

China To Become Green Super Power?

WASHINGTON – Many Western environmentalists and commentators openly praise China for its declared energy policy objective of turning itself into a truly “*Green Super Power*”. They claim that, unlike Trump’s America, (ignorant and backward), China (smart and forward-looking) truly understands the threat of global warming, and is actually doing something very serious about it.

Hundreds of billions for green power projects

Indeed China has committed hundreds of billions of dollars to renewable energy projects. It is leading the world in massive investments in wind and solar projects, with more to come.

Contrast that with heretic America now led by a President who believes and publicly affirms that global warming is nothing but a hoax. Indeed, instead of leading the way in renewable energy investments, President Trump’s America promises to revive (dirty, high emissions) coal production, while he just signed executive orders that will re-start two major oil pipeline projects that had been blocked by President Barack Obama, at least in part because of environmental concerns.

Responsible China

So, there you go. Communist China’s leaders are acting as responsible stewards of our Planet Earth, while democratic America is the prisoner of anti-science bizarre bigotry that ignores “the facts” about green house gases and global warming, and the dire consequences of disastrous energy policies still based on fossil fuels that will end up cooking the world.

The truth is more complicated

Well, this is how the critics of American policies would like to frame the argument. But the truth is far more complex. It is indeed true that China is investing very substantial amounts in green energy projects. But it is also true that renewables are and will continue to be a small fraction of China's power generation capacity. The fact is that China relies today and will continue to rely in the future mostly on coal –yes, old-fashioned dirty coal– to produce about 66% of its electricity.

In contrast, if you look at the current mix, U.S. electricity generation is on balance far greener.

Green America?

In the U.S. coal is now used for only 33% of power generation, a much lower proportion than China's, (50% less, in fact). On account of the shale gas revolution that made natural gas abundant and cheap, America now relies on low emissions natural gas for 33% of electrical generation capacity. This percentage is destined to increase, mostly at the expense of dirty coal. While this transformation is driven by market factors, as opposed to government green policies, the added bonus here is that natural gas is a much more environmentally friendly fossil fuel.

If you add 20% of power generation produced by nuclear and 6% from hydro, (an old-fashioned source of renewable energy), the picture is not that disastrous.

Less coal, more natural gas

While the contribution from other renewables is still rather small in America –solar represents only 0.6% of total power generation capacity, while wind is a still a modest 4.7%– the fact remains that America relies on coal for only 33% of its power generation, while China uses this dirty fuel for almost 70% of its total electricity generation.

So, looking at the numbers, (to date at least), America is far greener than China.

The truth is that coal-fired plants are and will continue to be for years to come the major electricity producers in China. Even at current levels of new investments in renewables, it will be a long time before China becomes green in a meaningful sense.

Biomass

In the meantime, if we break down China's renewable energy mix, we see that (if we exclude hydro) by far the biggest percentage is represented by biomass. As noted by Bjorn Lomborg in a recent op-ed piece published in The Wall Street Journal (A "Green Leap Forward" in China? What a Load of Biomass, February 5, 2017):

"It is peculiar—though unsurprising given the sensibilities of Western environmentalists—that those who celebrate China's "Green Leap Forward" almost always focus on wind and solar technology. By far the largest source of renewable energy used in China is traditional biomass—that is, people burning charcoal, firewood and dung, as China's poor do to stay warm. Biomass is the biggest source of killer air pollution in the world."

Health concerns

As biomass energy production entails burning animal dung, wood and charcoal, this type of fuel is hardly green, because of the fumes and soot produced by its combustion. If you consider that in China biomass is used for home heating and cooking mostly by the rural poor, this means that the fumes released by these "green fuels" cause a variety of respiratory diseases to vulnerable, low income people.

It will take a long time

So, what is really going on here? It is true that China is committed to increasing the percentage of its electricity generation provided by clean solar and wind. In absolute numbers, China's renewable generation added capacity is truly impressive. However, as a percentage of the total (keep in mind that China has a population of 1.3 billion energy users), this contribution from renewables is and will continue to be rather modest.

Still reliant on coal

The fact is that major efforts in wind and solar notwithstanding, China still relies and will continue to rely on traditional dirty coal as the key component of its power generation mix for many years. In fact, while wind farms are built, China is adding more coal-fired generation.

It is therefore a misrepresentation to state that China is well on its way to becoming a "Green Super Power". While the intention may be there, it will be a long time before China will be able to rely mostly on renewables for its power generation needs.

Let the markets decide

The larger lesson here is that in the end it will be superior technology delivered at competitive prices that will tilt the power generation balance. When renewables will be really cost competitive without subsidies, then they will be adopted on a massive scale in China, in America and elsewhere.

Right now, at least in the West, the push for early adoption of still expensive technologies is not driven primarily by economic considerations. It is pushed forward by policy-makers through mandates, set asides and tax breaks created because of strong environmental concerns.

While this is understandable, we should not muddy the waters by arguing that if China can go all the way with renewables,

so should America. China is doing something important. But, on close inspection, a lot less than what is stated by Western environmentalists.