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Solutions for China

Do politicians understand just how difficult it could be, just how devastating, rises of 4°C, 5°C, or 6°C could be? I think, not yet.
— Sir Nicholas Stern

It is common to hear people say, "But... what about China? What's the point when China's burning so much coal?"

China is responsible for 8% of the world's cumulative carbon emissions since 1750 and 19% of the current emissions, 33% of which come from Chinese industries making products for export, mostly to North America and Europe.[1] China also pours 50% of the world's concrete.

China gets 70% of its energy from burning coal, which is responsible for 80% of the country's CO_2 emissions. In 2008 it burned 2.7 billion tonnes of raw coal which produced 6 billion tonnes of CO_2, representing 15% of the world's CO_2 emissions. In 2007 China added 90 GW of new coal-fired electrical power plants, at two new plants per week. The environmental damage caused in part by burning coal is reducing China's GDP by 8–13% a year — almost as much as it is growing.

In 2009 China ranked 49th out of 60 countries in the Climate Change Performance Index, reflecting emissions, emissions trends and climate policy — well ahead of Canada (59th) and the USA (60th). China is making a huge effort to reduce its emissions, while still needing to satisfy the need of its people to escape the poverty, famine and hardships that previous generations have suffered.

- Asia Alternative Energy Program: worldbank.org/astae
- Beijing Energy Efficiency Center: beconchina.org
- China Climate Change Info-Net: ccchina.gov.cn/en
- China Energy Group: eande.lbl.gov/EAP/China
- China Goes Green (CNN): tinyurl.com/5us9e8
- China Sustainable Energy Program: efchina.org
- China's Copenhagen Commitments — a Workable Solution (Climate Progress blog): tinyurl.com/dmpsq3
- China's Green Beat: chinasgreenbeat.com
- China's Green Buildings: greendragonfilm.com
- Electric Bikes in China: tinyurl.com/57xcpd
- Solar hot water in China: tinyurl.com/6mjjgc

China's Climate Action Initiatives[2]

China's one-child population policy has avoided 300 million births, reducing its CO_2 emissions in 2005 by 1.3 billion tonnes. China's goal is to reduce the CO_2 intensity (not the absolute emissions) of its economy by 20% by 2010, and 80% by 2050. If successful, this would cause a 1.5-billion-tonne fall in emissions by 2010.

This is supported by a drive to increase energy efficiency by 20% by 2010, using mandatory energy efficiency appliance labeling, the distribution of 150 million half-price efficient light bulbs and a Top 1,000 Enterprises Program that targets efficiency in China's most energy-intensive enterprises, representing a third of China's energy use. China's building codes, if enforced, will cut energy consumption in new buildings by 65%.

On the supply side, China has adopted Europe's feed-in tariff for renewable energy (see #69) and set a goal to provide 10% of all electricity from renewables by 2010, and 15% by 2020, totaling 137 GW. For wind energy China's goal is 3% (5 GW) by 2010 and 30 GW by 2020, though experts believe wind could provide 40 GW by

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Solar evacuated tubes heat the water on a roof in Rizhao, China.

2020. China has 253 GW of wind energy potential, mainly in Inner Mongolia and along the coast.

China is the world's largest exporter of solar panels, and the largest consumer of solar hot water systems with over 40 million heaters — 60% of the world's total. In Kunming, capital of Yunnan Province, half of the city's 3.2 million inhabitants use solar heaters. In the coastal resort city of Rizhao (population 3 million), which is aiming to become fully carbon neutral, almost all buildings in the urban area use solar hot water. The city also has 60,000 solar-heated greenhouses. Between 2000 and 2008 Rizhao cut its CO_2 emissions by almost 50%, partly by closing small inefficient coal-fired operations.

In 2008 China's fuel-efficiency standard for new vehicles was 36 mpg, compared to the US goal of 35 mpg by 2020: most new American cars would not be allowed on China's roads. There is also a goal that China's vehicle fuels should be 10% renewable content by 2010, 15% by 2015. Chinese citizens are buying 25–30 million electric bikes a year, making China the world leader in the field, and China is likely to emerge as a leader in the production of electric cars.

Finally, China is making an enormous effort to plant trees in an initiative known as the Green Wall of China, to stop the Gobi Desert from advancing, end the appalling dust storms that are happening because of the ecologically destructive management of Inner Mongolia's grasslands, and increase the forest carbon sink by 50 million tonnes by 2010, compared to 2005. Between 1982 and 2007, volunteers and workers planted 52 billion trees, increasing China's forest cover from 12% in the early 1980s to 18% in 2008. It may not be working,[3] however, in part because proper restoration needs the return of the Mongolian wolf to restore natural rotational grazing patterns.[4] The loss of carbon from China's grasslands has not been tallied.

What more can China do? Double every effort; impose a carbon tax; make China's citizens aware of the terrible danger they face from global warming; and aim to make China a fully climate-friendly country by 2040.