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CHINA – the emerging Green Dragon?

As China forges ahead in developing renewable energy and clean technology, accountants are cashing in on the booming sector, writes *Helen Luk*

As global warming intensifies and fears of oil depletion looms, the world is in desperate need of alternative energy and for China, that goes double. Pollution woes have become a big headache for Chinese leaders in recent years, as the nation hurtles towards full industrialization. During last summer's Olympic Games, Beijing was forced to shut down heavy industries around the capital and ban motorists from using their cars daily to get its air clean enough to host the athletic events. China overtook the U.S. as the world's top emitter of greenhouse gases last year and is under growing pressure to clean up its act.

"We all felt the environment is sacrificed under the economic reform – the air is polluted, drinkable water in China is diminishing, so there is an urgency out there for China to develop alternative energy," says Bonnie Zhang, audit partner of Deloitte China's clean technology team.

The central government's goal is to reduce energy consumption per unit of China's GDP by 20 percent and major pollutant emissions by 10 percent from 2005 levels by next year. The National Development and Reform Commission has set a target of doubling China's use of renewable energy by 2020, when non-fossil fuel will make up 15 percent of its total energy consumption, up from today's 8 percent. To reach this goal, Beijing pledged to invest 1.5 trillion yuan in environmental protection in its 11th five-year plan (2006-2010), doubling the amount it spent in the previous five-year period.

Chinese leaders acutely realized last year the need to reduce the country's heavy reliance on coal for generating electricity when commodity prices skyrocketed and crude oil prices soared above US\$140 a barrel. Since then, falling oil prices and the global recession have both done their part to dampen investments in capital-intensive clean energy businesses. According to the Cleantech Group,



+22

a U.S. market researcher, global clean technology venture investments dropped to US\$1.7 billion in the fourth quarter of 2008, down 35 percent compared to the previous quarter.

“The plunge in oil prices has lowered the incentive to develop renewable energy. But the impact is probably short-lived since many governments around the world are still putting in resources to encourage investments in this sector,” says Ringo Choi, managing partner of China South and leader of Ernst & Young China’s venture capital advisory group.

Chan Ka-keung, managing director and head of Greater China investments at London-based alternative investment manager Climate Change Capital, admits that investors have turned more cautious since the outbreak of the financial crisis.

“In the past, it was easier to raise funds – the mere mentioning of an Asian fund would have generated a lot of interest. But now investors have become stricter when selecting a fund manager and they demand a clearer investment theme and more specific details,” he says.

Chan told *Reuters* in November that his company plans to invest five billion yuan in environmental projects in China over the next two to three years. But lately, his firm, which manages several green funds worth US\$1.6 billion, has been reviewing its investment plans given the severity of the credit crisis. “Our plans are dependent on market sentiments. We are a fund manager and we need funding before we can make investments in projects,” he tells *A Plus* in a recent interview.

Blessing in disguise

Ironically, the financial crisis may prove in the long run to be a blessing in disguise for the budding green



Photo: China Photos/Getty Images

technology industry. Up until the credit crisis broke out, the sector looked ominously like the Internet industry a decade before – with hot money pouring in from investors who had little idea of what the green industry was about. Eager to capture the opportunity, many “green” companies set up in Hong Kong during the last few years have impressive names but little to show otherwise.

Chan noticed that few Hong Kong companies are actually engaged in developing renewables and clean technology, and a number of so-called “green” companies are simply investment holding companies.

“The green concept attracted a lot of speculation. It is important for investors to figure out how many environmental projects the company is engaged in. A company can give itself whatever name it wants. Some just want to introduce a green element into the company to boost share prices,” he says.

Still, industry insiders believe prospects for the renewable industry remain favourable, particularly in China. Despite the downturn, the mainland saw venture capital and private equity investment in clean technology surge 120 percent year-on-year to US\$1.3 billion in 2008,

China Daily reported, quoting a report released last month by market researcher Zero2IPO. Domestic and overseas venture capitalists and private equity companies invested in 55 clean technology deals last year, up 175 percent from 2007. These companies raised US\$2.36 billion worth of capital, of which 60 percent went to solar energy, between 2006 and 2008, the report said.

Chan's company, meanwhile, is exploring more than a dozen projects of between US\$10 million to US\$20 million per deal, including developing wind farms in China's northeast and Shandong province, small hydro plants, wind turbine manufacturing and water treatment plants.

"We are lucky to be in this market space where the investor community agrees that green technology has a brighter future," he says.

Indeed, no industry seems to have generated more buzz lately than renewables and clean technology. In the U.S., President Barack Obama pledged to spend US\$150 billion over the next decade to combat climate change, with the U.S. doubling its production of alternative energy in three years and creating millions of new green jobs.

