

Key Policy Reforms Needed to Achieve Our Energy Efficiency and Environmental Goals

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U.S. and China are Key to Any Solution to Our Global Climate Change Crisis

As the world's biggest industrial country and largest developing country, the U.S. and China together account for approximately :

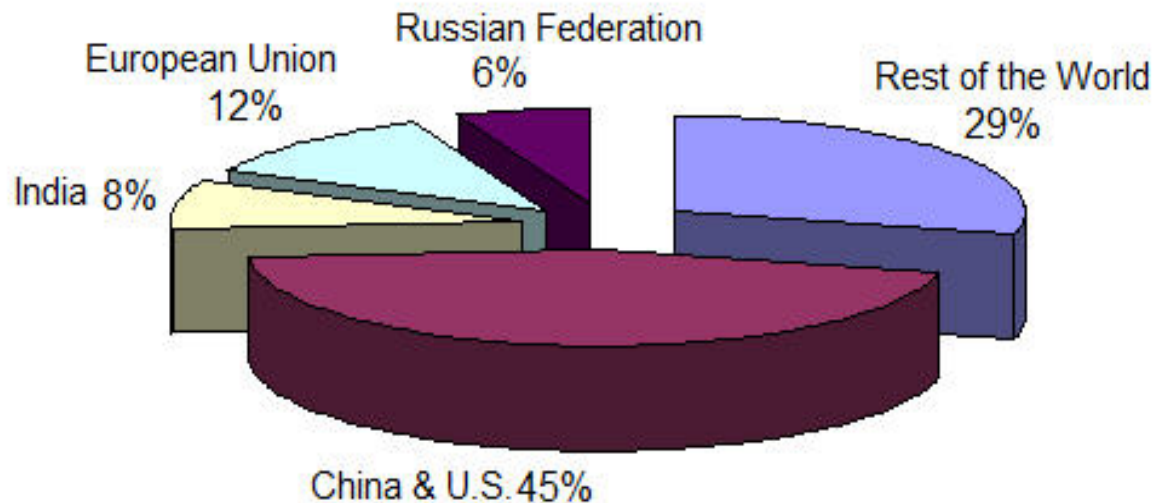
- ✓ 1/4 of the world's population
- ✓ 1/3 of the world's economic output
- ✓ 1/3 of the world's energy consumption, and
- ✓ 1/2 of global CO₂ emissions from fossil fuel use

Source: World Bank, IEA, EIA



Energy Use Poses Greatest Threat to the Global Environment

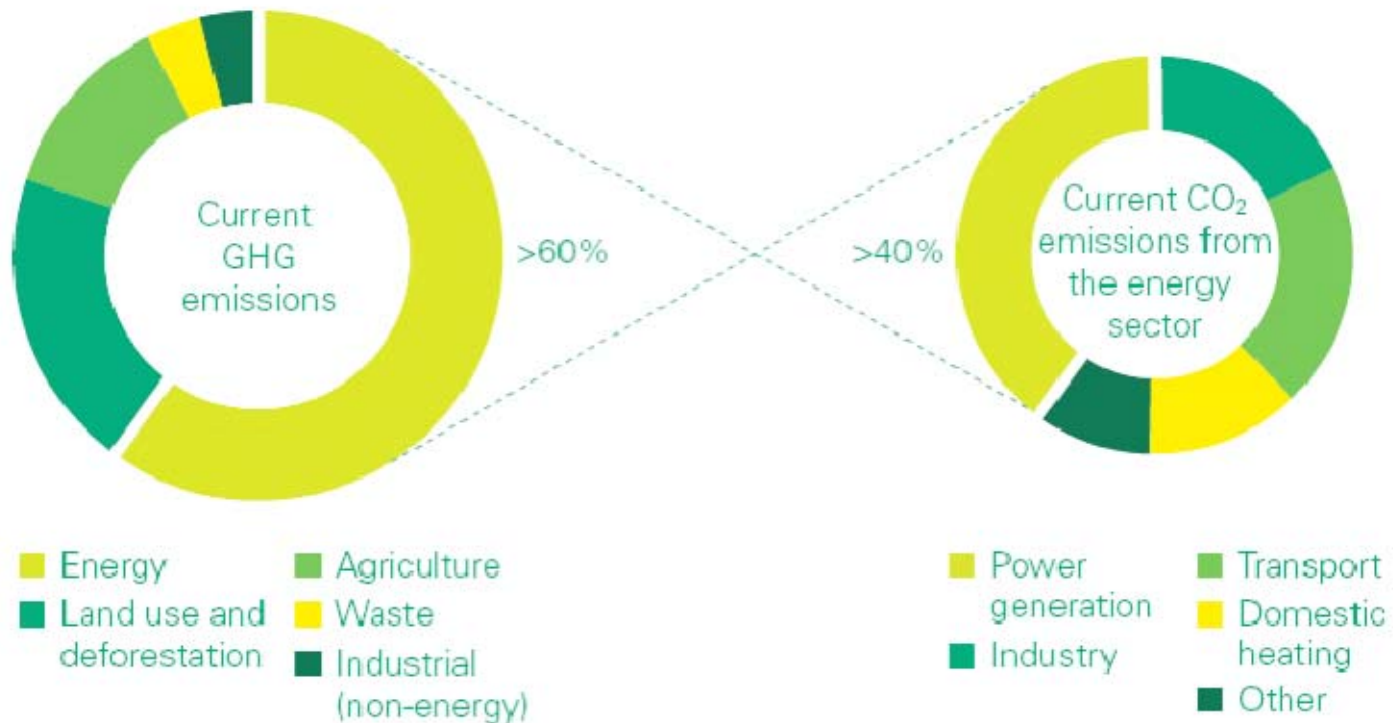
Carbon Dioxide Emissions from Energy Activities, 2007



