Baseload Electricity

Did you know there are two kinds of electricity? One is absolutely essential to everything in your life…even your survival. The other can be helpful, but it isn't necessary. Since the first kind of electricity is so important, you would think most people would know what it's called… but you would be wrong.

So, what's this critical form of electricity that most people have never heard of? It's called baseload power, provided by coal, natural gas, and nuclear. The not so important electricity goes by the name "intermittent."

Unreliable wind and solar don't actually produce electricity most of the time. Why am I telling you this? Because a lot of politicians don't seem to understand the difference between baseload and intermittent power, and the consequences can be costly and dangerous.

To keep electricity flowing to homes, businesses, and factories, the grid needs a steady flow of electrons. Baseload power from coal, nuclear, and large natural gas facilities provides those electrons 24/7. Intermittent electricity from wind and solar is added to the grid when the wind is blowing, or the sun is shining. But the intensity of the wind and sun go up and down… a lot. As they do, electric utilities increase or decrease electric input… usually from natural gas… to keep the grid stable. The flow of electricity must remain steady or the whole system goes down, causing a blackout.

Here's the big problem on the horizon. States have massively subsidized intermittent wind and solar while tightening regulations on all baseload power sources, including nuclear, which produces carbon-free electricity. As a result, a lot of baseload power plants have been forced into early retirement, which is dangerous for grid stability.

At last count 10 states have declared they will be 100 percent renewable in the next 25 years—so, no coal or natural gas, and possibly no nuclear. Politicians in these states naively believe they will be able to keep the grid stable by substituting battery power for baseload sources. That's impossible because batteries are enormously expensive and can only store a small fraction of the electricity needed to keep the grid functioning when wind and solar drop to low levels as they consistently do. For more on that, check out our video "Battery Fantasy."

The best example of politicians ignoring baseload electric reality is in Germany. It's Energiewende program, or "transition to renewables," is failing badly. The nation has spent well over 100 billion Euros on wind and solar and plans to spend an estimated 450 billion more in the next 20 years. Consulting giant McKinsey and Company evaluates Energiewende twice a year. One of Germany's largest newspapers summarized a recent report's findings as "disastrous."

Germany now has the highest electricity prices in Europe, more than double what Americans pay. The system is so messed up, sometimes consumers are actually paid to use excess electricity. But on hot summer days when the wind isn't blowing, people and businesses are told to reduce electric use to avoid blackouts. And in spite of gigantic investments, Germany's CO2 emissions have not dropped as much as other nations that have focused on adding natural gas generated electricity.

The results of Germany's expensive and dangerous experiment were entirely predictable. The United States can expect the same if politicians keep squeezing out reliable baseload electricity from coal, natural gas, and nuclear in favor of intermittent wind and solar.

For the Clear Energy Alliance, I'm Mark Mathis. Power On.