



Enter the Dragon

China's burgeoning thirst for energy is key to the world's energy future

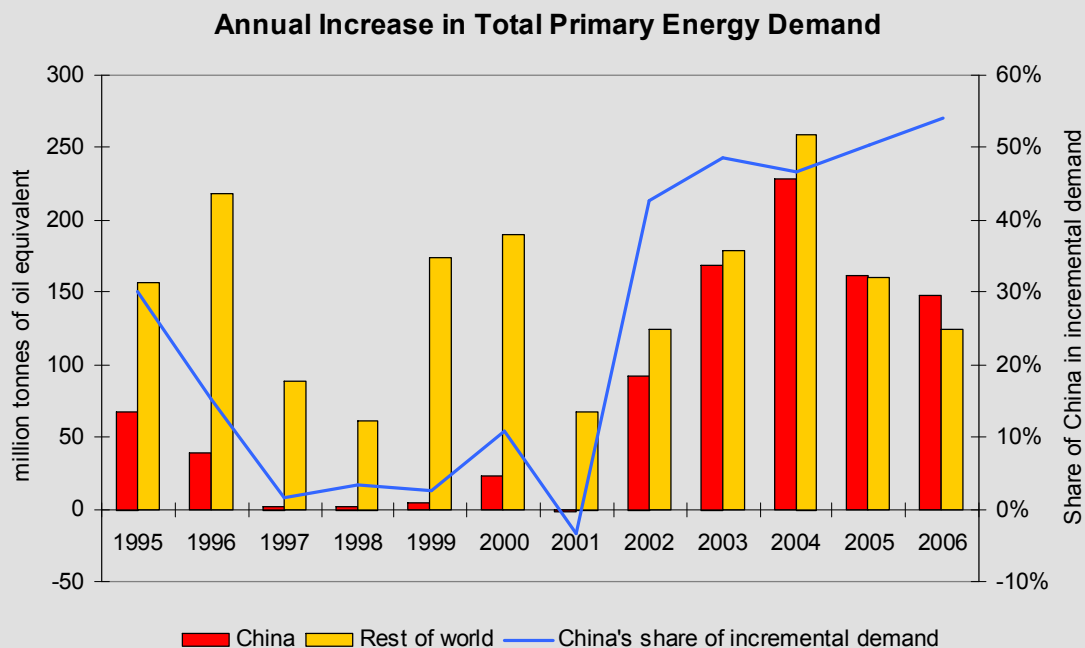
The emergence of China as the world's new energy giant has become something of a cliché. Everyone knows that China's economy is booming, fuelling an insatiable thirst for energy and other raw material commodities and driving up international prices. But maybe not everyone realises the extent to which China's weight in global energy has grown in just the last five years. And, contrary to popular belief, it is coal and not oil that is leading the way. China will almost certainly overtake the United States this year as the world's biggest emitter of carbon dioxide, mainly due to surging coal use. And there are few signs of a slowdown in demand yet. The importance of China today is such that the future of global energy supplies and prices – and the prospects for curbing climate change – depends more than ever on what happens in China.

The latest data show that China's energy consumption jumped by more than 70% in the five years to 2006 – an average annual rate of increase of 11%. In fact, demand grew even faster than the country's gross domestic product, reversing the trend of declining energy intensity that characterised the country's economic boom since the late 1970s. GDP grew at by 10.7% in 2006, according to the latest estimates from the International Monetary Fund. The reason for the recent rebound in intensity is a remarkable surge in production of industrial goods in the most energy-intensive sectors like iron and steel and cement to meet rising exports and the needs of the domestic construction industry. In fact, the current wave of infrastructure development – primarily houses, offices, commercial premises, factories, power stations and roads – is quite simply the biggest construction boom the world has ever seen. Coal has met more than two-thirds of this increase in demand, though consumption of oil – especially for transport – and natural gas are also growing fast.

In total, the *increase* in China's total primary energy consumption in the three years to 2006 amounted to just under 540 million tonnes of oil equivalent. That is the equivalent to slightly more than the entire energy consumption of Japan. In the last five years, the increase has amounted to close to 800 Mtoe, accounting for just under half of the increase in demand for the world as a whole (see the figure below). In 2006, China contributed a record 54% of the increase in global energy demand. This is a completely different story to the period up to 2002, when China made only a small contribution to world demand (its energy use actually *fell* in 2001).

The picture for oil is less dramatic, even though China's contribution to global oil demand has risen since the 1990s. In the five years to 2006, China accounted for 41% of the increase in world demand; in the previous five years, the corresponding number was only 23%. China's oil demand has been very erratic of late. It jumped 15% in 2004 – a major cause of the upward lurch in international oil prices. But it grew by less than 3% in 2005, rising to 7% in 2006. The blip in demand in 2004 and subsequent slowdown in 2005 was largely caused by switching to heavy fuel oil in the power sector caused by an unexpected surge in electricity demand and delays in bringing coal-fired capacity on line.

An Overweight Dragon in the Room



Sources: IEA databases; *BP Review of World Energy 2007*; Menecon Consulting analysis.

The near- to medium-term prospects for China's energy use are inevitably uncertain. But it is highly likely that, in the absence of a dramatic slowdown in its economy, energy demand will continue to grow. A critical factor will be the extent to which the government is successful in rebalancing economic growth away from industry and towards services, thereby reducing energy intensity and mitigating worsening pollution and greenhouse-gas emissions. The government has set a goal of reducing intensity by 20% between 2005 and 2010. The increase in intensity in 2006 suggests that this goal is highly unlikely to be met, though some improvement is nonetheless expected. A raft of new measures, including higher interest rates, tighter controls on lending to energy-intensive sectors and new export tariffs, have recently been introduced aimed at reducing over-heating of investment in export industries and promoting the development of services sectors geared mainly to supplying the domestic market. Clearly, the current highly resource-intensive path of economic development is unsustainable in the longer term. But that doesn't mean to say that China cannot continue along that path for several years to come – with potentially catastrophic consequences for its own people and for the rest of the planet.

We have every reason to be paying careful attention to what happens to China's energy needs in the years to come. Surging demand for oil has already pushed up its imports to record levels and contributed to the hike in prices (though past under-investment by the major oil-producing countries has arguably played a bigger role). And China's hard coal exports have all but dried up as a result of booming domestic needs, similarly pushing up international prices. The implications of higher coal and oil use for the security of supply for the rest of the world and carbon-dioxide emissions are obvious. As is the importance for the west to engage with China in enhancing the consuming

countries' collective security through short-term measures to deal with a supply disruption and helping the country reduce its reliance on fossil energy in the longer term. China has as much to gain as the west from working together to meet these goals.

The centre of gravity of world energy has well and truly shifted to the Far East. Menecon Consulting is working with the International Energy Agency on its latest *World Energy Outlook*, which will focus on the implications of energy developments in China and India on the rest of the world. We will report on the findings of that study in an Energy Brief later this year.

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