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Wind and Solar are Competitive with Fossil Fuels only in Subsidized Price, Not in True Cost

A CO2 Coalition Review of a Media Claim

By Bruce Everett, Ph.D.

The June 25 *Wall Street Journal* has a news piece by Rochelle Toplensky entitled "Green Energy is Finally Going Mainstream." Ms. Toplensky claims that "the cost of renewable energy can now be competitive with fossil fuels." Unfortunately, her argument is based on one of the oldest and most common economic fallacies: confusing cost and price.

Ms. Topensky states, quite accurately, that investor returns on companies making and selling renewable energy equipment bottomed out in 2018 and have improved substantially since, growing faster than the S&P as a whole. In a competitive market, company profits would be a clear indication that their product was cost-competitive with its alternatives. The renewable energy market, however, is not a competitive market, but is managed by governments. Over the last few decades, the US and many other governments have spent billions of dollars forcing high-cost renewable energy into the marketplace through a complex web of subsidies and mandates, some explicit, but many hidden. Investors may enjoy the fruits of these policies, but consumers do not. All the subsidies and mandates must be paid for either through additional taxes, higher government debt or increased utility bills.

About the Author

Bruce Everett, Ph.D. During his 45-year career in international energy, Dr. Everett was an economist with the U.S. Department of Energy and an executive with ExxonMobil. He taught energy economics at the Georgetown University School of Foreign Service for ten years and was also an Adjunct Associate Professor of International Business at the Fletcher School of Tufts University for 17 years.

As a simple analogy, a 2020 S-class Mercedes costs roughly $100,000, while a Toyota Camry costs about $25,000. If the US government offered a subsidy of $75,000 per Mercedes, an S-class would be *price* competitive with a Camry, but not *cost* competitive. Society as a whole would still have to pay the $75,000 somehow.

Ms. Toplensky actually admits this point, since she attributes the higher shareholder returns largely to additional government spending.
This difference between price and cost is illustrated in the energy field in a White Paper I wrote for the CO2 Coalition in 2019, *The Social Cost of Carbon and Carbon Taxes: Pick a Number, Any Number*. I found that the carbon tax required to make electric cars truly competitive with gasoline vehicles would quadruple the price of gasoline per gallon. Similarly, for onshore wind turbines to be truly competitive with natural gas for generating electricity a carbon tax that quadruples the price per kilowatt-hour of natural gas-generated electricity would be required.

Ms. Toplensky notes that, "Many big companies—the likes of Royal Dutch Shell, Air Liquide and Toyota - have green initiatives worth many hundreds of millions of dollars." As of this writing, these three firms together have market capitalizations of over $370 billion. A few hundred million is nothing more than a little "greenwash" to burnish their corporate reputations.

Finally, Ms. Toplensky points out that, "Globally, clean-energy investment is now expected to account for half of total investment in the entire energy sector this year, according to UBS." This may be true, but the benefits of these huge government expenditures may prove disappointingly small. According to the BP Statistical Review, in the year 2000, fossil fuels accounted for 87% of world energy use with renewables (excluding hydro) accounting for less than 1%. In 2018, after billions of dollars spent jamming renewable energy into the market, fossil fuels account for 85% of world energy use and renewables less than 5%. Not much of a transition so far.

Investors are of course always free to risk their money on firms reliant on government handouts for their business success. Shareholders of these companies should remember, however, that governments can withdraw this support just as easily as they can extend it. As consumers begin to see how little they are getting for the billions spent on renewable energy, these shareholder returns could easily vanish into air. I've left for another day a discussion of whether "renewable" is even the right word for solar and wind projects that require fossil-fueled mining, construction, transportation, infrastructure, and regular replacement. Caveat investor.

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