

China's Challenges

Energy, Environment and Development



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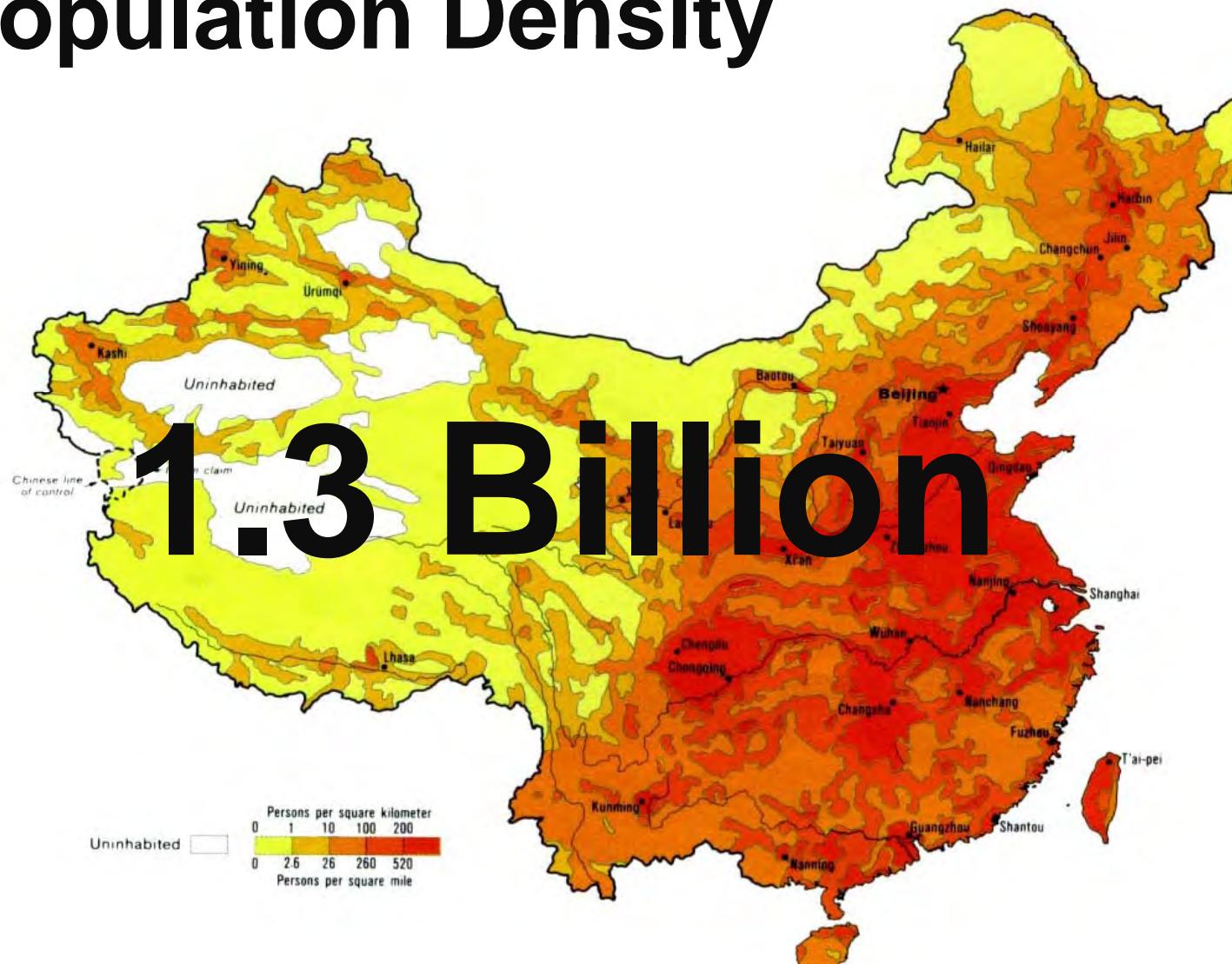
Photo: Sunset Noir (Flickr)

“We will make **China**
a country of
innovation”

China's Premier Wen Jiabao, September 10, 2009
Speaking at the World Economic Forum



