

By the Numbers: China, the U.S., and Clean Energy Deployment

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China Leads in Deploying and Benefiting from Clean Energy Technologies

China isn't just the best at making clean energy technologies, it is also the best at using them. As a result, China will be less reliant on fossil fuels – resources that the rest of the world is all competing for. This means greater energy independence for China, while the U.S. remains reliant not only on overseas oil, but also on Chinese exports.

1,242 GW the total electric capacity China is expected to have installed by 2020. ¹ This is a 38% increase over its 2010 installed energy capacity of over **900 GW**. #

150 GW the additional wind, solar, and biomass energy capacity China is expected to install between 2010 and 2020 based on its recently-released 12th Five-Year Economic Plan. ² The U.S. is projected to install only **19 GW** between 2009 and 2020, or **87%** less than China. ³

Consistent with China's plan to deploy **7.6 times the amount of clean energy** in 2020 as it had in 2009, renewable energy sources are expected to provide approximately **15%** of China's electricity generation. ⁴

China Implements National Policies to Encourage Its Nascent Energy Markets

While the demand is rising for clean energy technology, China has decided to speed up its developing market by strategic policy initiatives aimed at spurring greater investment into energy technologies. While the U.S. continues to limp along without a national energy policy, China is striving to create a domestic market for clean energy

knowing that will lead to its companies having greater strength in the international market.

40%-45% reduction in carbon intensity mandated by China by 2020 under a national consumption cap implemented as part of its 12th Five-Year Plan. ⁵

16% China's five year energy intensity reduction goal. ⁶

\$14.20 amount of China's implicit price on pollution, based on policies encouraging the deployment of clean energy and discouraging the continued deployment of conventional fuels. ⁷ China is expected to implement a pilot program that puts an explicit price on carbon between 2011 and 2015. ⁸

\$5.10 amount of the United States' implicit price on pollution, based on similar criteria. ⁹

42.2 miles per gallon. China's nationwide fuel economy standard for vehicles by 2015. ¹⁰ The U.S. requires that a **34.1 mpg** standard be met by 2016, though the Administration recently proposed an increase to 56.2 mpg by 2025. ¹¹

72 GW total capacity of inefficient plants shut down by China resulting in a more competent and effective Chinese energy fleet. ¹²

15% China's required production of electricity from renewable energy by 2020. ¹³

China Provides Its Energy Industries Startup and Operating Capital

\$114.1 billion: Total Chinese public and private capital investment in clean energy in 2009, while total United States public and private capital investment in clean energy, excluding temporary Recovery Act funding, was **\$21.1 billion.** ¹⁴

\$35 billion in finances provided by the China Development Bank to private firms for clean energy in 2010 while the United States' Federal Financing Bank provided **only \$2 billion.** ¹⁵

\$54.4 billion Chinese private investment in clean energy in 2010, compared with **\$34 billion** of private investment in the U.S.¹⁶

China's Energy Successes from Its Investments

One out of every 2 wind turbines installed in 2010 were installed in China.¹⁷ China installed three times as much wind power capacity during 2010 as the United States (18.9 GW vs. 5.1 GW).¹⁸

44.7GW China's total installed wind capacity in 2010.¹⁹ It surpassed the U.S., which had **40.2 GW** of installed wind capacity, making China the largest wind market in the world.²⁰

43%: Share of global nuclear projects in 2009 under construction or developed in China.²¹

- **25:** Number of new plants under construction in China, leading to an expected tenfold increase in capacity to 80 GW by 2020.²²
- **4:** Number of new plants now expected to be constructed in the U.S. by 2020.²³

3: Number of advanced fast reactors planned to begin construction in China, with the first two planned to be started by 2013.²⁴

- **0:** The number of next generation nuclear reactors planned for construction in the U.S.²⁵

50 GW China's stated goal for total installed solar capacity by 2020.²⁶ The U.S. has no stated national goal for installed capacity by 2020.

8,358 km operating distance of high speed rail (greater than 200 km/hr) in China at the end of 2010. The country is planning to add an additional 16,000 kilometers by 2015.²⁷ The U.S. only had **1,270 km (789 miles)** of what is technically high speed rail at the end of 2010.²⁸

END NOTES

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