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China's economic shift promises to aid climate fight but packs a commodity punch

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When officials in the southern end of the Chinese province of Shanxi feared their local golf course might attract unwanted attention from a nationwide crackdown on corruption, they artfully changed its name to the Yishan Ecological Park.

Compared with the new apartment towers and eight-lane highways slicing across nearby cornfields, Yishan is something of a green oasis.

But a decade ago, the golf course was woodlands that have now been largely cleared, and are out of reach to those unable to tee up 200,000 yuan ($44,000) for lifetime memberships.

"Ecological civilisation", as it happens, is also one of the catchcries of China's leadership headed by President Xi Jinping. As in the case of the golf park, it's wise not to take policies in China entirely at face value.

The world is watching China closely. Not only is it the largest greenhouse gas emitter, the country's rise created "the largest, longest and most broadly based increase in commodity demand that the world economy has ever experienced" as Ross Garnaut, Professor of Economics at The University of Melbourne wrote in a recent report.

Its resource-hungry model, though, has largely run its course, prompting global commodity prices to sink below their lowest levels during the 2008 Global Financial Crisis, with big implications for Australian exporters and state and federal coffers.

Ahead of the climate summit in Paris starting next month, the slowdown means China's pledge to peak carbon emissions before 2030 may be achieved much sooner than expected - which would be good news for the battle to limit global warming.

Carbon pledge

Xi last month drew applause for another climate pledge - to introduce a national market to put a price on carbon emissions by 2017 - but that is far less likely to play a significant role in China's emissions trajectory than many hope.

China had previously promised such a market by 2016 and the pilot schemes already in operation in five major cities and two big provinces are such the policy will have little impact for many years.

Take the market in the south-west megacity of Chongqing. In June, as the compliance deadline for liable polluters approached, the official in charge had to make personal visits to plead for their pollution details.

"He was like a door-to-door salesman," says Sophie Lu, who covers carbon markets in Beijing for Bloomberg New Energy Finance. "They just don't care."

As with many previous market experiments in China, the process has been one of first setting the rules and building a platform for the future.

Teng Fei, a leading climate change economist at prestigious Tsinghua University in Beijing, says a "plausible starting point" would be to link the seven markets and then extend them into a national scheme - although 2017 is probably too ambitious.

Some provinces are still short of "meaningful monitoring and reporting systems", Professor Teng says. "It's very important with an ETS to make sure one tonne is equal to one tonne."

'Please, no free allowances'

Jiang Kejun, a researcher with the Energy Research Institute under the powerful planning body, the National Development and Reform Commission, also has doubts.

"I cannot see the role for carbon prices because you will still have free allowances" issued to polluters, Professor Jiang says. "So if you are under the cap, there will be no change."

"We tried to convince the NDRC: no free allowance," he said. "It doesn't matter if the price is high or low, please don't give them free allowances."

"Our study showed that if everything is informed to the market, the price will go to zero," Jiang says.

A survey released earlier this month by the China Carbon Forum and ICF International, which tapped 304 responses from industry, academics and carbon traders, found average price expectations to be 39 yuan ($9) a tonne in 2017, rising to 56 yuan by 2020 and 70 yuan by 2025. [Australia's carbon tax was $24.15 when it was scrapped by the Abbott government in July 2014.]

Some 83 per cent of respondents expect China will also have a carbon tax. That's an approach both Teng and Jiang prefer, since it would give companies a more stable investment signal than one that potentially fluctuates wildly.

The fact President Xi announced the 2017 target, though, means a carbon market of some form will be implemented.

"The trouble for me is I don't think an ETS is important for China," Jiang says.

Climate risks

That view is not because China doesn't face big risks from climate change. To the contrary, the country is heavily exposed to even moderate changes in weather patterns.

As Professor Teng noted in a paper published with Frank Jotzo of the Australian National University last year, the majority of China's 1.3 billion people live within about 350 kilometres of the coast, many of them exposed to a forecast of more intense typhoons and sea level rise.

Inland, residents in cities such as Guazhou near the western end of the Great Wall in Gansu province, can only watch as the snowpack that provides them with vital water retreats further up the nearby mountains as conditions warm.

"China is one of the most vulnerable countries to climate change, and that's increasingly acknowledged by China's leaders," Qi Ye, director of the Brookings-Tsinghua Centre for Public Policy, said during a visit to Australia this week.

