

International sectoral approaches and agreements: case studies of the steel sector in China, India and Japan – Emerging Policy Recommendations –

Peter Wooders, 27th July 2010

Steel is an essential sector if we are to control global CO₂ emissions. Both the negotiating process and the proposals being made require further development.

Existing national policies should be the essential building blocks of sectoral approaches, agreements and mechanisms. International agreement is needed to ensure adequate levels of ambition to curb rising emissions in the steel sector, notably to assail competitiveness fears.

The UNFCCC is still an essential element for developing Sectoral Approaches, Agreements and Mechanisms. It could host a steel-specific negotiation forum with government and industry representation and with sufficient technical expertise to be able to assess the level of commitment that individual countries are making and to investigate potential international agreements.

The steel sector represents 5% of world carbon dioxide emissions. Despite continuing improvements in its production efficiency, its **emissions are projected to continue to rise** due to projected demand increases.

Steel is a component of a huge number of goods and products, including many – for example wind turbines and lighter vehicles - that would contribute to a greener economy. Nevertheless **it is not apparent how reductions in global carbon dioxide emissions could be achieved if emissions from energy-intensive sectors including steel continue to rise.**

'Sectoral approaches' have made little progress internationally, despite having been discussed for many years. Climate Strategies' 18-month project, which started in summer 2009, aims to progress the issue by concentrating on just one sector – steel – applied in three key countries representing over 50% of world production and consumption – China, India and Japan.

The study recognises that each country already has a range of policies and measures designed to control emissions from the steel sector. It recommends that these **existing national policies should be the essential building blocks of an international approach** – for example, China's energy efficiency targets, India's "Perform, Achieve and Trade" and Japan's voluntary agreements. This should be built on a 'bottom-up' basis, taking account of countries' specific priorities and circumstances, rather than relying on the 'top-down' approach which has not yet delivered an agreement within the UNFCCC.

The **danger with relying on national commitments alone is that these will not deliver sufficient GHG emission reductions**, often because countries fear losing out to their competitors. 40% of steel is currently traded internationally and it is one of the key sectors within the competitiveness and leakage debate. NAMAs in developing countries, where appropriate supported financially and technically by developed countries, are an obvious starting point in providing additional momentum for change. But the developing world already accounts for over half of world steel production – China being 40% alone – and most of its growth, and there must be concern over how much support NAMAs for the steel sector would be able to garner.

The **starting point for an international agreement is to understand where the steel sector can make reductions in its emissions**. The study has categorised opportunities into four based on current technologies and two for the future. Analysis conducted in the study – and supported by other work – indicates that these opportunities will generally not be realised by carbon pricing alone. The table below indicates potential

complementary policies, which could be implemented nationally or internationally. Funding and financing could come from the public or private purses.

Emission reductions in each of the four current categories identified could be, and indeed are being, achieved nationally, but **concerns over competitors' actions would almost certainly limit the level of ambition**. Additionally, the transfer of finance and technology and R,D & D activities would be more efficient as more countries collaborate.

Abatement Category	Potential complementary policies
1. The closure of inefficient, highly polluting plant	Make payments based on faster reduction in production than current policy
2. Improving energy efficiency and carbon efficiency at existing, non-obsolete plant	Project-based scheme (e.g. continuation of CDM). Supplemented by financial support scheme, ideally low cost capital
3. Ensuring that new plant is built using best available technology	Consider partial investment credit (e.g. low cost capital) if new plant is best available technology
4. Increasing the use of recycled scrap	Make payments against increased rates of collection made, within the country only (to avoid leakage)
5. Adopting Carbon Capture & Storage (CCS)	Fund demonstration schemes, covering different technologies and transportation solutions
6. Developing and implementing breakthrough technologies	Fund R&D, ideally at a wide international level

In order to encourage agreement from industry, impacts on production costs should be understood and minimised; governments are concerned more by potential job losses and future investment. **It is their ability to include policies complementary to carbon pricing where SAAMs¹ offer key advantages** over carbon pricing, helping to reduce GHG emissions and giving side benefits including improved energy security of supply, better air quality and lowering risks from increased energy prices. But carbon pricing retains the advantages of also including demand reduction as an option to reduce emissions and potentially building a source of revenue.

