

INVESTING IN CHINA

Aiming to become an innovation-based economy

China just might tinker its way to a breakthrough. “Innovation is a mark of maturity, of sophistication, of arriving,” says Louis B. Schwartz, president of China Strategies LLC, a consulting, legal and business intelligence firm based in Pittsburgh. The Chinese “plunge in, plan, implement and then see how it works. And when they see how it works, they tinker and keep tinkering. Tinkering is getting results.”

Ashok Bhargava, director of the energy division of the Asian Development Bank (ADB) in Manila, agrees. “They import and then re-innovate. They operate existing imported technology, then they go about pushing the technological boundaries. This is what they have successfully done in a number of areas.”

But incremental innovation isn't enough. China wants brag-worthy breakthroughs. Its 12th Five-Year Plan, unveiled in March, sets lofty goals for innovation.

Innovation goals

Among the plan's goals for innovation are:

- Raising research and development spending to 2.2% of gross domestic product from 1.5% currently;
- Registering 3.3 patents for every 10,000 people;
- Breaking through in seven emerging strategic industries: new-generation information technology, energy-saving and environment protection, new energy, biology, high-end equipment manufacturing, new materials and new-energy cars.

“Focusing on these seven strategic emerging industries, of which four are clean-tech-based industries, the Chinese government continues its focus on transforming the country from being mainly a place for outsourcing manufacturing to being an innovation-based economy,” says Gil Forer, global clean-tech leader for consultancy giant Ernst & Young, based in New York. China wants those seven industries, which made up 2% of GDP last year, to account for 15% of GDP by 2020.

“China will accelerate the development of these strategic industries through increased international cooperation to promote research and development, encourage local and foreign investments and create financial incentives,” he says.

The fact that three of the seven strategic industries are related to clean technology is logical, considering the plan also lays out tough requirements for the environment and clean energy:

- Raising non-fossil fuels to 11.4% of primary energy consumption (in addition



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- to hydroelectric power);
- Cutting energy consumption per unit of GDP 16%;
- Slashing carbon dioxide emissions per unit of GDP 17%.

To accomplish that, China wants, by 2020, to have 100 gigawatts of wind power, up from about 40 gigawatts at the end of 2010, and 20 gigawatts of solar photovoltaic power, up from 0.5 gigawatts in 2010. These are huge numbers. The wind goal alone is more than all the electricity-generation capacity in a country like Australia, notes Mr. Bhargava of the ADB.

Ernst & Young named China the most attractive location in the world for renewable energy projects,

first in the third quarter of 2010 and again in the first two quarters of 2011, but with an even wider lead over No. 2, the U.S., thanks in part to China's diversification of its renewable energy portfolio and an increased focus on offshore wind farms and concentrated solar power.

Ambitious targets

“China invested nearly \$55 billion in renewable energy last year and was ranked No. 1, for the first time, in wind turbine installations. Also, China's 12th Five-Year Plan demonstrated the country's commitment to clean-tech, including renewable energy, through ambitious renewable energy tar-

gets and increased investment plans,” Mr. Forer says.

While China works on innovations in renewable energy, it also has continued to tinker with older technologies, to make them cleaner and more efficient.

“The coal-fire efficiency in new power plants is comparable to anywhere else in the world. Having slowly moved from sub-critical to ultra super critical, they are operating at extremely hot steam levels that are not achieved even in the U.S.,” says the ADB's Mr. Bhargava.

The text of this Special Advertising Section was written by Catherine Bolgar

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