Those concerns mean China's leaders will continue to take steps to curb emissions even if the motivations are many and varied.

The so-called "airpocalypse" of early 2013 when smog levels in many major cities literally went off the charts was clearly one spur to action.

China's leaders, worried about the soaring health costs and potentially millions of premature deaths, acted with alacrity to slap limits on coal consumption in 10 key cities and provinces.

'No space for India'

They also intervened to further boost renewable energy, lured by the global market opportunities that beckon as the world inevitably shifts towards less reliance on fossil fuels.

Unlike established industries such as aviation or computers, China doesn't have to rely on imported intellectual property, Jiang says.

"[It's] a good opportunity for China to get into the global [economic] game because low-carbon is really new for everybody," Jiang says. "If in 10 years India wants to come [in], there will be no more space to them."

China last month raised its solar energy ambitions, lifting its 2015 installation target for new panels to a mammoth 23 gigawatts of capacity - seven times Australia's - from 17.8 GW. "That's about half the world's installations this year," Jiang says.

A similar boom in wind energy, though, means capacity is coming on faster than the grid and consumers can adjust. So-called power curtailment, in which power was dispatched but not used, amounted to about 15 per cent of wind and 9 per cent of solar energy generation in the last half year, Bloomberg's Lu says.

With electricity demand up less than 1 per cent in 2015 amid a slowing economy, the coal-fired power sector is being squeezed - with big implications for Australia's thermal coal exports .

According to Tim Buckley, a former Citi analyst now with the Institute for Energy Economics and Financial Analysis, the average generation hours of coal-fired power plants dropped 9 per cent in the first seven months of 2015 compared with a year ago.

'Complete bubble'

Oddly, the dimming outlook for coal hasn't stopped China adding new coal-fired power plants. Last year, China added 37 GW of new capacity and the pace has even quickened to almost 1 GW - equivalent to a large plant in Australia - per week over the past 12 months, says Lauri Myllyvirta, a global coal campaigner for Greenpeace in Beijing.

"It's a complete bubble and there's no feedback from the market," Myllyvirta says, noting capacity usage of plants has slumped to about 50 per cent.

Jiang says the government is now considering the radical step of banning new coal-fired power plants as part of its 13th Five Year Plan due to start in 2016.

"Now we are just talking about this in the new five-year plan - whether we go to zero new coal-fired power plants," he says.

The plan is also likely to extend those mandatory curbs on burning coal, potentially nationally, Tsinghua's Teng says.

"The issue is how to define the cap, and how to allocate the cap among the different sectors and provinces," says Teng, who is also a member of China's negotiating team travelling to the Paris climate summit.

Early emissions peak

The impacts of wilting coal demand were on show last month with the largest coal company in China's northeast, Heilongjiang Longmay Mining, announcing it would shed 100,000 of 240,000 staff in three months to stem losses.

Investment bank Deutsche Bank estimates China poured 1.69 trillion yuan ($367 billion) into its coal sector since 2011, creating "very serious" overcapacity that will likely drive the coal price lower at home and abroad.

Reining-in that investment binge is likely to be bad news for Australia-based coal exporters such as Glencore – and prospective ones, such as China's Shenhua which is planning a controversial new coal mine in the rich farming lands of NSW's Liverpool Plains.

"The new model of economic growth involves major adjustment for the Australian resources industries if things go smoothly in China," Garnaut says.

"There will be no growth in coal or steel demand in China - in fact significant decline - for the foreseeable future, while increased supply capacity is being added in exporting countries," Garnaut says. "In the long term, growth in demand outside China will help the adjustment in China for iron ore, but not for thermal coal."

Services typically generate only one-third of the emissions of industry, so the transition to new growth drivers and the slowdown to under 7 per cent annual growth from 10 per cent plus indicate the country's emissions will peak well before Beijing's 2030 target – with or without a functioning carbon market.

Garnaut says emissions from coal alone have probably peaked and the rest of the economy may not be far off: "It is more likely than not that the peak will come before 2020 - before taking account of the possibility that emissions could temporarily fall more at any time as the economy hits a bump in the road."

Modelling by Jiang's team suggests the peak may come even sooner.

"One of the extreme scenarios said that China has already peaked last year," he says.