Source: EIA U.S. Carbon Dioxide Emissions from Energy Sources 2007
Flash Estimate, EIA International Energy Outlook 2008 and MNP 2008

Power Sector is the Biggest Contributor to Global Warming

Power generation on average accounts for more than 40% of the energy sector's CO₂ emission. It is the largest single source of man-made CO₂ emissions.



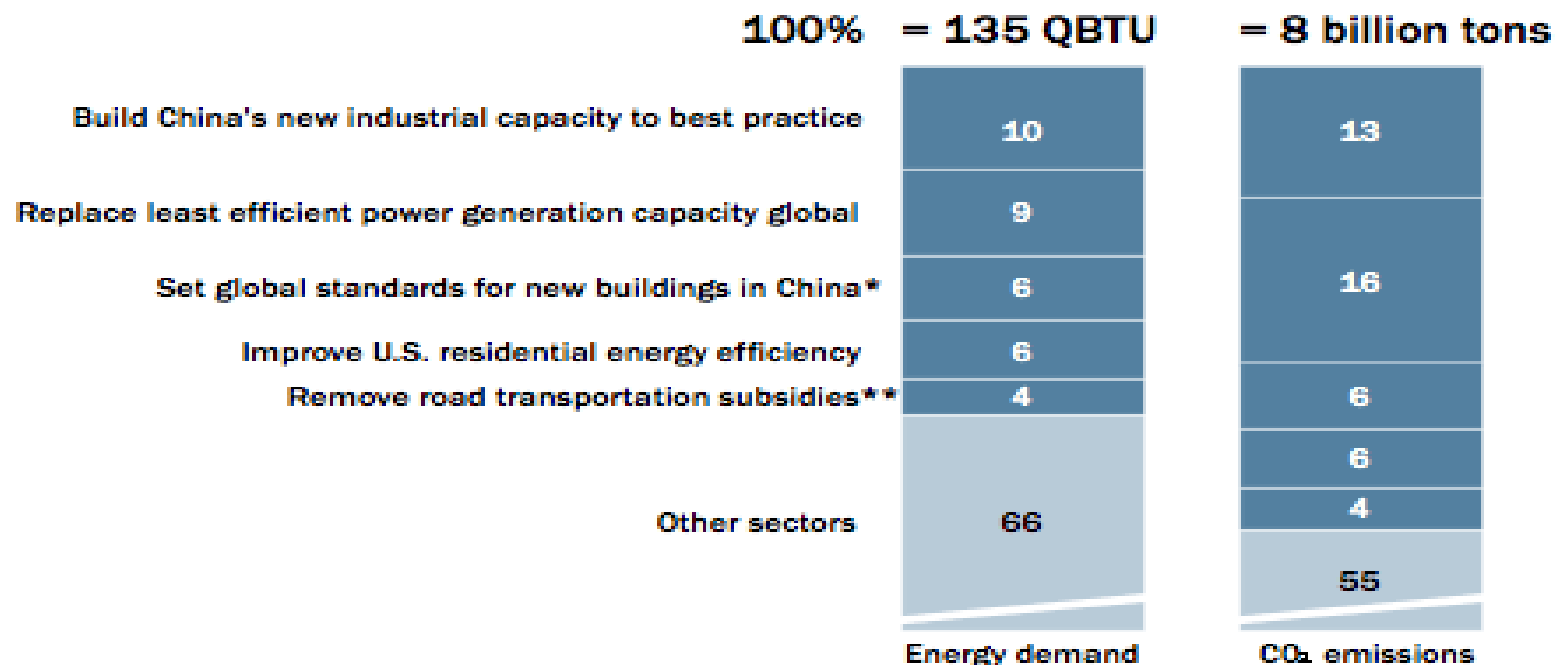
Source: IEA, WEO 2006



Energy Efficiency in China and the U.S. Presents the Biggest Opportunity to Curb Global Warming

THE TOP FIVE PRIORITIES REPRESENT A LARGE SHARE OF THE OPPORTUNITY TO CURB GLOBAL ENERGY DEMAND AND CO₂ EMISSIONS

Breakdown of the global energy productivity opportunity
%, QBTU, billion metric tons



*Residential and commercial building sectors.

