

Council for Economic Renewal

Commerce Cymru paper

Climate Change Policy Costs and Energy Intensive Industry

Introduction

1. The drive towards a low carbon economy is one strongly supported by manufacturers in the UK; there can be no question regarding the need to drastically reduce greenhouse gas emissions across all sectors of the economy and there exists a significant opportunity for manufacturers in enabling this transition. This debate is not one of energy intensive industry versus climate change legislation and targets but rather one of how we can best design our policies to ensure that our targets are met at the same time as retaining our own energy intensive industries (EII) and the hundreds of thousands of jobs they provide & support.
2. Broadly speaking we are able to divide the impact of our climate change ambition on energy intensive industry into two camps; direct and indirect. The direct impacts are largely related to the costs, difficulties and barriers energy intensive industry experience in relation to the decarbonisation of their own activities which is intimately bound up with, and largely governed by, the operation of the EU Emission Trading System (EU ETS). The indirect impacts can be broadly seen as the increases in electricity prices resulting from the decarbonisation of the power sector drive by a range of mechanisms; the Renewables Obligation (RO), Contracts for Difference (CfDs), EU ETS, and the Carbon Price Support (CPS).
3. In the absence of a global deal on emissions reduction and global carbon price, these policies place significant unilateral costs on energy intensive industry and can seriously damage their international competitiveness leading to an erosion of investment and ultimately carbon leakage and the site closures and job losses this entails. It is therefore essential that any climate change policy framework in the UK and the EU must develop a credible and comprehensive strategy for these industries in order to protect investment, jobs and, crucially, to actually ensure that emissions reductions in the UK resulting from policies actually lead to a net global decrease in emissions.

The financial impact of climate change policy

Indirect Costs

4. UK Steel estimates that by 2020, without intervention, UK and EU climate change policy would result in an increase in electricity bills by some £37/MWh (real 2012 prices) accounting for a third of the total electricity price. [BIS's own analysis from 2012](#) showed that this projected cost exposure was higher for energy intensive industry in the UK than for those elsewhere in the EU and significantly higher than for competitors outside the EU. The estimated figures showed a climate change cost of some £13/MWh in Germany, £17/MWh in Italy and figures close to zero in the US.
5. The 2014 Budget saw the UK government take significant action to address this growing concern with the limited existing EII compensation package extended significantly in terms of scope and longevity; from 2016/17 eligible electro-intensive sectors will be eligible for

compensation to cover the indirect costs of the RO, small scale FITs, as well as an exemption from the costs of the CfDs. Compensation for the costs of the EU ETS has been available from April 2013 and for CPS since August 2014. The compensation package is estimated to reduce the costs of climate change policies to UK EIs to around £11/MWh comparing favourably with other competitors in the EU, although still significantly greater than the US.

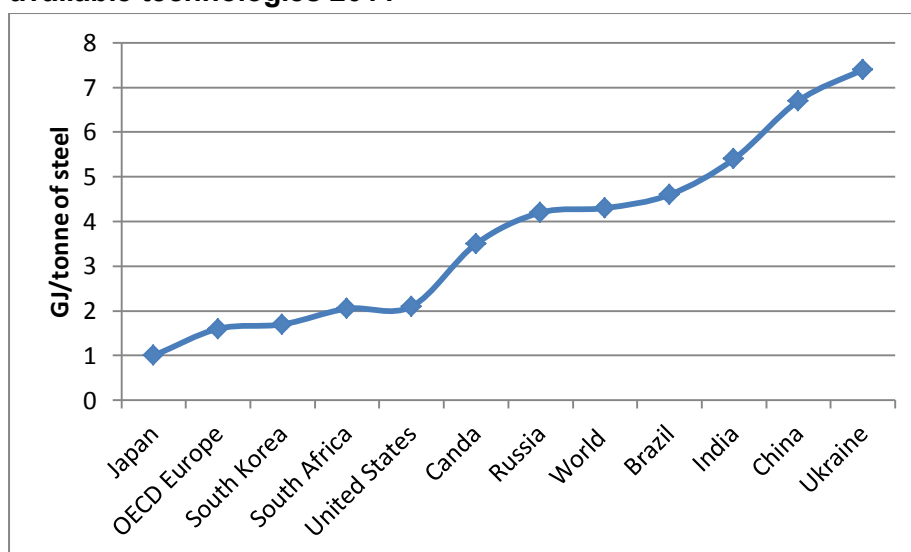
6. This package represents a significant step forward for UK EIs and is greatly appreciated; however there remain a number of key actions that industry would like to see to complete the package;
 - The compensation from the costs of renewables support is not due to start until April 2016. We believe that the scheme design and state aid approval can be completed within the next 12 months and as such the scheme should be introduced at the nearest available date after this to ensure that EIs are not exposed to these costs any longer than strictly necessary.
 - There remains an element of uncertainty surrounding the implementation of the package in the event of a change of government. We seek cross party support for the continuation of the full Package to 2020 and beyond.
 - The 2014 Budget also announced a capping of the CPS rates at £18/tCO₂ (around £10/MWh). Whilst this is extremely welcome, in the longer term we would still wish to see a complete phasing out of this tax. Even with this capping it will still leave the UK power sector with a carbon price some five times higher than the rest of the EU by 2020 and it will not result in any additional emissions reduction across the EU as a whole. Not all EIs have been able to gain access to the compensation for the CPS and even those that have, such as the steel sector, will still be exposed to 40% of the cost of the tax in 2020 meaning exposure to carbon price in electricity bills still twice that of uncompensated (i.e non-EIs) electricity consumers elsewhere in the EU.