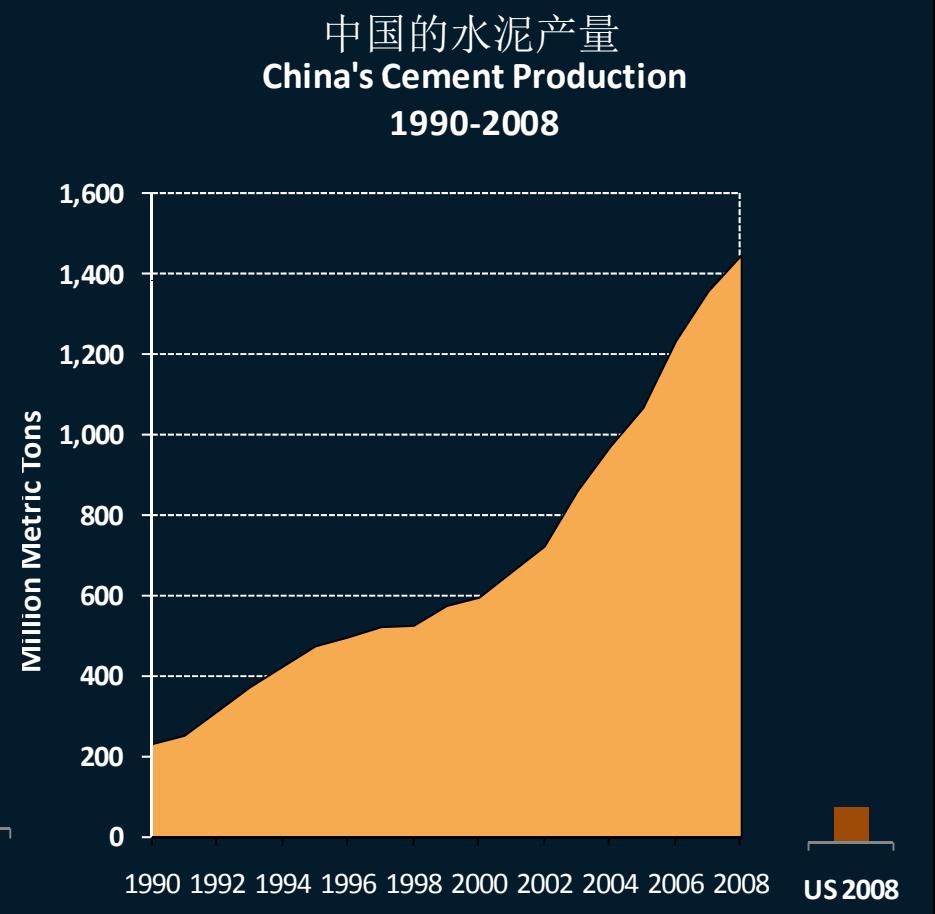
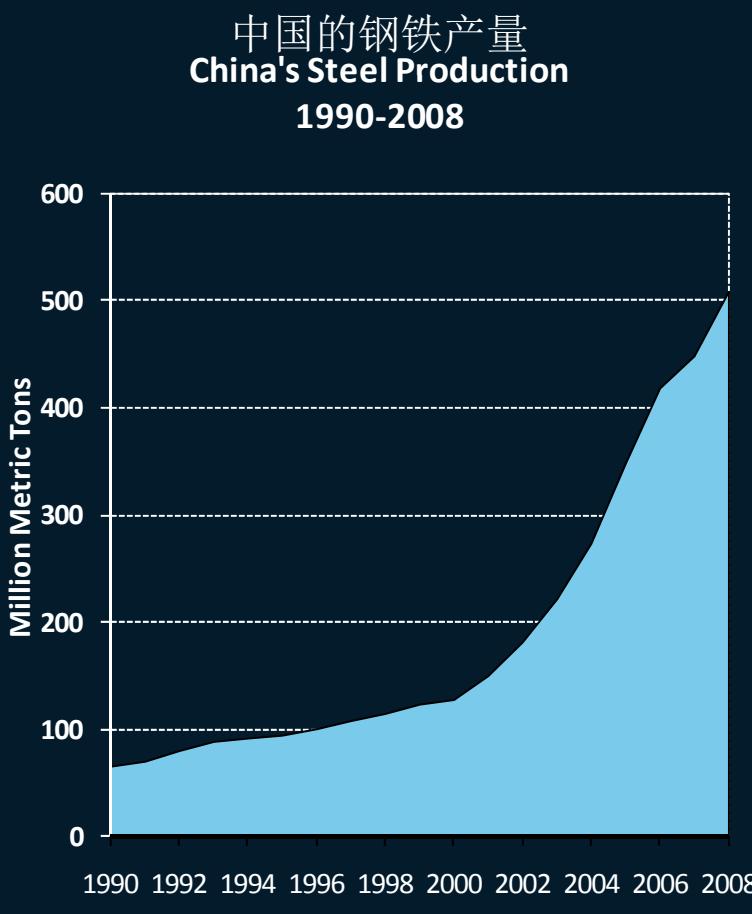
Population Density



Source: http://www.lib.utexas.edu/maps/middle_east_and_asia/china_population_83.jpg

