

# Energy & Natural Resources

BALANCING ECONOMIC AND ENERGY GOALS

# CHINA BALANCE SHEET

WWW.CSIS.ORG/CHINABALANCESHEET

## Background

- **China's energy demand doubled between 2000 and 2007**, making it the world's second-largest energy consumer after the United States. China accounts for 17 percent of global demand today, up from 10 percent a decade ago.
- **This surge in China's energy and resource needs is not only the result of its fast economic growth** but a change in the composition of that growth. Between 1978 and 2001, GDP grew by 9 percent annually while energy demand grew at half that rate. Between 2001 and 2007, GDP growth has continued at the same high rate, but the rate of growth in energy demand has more than doubled.
- **Industry, not automobiles and air conditioners, drives energy demand in China.** The preference for heavy industry over light industry and services is responsible for diverting China from a two-decade track record of improving the energy intensity of economic growth. The iron and steel sector alone accounts for 18 percent of the country's energy demand, compared to 12 percent for all Chinese households combined.
- Domestic coal supplies 70 percent of China's energy needs, making China the world's largest coal consumer at 41 percent of total global demand, more than twice that of the United States. **Surging energy demand and a reliance on coal have made China the largest annual emitter of greenhouse gasses**, although the United States is still by far the largest emitter on a cumulative historical basis.
- Although coal is relatively abundant in China, domestic supplies of other natural resources are limited. **China relies on imports for slightly less than 50 percent of the oil it consumes** and is dependent on international markets for a growing share of its iron ore, bauxite, and natural gas needs.
- **China accounted for 33 percent of the growth in global oil demand between 2002 and 2007**, which contributed to the sharp rise in crude oil prices in that period. Yet because automobiles are not yet its main energy challenge, China remains a distant second to the United States in overall oil demand (9 percent versus 24 percent of the global total) and oil imports (3 million barrels per day versus 10 million).

- Based on recent trends, China is forecast to account for 34 percent of the growth in power generation, 30 percent of the growth in oil demand, and 42 percent of the growth in CO<sub>2</sub> emissions worldwide between now and 2030. **Yet China's energy future is not predetermined, and changing course does not have to come at the expense of economic growth.**

## Current Situation

The implications of China's growing resource needs are felt both inside and outside the country, and the current economic crisis is dramatically altering China's energy trajectory.

### *Domestic*

- **Air pollution claims more than 750,000 lives each year** and costs China at least tens of billions of dollars. Power outages and fuel shortages plague the country and retard growth. These challenges are well known in Beijing and have become pressing issues for leaders. The kind of growth that has delivered double-digit energy demand has failed to meet the country's social needs in the process.
- **The five most energy-intensive industries account for 42 percent of the country's energy use** and have been a significant source of China's growing trade surplus. Yet these five combined employ only 14 million people out of a labor pool of 770 million (under 2 percent). Policymakers have correctly set a goal of rebalancing growth away from investment in energy-intensive manufacturing and toward light manufacturing, service sector activity, and domestic consumption.
- The economic crisis is forcing some of this rebalancing to occur. A dramatic slowdown in domestic investment and foreign demand for Chinese goods has caused energy-intensive industry to severely curtail production. This will significantly arrest, and may even reverse, overall energy demand growth in the near term. At the end of 2008, electricity production was down 10 percent from the previous year. China's energy footprint after the country emerges from the economic crisis depends in large part on whether Beijing's policy response moves the country in a more labor-intensive and less resource-intensive direction.

