



Efficiency, A Thousand Companies At A Time

CHINA'S "1000 ENTERPRISES" PROGRAM: AN ENERGY EFFICIENCY POLICY

China's policymakers understand that continuing development will require using less energy to produce more economic growth – and are betting on the nation's largest 1,000 businesses to make it happen.

So far, that bet appears to be paying off. More than halfway through a 5-year effort, the companies are on track to meet - and exceed - their goal to save 100 million tons of coal equivalent (mtce) by 2010.ⁱ Success will prevent the release of hundreds of millions of tons of greenhouse gases into the atmosphere.

The "Top-1,000 Energy-Consuming Enterprises Program" was unveiled in 2006 as part of a larger effort to curb China's growing appetite for energy. China's 1,000 biggest companies are responsible for about one-third of its energy use, and a similar share of energy-related CO₂ emissions. As such, officials recognized, this set of industries – which includes steel mills, chemical factories, coal mines, and power plants – provided a ripe target for improving efficiency and cutting greenhouse gases.

In 2006, the National Development and Reform Commission, China's top economic planning agency, assigned efficiency targets for each of the

Top-1000 enterprises. The central government followed a "carrots and sticks" approach to compliance. Incentives such as financial grants for new equipment are made available to support efficiency projects that would save at least 10,000 mtce. The plants undertook audits on their own, with some oversight by the provincial governments. The energy goals are incorporated into the official performance evaluation and promotion system for provincial officials, providing a strong incentive for them to ensure targets are reached in their jurisdiction.

Almost all of the companies now have plans, which in 2007 alone, spawned more than 8,000 energy saving projects ranging from factory retrofits to scrapping inefficient machines.

Top-1000 Program Energy Savings (2006)ⁱⁱ

Sector	% Savings
Iron and steel	3.1%
Chemicals	2.9%
Electric power	1.2%
Petroleum/petrochemical	1.6%
Construction materials	1.5%
Non-ferrous metal	1.1%
Textiles	1.5%
Paper	1.3%
Coal mining	0.2%

Key Points

- China's "Top-1000 Energy-Consuming Enterprises Program" focuses on energy efficiency improvements in large enterprises that make up 33% of China's energy use and a similar share of energy-related CO₂ emissions.
- Almost all of the 1,000 large enterprises have developed energy efficiency plans, which so far have produced more than 10,000 energy saving projects.
- At the program's current rate, benefits will exceed the initial goal of saving 100 million tons of coal equivalent by 2010, an emissions reduction of about 250 million tons of CO₂.

Contact An Expert

Lynn Price
Staff Scientist

Lawrence Berkeley
National Laboratory
LKPrice@lbl.gov
(510) 486-6519

CHINA'S "1000 ENTERPRISES" PROGRAM: OUTCOMES AND INDICATORS

Less than halfway through the program, these projects had already saved nearly 60 mtce. According to a report led by Lynn Price at the Lawrence Berkeley National Laboratory (LBNL), if the program continues at its current pace of savings, "Top-1000 Enterprises" will exceed its initial goal and could save over 400 million metric tons of carbon dioxide by 2010.ⁱⁱⁱ

Some indicators of the program's success include the following:

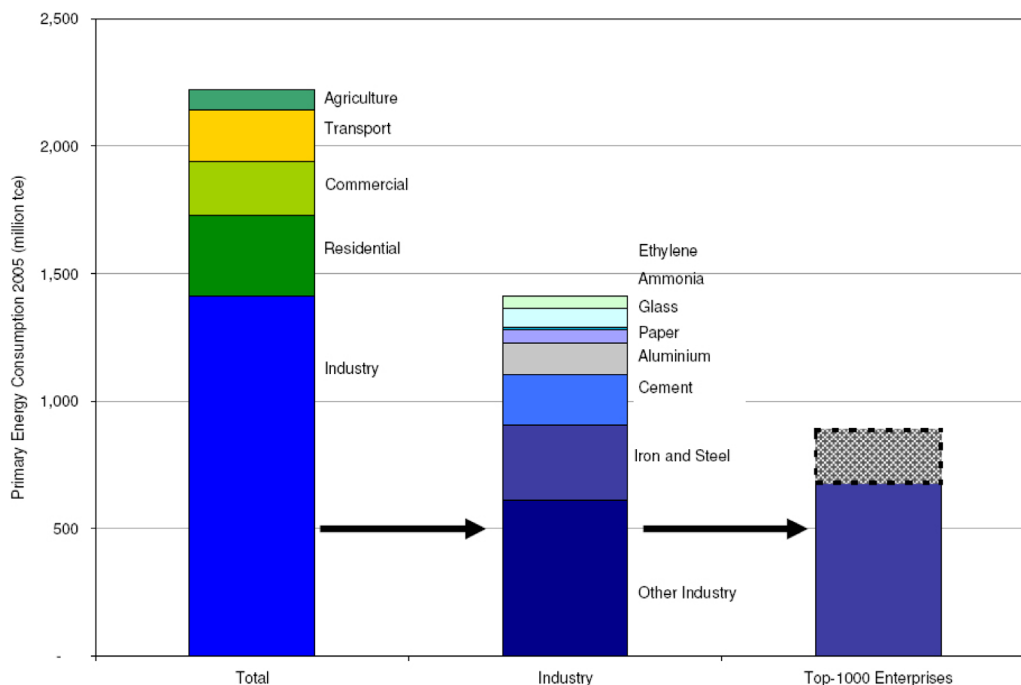
- Energy management was implemented in most of the Top-1000 enterprises and full-time or part-time energy management departments were established in more than 95% of the Top-1000 enterprises.

- A number of provinces have extended the Top-1000 program. For example, Shandong and Jiangsu Provinces have signed target-setting agreements with 100 additional large enterprises.

However, challenges do remain. The enterprises have found the task of conducting energy audits difficult, for instance, and further tweaking in the area of supporting policies has been proposed. But if its targets are met, "Top-1000 Enterprises" program could carry China a quarter of the way toward its overall 2010 energy reduction goal, propelling the nation towards a lower-carbon future.^{iv}

This fact sheet is a product of ChinaFAQs, a joint project of the World Resources Institute and experts from leading American universities, think tanks and government laboratories. Find out more about the ChinaFAQs Project at: <http://www.ChinaFAQs.org/>.

Energy Consumption of China, China's Industrial Sector, and the Top-1000 Energy Consuming Enterprises (2005)^v



Notes

ⁱ Energy use and energy savings are reported in Chinese units of million metric tons of coal equivalent (Mtce). One Mtce equals 0.29 exajoules (EJs) and 0.28 quadrillion British thermal units (Quads).

ⁱⁱ Price, Lynn, Wang Xuejun, and Jiang Yun. (June 2008). "China's Top-1000 Energy-Consuming Enterprises Program: Reducing Energy Consumption of the 1000 Largest Industrial Enterprises in China." Lawrence Berkeley National Laboratory. Available at: http://china.lbl.gov/sites/china.lbl.gov/files/LBNL_519E_Top-1000_Energy_Consuming_Enterprises_Program_Jun2008.pdf.

ⁱⁱⁱ Price et al., 2008.

^{iv} This goal is a 20% reduction in energy intensity of China's economy (the amount of energy consumed per dollar of Gross Domestic Product) by 2010.

^v a) Top-1000 program energy consumption is typically reported in final energy units (dark blue box). b) The shaded area provides the Mtce equivalent of electricity generation, transmission, and distribution losses so that the Top-1000 program can be compared in primary energy terms with the other two bars. Industry sub-sector breakdown based on LBNL model, not Chinese statistics. Price et al., 2008.

ChinaFAQs

World Resources Institute
10 G St NE
Washington, DC 20002
202-729-7600
www.ChinaFAQs.org