ZHU WANCHANG / FOR CHINA DAILY

China Guodian Corp's power plant in Jiangnan, Jilin province. The Ministry of Environmental Protection announced in September last year that starting in January, all Chinese power plants should adopt measures to meet new national standards for nitrogen oxide emissions in two years.

ENERGY | CAI XIAO

Full steam ahead toward a cleaner, more efficient China

Cutting-edge technologies can help clean-up country's coal-tarnished environment

Just as pandas are attracted to bamboo, companies and individuals who are experts in coal-based clean technologies are being drawn to China in increasing numbers, by the lure of an industry estimated to be worth $25 billion globally.

That's why William Latta, a former senior executive with Alstom Power, the world leader in conventional power generation equipment, came to the country five years ago.

Latta is the founder of the Beijing-based environmental engineering company LP Amina, which says it has developed technology that can vastly reduce the amount of pollution produced by burning coal.

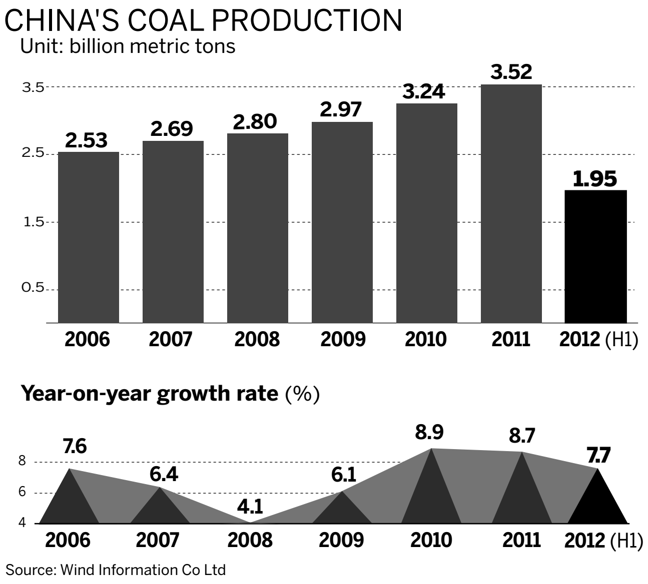
According to the latest industry figures, about 70 percent of the country's electricity supply comes from thermal power plants, or plants fueled by coal.

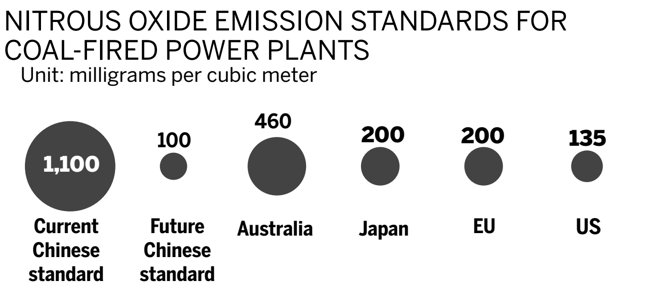
Latta's company specializes in delivering complete cleaning solutions for power plants — particularly thermal power plants — while also making them more efficient.

Its key technology is a revolutionary system of getting rid of poisonous nitrous oxide gas. It eliminates the pollutant when coal is burning in a boiler, not only reducing the nitrous oxide produced by up to 65 percent, but also improving efficiency in the boiler's energy output.

Latta said that as China's energy industry continues to burn coal, LP Amina's De-NOx technology is poised to clean up, literally and figuratively, as the government continues to target cleaner and more efficient ways of cutting emissions.

The Ministry of Environmental Protection announced in September last year that starting from January, all Chinese power plants should adopt measures to meet new national standards for nitrogen oxide emissions in two years.





Source: Ministry of Environmental Protection, China Greentech Initiative

"Coal is the most widely used energy source in the world and every country needs clean-coal technology.

"So when you develop a technology that is better than any others, it's not hard for you to find customers," he said.