中国和美国的钢铁和水泥产量

China and U.S. Steel and Cement Production



Slide courtesy of Mark Levine, LBNL



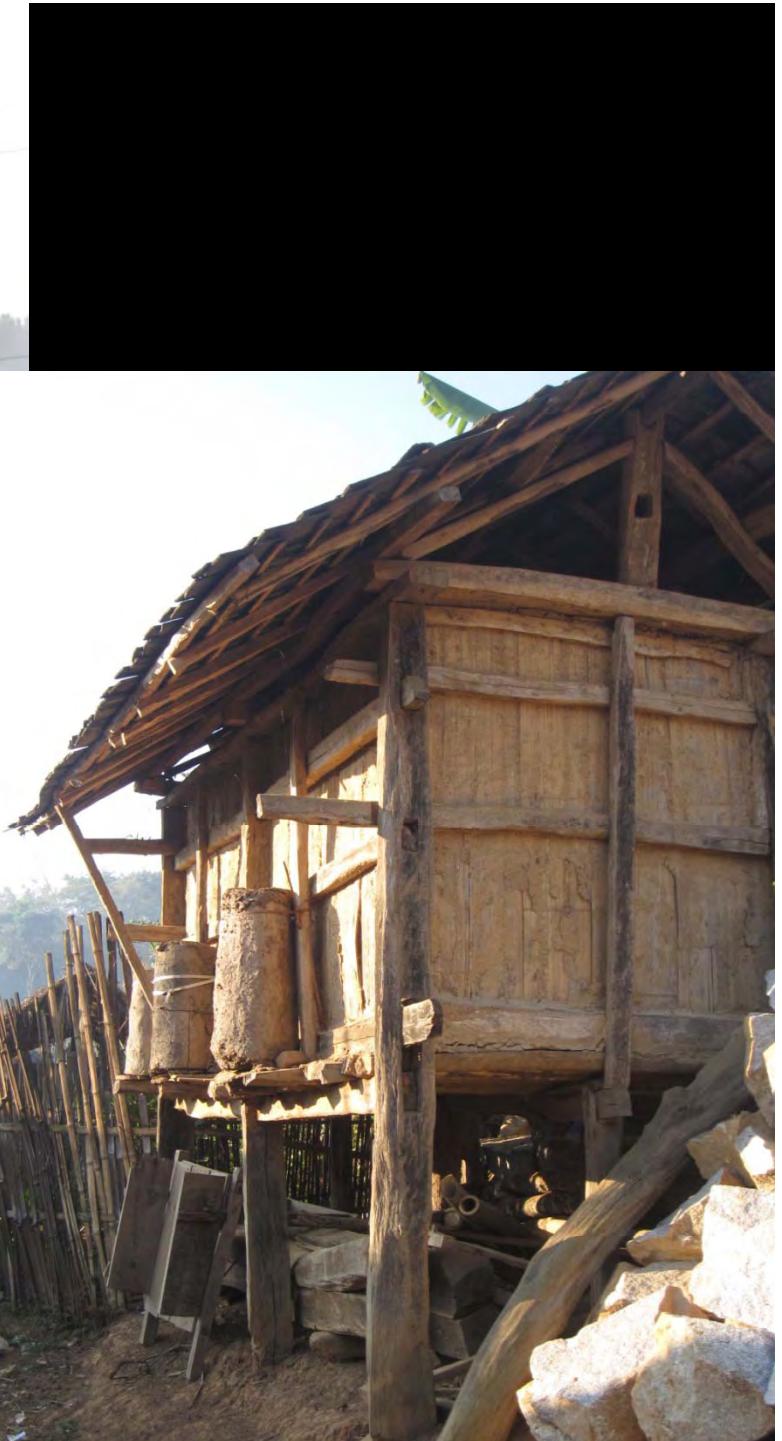
700 million people in
120 cities **over 1 million**

