The employment consequences of material efficiency: an analysis of steel re-use in the UK construction sector

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Re-use of steel sections in construction without re-melting is a material efficiency strategy that has the potential to reduce emissions by reducing the construction sectorâ€™s demand for new steel. However, this strategy will lead to changes in the supply chain, with associated impacts on employment. This conference paper combines industry interviews with additional academic and government-issued literature to develop realistic and transparent scenarios on how construction supply chain costs and labor requirements might change if the amount of re-use steel sections was increased in the UK. These scenarios are then modeled using a static multiregional input output model to estimate the domestic and international employment impacts of this change. The modelling results show increasing the amount of re-use steel sections to 1% of total mass consumed annually in the UK would lead to a net increase in jobs in the UK construction sector, without leading to any significant structural change in other sectors of the economy.