

The Cost of Carbon Leakage: Britain's Carbon Price Support and Cross-border Electricity Trade¹

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Abstract

Carbon taxes create global benefits unless offset by increased emissions elsewhere. An additional carbon tax in one country may cause leakage through imports and will also increase costs by creating a wedge between economic marginal costs in different markets, causing an offsetting deadweight loss. We estimate the global benefit, carbon leakage and deadweight cost of the British Carbon Price Support (CPS) on GB's cross-border electricity trade with France and The Netherlands. Over 2015-2020 the unilateral CPS created €72±20 m/yr deadweight loss, about 31% of the initial economic value created by the interconnector, or 2.5% of the global emissions benefit of the CPS at €2.9±0.1 bn/yr. About 16.3±3.5% of the CO₂ emissions reduction is undone by France and The Netherlands, the monetary loss of which is about €584±127 m/yr.

Keywords Carbon tax; Bilateral trading; Carbon leakage; Electricity market.

JEL Classification Q48; F14; D61; C13

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¹This replaces an earlier version of EPRG WP 1918, which seriously under-estimated the deadweight loss. This paper substantially extends, updates and replaces the earlier EPRG WP 2005 *The Cost of Trade Distortion: Britain's Carbon Price Support and Cross-border Electricity Trade*.