

ChinaFAQs

The Network for Climate and Energy Information



Energy & Emissions Data in China

MONITORING ENERGY AND EMISSIONS DATA IN CHINA

In 2007, when China surpassed the United States as the world's largest emitter of greenhouse gases, the development caught some officials in both nations by surprise. In part, that's because even well-informed experts had predicted the change wouldn't occur until 2013 or later.ⁱ The miscalculation highlighted the importance of up-to-date information in global emissions forecasts – and the challenge of collecting comprehensive statistics in rapidly developing nations like China.

Now, China, the United States and other nations are taking steps to improve their monitoring of energy use and emissions. The U.S., for instance, recently finalized a plan to compile

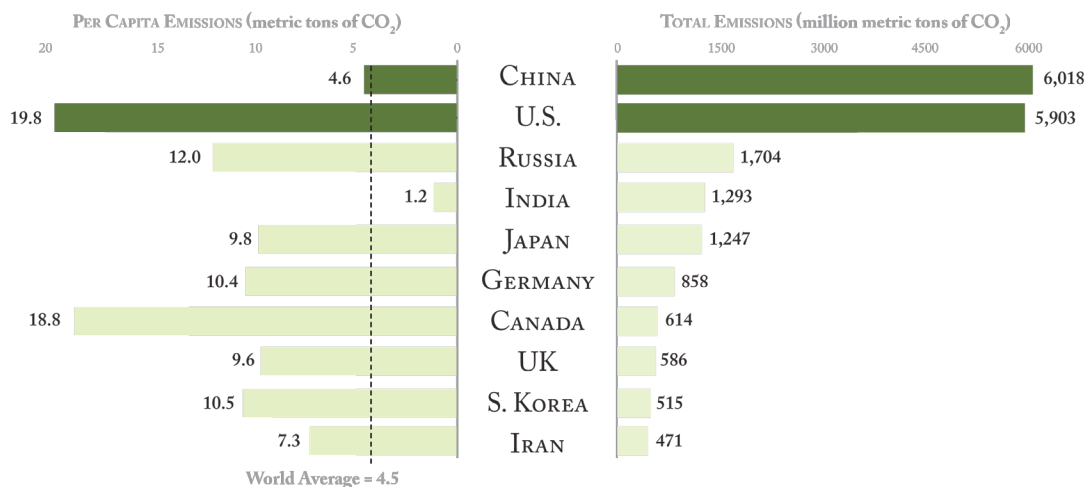
its first comprehensive inventory of greenhouse gas emissions.ⁱⁱ Such annual tallies will be key to assessing whether domestic and international efforts to curb emissions are working or need to be revised.

China is also moving to expand monitoring efforts. China's data collection programs have been hampered by a range of problems. Local officials sometimes misreport data to please higher-ups or look good for job evaluations. Government records suffer from gaps and periodic revisions, leading to uncertainty and concerns about transparency. The spotty numbers have sometimes made officials hesitant to set numerical goals for policies, because projections based on these numbers may prove off-target.

Key Points

- Inadequate monitoring of energy use and emissions in China has created problems for policy makers within and outside of China.
- In the last few years, China has taken major steps to improve monitoring of energy use and emissions, at times with extensive technical assistance from the United States and Europe.
- Although problems remain, expanded monitoring efforts have helped increase the breadth and depth of information available on China's energy use and emissions, improving the ability to develop and evaluate policies.

PER CAPITA EMISSIONS OF TOP TEN GLOBAL CO₂ EMITTERS (2006)



Data Source: EIA, 2008. International Energy Annual 2006.

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RECENT CHINESE LAWS AND POLICIES TO IMPROVE DATA MONITORING

Chinese policymakers seek to address such data quality problems through provisions in the following recent energy initiatives:

The 2007 Energy Law, which established efforts to improve efficiency and develop renewable sources. To implement the law:

- Local governments are establishing systems for collecting and reporting energy statistics.
- Commercial enterprises are developing ways to measure energy use; big energy users must annually report their numbers to government officials.
- The government has created an online energy data collection system. Users must provide detailed information on energy use, energy-saving technologies, and how those technologies perform over time.

A high-profile effort to improve nationwide “energy intensity” by 20% by 2010ⁱⁱⁱ. To reach the goal:

- The central government has assigned each province and provincial-level city improvement targets ranging between 12 and 30 percent. In annual evaluations, governors and mayors are held accountable for reaching the targets.
- Every spring, policy and technical experts from Beijing visit the provinces to conduct on-site inspections of facilities. The visits not only signal the central government’s seriousness about reaching the goal, but also provide feedback for policy revisions.

China is also pursuing a range of other efforts to improve monitoring. They include:

- Creating financial incentives for officials and enterprises involved in “Ten Key Projects” – a set of efficiency initiatives that range from improving urban heat/power systems to developing more efficient motors – to collect and report information that can be used to verify performance.^{iv} Project funding is partially withheld until an evaluation is completed.^v
- Expanding the use of real-time pollution and energy-use monitoring equipment at factories and power plants.
- Increasing monitoring of wind turbines to help improve operational performance.
- New legislation in 2009 that stiffens penalties for misreporting data to the central government.^{vi}

These domestic efforts are expanding both the breadth and depth of reliable information available, both within and outside of China, on its energy use and emissions. In addition, a wide array of national and international bodies collect and report a range of complementary information on China. Such multiple data sources are proving useful for verifying and cross-checking information. To further boost confidence and transparency, however, China will continue to build its capacity to monitor energy use and emissions.

Much of the material in this fact sheet is drawn from “China and Climate Change: Prospects for Action on a Low-Carbon Pathway,” a presentation given by Joanna Lewis, Georgetown University School of Foreign Service, to a Congressional briefing sponsored by WRI on September 24, 2009.

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/>.

Notes

ⁱ The 2006 International Energy Outlook from the (EIA) projected that China’s CO2 emissions would not surpass those of the US until 2013; the 2004 prediction was after 2030.

ⁱⁱ EPA, “EPA Finalizes the Nation’s First Greenhouse Gas Reporting System/Monitoring to begin in 2010,” September 22, 2009 press release. See: <http://yosemite.epa.gov/opa/admpress.nsf/d0f6618525a9efb85257359003fb69d/194e412153cffe8525763900530d75!OpenDocument>.

ⁱⁱⁱ Energy intensity is the amount of energy consumed per unit of Gross Domestic Product. In general, reducing energy intensity helps reduce emissions compared with a “business as usual” trajectory.

^{iv} See, for instance, “China Medium and Long Term Energy Conservation Plan,” a February 2005 presentation by Lu Wenbin of China’s National Development and Reform Commission. <http://www.resourcesaver.com/file/toolmanager/O105UF1252.pdf>.

^v See ChinaFAQs Fact Sheet: “Ten Key Projects”.

^{vi} China’s Statistics Law (2009), National People’s Congress. Retrieval (in Chinese) at: http://www.npc.gov.cn/npc/xinwen/lfgz/zxfi/2009-06/27/content_1508548.htm.

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