Since 2009, when the De-NOx solution won its first client, Yixing-Union Cogeneration, LP Amina has completed 20 projects in China as power plants look for ways to control their gas emissions.

There are only two companies in China, according to Latta, that own such proven in-furnace technology: LP Amina and Yantai Longyuan Power Technology Co, a State-owned enterprise listed on Shenzhen's new growth market, ChiNext.

China has the world's largest number of coal-fired power plants, with more than 1,500 large and 4,500 small units in operation.

According to a study by HAO Capital, the Beijing-based private equity firm and an investor in LP Amina, 99 percent of those have yet to install a solution for their nitrous oxide emissions.

Based on conventional SCR/SNCR technology — the method of lessening nitrogen oxide emissions in conventional power plants that burn biomass, waste and coal — LP Amina's systems are particularly tailored to provide solutions for the unique challenges facing the Chinese power industry, such as its use of high ash, and low volatile coals, Latta said.

LP Amina now has R&D engineers working in the United States and China, and Latta says there is great willingness in China for new technologies to be accepted by the coal and energy industries.

"We cooperate with many Chinese companies on new technologies, and we have also been able to sell our products and knowledge all over the world," he said, adding that the average price of what would be considered a large-scale contract is $2 million.

In China, LP Amina has completed projects in various locations including Yixing, Jiangsu province; Xingtai, Hebei province; Fengtai, Anhui province; Guangzhou, Guangdong province; and in Beijing.

William Latta, founder and managing director of LP Amina Inc

It has also completed two projects in the US, and is looking to expand into Mexico, South Korea, and Columbia.

Latta uses the example of Yixing-Union Cogeneration, a coal-fired power station in Yixing city, Jiangsu province, as being typical of what can be achieved, after cutting nitrous oxide emissions there by 50 percent.

Hu Zhijie, deputy general manager at the Yixing-Union plant said: "We had a great experience working with LP Amina in 2009 — we were amazed by the passion and technical expertise they put into this project.

"In the years since, we have developed a trusted relationship and that's one of the reasons we have just awarded it three more contracts."

Latta said in the short term, the company plans to set up three or four more R&D centers to further develop its technology.

The company is also working with the global company Bayer Technology Services to develop ways of better-using coal-based chemical resources.

LP Amina raised about $10 million from China-focused HAO Capital in 2010, and previously received money from Qiming Venture Partners, another local venture capital investment company.

Elaine Wang, HAO's founding partner, said that it only invests in companies that are looking to expand.

She first met Latta in a Beijing restaurant in 2007, when he had just left Alstom and was planning to set up LP Amina.

"We were impressed by his technology background and his determination to make China cleaner," Wang said.

"Of all De-NOx technologies available, we view his in-furnace solution as the best available to operate right in the heart of a boiler."

Wang said HAO Capital's support of LP Amina includes not only direct financial investment, but also access to its business contacts and other resources, which will help it expand.

She said some large international companies hesitated to get involved in LP Amina because they were wary of the technology; but she very quickly understood the massive potential.

"Coal is still widely used in China and around the world," she said, and HAO Capital will continue to support LP Amina in its work.

Ellen Carberry, co-founder and managing director of The China Greentech Initiative — a company focusing on accelerating the commercial success of enterprises in the clean technology sector — said LP Amina has exceptional potential.

She added that she considers it lucky, too, in that most venture capital and private equity companies prefer opportunities with companies that can earn them money quickly, normally within five to seven years.

Latta pointed out that according to the International Energy Agency, one-third of the world's electricity is still be derived from coal, and that its use is expected to continue rising for the next 20 years.

With over 50,000 coal-fired power stations worldwide, the demand for engineering expertise in emission reduction and operational optimization looks likely to remain extremely high for many years to come — and not just in China.

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FROM THE PRESS

Economists say inflation to slow, warn of high local government debt

Without waiting for the release of official statistics, investment institutions are releasing estimates about how China's economy fared in July.

