

The inconvenient truth about green and alternative energies

At a superficial level, the appeal of so-called renewable energy is understandable

TORONTO — The Obama administration's laudable Power Africa initiative aims to increase electricity generation and access to modern energy services in six poor African countries.

Far from promoting affordable, reliable and proven power generation technologies, however, this and other plans favored by so-called "sustainable development" experts prioritize almost exclusively trendy solar and wind power generation.

As is all too typical of projects in which utopians and opportunists spend someone else's money on another person, Power Africa's promoters display very little concern about effective results and the worldwide failure of "green" energy policies in developed economies.

For instance, after years of gobbling up massive subsidies, in 2012, wind and solar power generated respectively about 3 percent and less than 1 percent of the electricity produced in the United States, while in Europe these investments have turned into financial black holes that one government after another is now trying to extirpate itself out of — and sometimes by importing American coal to keep the lights on.

At a superficial level, the appeal of so-called renewable energy is understandable. After all, (almost) every day the sun shines, the wind blows, the tides roll, and we live on a molten rock. And yet, "green" energy promoters are oblivious to the fact that humanity's dramatic leap out of poverty only began as coal-powered steam engines displaced windmills in the 19th century.

Since then, apart from renewable (but nowadays not trendy) large-scale hydroelectric and (somewhat costlier) nuclear power, most of humanity's reliable and affordable energy has come from coal, petroleum and natural gas.

Unfortunately, the biggest success of wind and solar power spin doctors has been to equate "renewable" with "sustainable" and to make this minor consideration more important than all others. But even on this issue, consider the following inconvenient facts:

— Because they require much open land in regions where wind conditions are well above average, wind turbines are typically built in locations



By Hiroko Shimizu
For The Drill

such as hilltops and coastlines, where they typically destroy natural beauty and cause serious erosion problems.

— Renewable power sources are land-hungry. To generate the same number of kilowatts, on average, wind energy needs about 140 times more land than Colorado's typical natural gas wells, while on average solar power requires about 47 times more land than a south Texas nuclear plant.

— Windy corridors are typically favored by migratory birds, unfortunately turning strategically located wind turbines into giant Cuisinarts in the process. According to one estimate, between 75,000 and 275,000 birds, several of which are rare and endangered — such as whooping cranes and golden eagles, along with a very large number of bats — are killed each year by U.S. wind turbines.

According to European studies, a typical wind turbine kills between 333 and 1,000 birds and bats annually in Spain, up to 309 birds in Germany, and as many as 895 birds and bats in Sweden. Based on this data, the America's more than 40,000 turbines could easily be killing between 13 million to 39 million birds and bats every year.

— Even solar power turns out to be lethal to avian life, as

the newly-opened California's Ivanpah giant solar power generating station has already scorched and burned dozens of birds.

True, these numbers must be put into perspective, if only by pointing out that in the U.S. alone, domestic and feral cats are thought to kill between 1.3 billion and 4 billion birds each year. And yet, environmental activists are apparently only interested in fingerpointing operations such as a Canadian oil sand company that had to pay a \$3 million fine for accidentally drowning 1606 ducks (or \$1868 per duck) in a tailing pond in 2008. In the grander scheme of energy production things though, coal, petroleum and natural gas turn out to be birds' and bats' best friends.

Another common talking point of allegedly green energy promoters is that solar rays and the wind are free. True enough, but the construction and maintenance of wind turbines and solar panels are not. Actually, once the costs of operating and maintaining them, along with their short lifespan are factored in, they turn out to be prohibitively expensive.

On top of this, the most suitable locations for wind and solar power generation are typically remote from urban mar-

kets, which mandate additional and costly transmission, and other infrastructure costs.

For instance, in 2010 in the U.S., the subsidies for solar power was a whopping \$775.64 per megawatt hour. It was \$56.29 for wind, \$3.14 for nuclear power, 82 cents for hydroelectric power, and \$64 cents for coal, natural gas and petroleum liquids.

When factoring in all subsidies, the real cost of electricity for taxpayers and consumers turned out to be \$891.04 per megawatt hour for solar, \$171.69 for wind, \$118.54 for nuclear, \$116.22 for hydroelectricity and \$116.04 for coal, natural gas and petroleum liquids. The "greener" aspect of wind and solar power, it turns out, is the amount of green it puts into its promoters' pockets.

Other longstanding problems of wind and solar power generation include the following:

— Even in the best locations, the wind never blows and the sun never shines as much as their alleged theoretical potential. The result is intermittent (or irregular) power that requires significant backup power generation, ideally natural gas or hydroelectric power that can be brought online or turned off quickly. The problem is not only that consumers pay twice for infrastructure, but that carbon-powered backup generation plants — especially coal-powered plants — are used less efficiently because they are used intermittently, in the process generating more greenhouse gas emissions per unit of power produced than if they were used on a steady basis. Because of this, recent reports suggest that even Germany and Denmark have failed to cut their carbon emissions at all despite installing large numbers of wind turbines.

— Lanthanum, neodymium, dysprosium and other rare earth elements used in products such as high-capacity batteries, hybrid-electric vehicles and wind turbines are extremely polluting to produce.

As has long been obvious in Western Europe and North America, and more recently in China, a modern economy cannot be built on a foundation of

countless little distant, costly, intermittent, unreliable, and low-density power sources.

Until something truly innovative and better comes along, the only proven way to lift millions of people out of poverty are old-fashioned, but affordable, effective and reliable fossil fuels.

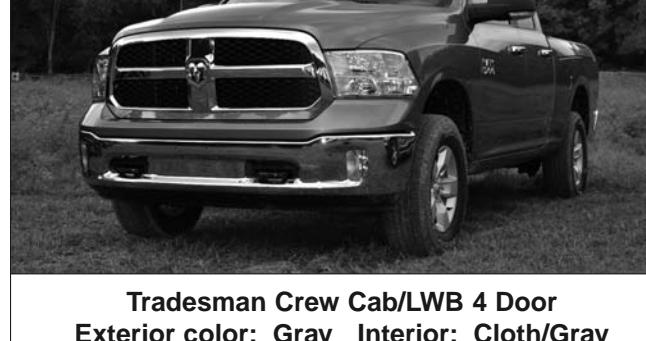
Unfortunately for the "beneficiaries" of initiatives such as Power Africa, green ideologues have long been deaf and blind to the damning evidence on their pet projects.

Feeling good, it seems, is more important to them than actually doing some good. In a year that made "polar vortexes" part of everyday conversations, however, many Americans now hopefully realize that affordable and reliable energy is not only a matter of comfort and convenience, but also of life and death.

Shimizu is a policy and co-author of the book "The Locavore's Dilemma: In Praise of the 10,000-mile Diet."

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