"We will put Americans to work in new jobs that pay well and can't be outsourced, jobs building solar panels and wind turbines, constructing fuel-efficient cars and buildings, and developing the new energy technologies that will lead to even more jobs, more savings, and a cleaner, safer planet in the bargain," Obama said in a speech at George Mason University in Fairfax, Virginia.

Deloitte's Zhang believes Obama's "Green New Deal" will drive changes around the world, including China. "If you have internal policies very much in line with the initiatives other countries are taking, particularly the U.S., I think

the development pace for this industry will be much faster," she says.

Already, the Chinese government is devoting 210 billion yuan of its four trillion yuan stimulus package to environmental protection and energy conservation. China invested more than US\$10 billion in boosting its renewable energy capacity in 2007 and according to the China Electricity Council, investments in nuclear power and wind power construction recorded increases of 72 percent and 88 percent respectively last year.

The government also implemented a circular economy law, which took effect on 1 January, to boost sustainable development through energy saving and reduction of pollutant discharges. Under the law, industrial enterprises are required to install water-saving equipment in new buildings and projects, while crude oil refining, power generation, steel and iron production plants must switch from oil-guzzling fuel generators and boilers to clean energy, such as natural gas and alternative fuels. Farmers and rural departments are encouraged to recycle maize straw, livestock waste and farming by-products to produce marsh gas as a fuel, according to *China Daily*. The law also states that the central government will allocate funds for enterprises driving innovation in recycling technologies and give tax breaks to companies that use energy-efficient equipment.

The power of wind

This year, China will spend 580 billion yuan on building energy facilities such as several large-scale wind farms over the next decade and nuclear reactors in Zhejiang, Shandong and Guangdong with a total capacity of 8.4 million kilowatts, a senior National Energy Bureau official told the state-run *China Securities Journal* in February. China

currently has 11 working nuclear reactors that account for only 1.3 percent of its total power generation, a figure set to rise to 5 percent by 2020.

While China has the world's highest number of small hydro plants, industry insiders say large-scale hydro projects wreck havoc on the environment and suitable sites have largely been exhausted. Solar energy, meanwhile, remains expensive to develop on a large-scale for domestic use.

China has therefore focused on boosting its wind power, doubling its new installed capacity to 12.2 gigawatts last year, two years ahead of its official target of 10 gigawatts by 2010, according to the Global Wind Energy Council. "The Chinese wind energy market is going from strength to strength," said Shi Pengfei, vice president of the Chinese Wind Energy Association. "The outlook for the coming years is also very healthy."

Li Junfeng, secretary general of the Chinese Renewable Energy Industry Association, said China is expected to double its new installed wind power capacity again this year, which will make up a third or more of the world's total new installed wind capacity for the year. At this rate, China would be well on its way to overtake Germany and Spain for second place in total wind power capacity next year, according to a report posted on the website of the Global Wind Energy Council.

China's wind power boom also means it has now generated enough supplies of wind turbines and components to meet not only domestic demand, but also for exports. "In 2009, Chinese companies will start to enter the U.K. and Japanese markets, and orders for 200 blades have already been placed. There are also ambitions for exploring the U.S. market in the coming years," Li said.

"It's a very fast growth area," says Joseph Jacobelli, group director of

carbon ventures at CLP, which is one of the top foreign investors in China's wind power market.

The company says it now has eight operating wind farms and eight others under construction in the mainland, with a total capacity of more than 239 megawatts. By market estimates, the projects involve a total investment of around HK\$2.39 billion; while most of them are joint ventures with mainland energy companies, CLP is planning to build its first wholly-owned wind farm in Hailing Island. In addition, the company runs three hydro stations in China, generating 371 megawatts, and a small biomass plant in Shandong.

Jacobelli says the company has come a long way from five years ago when it first began developing its renewable energy business and had only a small hydro asset in Guangdong. "We went from virtually nothing in terms of megawatts of renewable energy assets in Asia a few years ago to more than 1,000 megawatts now. So we've grown tenfold," he says.

One obstacle CLP faces in developing wind power in China is the commercial viability of such projects, Jacobelli says. Compared to a coal fire power plant, a wind farm on average costs almost three times more (around 10,000 yuan per kilowatt) to build. "The returns you get from wind projects in China are lower on average than what you get in India," he says.

A Chinese wind farm now gets revenues from two sources – selling carbon credits the farm generates to European utilities, enabling them to meet their greenhouse gas reduction commitments under the Kyoto Protocol, and getting revenue from a feed-in tariff, an incentive payment offered by the government to encourage the adoption of renewable energy. Governments around the world usually obligate national electricity utilities

to buy renewable electricity at above market rates – the higher price helps overcome the cost disadvantages of renewable energy sources.

