column by David May, CEO of the Fort Collins Area Chamber of Commerce.

Arguing with a bias and manipulated facts does a disservice to us all. Thus, I was in the fact check mode to find the real answers.

Fortunately, renewable energy is far less expensive than many think. Wind is the least expensive choice at this point. The Wall Street firm Lazard, reports in its latest analysis that wind energy is now one of the most affordable options for new electricity generation.

Wind's unsubsidized costs are highly competitive with conventional generation, ranging from $30/MWh to $60/MWh. Another study shows the price of wind energy in the United States is at an all-time low, averaging under 2.5 cents/kWh.

Solar also comes in at approximately $30 to $60 per MWh (3 to 6 cents/kWh) — but variable scaling affects the 3 cents range. Whereas virtually all wind energy projects are at utility scale, solar scales residential and up.

However, a National Renewable Energy Laboratory study cites a DOE target of less than 3 cents per kWh (unsubsidized) by 2030 and indicates the industry is making steady, realistic, and accountable progress,

Renewables have more than potential — they are here now. With approximately 9,000 solar businesses in the U.S. and 250,000 good-paying jobs, and with almost a $17 billion market value, solar is indeed an economic powerhouse.

Solar currently provides 53 gigawatts (53 large coal power plants, each approximately four times as big as Rawhide). This is reliable carbon-free energy and provides power for 10 million homes. Solar is not leaving.

Similar numbers are found in the U.S. wind energy industry (AWEA.org) that employees more than 100,000 nationwide, some of whom work right here in Northern Colorado at Vestas in Windsor and Brighton.

But what generation industry is on the outs? Coal.

From 2007 to 2016, 531 coal units (representing 55.6 GW) were retired across the U.S., according to Forbes. The U.S. Energy Information Agency stated in a January article that "Almost all power plants that retired in the past decade were powered by fossil fuels."

Certainly, coal and natural gas will remain part of the fuel mix in the near-term. But as the wholesale cost of wind and solar continue their rapid downward trajectory, coal and natural gas plants will just as rapidly become stranded assets that nobody wants.

Although solar and wind are intermittent, battery and other storage technologies will soon solve this — within five years is the latest prediction by NREL and others.

At this time, we can only argue that renewables — and the clean, carbon-free energy they provide — are here to stay and will become the main source of electrical generation certainly by 2050 and, if we can deliver 100 percent renewable energy here in Fort Collins, sooner than that.

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