

# China and US urged to set global example

By ZHANG YU'AN

Close cooperation in the clean energy sector between China and the United States will not only benefit both countries, but also help the two set an example to others across the world.

The two countries are the major global energy consumers and emitters of greenhouse gases. Their close cooperation and joint efforts in developing and utilizing clean energy are of great importance, according to Han Wenke, co-chair of China-US Clean Energy Forum. Han is also director-general of the Energy Research Institute under the National Development and Reform Commission.

Assessing the scale of the problem, Han said China and the United States jointly consume more than 40 percent of the world's total energy, whilst their combined greenhouse emissions also account for more than 40 percent of the world's total.

He said: "In this regards, the stance the two countries adopt on clean energy development is highly significant."

He confessed himself "delighted" that the two

countries had signed a joint statement during US President Obama's visit to China in mid-November. This memorandum saw the two agreeing that "the transition to a green and low-carbon economy is essential".

Han said: "Clean energy will play an active and essential role in the development of a green and low-carbon economy".

Han believes that both China and the United States should take a lead in shifting their energy production from a heavy reliance on fossil fuels to developing clean energy, especially renewable energy, such as wind power and solar energy. Their action, he said, will help promote the energy structure transition of the whole world and help combat climate change.

The two countries have enormous potential for such cooperation, as they both have large territories and rich renewable resources. They are also supplementary to one another, he said.

TheUnitedStateshasadvanced clean energy technologies and strong R&D capabilities, whilst China has a potentially huge market and abundant business opportunities. The



Hillary Rodham Clinton visits the Taiyanggong Thermal Power Plant in Beijing in February 2009. The plant is an efficient, low-emission power and heat generation project that uses US high-technology equipment. Clinton and Chinese officials agreed to focus their governments' efforts on stabilizing the battered global economy and jointly combating climate change.

Xu Jingxing

third generation nuclear power technology, developed by the American energy company, Westinghouse, was first deployed in China. The world's latest solar energy technology will also first see its first large-scale use in China.

Due to its continuous rapid economic growth and the strong support of the Chinese government, many American companies are now finding business opportunities in China.

However, Han believes, cooperation on clean energy between the two countries is still at an early stage and the road to cooperation may still prove bumpy.

At present, the United States has restrictions on exporting advanced technologies to China and has not opened its market to highly energy-efficient products from China.

China has now developed highly energy-efficient price competitive household-use air-conditioning products. The government has taken a number of measures to promote the use of such products in the domestic market. These products are now playing an active role in energy saving in the Chinese market.

In the United States, not all household air-conditioners are energy efficient, with many ageing air-conditioners actually consuming excess energy. If

the United States opened this sector to Chinese products, Han believes it would help the two countries to further expand trade and the utilization of clean energy products and technologies. It would also help create more service jobs in the United States.

The China-US Clean Energy Forum is a non-governmental clean energy cooperation and exchange platform between the two countries. Since its establishment in 2008, the forum has successfully organized three main events, helping deepen the understanding and promoting cooperation in the clean energy sector between the two countries.

# Energy efficiency best way forward

By JOE HOGAN

If we're serious about developing low-carbon power sources, we also need to develop a power system that can deliver them – a flexible and efficient smart grid that will effectively balance our energy consumption with the availability of wind and solar power. That technology is avail-

able now, but it needs to be implemented.

We also need to put renewable energy into perspective. Our only major source of renewable power today is hydro, and less than three percent of the world's electricity comes from other renewable sources. Clearly, they are just one part of our overall strategy for combatting climate change.

Surprisingly, our best prospect of reducing emissions is one that gets little attention – energy efficiency. Projections by the International Energy Agency show that using energy more efficiently has a greater potential to curb carbon dioxide emissions over the next 20 years than all the other options combined.

Governments can truly help

by identifying and removing the barriers to the implementation of energy efficient technologies. Getting the international community to agree on binding targets for global CO2 emissions may look like hard work, but it will come to nothing unless we take the simple step of using energy more efficiently.

The author is CEO of ABB.



Joe Hogan

## GREEN SCENE

### Wind farm systems

The Research Center for Wind Resources at Sun Yat-Sen University in southern China has developed several advanced wind farm-siting systems following several years of research. The new systems are the Regional Wind Resource Information System, the Integrated Wind Farm Siting System and the CFD Wind Farm Siting System.

The center's Dr. Zeng Xuelan said that the systems allow the best sites for wind turbines to be easily located and thus substantially increase their efficiency. The center's systems are also said to be highly cost-effective when compared to foreign ones. Zeng's center has been making considerable efforts to put its research results into practice and is seeking to actively participate in the development of China's wind farm industry.

China has rich wind power resources, with an estimated potential volume of several hundred million kilowatts. Since 2000, China has achieved an average annual growth of 52 percent in the sector, bringing its installed capacity to over 12 million kilowatts, ranking it fourth in the world.