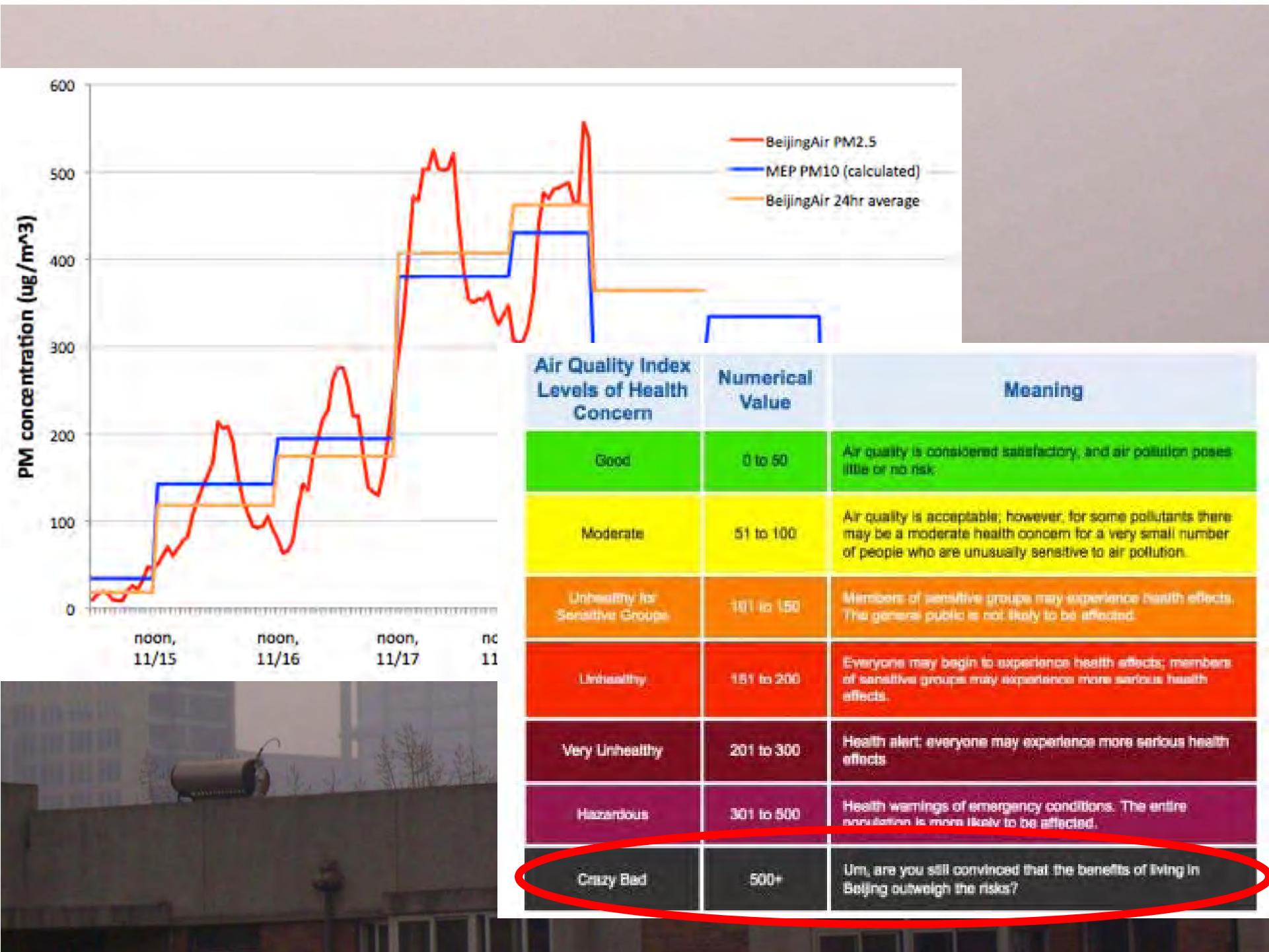


50 new cities over 1 million by 2035





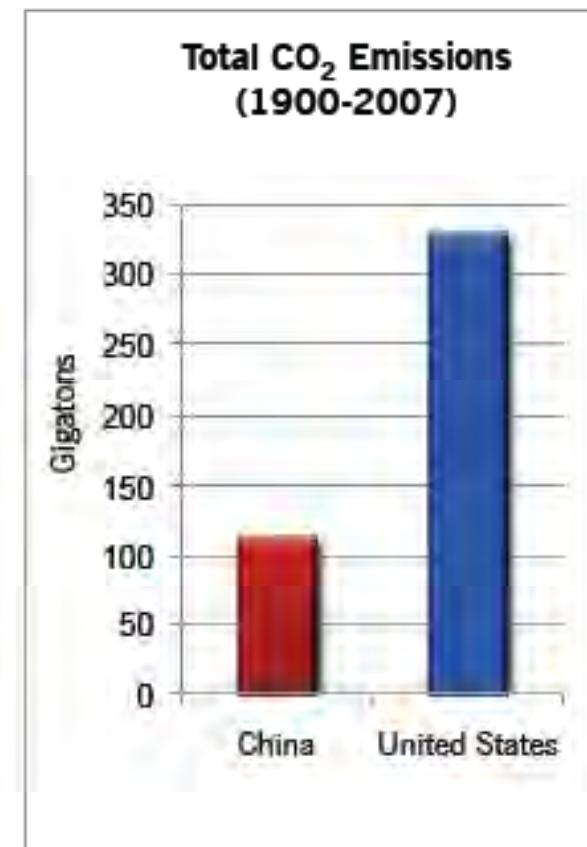
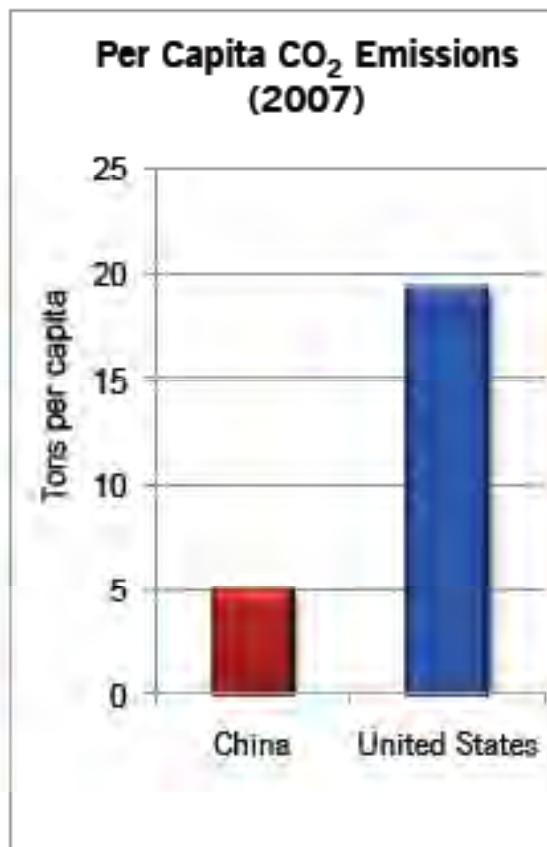
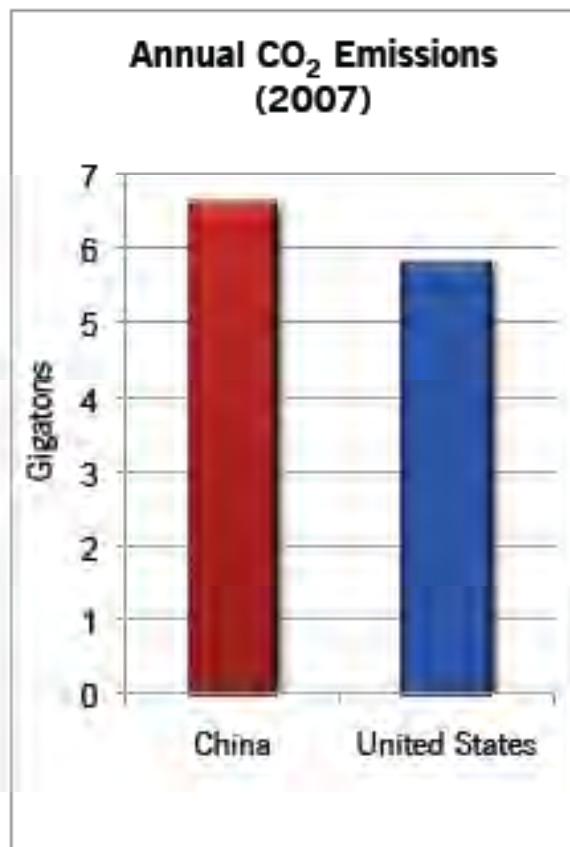




