Embodied energy intensities in Chinese Provinces

Topic: Embodied CO2 emissions in trade

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In order to counteract global resource depletion China is said to play a key role in reducing energy intensity of goods, products and services. Having just missed its own target of 20% efficiency reduction by unit of GDP, effective policies need to be set in place that aim at reducing intensity of industries and sectors with high embodied energy. We use a hybrid unit input-output model with disaggregated energy sectors represented in energy units to analyze indirect and direct energy intensities embodied in product flows of three provinces in China for the year 2007. Each province has a distinct economic standard, so that the study reflects the disparate socio-economic differences prevalent in China. Results show that indirect embodied energy makes up a much higher fraction in products than direct embodied intensities, and this ratio is higher in products of the well developed province Zhejiang. We conclude that economically well-off provinces in the east drive to a large extent high energy intensity of the Central and western region.