Policy-makers have a range of options for SAAMS going forward. The two most promising options currently under general discussion are for technology agreements – the explicit inclusion or exclusion of various technologies – and intensity targets covering energy used or carbon emitted per tonne of steel produced. **Currently-discussed solutions may be too aggregated and too blunt**. International agreements covering each of the six abatement categories individually could be easier to operationalise, for example groups of countries agreeing to support scrap collection and allow its international trade, to guarantee new plant is built to minimum standards or to contribute to a fund for CCS demonstration plants.

Progress on SAAMs in the steel sector needs an appropriate forum. Industry and government representatives already attend fora including the APP, OECD Steel Committee, World Steel Association and WTO, but this study's initial conclusion is that, in addition to these fora, **the UNFCCC's essential role in climate change negotiations mean it will be essential for progressing ambitious agreements**. But this will need changes both in what is negotiated and the support provided to these negotiations.

¹ "Sectoral Approaches, Agreements and Mechanisms" is the preferred term within this study. "Sectoral Approaches" as a term has negative connotations for certain countries.

If we accept that unambitious emission reduction commitments from the few key energy-intensive sectors such as steel may contribute to unambitious commitments from countries, then **the need to have negotiations which are focused on the steel sector specifically becomes even clearer**. The necessary discussions have technical components and require industry expertise – thus it is recommended that the UNFCCC either builds or contracts the capacity to support steel-specific negotiations. This study has found that:

- **Setting up a steel-specific negotiation forum within the UNFCCC should be considered.** This forum would be informed by and draw on existing discussions within other fora, and include both government and industry representation;
- **This forum has sufficient technical expertise to be able to assess the level of commitment that individual countries are making** within their steel sectors. It is recommended that countries submit 'model agreements' defining their approaches –adding 'process' and 'governance' to the eleven criteria identified by the UNFCCC for the 2009 negotiations² provides a ready format for these, and the World Steel Association's CO₂ Emissions Data Protocol³ gives an internationally-recognised boundary of the sector;
- It is not possible to conclude an ambitious set of national commitments unless **issues around competitiveness and leakage are included**. This will require resolution of the CBDR (common but differentiated responsibility) debate, at least on how it applies to the steel sector. It would also be assisted by agreeing guidelines around when BCAs could be applied and discussing the appropriate levels of free allowances which could be granted under Emission Trading Schemes;
- **The forum should investigate potential international agreements covering the six categories of abatement options** shown in the table above. Initial suggestions are to investigate:
 - whether companies paying into a fund for CCS demonstration and/or breakthrough technologies would be viable, in conjunction with rules precluding plant without CCS to be built or operated after certain dates;
 - minimum standards for new build plant;
 - international actions to increase scrap recycling and liberalise its trade;
 - financial support and technology transfer for the retrofit of non-obsolete existing steel plant.
- **None of these options preclude progressing current options** on technology (as led by the APP) and on sectoral crediting mechanisms and other intensity targets now being proposed as NAMAs.

Steel is as essential sector for controlling global CO₂ emissions. Both the negotiating process and the proposals being made require further development – a specific UNFCCC negotiating forum meets these needs.

² FCCC/AWGLCA/2009/INF.2.Add.2. See "Modalities for subsequent development" on page 17.

³ <http://www.worldsteel.org/climatechange/files/2/2/Data%20collection%20user%20guide.pdf>.

The overall objective of this project has been to make an original contribution to the dialogue on the role of sectoral agreements in the post-2012 international climate regime by addressing the following questions:

- What types of sectoral agreements should be seriously considered?
- What are the key issues and options for the design elements of sectoral agreements?
- What would be the features of a transnational agreement compared with other types?
- How can sectoral agreements and cap-and-trade systems effectively co-exist?
- How can a steel agreement be successfully integrated into the international climate regime?
- Can a steel agreement be a prototype for other sectoral agreements?
- What are the key implementation issues involved in developing a steel sector agreement?

The final study will be available in December 2010.

This briefing paper is based on Climate Strategies' project on International sectoral approaches and agreements.

A full description of the project can be found at <http://www.climatestrategies.org/our-reports/category/54.html>.

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