**Assuming the removal of 80 percent of fuel subsidies globally (largely in the Middle East, Venezuela, and Mexico).

Source: MGI analysis



Opportunities of Energy Efficiency Improvement

- China has made great progress – energy intensity fell by 56% between 1994 and 2003
- China has set one of the most ambitious energy intensity reduction goals and taken concrete measures
- Many opportunities exist :
 - China's Investment in cost-effective energy efficiency is only 5% of supply-side investment
 - Energy intensity in China is almost 3, 5, and 8 times higher than that of the U.S., EU, and Japan, respectively
 - High energy consuming sectors account for over 70% of China's industrial energy use, while contributing only 20% to the industrial value-added.



Promote Energy Efficiency as a Cost-Effective Resource Through Efficiency Power Plant (EPP)

- One critical way to improve energy efficiency is through the deployment of Efficiency Power Plants (EPP) – large-scale DSM programs
- EPPs aggregate a large number of energy efficiency (DSM) options, producing as predictable and substantial electricity saving as the output of electricity power
- U.S Companies are proposing “peaking & power plants” with demand response and storage.





Promote Energy Efficiency through Efficiency Power Plant (EPP)

- If China replaces just 20% of its 80GW of new coal-fired capacity added in 2007 with EPP at 1/3 the cost, the country could meet its energy demand growth and at the same time save 51 million tons of coal each year for many years while reducing annual CO₂ and SO_x emissions by 140 million and 1.1 million tons, respectively



Recognize energy efficiency is a resource and treat it as such

- As a quick, cheap, clean and large resource, energy efficiency is the best way to meet our energy and environmental goals.
- Adopt policies and organize its power sector to make energy efficiency a reality.
- Integrate energy efficiency in power sector reform, resource planning, and investment decisions



Make energy efficiency part of the grid companies core business

- Grid companies should be given the mandate and obligation to develop and implement cost-effective energy efficiency programs that contribute to the national energy efficiency objective and their profits.
- U.S Grid Companies and regulators are investing decoupling and profit incentives for investing in energy efficiency.



Modify rules and policies to promote energy efficiency

- Treat energy efficiency and conventional power production on an equal footing by allowing utility to purchase energy efficiency in the same fashion as a conventional power plant.
- Use pricing reform to promote energy efficiency: inclining block prices, efficiency based differentials, and energy use quota.
- Delivery of energy efficiency projects and energy savings need to be made important evaluation criteria of utilities performance





Modify rules and policies to promote energy efficiency

- Allow energy efficiency costs to be recovered through tariff or energy efficiency fund.
- In China, the Southern Grid Company has implemented many energy efficiency efforts as part of it's social responsibility. These efforts are praise worthy but unless these types of efforts become part of their business plan they will not be as sizable or as effective as they should be.



Organize government in a way that supports energy efficiency as a resource

- Government supervision of power supply and energy efficiency need to be fully integrated.
- Energy efficiency responsibility is dispersed and separated from power supply planning. These government functions should be consolidated and strengthened.
- U.S. is considering regional planning that encompasses both energy efficiency and power supply. Now done at state level.



Organize government in a way that supports energy efficiency as a resource

- The high priority of energy efficiency and environmental protection needs to be reflected in its position in government organization.
- FERC has set as a priority integration of demand side resources into electricity markets including energy efficiency and demand response.





Strength the cooperation between the U.S. and China

- As the world's two leading sources for CO₂ emissions, the U.S. and China are key to our solution to global climate change and energy security
- Tackling the energy and environmental challenges is in the mutual interests of our two nations. Our countries should work together in achieving our energy and environmental goals



Strengthen the cooperation between the U.S. and China

- The U.S. and China need to accelerate and deepen cooperation with a strong spirit of vital global survival and translate this spirit into tangible actions.
- There are many areas that U.S. and China could work together. These include utility restructure, policy support, market transformation, information exchange, sharing of best practices, and capacity building.
- A memorandum of understanding between FERC and the Chinese Regulatory agencies could further this cooperation.



Thank you!