## Current Situation

(continued)

### International

- The activities of Chinese oil companies have grown along with Chinese oil demand and include investments in countries considered “pariah states” by the United States, **often because of the absence of competition and political resistance to Chinese investment in the West** (see box on CNOOC’s bid for Unocal). State support for the country’s oil companies comes with a price in terms of Chinese “soft power,” which has prompted a debate in Beijing as to whether overseas investment by Chinese firms necessarily enhances energy security.
- Regardless of whether Chinese or Western oil companies produce abroad for China, oil is shipped to China by sea. **Some 80 percent of China’s oil imports transit through the Strait of Malacca alone**, a major potential chokepoint. China’s oil deliveries are dependent on the U.S. Navy to patrol and secure sea lanes, which China views as a strategic vulnerability should U.S.-China relations turn sour. Energy security is one rationale behind **China’s efforts to upgrade its naval capacity**. In addition, **China has sought to develop new port facilities**, such as at Gwadar in Pakistan and in Bangladesh and Burma, and more overland pipelines extending from South, Southeast, Central, and Northeast Asia.
- While China’s energy future may not be as dire as it appears today, both China and the United States will be dependent on international energy markets for some time, and thus share an interest in promoting a stable Middle East, increased global investment in oil and natural gas production, and the development of economically viable alternative energy technologies.
- China’s ownership of foreign oil and gas assets is not antithetical to U.S. interests. By investing in production, China is helping to alleviate the supply-side constraints on resources. Washington and Beijing should work together to establish international norms for energy investment, both bilaterally and in third countries. China should also be welcomed and encouraged to play a larger role in multilateral energy institutions, such as the International Energy Agency.
- The Strategic Economic Dialogue made a positive start in addressing energy and environmental issues within the context of the broader economic relationship through the creation of the U.S.-China 10-Year Energy and Environment Cooperation framework. Progress on this front will also help speed up the process of strengthening and elevating the bilateral relationship as a new G-2, a concept endorsed in early 2009 by Zbigniew Brzezinski, the former national security adviser.

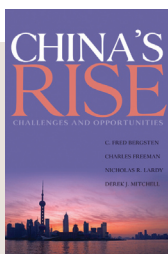
## Implications

- China can weather the current crisis and return to trend growth rates while slowing energy demand and reducing emissions, but only by adjusting policy. Rebalancing the economy away from exports and investment in heavy industry toward light manufacturing, services, and domestic consumption would not only change China’s energy trajectory but would also increase income and employment for Chinese citizens and reduce its huge trade surplus. The current economic crisis makes moving the country in a more labor-intensive direction all the more urgent.
- Balance between China’s economic and energy goals creates opportunities for engaging Beijing in an effort to address climate change. And although China’s investment and export-led growth model have created an outsized carbon footprint, a consumption-led

### INVESTMENT VS. CONSUMPTION IN CHINA

In 2005, the China National Offshore Oil Corporation (CNOOC) bid to purchase the American oil company Unocal. U.S. critics charged that the transaction would make the United States more dependent on foreign oil and thus harm U.S. interests. This charge, and the fear that China’s energy investments elsewhere would “lock up” long-term supplies, reflects a fundamental misunderstanding of the global energy market.

Had China acquired Unocal and diverted its entire output to China, the net effect on the United States and the global markets for oil and natural gas would have been negligible. For every unit of oil or natural gas China imported from Unocal fields, it would import a unit less from other sources, so the net effect on the global energy market would be nil. Indeed, to the extent that Chinese investment increases global oil supply, it can in fact improve U.S. energy security.



FOR FURTHER INFORMATION:  
SEE CHAPTER 7: “ENERGY IMPLICATIONS OF CHINA’S GROWTH” IN  
*CHINA’S RISE: CHALLENGES AND OPPORTUNITIES*  
BY C. FRED BERGSTEN, CHARLES FREEMAN, NICHOLAS LARDY, DEREK J. MITCHELL &  
CHAPTER 5: “CHINA’S FOREIGN & SECURITY POLICY: PARTNER OR RIVAL?” IN  
*CHINA: THE BALANCE SHEET: WHAT THE WORLD NEEDS TO KNOW ABOUT THE EMERGING  
SUPERPOWER* BY C. FRED BERGSTEN, BATES GILL, NICHOLAS LARDY, DEREK J. MITCHELL