**200,000 to
1 million
premature
deaths
each year from
fuel smoke**



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





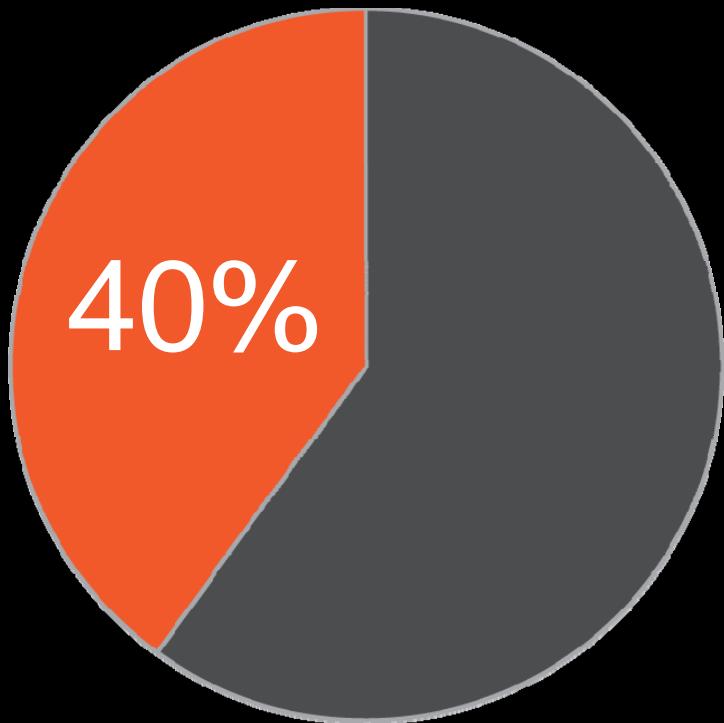


Solar Cells “Like a Barbie doll”

