



Power Lunch

## The Green Energy Economy Reconsidered

Jerry Taylor and Peter Van Doren 03.29.11, 6:00 AM ET

"Green" energy such as wind, solar and biomass presently constitute only 3.6% of fuel used to generate electricity in the U.S. But if another "I Have a Dream" speech were given at the base of the Lincoln Memorial, it would undoubtedly urge us on to a promised land where renewable energy completely replaced fossil fuels and nuclear power.

How much will this particular dream cost? Energy expert Vaclav Smil calculates that achieving that goal in a decade--former Vice President Al Gore's proposal--would incur building costs and write-downs on the order of \$4 trillion. Taking a bit more time to reach this promised land would help reduce that price tag a bit, but simply building the requisite generators would cost \$2.5 trillion alone.

Let's assume, however, that we could afford that. Have we ever seen such a "green economy"? Yes we have; in the 13th century.

Renewable energy is quite literally the energy of yesterday. Few seem to realize that we abandoned "green" energy centuries ago for five very good reasons.

First, green energy is diffuse, and it takes a tremendous amount of land and material to harness even a little bit of energy. Jesse Ausubel, director of the Program for the Human Environment and senior research associate at Rockefeller University, calculates, for instance, that the entire state of Connecticut (that is, *if* Connecticut were as windy as the southeastern Colorado plains) would need to be devoted to wind turbines to power the city of New York.

Second, it is extremely costly. In 2016 President Obama's own Energy Information Administration estimates that onshore wind (the *least* expensive of these green energies) will be 80% more expensive than combined cycle, gas-fired electricity. And that doesn't account for the costs associated with the hundreds of billions of dollars worth of new transmission systems that would be necessary to get wind and solar energy--which is generally produced far from where consumers happen to live--to ratepayers.

Third, it is unreliable. The wind doesn't always blow and the sun doesn't always shine when the energy is needed. We account for that today by having a lot of coal and natural gas generation on "standby" to fire-up when renewables can't produce. Incidentally, the cost of maintaining this backup generation is likewise never fully accounted for in the cost estimates associated with green energy. But in a world where fossil fuels are a thing of the past, we would be forced--like the peasants of the Dark Age--to rely upon the vagaries of the weather.

Fourth, it is scarce. While wind and sunlight are obviously *not* scarce, the real estate where those energies are reliably continuous and in economic proximity to ratepayers *is* scarce.

Finally, once the electricity is produced by the sun or wind, it cannot be stored because battery technology is not currently up to the task. Hence, we must immediately "use it or lose it."

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Fossil fuels are everything that green energy is not. Approximately 1,000 cubic feet of natural gas (which cost approximately \$4.00) can generate the same amount of electricity as running an average rooftop solar system for 131 days. It is comparatively cheap. It is reliable; it will burn and produce energy whenever you want it. It is plentiful (we use only a tiny bit of oil in the electricity sector). And you can store fossil fuels until you need them.

Proponents of green energy argue that if the government can put a man on the moon, it can *certainly* make green energy economically attractive. Well, notice that government was not trying to get a man to the moon *profitably*, which is more akin to

the challenge here. Even before the Obama presidency began, about half the production costs of wind and solar energy were underwritten by the taxpayer to no commercial avail. There's little reason to think that a more sustained, multi-decade commitment to subsidy would play out any differently. After all, the federal government once promised that nuclear energy was on the cusp of being "too cheap to meter." That was in the 1950s. Sixty-one billion dollars of subsidies and impossible-to-price regulatory preferences later, it's still the most expensive source of conventional energy on the grid.

The fundamental question that green energy proponents must answer is this: if green energy is so inevitable and such a great investment, why do we need to subsidize it? If and when renewable energy makes economic sense, profit-hungry investors will build all that we need for us without government needing to lift a finger. But if it doesn't make economic sense, all of the subsidies in the world won't change that fact.

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