Locked out? Will China ultimately shut out Western players from its burgeoning wind power business?

Offshore coup? China flexes its muscles

WITH ITS knuckles wrapped for breaking **World Trade Organisation (WTO)** rules for wind power, China has opened the door wider to foreign players. But what does that mean?

Earlier this summer, China ended its *Special Fund for Wind Power Equipment Manufacturing*, a Government subsidy that, in requiring the use of Chinese over foreign turbine technology, broke WTO rules. It was hailed as a victory by the plaintiffs, the **United Steelworkers Union**, and the media.

But the ending of the subsidy is merely a short-term setback for China's highly organised and increasingly effective industrial policy. With the recent announcement of a 30GW offshore wind capacity target by 2020, the Chinese government has signalled it wants domestic companies, currently low-power onshore specialists, to corner the entire wind power industry.

Crowding out the market?

At the risk of oversimplification, China's industrial policy aims to control a given industry, market or sector by saturating it with low cost domestic supply. This is achieved by the acquisition or development of requisite technology, and its subsequent commoditisation, sale and export, priced below levels at which competing suppliers can survive.

The process of crowding out begins at the **National Development and Reform Commission (NDRC)**, when policy makers identify a potential area that Chinese companies can move into. In discussion with select ministries, party members and regional state owned enterprises (SOEs), the NDRC, in this case together with its subsidiary, the **National Energy Bureau (NEB)**, will edge out a modest set of incentives to test the industrial policy.

If successful, this pilot scheme will be advanced to where the volume is turned up on the incentives and cadres involved at the early stage are promoted. At this point officials and heads of SOEs across the country are getting involved; networks are tapped and expanded, and resources are allocated.

In time, the policy takes on a life of its own, away from direct Government control.

Everyone, public and private, swarms in, and the weight, numbers and momentum of Chinese industry crowds out foreign competition. In this context, losing the occasional trade complaint is but a gambit, when, in the long run, Chinese dominance of an industry is secured.

Dominating the supply chain

China's management of the domestic wind market differs according to how consolidated domestic technology capabilities are. There is less intervention but more liberal financing for projects using turbines already commoditised by Chinese companies.

For turbines over 1MW, especially 3MW machines, there is greater paternalism and higher restrictions on the number of projects approved - a signal of this materialised in 2010 when a senior NDRC official was quoted as saying that China "doesn't need" turbines over 3MW. These two approaches are characteristic of the onshore and offshore markets, respectively.

Onshore wind farms, which have been growing rapidly for the last five years, are at the point where companies such as **Sinovel**, **Goldwind** and **Dongfang** are dictating the trends. And they are replacing foreign components with those that are Chinese made.

In 2005, the government passed a law requiring that any wind turbine technology sold to the state (SOEs such as the Big Five power companies overwhelmingly make up the customer base) had to be 70% locally produced. The law was later relaxed, but the mandated localisation of foreign technology and production methods coincided with the emergence of a set of Chinese companies whose market share increased from 15% to 85%.

However, industrial policy has resulted in a large amount of oversupply to onshore wind farms. Locally funded projects, with small turbines, are being built in deserts, far away

About: Edward Barlow is Senior Analyst and Head of Multi-client Research at **GCiS China Strategic Research**, based in Beijing.

China to drive global demand

Globally, the demand for electricity will escalate between 2010 and 2030, especially in the developing regions, due to a growing middle class, and rapid urbanisation. As the spending power of the people in these regions rises, so will their uptake of electric appliances.

New analysis from **Frost & Sullivan** (*http://www.energy.frost.com - Annual Global Power Generation Forecasts 2011)*, finds that electricity generation will expand at a compound annual growth rate (CAGR) of 2.7% through to 2020, with the growth rate declining to 1.8% per annum over the subsequent decade as growth in the emerging markets is reduced and energy-efficiency measures begin to have a greater impact.