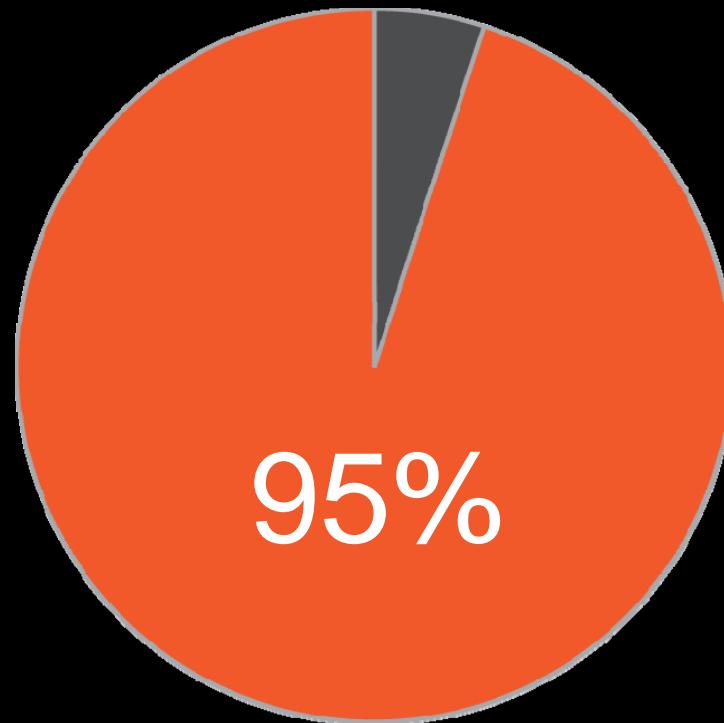


China's 2009 Solar
Production Capacity = **4GW**

Nearly **one-third** of global solar production



Global Solar Market



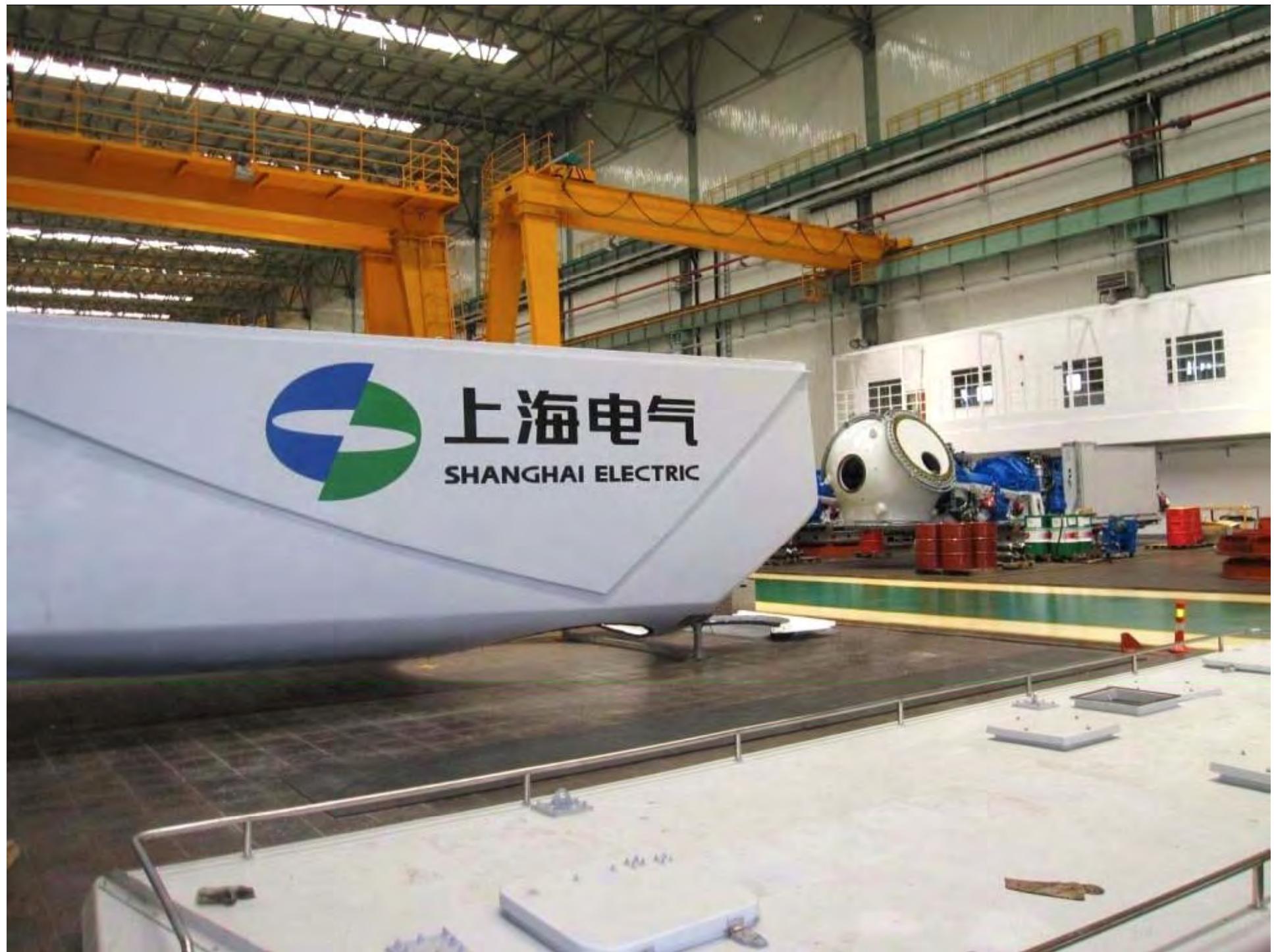
Global Solar Cell Exports













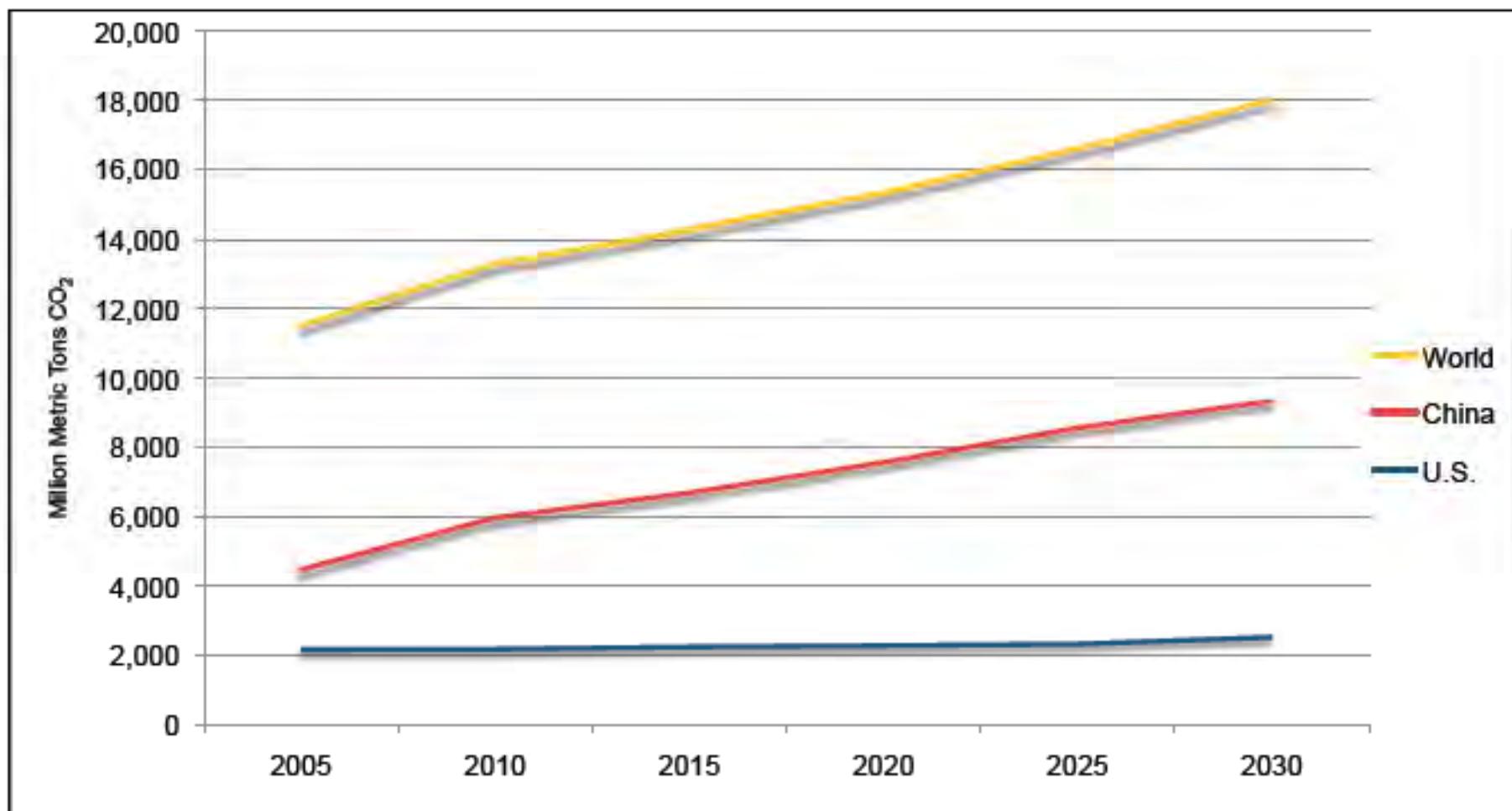


Coal

(still) powers China



Carbon Dioxide Emissions from Coal Use (2005-2030)

