

## **Comparison of direct and indirect energy consumption between China and the United States**

Topic: Energy consumption and CO2 emissions

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As green house gas reduction and energy consumption are set to become two important issues in governments of both industrialized countries and developing countries, policy makers strive to reduce total domestic energy use. We evaluate and compare the direct and the indirect energy consumption both in the People's Republic of China (China) and the United States of America (US) by looking at a series of hybrid energy input-output tables (1997, 2002, and 2007). We also apply structural decomposition analysis (SDA), to identify the factors causing energy intensity (energy consumption per unit gross domestic product) to differ between the countries analyzed, which lead to potential energy-saving options. Our results show that, besides the differences in direct energy consumption, huge differences also exist in indirect energy consumption between the two countries. Differences in indirect energy consumption are mainly due to differences in technology. Technological change and industrial structure change are key factors to explain the inequality of energy intensity, while there is a significant trend towards the convergence of sectoral energy efficiency between the two countries.