### Energy-saving material

The Beijing Weirunda Metallurgical Material Co Ltd has developed a new-type of magnesia-carbon hot-method patching material for converters. Though a fledgling firm, the company, led by the well-known patching material expert, Zhu Wanzheng, has quickly won over many leading players in the country's iron and steel industry.

This is largely because the company's patching material can help steelmakers save nearly 40 percent of their costs on patching materials, items frequently used by converters in large volumes. The company's clients include the Shougang Group, the Shougang Jingtang Company, Ma Steel and the Anyang Iron

and Steel Company.

Zhu said that, as environmental protection and energy saving are becoming hot issues, his company will do its utmost to continue its efforts to develop energy-saving materials to meet clients' needs, as well as contributing to the development of a green metallurgical industry. He said his company's products will not only help clients cut production costs, but also reduce emissions and substantially prolong the service life of their converters.

**Environmental award**

Franz Fehrenbach, CEO of Robert Bosch GmbH, won the Environmental category in the Large Enterprise category of the German Environmental Management Association Awards last month. The award recognizes environmentally conscious management practices. Currently Bosch invests some 45 percent of its research and development budget in technologies that help protect the environment and conserve resources. It generates one third of its sales from such products.

### Stylish bike ride

Good to Shanghai launched a stylish cycling event in Shanghai on December 5 with a fun bike ride aimed at encouraging residents and students in China's economic powerhouse to use bikes as a regular transport option in their daily lives. The event was designed to appeal to people from all walks of life and encourage them to do their bit in helping reduce air pollution, whilst keeping fit and having fun.

Good to Shanghai is the umbrella group for a series of environmental and social initiatives that aims to provide people with insightful, accessible and actionable ways to practice and evolve towards "sustainable living".

China Daily



Volunteers, dressed as polar bears, promote the uptake of a low-carbon lifestyle for Beijing residents last Wednesday. The event was among the awareness-raising activities the World Wide Fund for Nature held before the start of the Copenhagen Climate Change Summit.

Deng Jia

# Emission reduction is a verb, says Green Gas MD

By FAWN GLEN

Emission reduction to combat climate change is the biggest challenge facing humanity and is one of the most talked about topics of recent years. With the high profile UN Climate Change Conference in Copenhagen looming and even higher expectations of its success, the world's attention is focused on the emission reduction issue more than ever before.

At Green Gas, we say: "emission reduction is a verb" – that is you will not reduce any emissions until you take real action. Awareness is good, but action is better.

Green Gas today produces 650 GWh per annum of electricity from renewable resources worldwide and eliminates in excess of 4 million equivalent tons of carbon each year. By utilizing and destroying methane, a potent greenhouse gas, it generates green energy to replace brown energy. We have been in the business of doing it for 30 years, long before emission reduction came into the global spotlight.

We have a unique business model that focuses on an integrated approach to methane capture and utilization, in partnership with our custom-

ers. Not only does it eliminate greenhouse gas and produce clean energy, it also helps coal mine owners to make mines safer and more productive through improving gas management in mines. Furthermore, we invest in our own solutions to make them a reality.

China is proving the most impressive growth story of modern times, supported by strong leadership, vast natural resources, abundant labor and strong domestic and international demand. A common concern is that, with rapid economic growth, comes damage to the environment.

The policy direction in China, which focuses more and more on energy conservation, emission reduction and climate change mitigation, is a clear illustration of China's desire to deal with this serious global issue.

Green Gas is very honored to be in China at this time and to be able to implement projects alongside Chinese companies and people. We believe this will provide a better future for the generations to come.

"Emission reduction" is a verb that leads to more verbs. At Green Gas we:

- "Manage" methane to make mines safer and more productive
- "Develop" projects that

reduce greenhouse gas emissions

- "Invest" in such projects
- "Build" power plants that generate electricity from methane emissions
- "Operate" methane fired power plants on a day-to-day basis to ensure their stable high performance, efficient reduction of emissions and provision of clean energy

Kofi Annan, the former Secretary General of the United Nations, once said: "Scientists tell us that the world of nature is so small and interdependent that a butterfly flapping its wings in the Amazon rainforest can generate a violent storm on the other side of the earth. This principle is known as the 'Butterfly Effect.' Today, we realize, perhaps more than ever, that the world of human activity also has its own 'Butterfly Effect' – for better or for worse."

Green Gas will continue its mission of solidly executing emission reduction projects. By flapping our wings we believe our "Butterfly Effect" will bring better results for the world. We believe that, with more people in China joining us, we can do more and do it better.

The author is managing director of Green Gas (Beijing) Clean Energy Technology Ltd



Connect emission-free power to the grid?

ABB is helping construct the world's leading offshore wind farm. Using our eco-friendly transmission technology, this 400-megawatt plant is expected to prevent 1.5 million tons of CO<sub>2</sub> emissions per year and improve the reliability of the power grid. It's just one of the ways that we, as the leading supplier of electrical products and services for the wind industry, can use renewable power sources to help combat climate change. [www.abb.com/energyefficiency](http://www.abb.com/energyefficiency)

Naturally.