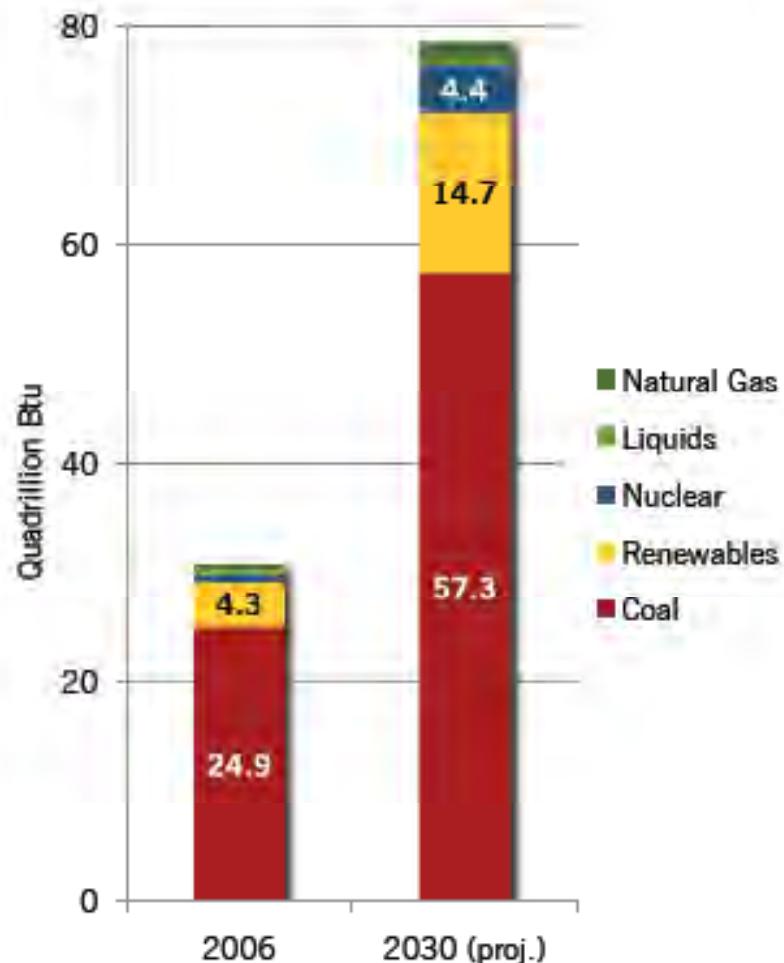


Note: 2005 data is actual; 2010-2030 data is projected

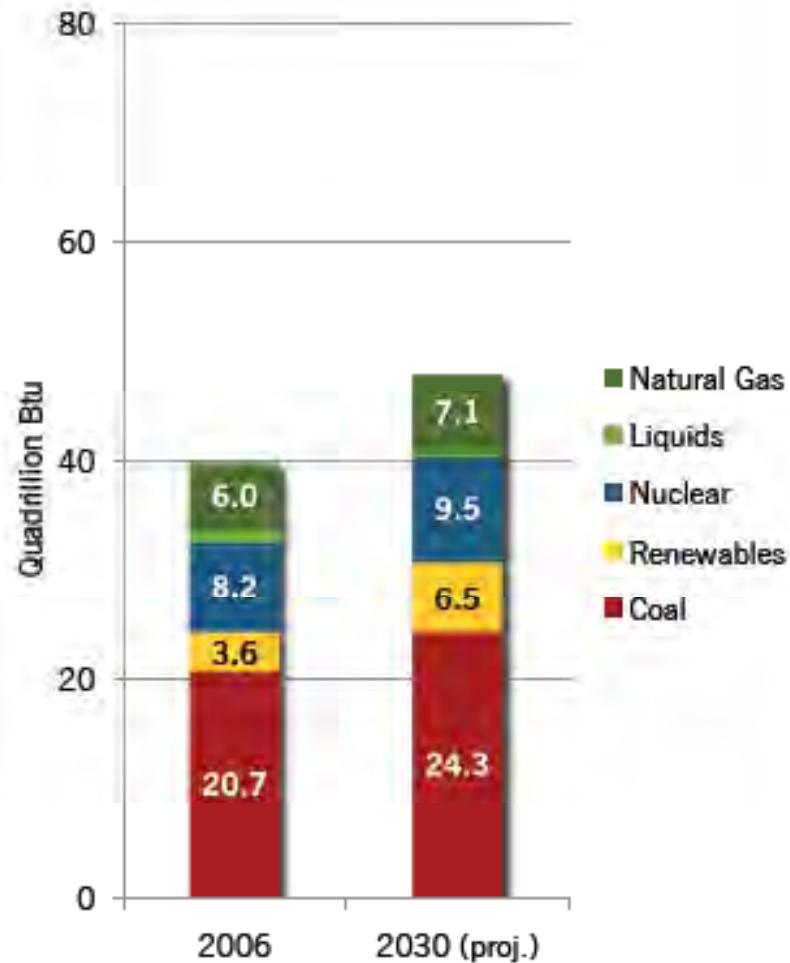
Source: "International Energy Outlook 2009", Energy Information Administration, May 2009

