

ECONOMY & POLICY

China Drafts Smart Grid Plan for Renewable-Energy Future

By Jackie Cheung

HONG KONG (CBID) Sept. 14 -- China is preparing to unveil by the end of this year a nationwide plan to invest hundreds of billions of yuan to smarten up and extend its power distribution networks, which experts say will speed up the development of renewable energy in the country for the decade to come.

As a giant country with giant energy needs that are expected to double by 2020, China has committed to reducing its reliance on oil and increasing the application of renewable energy.

But the big stumbling block to lowering dependence on coal-fired power plants is the difficulty renewable-energy producers have in transmitting the electricity they generate in remote areas, like northern China's Inner Mongolia region, to the energy-hungry cities in affluent parts of the country like eastern China.

"The development of some renewables - most notably wind power - is outpacing the development of a grid to deliver that power," Lou Schwartz, president of Pittsburgh-based advisory firm China Strategies LLC, said in an interview. "There is a plan to steadily increase the amount of renewables that are produced in China, and a smart grid is an integral part of that plan."

China has already become the world's largest renewable-energy producer in terms of new capacity installed since 2007, according to The Climate Group, a London-based non-profit body. But most renewable-energy generation in China takes place in remote areas not covered by the existing grid system, DBS Vickers Securities Holdings Pte Ltd. analyst June Ng said.

A smart grid would apply digital technologies to modernize and automate transmission and distribution assets in a way that anticipates and responds to system disturbances. Such a system can also provide the information end users need to control their energy consumption effectively.

As a smart grid allows much more active monitoring, switching and management of power, it enables greater use of weather-dependent renewable energy sources that can't always produce consistent power output. If more renewable energy sources are connected to the grid, they could help pick up the slack if there are power outages in key cities like Shanghai, where most power comes from conventional coal-burning plants.

A sophisticated electric grid could also decide when to charge electric cars, preferably late at night when demand is lower. As such, the power producers can reduce the cost of keeping electricity reserves by shifting demand to different times.

In China, the government is taking the lead to put these ideas into practice. Officials have said they will unveil more details of the smart-grid development in the country's twelfth five-year plan to be announced by the year-end, with the total investment reaching as much as US\$100 billion.

"They've got a strong economy to push forward the massive program," said Jason Rodriguez, director of research at Zpryme Research & Consulting LLC, whose recent study shows China has already topped a list of 10 major countries in smart grid investments this year.

Zpryme expects the Chinese government to spend US\$7.3 billion on modern grid technologies and related investments in

2010, with the United States close behind at US\$7.1 billion.

The International Energy Agency said in July that China overtook the United States as the world's largest energy user last year, consuming 2.252 trillion tonnes of oil equivalent. The Chinese government, however, dismissed the claim.

China has pledged to increase the proportion of non-fossil energy use to 15 percent of primary energy consumption in 2020 and to reduce carbon intensity by 40 to 45 percent in 2020 from 2005 levels.

State Grid Corp. of China, which is responsible for 80 percent of the country's power distribution, is running a demonstration project called "Magic Box" at the Shanghai World Expo. The display features an electric tunnel explaining how a "green grid" can improve people's lives.

In June, the government-owned electricity distributor released its smart-grid technology standards and a development plan for key facilities to be used in the system. It said earlier it will invest 25 billion yuan (US\$3.7 billion) in 228 pilot projects, with the aim of putting them on stream by 2020.

Considering the sheer amount of money pouring into China's smart-grid system, foreign companies -- mostly partnering with local firms -- have been vying to play a major role.

General Electric Co. is tying up with the city of Yangzhou, in eastern China's Jiangsu province, for a pilot program to showcase how renewable-energy sources can be integrated into the grid.

German industrial giant Siemens AG has signed separate agreements with Hong Kong-listed power meter maker Wasion Group Holdings Ltd. and grid equipment maker Rongxin Power Electronic Co. Ltd. to explore the smart-grid market.

"China will become the largest energy consumer in the next decade," Wolfgang

Dehen, chief executive of Siemens's energy business unit, said in a statement earlier. "We are committed to applying our extensive power technologies to help Chinese customers improve their energy efficiency while reducing emissions."

Similarly, International Business Machines Corp. formed a joint venture with China's ENN Group Co. Ltd. in November last year focusing on "intelligent energy." IBM and ENN Group, the energy firm that controls Hong Kong-listed XinAo Gas Holdings Ltd., said they will join hands in "innovative energy services" and promote intelligent-city programs throughout China but haven't disclosed many details.

None of these multinational companies has yet built a successful business case, but no one would want to miss out on such a huge opportunity.

"It will be interesting to see to what extent these companies participate beyond the expertise or technologies that the Chinese don't have," Schwartz said. "Reciprocal participation in government-supported infrastructure projects in the renewables space is key for the US or other Western countries to accomplish the 'win-win' that the Chinese emphasize."

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Pilot Shortage Threatens Growth, Safety at Fast-Expanding Chinese Airlines

By Peimin Suo

HONG KONG (CBID) Sept. 14 -- The year 2001 could be thought of as the beginning of China's Golden Age of air travel with millions more flying and airlines rushing to accommodate that demand. A shortage of pilots is, however, holding the airlines back from meeting that demand and in some cases threatening the safety of passengers.

A recent air crash and a scandal in which pilots were found to have forged their credentials show that the government