Over the next two decades, the combined share of demand for electricity from the developed regions of the European Union (EU); North America; and *Organisation for Economic Co-operation and Development Asia Pacific (OECD-APAC)* will drop from 49.6% to 37.5 %. The bulk of demand is expected to come from India and China, with the combined share of these two countries alone rising from 23.6% in 2010 to 34.5% in 2030.

Foreign players may have no more than ten meaningful years left

from growing population centers. The **State Grid Corp.**, faced with the task of balancing loads, reportedly doesn't have enough ultra high voltage transmission installed.

The grid has been comparatively overlooked next to the huge investment that has gone into power generation. Conservatively managed, heavily indebted and with the inefficiencies that plague many giant corporations (the State Grid Corp employs over 1.5 million and is ranked 7th in the *Fortune Global 500*), it is showing increasing resistance towards onshore wind projects, shying away from connecting plant smaller than 50MW.

Nor have exports taken off as hoped. While a weakened global economy has suppressed demand, companies like **Vestas** and **Gamesa** are preferred due to their greater engineering experience, technology and management. Tellingly, **Sinovel** recently sold wind farms in Ireland and Greece using state-owned financing (another tool of industrial policy).

Offshore wind, with typical turbine ratings of 3MW, is gaining greater currency with China's leaders. We can see the early strings of policy being pulled. A People's Daily missive in late June announced that "in the next five years, China will boost its offshore wind power installed capacity to 5GW and form a complete technology and industrial chain." This is what I referred to earlier as the pilot scheme; a modest 5GW over five years, closely administered by the NEB. **Siemens** has won an early order, but this policy will certainly encourage the local industry and supply chain to invest in offshore.

Accordingly, turbine producers like Sinovel, which is closely tied to China's industrial establishment, are already beginning to shake out foreign presence in their supply chain.

Into deeper waters

American Superconductor's (AMSC) China headquarters, for example, are in a suite in one of the newer tower blocks in Beijing's CBD. Its offices are of the quiet, functional type that characterises the sales platform of many foreign multinationals. However all was not well.

Its biggest client, **Sinovel**, source of most of its revenues, said it had rejected a shipment of converters (a device used to synchronise the frequencies produced by wind turbines with the grid) and was going to cancel a further order.

It transpired that with stimulus money coming through in 2009, Sinovel had allegedly been working with its parent SOE to develop higher-rated converters in direct competition to AMSC's. A Sinovel subsidiary (run as a joint venture with the SOE) disclosed last summer that it had a 1.5MW converter ready for 2011 and would be commercialising a 3MW product in the next few years.

By late 2010, a sales manager familiar with the project claimed in a phone conversation, that the joint venture would soon by supplying all of Sinovel's converters. AMSC has since lost 75% of its market value and is in the process of appointing a new ceo.

The next ten years

China's twelfth, five-year plan, released in March, calls for 30GW of installed offshore capacity by 2020. Given current technology and the prodigious rate of construction this could be achieved in 12 months. But China doesn't want to replace one type of foreign energy dependency with another.

Over the course of the next decade, local companies have the potential to grow, learn and gradually outcompete their foreign rivals. China's wind industry may develop into something like its solar industry, where the backbone of global supply is Chinese.

Modern China's mantra is "development is inevitable". So is there a touch of the inevitable about the plans in the wind power market?

China, with an area the size of Montana that can be used for wind power, is a vast market and growing, while projects in other parts of the world are being cancelled or delayed. Along with the political will, there is the money, armies of engineers and big picture power and infrastructure projects being rolled out incessantly.

If crowding out continues to spread in China's wind power industry, foreign players may have no more than 10 meaningful years left.

With its ability to channel the nation's industrial might, China doesn't need to overtly favour indigenous technology. It has signalled where it wants to head and, while the West are distracted by WTO decisions and showpiece contracts, China may well pull off a long-term coup.

e: Edward.Barlow@REF.contributor.com