"Most investors in the Chinese wind industry today, whether it's CLP, our peers or joint venture partners, all need carbon credits in order to augment the returns on the projects," Jacobelli says. "And the current feed-in tariff for wind projects is not enough to make the projects commercially viable."

In order to be able to sell carbon credits a wind farm generates, a foreign investor like CLP must form a joint venture with a mainland enterprise before it can qualify for the "clean development mechanism" status under the Kyoto Protocol. "If we own 100 percent, we can't apply for CDM status and we can't get the carbon credits. Thus, the return may not be optimal," he says.

Some analysts say another restraint for China's renewable energy markets is a lack of homegrown technology and dependence on imported equipment. China is a manufacturing powerhouse for solar photovoltaic energy, ranking first in the world, according to the United Nations Environment Programme. By 2005, China already had about 1,000 enterprises with more than 150,000 employees manufacturing solar energy-related products and exporting them to European countries, with total sales of US\$2.5 billion, according to Ernst & Young. Yet, in terms of the design of new green technology such as wind turbines and blades, China is far behind Denmark and Germany, and Japan in Asia.

In recent years, however, some cash-rich Chinese listed solar energy companies have been rectifying this problem by investing in Germany and the United States to obtain more advanced technology. "We see state-owned enterprises go out and acquire –

the overall valuations are relatively low right now," says Deloitte's Zhang.

Zhang argues it would be logical for China to leverage on its manufacturing prowess to unlock the huge potential of its domestic market. "China is at a very good point to develop its green technology industry because we already have the manufacturing capacity and we need more government input so that we could be the end users of this alternative energy," she says.

Zhang says China's solar industry is proposing to the government that it makes solar-generated electricity cheaper and more competitive with traditional energy sources. That may significantly expand the customer portfolio of NYSE-listed Suntech Power, China's biggest solar panel manufacturer, down the road.

"Historically, Suntech has 90 percent export sales. Now, it will have an opportunity to allow more domestic sales," Zhang says, adding that Deloitte recently brought Suntech to the U.S. capital markets and raised US\$400 million.

Ernst & Young's Choi predicts both China's exports and domestic demand for renewable energy will soar in coming years. "The demand for clean technology domestically will increase dramatically," he says. "We expect the export of wind power equipment and technology to increase quickly in the future. Many large wind power manufacturers have recently begun to export their products overseas."

Booming business for accountants

Undoubtedly, big accounting firms are keen to cash in on the potential business China's transformation to a greener economy would bring.

Both Ernst & Young and Deloitte have listed green technology as a priority for development. The sector



is expected to bring an increase in demand across the firms' many service lines, including audit, tax, transaction advisory and consulting.

"Ernst & Young can benefit by providing due diligence, consultancy, auditing, risk control and internal control services, as there will be more mergers and acquisitions, initial public offerings and other investments in this sector," Choi says.

Deloitte China has in recent years built a team of more than 150 people, including 50 partners, to work on clean technology projects in the mainland. The firm's CEO, Chris Lu, recently said they are serving about 50 to 60 clients engaged in solar and wind power, water treatment and energy efficiency.

"If you look at it from policymakers' perspective, the attention it gets in terms of government support is non-comparable – not only does it have commercial potential, but also a social implication for the world,

which makes green technology very unique," Deloitte's Zhang says. "The government is giving a lot of incentives for companies that are doing green technology. As an accounting firm, we are well positioned to help these enterprises."

For CPAs who want to jump on the green bandwagon, Chan of Climate Change Capital advises them to familiarize themselves with the specific characteristics of the green sector, which covers a wide range of industries such as infrastructure, manufacturing and technology, in order to better advise their clients.

While the financial crisis may have dented capital funding for renewable and clean technology companies in the short run, it also let some hot air out of the bubble. Industry players predict green technology will become a driving force for the global economy.

"I don't see a big bubble waiting to burst in this sector like the one

experienced by the Internet industry. True, specific companies or industries were overpriced but they have already gone through a big adjustment during the financial crisis. For example, the valuations of wind turbines and solar panels manufacturers have fallen significantly from their high levels. This will weed out the weak players and is beneficial to the development of the industry in the long run.

"Carbon dioxide emission is a cost to the world. If a factory or electricity company doesn't meet a specific emission target, it will have to pay a penalty, which becomes part of its operational cost. Under this circumstance, clean technology or energy can only move forward but not backtrack even in a financial crisis," Chan says.

Deloitte's Zhang agrees. "Much like the way the Internet transformed the way we communicate with each other 10 years ago, I think green technology is going to change the way people live." **A+**