Power Generation by Fuel

China Power Generation by Fuel



U.S. Power Generation by Fuel



Source: "International Energy Outlook 2009", Energy Information Administration, May 2009





二氧化碳捕集试验示范装置

Huaneng Post-combustion CO₂ Capture
Experimental Demonstration Plant

精制系统
Refining Unit



GREENGEN

色煤电有限公司









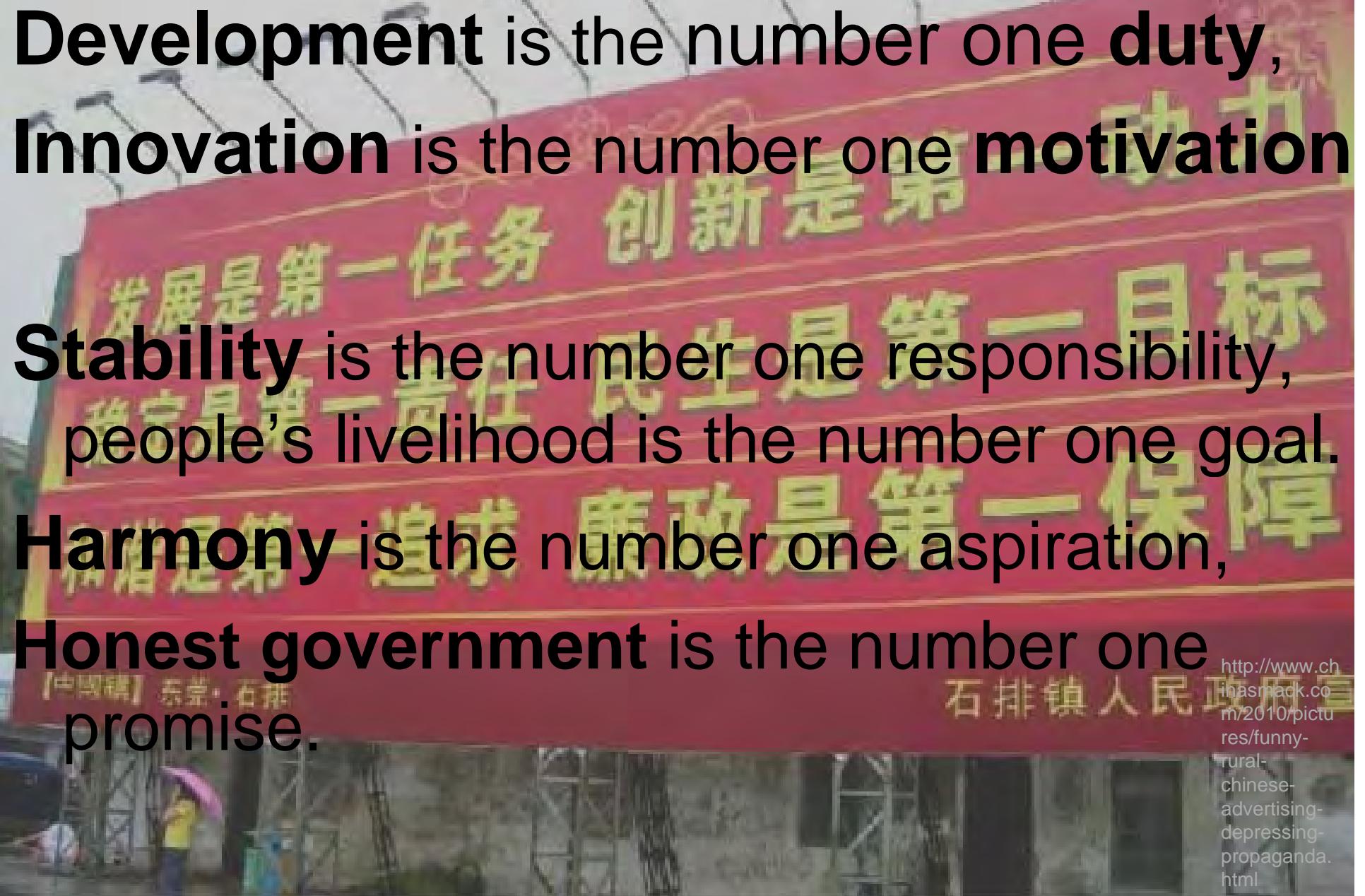


Wood and dung for heating & cooking in rural China



“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.



Contact: ewilson@umn.edu

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- China map: <http://www.panasianbiz.com/india/map-of-china-the-15-most-useful/>
- China population map:
http://www.lib.utexas.edu/maps/middle_east_and_asia/china_population_83.jpg
- Beijing air quality graph and EPA remix,
<http://www.livefrombeijing.com/2010/11/crazy-bad-air-quality-in-beijing/>
- Urmuchi Wind:
http://en.wikipedia.org/wiki/File:Wind_Farm_Outside_Urumqi.jpg

Wind Map in China:

http://www.technologyreview.com/files/33101/china_x600.jpg