China's Challenges
Energy, Environment and Development
“We will make China a country of innovation”

China’s Premier Wen Jiabao, September 10, 2009
Speaking at the World Economic Forum
Population Density

1.3 Billion

Source: http://www.lib.utexas.edu/maps/middle_east_and_asia/china_population_83.jpg
中国的钢铁产量
China’s Steel Production
1990-2008

中国的水泥产量
China’s Cement Production
1990-2008

图示由Mark Levine提供，LBNL
700 million people in 120 cities over 1 million
50 new cities over 1 million by 2035
Crazy Bad 500+ Um, are you still convinced that the benefits of living in Beijing outweigh the risks?
200,000 to 1 million premature deaths each year from fuel smoke
U.S. and China: Annual, Per Capita and Cumulative CO₂ Emissions

Sources: Oak Ridge National Laboratory, Carbon Dioxide Information Analysis Center (CDIAC), 2007; the Netherlands Environmental Assessment Agency (MNP), 2007; Population Reference Bureau 2007 World Population Data Sheet

Source: Asia Society, CAP Report 2009
Solar Cells “Like a Barbie doll”
China’s 2009 Solar Production Capacity = 4GW

Nearly one-third of global solar production
Coal (still) powers China
Carbon Dioxide Emissions from Coal Use (2005-2030)

Note: 2005 data is actual; 2010-2030 data is projected
Power Generation by Fuel

China Power Generation by Fuel

- 2006: 4.3 Quadrillion Btu
- 2030 (proj.): 57.3 Quadrillion Btu

- Natural Gas
- Liquids
- Nuclear
- Renewables
- Coal

U.S. Power Generation by Fuel

- 2006: 20.7 Quadrillion Btu
- 2030 (proj.): 24.3 Quadrillion Btu

- Natural Gas
- Liquids
- Nuclear
- Renewables
- Coal

Huaneng Post-combustion CO$_2$ Capture Experimental Demonstration Plant

Refining Unit
Wood and dung for heating & cooking in rural China
“We will accelerate the development of a low-carbon economy and green economy so as to gain an advantageous position in the international industrial competition.”

China’s Premier Wen Jiabao
at the World Economic Forum, September 10, 2009
Development is the number one duty, Innovation is the number one motivation
Stability is the number one responsibility, people’s livelihood is the number one goal. Harmony is the number one aspiration, Honest government is the number one promise.
Photo Credits

• China population map: http://www.lib.utexas.edu/maps/middle_east_and_asia/china_population_83.jpg
• Wind Map in China: http://www.technologyreview.com/files/33101/china_x600.jpg