China's growing cleantech threat

National Business Review
Liam Baldwin | Monday September 20, 2010 - 10:20am

While experts point to clean technology as a major export driver, others suggest millions of invested dollars are at risk because of protectionist policies in China.

The former chief economist of the World Bank, Lord Nicholas Stern, said a very real threat was falling behind in the cleantech industrial revolution he believed would define the 21st century.

Lord Stern was in New Zealand to deliver a series of lectures focused on human-created climate change, policies and new economies that must develop around it.

He was the author of the controversial Stern Review on climate change in 2006 and strongly advocates the development and adoption of clean technology to both mitigate the effects of climate change and to boost export potential.

Economies that choose to ignore a market and policy-led drive to embrace new low-carbon emitting technology face being shut out of markets, Lord Stern said.

“Each country needs to look at its special advantages and disadvantages. For example, some will find solar and wind energy easy, while geothermal will work for others, like in Iceland.”

And, Lord Stern noted the need to be ahead of the game was important in the short term in the next 10 to 15 years as all economies focused on their own competitive advantages.

This was important whether the climate change argument was accepted or not. Either way, the market was demanding the focus on cleantech.

A report commissioned by the World Wildlife Fund last year suggested the global cleantech sector was worth $1.1 trillion in 2007 and was larger than the world¹s pharmaceutical sector. In 10 years, cleantech was expected to be the third largest industrial sector in the world.

Energy efficiency products and renewable energy technology dominate global sales.

China¹s growing dominance
But there are questions as to how to retain any advantages as geopolitical behemoth China forges ahead with its own strategies using economic methods at odds with development in the rest of the world.

Usha Haley, a professor of international business at Massey University, said developing clean, or green,

technology is becoming increasingly difficult in the face of China¹s massive and rapid push to “own” the sector.

Despite becoming the world¹s biggest greenhouse gas emitter over the last decade, China is fast becoming the largest cleantech manufacturer. For example, in just five years China has become the world¹s largest manufacturer of solar panels and wind turbines.

However, this development has happened in an environment of heavy subsidies including interest free loans or loans that require no repayment gifts of land, even free electricity. These advantages, coupled with lower worker costs, allow Chinese companies to undersell other manufacturers by about 30%.

And nearly all the cleantech products made in China are exported rather than consumed in its expansive domestic market.

The same threat exists to the world¹s global paper industry. Research conducted by Prof Haley (NBR, August 6) showed China¹s protectionist policies prompted massive growth in an industry it had little raw materials, which had significant negative effect on the sector elsewhere in the world.

In the US, the world¹s biggest consumer of energy, including green energy, manufacturers are struggling to compete with Chinese imports in its own economy.

If Lord Stern plans on a global cleantech utopia to help arrest anthropogenic climate change, Prof Haley surmised it would be unlikely given China¹s increasing dominance.

Legal action

China¹s stance on development has sparked the United Steelworkers Union in the United States to announce this month it will file a trade complaint with its own government against renewable energy imports from companies that have benefited from protectionist policies.

While all countries subsidise cleantech to some degree, including New Zealand, Prof Haley said China appeared to flout World Trade Organisation rules covering protectionist policies for exporters.

Governments such as New Zealand¹s, often provide financial support to manufacturers to develop products and take them to market. In addition, there are often subsidies for consumers adopting cleantech, as part of a government¹s policy to reduce overall greenhouse gas emissions.

But she said China¹s focus on subsidies was directed at growing exports, not the domestic market, in breach of WTO rules designed to prevent governments helping their companies gain in world markets.

Prof Haley said there is a risk to the millions of dollars invested in cleantech innovation in New Zealand, simply because of China¹s stance.

New Zealand¹s risk

That risk extends to Lord Stern¹s concept that countries like New Zealand need to look at their strengths and what they can offer the world in terms of carbon-busting technology and therefore maximise export potential.

And globally, Prof Haley said the dominance by China and the resulting damage on research and development elsewhere in the world will restrict the ability to arrest climate change.

Simply put, Prof Haley said reduced competition as a result of China¹s increasing dominance would reduce the availability of products and development of innovation.

“China isn¹t good at innovation. It¹s good at producing second generation, taking someone else¹s idea and improving it,” she said.

In addition, Prof Haley said technology was at risk of being stolen, or at least controlled, in China.

Small companies, especially those just starting out with new ideas, have little chance against this tide of development.

Instead, Prof Haley said there needed to be strong government support and plenty of venture capital availability.

She said China has a history of investing heavily in foreign companies, sometimes enticing them to China to manufacture, which can be highly lucrative and attractive in the short term.

“But China will always want a stake and that¹s where the problems will begin.”

As the world¹s biggest country gears up to be the biggest cleantech manufacturer, it has also reaffirmed its position as the largest polluter during a recent meeting with Japan.

China¹s commitment to rapid growth is at odds with the global commitment to greenhouse gas reduction. Much of this growth is fuelled by fossil fuels and China, which accepts broad environmental responsibilities, also wants to enjoy the same advantages wealthy nations had over the last 150 years before greenhouse worries were raised.

Lord Stern though seems more focused on the positives and pointed to increasing awareness in a number of previously environmentally destructive countries, such as Brazil, which is now focusing on boosting agricultural production and preserving rain forest.

He pointed out Brazil¹s expertise in biofuel development and is increasing production on land while managing to preserve rainforests as their importance was becoming more widely known.

“In this industrial revolution, government involvement is crucial,” Lord Stern said.

Framework required

While investment generally comes from the private sector, the government must be involved because climate issues and how they are dealt with are not market led, he said.

“The market is not signaling the damage done. That requires policy. Governments need to create the framework.”

Lord Stern said the key requirement to create the momentum was political will.

Niche focus will pay off

New Zealand Trade and Enterprise investment director Graham Matthews said a survey last year identified about 250 New Zealand companies working in the cleantech sector in various ways.

However, he said much of the development was focused on niche products and markets producing high value but low volume goods.

“The market is already large and all the measures suggest it¹s going to grow further.”

Mr Matthews said New Zealand could excel with a focus on niche markets and was continuing to capitalise on its clean, green image.

He said because cleantech ideas touched on many sectors, it was difficult to quantify its export value to New Zealand yet.

“A lot of the science, technology and innovation is still quite young and projects are still under wayŠ but if we look at all the niches, it will all add up.”

Liam Baldwin | Reporter