

Low Oil Prices & Clean Energy Transition

By Thomas Beck, AIA, NCARB

During the past century coal technology fueled the steel industry, without which modern infrastructure would not exist. The use of coal powered transportation in the form of railroads, which fueled much of the historical growth of our U.S. economy. Coal made possible the first electric power plants.

As we enter the 2nd decade of the 2nd millennium A.D., we are seeing exponential expansion of alternatives to fossil fuels as sources for energy. In the past 50 years the efficiency of solar and wind has increased substantially, and the cost of integrating renewables into our everyday lives is beginning to cost less than “traditional” fossil fuels like oil and coal.

Why is the use of coal still so widespread? There is the existence of already constructed power plants. Coal supports energy security, domestic production and employment in countries where petroleum and gas are not local commodities, in countries such as China.

Why is it desirable to thank coal for its service, and move on to new technologies? Burning coal pollutes air and waterways, affecting our health and wellbeing. Coal is among the most carbon intensive sources of electricity generation. Coal has become a more expensive source of electricity than gas, solar and wind. The cost of coal has stayed steady, while costs of solar, wind and gas have fallen. Long-term financial and economic concerns arise from the funding of coal plants due to changing administrations with greener priorities than those they replace. For example, South Korea is the third largest funder of new coal-fired power plant construction. The new administration, voted in a landslide election in April 2020 despite the coronavirus pandemic, ran on a “Green New Deal” platform in which they vow to defund future building of coal fired power plants. As tomorrow’s leaders increasingly embrace renewables, investment in these cleaner technologies will be rewarded. Supporting fossil fuel industries in the long-term is not a smart investment strategy.

According to [the energy transition.org](https://www.energytransition.org) article *Zombie Coal*, “In March, London-based Carbon Tracker issued a new report, ***How to Waste over Half a Trillion Dollars***, which showed that it is cheaper to build solar and wind than new coal plants in every major geography. Even more significantly, it found that in some cases it was cheaper to build new wind or solar than to even keep running existing coal-fired power plants. And by 2030, the think tank found that this would be the case everywhere.” Mike Scott in Forbes on April 30th, 2020, says “The cost of building new solar projects is now almost the same as the cost of operating coal-fired power plants that are already up and running, at an average of \$35/MWh.” Once solar and wind are constructed, the operation is far less expensive than the ongoing expense of operating coal-fired plants.

Here in the Estes Valley, our power provider, the Platte River Power Authority (PRPA), agreed in December 2019 to enter into the Western Energy Imbalance Market (WEIM) which will allow the utilities to provide more carbon-free energy and sell the wholesale power. This “crowd sourcing” will allow our utilities to keep our costs low while providing more carbon-free energy.

In the short term the low oil prices will help our tourist driven economy by making it easier for visitors to fill up their vehicles and tour our spectacular mountains. The summer is the peak season for use of electric power (primarily in the form of air conditioning). Solar and wind generation of electricity can help offset the carbon footprint of the fossil fuel powered stream of vehicles entering Estes Park.

To our credit, Estes Park has multiple Electric Vehicle Charging Stations in several locations. Ultimately, we will see far more electric powered vehicles as their ranges increase, the availability of charging stations increases, and the cost of purchasing them becomes affordable for the average American. Since we live next to one of the most visited National Parks in the country, I believe it is our moral obligation to encourage more sustainable energy use. This includes transitioning to electric vehicles charged by more and more sustainable power sources, not coal. As citizens living next the national treasure we locally enjoy, we must protect our clean air and water by transitioning away from coal. We need to encourage our local electric provider, Estes Park Light & Power, to source and generate more renewable power.

We must think of new ways to maximize our clean energy options. One thought would be for Estes Park Light & Power or PRPA to pump water back up hill at night using wind energy, then use the stored water (like a battery stores energy) to use the hydropower for our summer peak afternoon loads.

Finding innovative ways to harness clean energy is everyone's concern. Our health & livelihoods depend on it.

Beck, Thomas W. "Low Oil Prices & Clean Energy Transition ", *Estes Park Trail Gazette*, Friday, May 15, 2020