Direct Costs

7. As noted above, the direct costs of decarbonisation for the steel sector are principally related to the costs of the EU ETS; that is the purchase of allowances for each tonne of CO₂ emitted during the production of steel. The design of the EU ETS already has measures intended to guard against carbon leakage in the form of a free allocation of allowances to those sectors deemed at risk of carbon leakage. However, as covered in detailed in a [recent report by UK Steel and EEF](#), this system of free allocation is in need of radical reform in order protect the international competitiveness of EIs during the 2020s.
8. With measures currently being discussed to reduce the surplus of allowances in the EU ETS and ultimately drive up the carbon price to €30-40 during the next decade (up from around €6 currently) the inadequacy of the current provisions for carbon leakage must be addressed. Analysis by Eurofer, the European Steel Industry, estimates that if the current system of free allocation continues unreformed through to 2030 it will cost the European Steel Industry €40-60 billion, these kinds of costs would cause irreparable harm to the industry and would see massive reductions in production, create a highly unattractive investment environment and would ultimately see the closure of steel production facilities in the EU.
9. In our recent report on the EU ETS we call for a number of reforms and measures to the EU ETS to guard against this eventuality;

- Measures to reduce the surplus of allowances and drive up the carbon price should only be introduced as a package of reform measures that ensures adequate protection is given to industrial competitiveness.
 - The EU ETS must adopt a system of [free allocation](#) based on actual industrial production levels rather than historic. The current system of free allocation based on historic production works neither for government or industry; economic downturns or reductions in individual installation output result in over-allocation, whilst any uptick in production leaves installations significantly short.
 - Free allocation of allowances to industry is currently subjected to a cap; a [cross sectoral correction factor](#) is applied each year to all installations allowance amounts to ensure this cap is met. This correction factor will reduce allocations to the steel sector by 17.56% in 2020 (rising from 5.73% in 2013) and climbing to around 40% by 2030 if reform is not taken. UK Steel is calling for the end of the application of this correction factor for industry at risk of carbon leakage.
 - The current range of [product benchmarks](#) does not accurately reflect the reality of the range of carbon intensity of installations across Europe; consequently even the most carbon efficient steel plants in the EU would find themselves short of allowances under the current scheme. We must work towards a system of benchmarks that would actually allow the top 10% of plants in carbon leakage sectors to operate without any additional costs, as envisaged by the Directive.
 - The 900 million [back loaded allowances](#) should not be permanently retired but instead used to enable the reforms to free allocation and support carbon leakage sectors.
10. Policy makers must start to take account of the considerable physical and economic barriers to decarbonising EIs that operate in a global marketplace; the EU steel sector for example is amongst the most efficient in the world and is reaching the limit of energy efficiency improvements and carbon savings that are available through currently available technology.

Iron and steel sector: energy savings technical potential based on application of best available technologies 2011



11. DECC has sponsored, in cooperation with the sector, the development of a 2050 low carbon road map for the steel industry, which is due for completion soon. This independent study is expected to confirm that the technologies that are required to deliver a step change and significant carbon reductions, such as Carbon Capture and Storage/Carbon Capture and Use (CCS/CCU), will require significant time, development and, most notably, investment to realise, and this is something the EU ETS alone is incapable of delivering. There is a need for support from governments for these technologies and sectors; the challenges present in delivering emissions reductions in the steel sector are greater than those found in the power sector, yet the approach that governments have taken are markedly different.
12. The EU ETS is ill-suited to stimulating R&D and investment for those sectors where there are, as yet, no cost effective technologies in existence to deliver de-carbonisation. In this situation, the cost of carbon merely acts as a tax draining cash from industry. For sectors where the bulk of emissions are related to process rather than energy, industrial CCS/CCU is likely the only available solution to significantly reduce emissions in the medium to long term.
13. A great deal of uncertainty remains about the potential of CCS, its cost, its applicability to industrial processes, issues regarding retrofitting and of course what carbon price would be required to trigger investment in it. [Research conducted](#) for DECC last year estimated that it would require a carbon price of around £80-100 to allow industrial CCS to become commercially viable for the bulk of EII in the UK. However, if fully exposed to these prices (i.e. without any form of free allocation) EIIs would be pushed out of the EU well in advance of the realisation of these projects. Importantly, this price estimate relies on the technology already being proven and established and the infrastructure available for industry to make use of, assumptions that are far from a reality at present.
14. We must challenge the assumption that the carbon price will drive the necessary levels of R&D to bridge the innovation gap. Within the power sector, governments have recognised that the market and a carbon price alone are not sufficient to drive widespread decarbonisation, or certainly not at the pace desired. To counteract this, the Commission has put in place a renewable energy target for 2020 and Member States have responded with a whole host of support mechanisms to help drive investment in renewable electricity. But despite the even greater challenges to decarbonisation in many energy intensive sectors, the response for them has been markedly different. If CCS is to have a role to play in industry EU governments must provide support to establish it as a credible and established solution to industrial decarbonisation, the EU ETS alone will not provide.