In all likelihood, the consumer price index, a measure of inflation in the consumer market, will show a year-on-year increase rate of 1.7 percent in July, the first time such a figure has dipped below 2 percent in two and a half years. If the estimate proves accurate, the rate will also be down from the 2.2 percent year-on-year rate recorded for June.

Among the estimates made by economists surveyed by the business information website Caixin.com, the lowest rate of increase predicted for the July CPI was 1.5 percent.

Meanwhile, the producer price index, a measurement of inflation in production materials, was expected to record a negative 2.5 percent rate of change, indicating that further price declines are likely to be seen in the consumer market in the coming months.

At the same time, Ministry of Commerce data show that food prices, which used to be the main driver of inflation, increased at a mild pace in the last week of July.

Other estimates said China had a trade surplus of $31.6 billion and issued 863 billion yuan ($135.6 billion) in new loans during the month.

While inflation is no longer as great a threat as it was in the early months of the year, economists are divided about how long the current low CPI can last.

Their doubts arose in part after many government agencies decided to embark on aggressive investment plans in an attempt at accelerating the country's economic growth, which has been slowing since the beginning of the year.

Will these projects be tantamount to a Chinese version of quantitative easing?

And will they, in due course, again drive up the prices of production materials and lead to a new round of inflation?

Even worse, will they add to the already heavy debts that are weighing on many provincial and municipal governments?

Economists and business commentators are anxiously discussing these possibilities.

Rather than the central government, which took steps to stimulate the economy in late 2008, local governments are now the entities adopting policies meant to stimulate economic growth — a trend commentators have deemed "4 trillion yuan program 2.0".

That name refers to the stimulus policies Beijing enacted in response to the financial troubles that bedeviled Wall Street in 2008.

Through those, 4 trillion yuan ($635 billion) in new government investments were used to sustain China's economic growth.

By Aug 2, 30 provinces, municipalities and autonomous regions had issued reports concerning their fixed-asset investments in the first half of the year. Of those, 26 saw their investments increase at a rate that was faster than the national average increase, according to China Enterprise News, a newspaper run by the China Enterprise Confederation and Chinese Enterprise Directors' Association.

The southwestern province of Guizhou saw its fixed-asset investment increase by 58.1 percent year-on-year. Shanghai, in contrast, recorded a growth rate of 4.5 percent.

The newspaper quoted an official in the National Development and Reform Commission as saying that even though the central government has no plans to adopt a stimulus package similar to the one it had in late 2008, local governments have come up with their own versions of financial stimulus.

Much as Beijing did a few years ago, many local governments' stimulus spending is going into large-scale public-works projects.

"We may be racing recklessly toward an abysmal state of government indebtedness," Ye Tan, an independent business commentator, told the newspaper National Business Daily.

She noted that 24 cities introduced ambitious urban development investment programs from June to July. Those have a combined budget of almost 500 billion yuan.

On July 25, Changsha, capital of Hunan province, introduced plans to make various important investments. The city listed 195 projects, which are expected to be undertaken at a cost of nearly 830 billion yuan.

Many economists expressed reservations about the "4 trillion-yuan program 2.0".

According to Zhao Xiao, an economics professor with the Beijing Institute of Technology and a former National Development and Reform Commission official, Chinese local governments' debts increased by as much as 40 times in 13 years, hitting 10.7 trillion yuan by the end of 2010.

Much of that spending has been slow to generate significant returns and is therefore considered to be largely unsustainable, Zhao said.

Local governments' stimulus plans are likely to lead to even worse overcapacity in some industries and even worse government debt, he said.

Zhao cited research suggesting that China's credit-to-GDP ratio is now as high as 123 percent, higher than that of the United States, whose credit-to-GDP ratio is about 60 percent. In 2012, local governments' debt-to-asset ratio is expected to exceed the danger point of 20 percent, increasing to as much as 26.6 percent.

China will have to pay a high price, Zhao warned, for its twisted and lopsided understanding of Keynesian economics.