

China wind farms sprout amid 'green' energy push

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A farmer walks with his cow past rural housing in the shadow of a wind farm developed by state-owned China Energy Conservation Investment Corp in Zhangbei, north of Beijing, Hebei province. While a couple of years ago only a few dozen of the 80-metre (262-foot) propellor-like turbines stood on the wind farm's vast open expanse of grass, today there are 200 and counting.

As Deng Hui looks out at a forest of towering turbines dotting his company's wind farm north of Beijing, a cold, drizzly wind howls in his face, but he doesn't mind.

"That's the sound of money being printed," laughs Deng, general manager of the wind farm developed by state-owned China Energy Conservation Investment Corp.

A couple of years ago, only a few dozen of the 80-metre (262-foot)

propellor-like turbines stood on the wind farm's vast open expanse of grass. Today it has 200 and counting.

The facility's growth is but one example of soaring investment that has made China an emerging world leader in wind energy, with potentially huge benefits for the environment in both China and the world.

With close to 80 percent of China's energy supplied by cheap but heavily polluting coal, the government has laid ambitious plans to raise the use of renewable energy, such as the winds that rake northern and western China.

"It's not like people are still talking about wind as a potential future direction. It is already the way forward for a lot of power companies in China," said Yang Ailun, climate and energy campaign manager for Greenpeace China.

But the pace of wind energy's development in China has surpassed even the most optimistic projections.

After setting an original goal of 30 gigawatts of installed wind power by 2020, the government recently said that could be raised to 100 gigawatts as installed capacity has doubled each of the last four years.

From almost nothing a few years ago, China had 12.2 gigawatts of installed wind power by the end of 2008 as power companies have rushed to meet government mandates to raise the proportion of energy they produce from [renewable sources](#).

There are about 121 gigawatts of installed wind power worldwide, according to the Global Wind Energy Council (GWEC), with the United States, Germany and Spain the top three wind power nations, followed by China.

In June, authorities in northern China's windswept Gansu province detailed plans for a "Three Gorges of Wind Power," a reference to the massive Three Gorges hydroelectric dam on the Yangtze River.

Gansu's plans alone would nearly match the eventual 22.5-gigawatt installed output of the dam, the world's largest hydroelectric project. Other provinces are discussing similarly ambitious plans.

Installed capacity has grown so fast that it has outpaced the electrical grid's ability to accommodate the newly generated electricity, leaving much of the output of Deng's wind farm going to waste.

"Our nation's wind power has developed very fast but the distribution system's development has lagged. This was an unavoidable problem with wind," he said.

Of China's 12.2 gigawatts of installed power in 2008, only 8.9 gigawatts made it into the electrical grid, said Qiao Liming, GWEC policy director.

The problem has been exacerbated by the fact that [wind farms](#) in remote regions rich in the resource are too far from electrical grids.

"In the past two or three years this has really become a serious problem in [China](#)," said Qiao.

Another issue is a project bidding process widely viewed as lacking transparency and which sets wind electricity tariffs too low for wind farms to turn a decent profit, she said.

But the government has shown increasing concern about these hurdles and appeared set to solve them, Qiao said, noting that an economic stimulus plan unveiled last year will include heavy investments in

electrical grid expansion.

"It's part of a process. Because of the huge wind farm development that just happened in recent years... it takes some time for the government to really solve such issues," she said.

The growing pains are not stopping development of wind farms like that managed by Deng, located on the edge of the Mongolian steppe and reached via a three-hour drive north of Beijing along a highway dotted with huge trucks hauling 40-metre long wind turbine blades toward the plains.

Deng said hundreds more of the 80-metre tall turbines are planned.

"Despite the problems, the government is working to coordinate the development of the grid and wind farms. This will create an even better path for [wind power](#)," he said.

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