

## Flip The Fossil Fuel Script

Some people are so concerned about climate change they believe we should race to implement Green New Deal priorities as fast as possible. Wind and Solar technologies should power the world, they say. Ok! What would it look like if a genie could magically give them what they want, right now?

This is, of course, a silly fantasy, but since so many people naively believe that it's possible or even desirable, we thought indulging their fantasy would be a good opportunity to point out a fact that's almost never discussed.

Wind and solar provide so little energy- in America, less than four percent- it's easy to be blind to the significant downsides of these technologies.

Wind turbines slaughter birds and bats by the hundreds of thousands every year. The big blades kill large raptors such as hawks and bald eagles. The loss of so many bats is a serious ecological problem because they are prolific pollinators for agriculture. Large solar arrays also kill birds and bats and are deadly to a variety of animals and insects. Old wind blades and solar panels are toxic junk that cannot be recycled. This is already a large and rapidly growing environmental hazard.

Wind turbines are noisy. They produce a loud, repetitive thumping sound that no sane person wants to be near. Many years ago, nearly all industrial wind installations were built in areas where nobody lived. But now, they are encroaching on rural communities and people don't like it.

Many lawsuits have been filed because of negative health impacts, loss of property value, and a loss of quality of life. The turbines are such a life-altering menace, many communities have passed moratoriums stopping new wind development. The backlash is well underway even though wind provides only about seven percent of America's electricity production. Solar is a lot less than that.

Now imagine that our genie could flip the script so wind and solar could do the work that fossil fuels do now. It's not possible because oil, gas, and coal do much more than make electricity, but let's indulge the idea.

Wind and solar generated electricity would each have to be at least ten times as large as they are today. Ten times! The extreme impacts of the massive expansion of unreliable electricity technologies is difficult to imagine but let's stack up the negatives.

Wind and solar are inherently more expensive than coal, natural gas and nuclear. They produce electricity far away from the people who use it. Therefore, a ten-fold expansion would result in hundreds of billions of dollars spent on thousands of miles of new and upgraded transmission lines. These unattractive power lines will become an unavoidable eyesore no matter where you are.

Wind turbines and solar panels require large amounts of rare earth minerals and critical metals. A massive increase in wind and solar would necessitate mining on a scale never seen in world history. By the way, China produces and refines most of these resources. See our two-part series “Rare Earth Emergency” for more on that.

Wind and solar only produce electricity 25 to 35 percent of the time, so they require backup power. Batteries are a wildly-expensive non-alternative. The only practical solution would be to build hundreds of natural gas power plants costing billions to provide electricity when wind and solar don't. This unnecessary redundancy creates very expensive inefficiencies. Electricity prices would spike significantly, to three, four, five maybe ten times what we pay now.

The technical challenge of trying to accommodate so much unreliable electricity on grid systems is not something we know how to manage. The blackouts we've seen in California are just a small sample of what would be a widespread reality.

The impact on many species of birds, especially large raptors, would be devastating. Bat populations that are already declining would likely disappear in many regions. The consequences to insects, other wildlife, and agriculture would be potentially catastrophic. Shocking, isn't it?

Some people imagine a future dominated by wind and solar because they don't personally see the significant negative impacts that come with these technologies. Wind and solar will never be 10 times larger than today. That's because as they grow there will be no hiding the giant problems that for most people are currently out of view.

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

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