## Roth: China's slowing economy and its impact on global energy

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## China's slowing economy and its impact on global energy

As China "rebalances" its economy, shifting away from manufacturing and exports to consumption and services, its energy demand continues to plummet.

In a recent report, the International Monetary Fund indicates that several factors are contributing to the sharp decline in growth and demand in China, including: the aging workforce and higher life expectancy, the slowing of technological advancements, and declining productivity. Others cite the declining workforce participation and tax base as young, working-age individuals pursue higher education instead of entering labor markets, as well as a shrinking middle class as the wage gap continues to expand.

Part of the problem is China's economic structure: It is driven by exports, as opposed to being dependent on domestic consumption. This becomes a problem when advanced economies, such as the United States, experience economic downturns that curb growth and demand. Some economists predict slow U.S. growth over the next several decades due to the aging population, increased student debt, and increased income inequality. This will cause U.S. imports to decline, which will in turn negatively impact China's export-centric economy.

Another major factor causing reduced demand in China — especially its demand for fossil fuels — is China's shift in energy policy. China is taking action to combat climate change. President Xi Jinping has announced that China will implement a nationwide cap and trade system in 2017.

China is a global leader in wind power, adding 19.8 gigawatts of wind turbines to its grid in 2014 alone, and it added more solar panels than any other country that same year. The expansion of renewables in China has led to increased competition for fossil fuels, which has contributed to the sharp decline in demand for conventional energy.

Both China's change in economic policy and its clean energy strategy have affected global energy markets and caused coalboom towns, such as Yulin, to turn into so-called "ghost cities."

China's shift away from coal to gas and renewables has contributed to the sharp drop in coal prices in recent years.

Thermal coal prices have fallen about 60 percent from a 2011 peak, and Brent oil prices have fallen approximately 75 percent over the same time frame.

The demand for oil in China has dropped dramatically, partially due to its improved consumption efficiency. A 2015 study showed that "oil demand (in China) grew about 0.69 percent for every 1 percent of GDP growth in 2014, which is significantly lower oil intensity than the 0.94 percent ratio that prevailed ten years ago."

China's demand for natural gas has also slowed down, which has been caused, in part, by government-regulated pricing. As global oil prices continue to drop, both oil and coal have become cheaper alternatives to natural gas. While China's natural gas consumption had been increasing at rates in the double digits since 2000, its increase in gas consumption was only about 3 percent in 2015. This data shows that even clean technologies like natural gas are not immune to the overall drop in energy demand in China.

One positive result from China's shift to clean technologies is that it is providing significant opportunities for private investment and innovation. For example, Apple Inc. announced that it will invest millions of dollars to build over 200 megawatts of solar capacity in China. Many diplomats and conservationists, such as former Treasury Secretary Henry Paulson, believe that China is in a unique position to lead the world in sustainable development. They see the U.S. playing a key role in advancing technology to meet China's growing — albeit slower than expected — energy demand. There is still American opportunity in a slowing global economy.

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