

POLICY BRIEF – JUNE 2018

Filling gaps

in the policy package

to decarbonise production

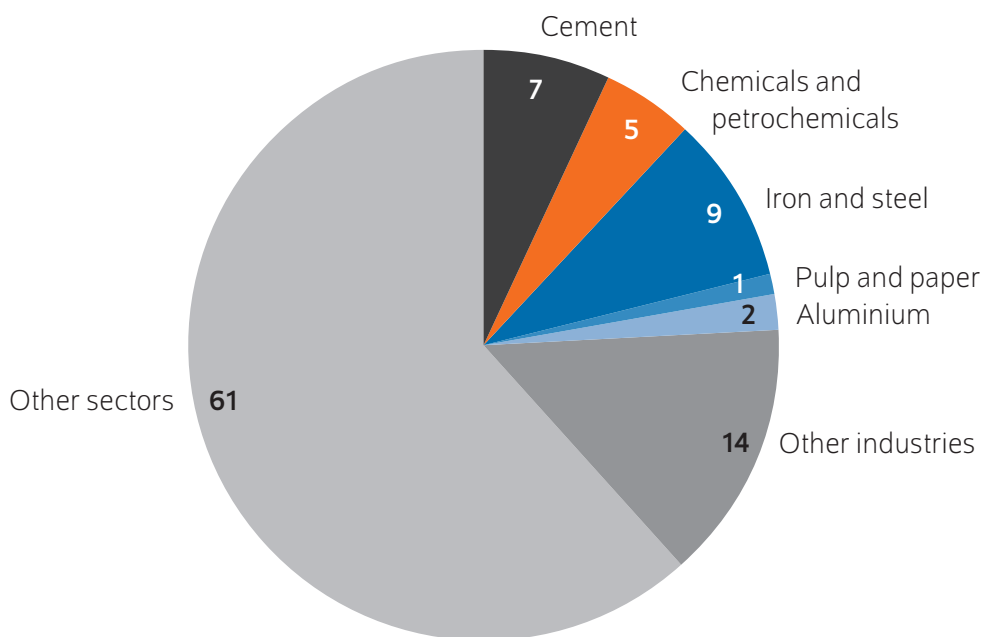
and use of materials

The time has come to get serious about decarbonizing the emission-intensive materials sector. The production of basic materials (cement, iron and steel, paper and board, aluminium and chemicals and petrochemicals) accounted for around 25% of global CO₂ emissions in 2014 (Figure 1).

materials sector is limited and not climate-focused. As a result, some policies may need to be recalibrated or reinforced, while others may need to be replicated on the basis of successful experiences in other sectors

FIGURE 1

Percentage contribution of various basic materials in global CO₂ emissions (DIW calculations based on IEA ETP (2017)).



Efforts targeting deep decarbonisation, however, have so far been limited in the materials sector. Policy makers have been operating with limited knowledge of climate friendly alternatives, and incomplete perspectives over a possible package of policies and incentives that could drive the low-carbon transformation of these industries. Instead, much of the policy debate is focusing on carbon leakage risks, which inhibited implementation of stringent policy despite the availability of robust solutions.

Completing the policy framework for the low-carbon transformation of the materials sector will require a shared perspective among policy makers and industry. This means not only a long-term vision for the relevant sectors, but also a portfolio of policy instruments that enables the achievement of such objective.

This paper identifies seven categories of mitigation options for the materials sector and maps a portfolio of policy instruments that could unlock these options (Figure 2). Many of these policy instruments already exist. Decarbonising the materials industry, therefore, does not require “re-inventing the wheel”. However, the application of many of these policies to the

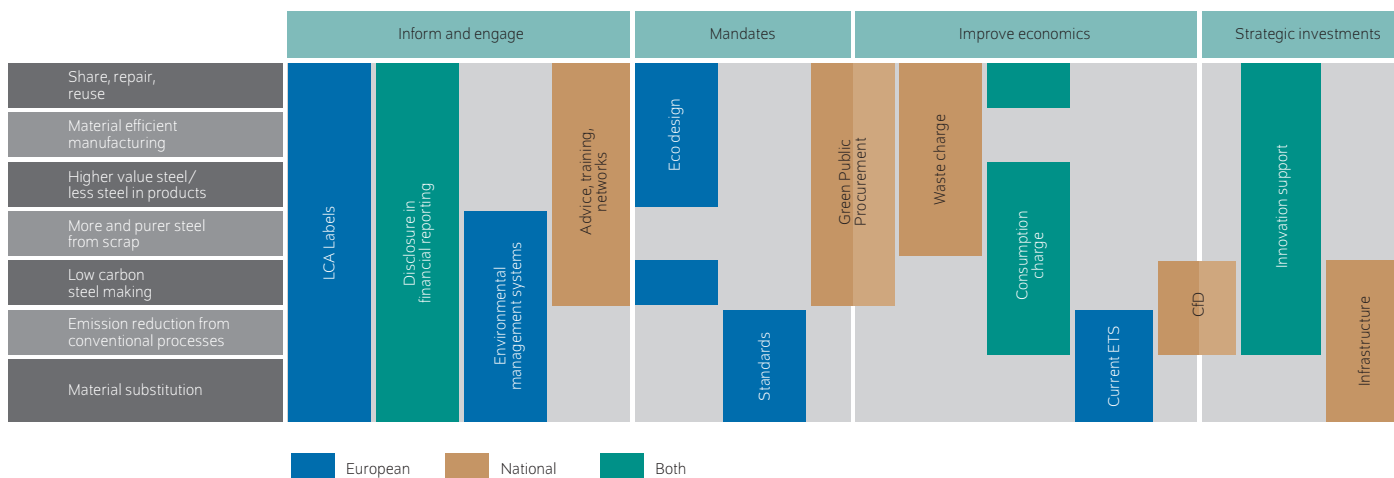
To help narrowing down the options for discussion, this paper identified three main policy gaps that currently prevent substantial progress:

- 1. Partial and incomplete incentives to enhance recycling**
- 2. Missing short- and long-term markets for climate-friendly options**
- 3. Missing policy signals that carbon-intensive production will be phased out**

These three policy gaps are interrelated and the solutions are highly complementary. For instance, the scale of the challenge in developing innovations for climate-friendly production processes can be made more manageable if the overall demand for primary materials is reduced with enhanced resource efficiency and recycling. Also, sending clear and early policy signals emphasizing policy makers’ commitment to phase our carbon-intensive production within a clear time frame is necessary to get business buy-in for the transformation agenda.

FIGURE 2

Summary and categorization of policy instruments for reducing emissions from materials production.



Implementing a robust policy package to fill the above-mentioned gaps will ultimately involve choices and trade-offs between different policy instruments. This paper has presented several options. Key criteria for policy choices are:

- Focus on instruments that have the potential to unlock multiple mitigation options or that close several policy gaps at once.
- Focus on policy instruments that provide incentives to deliver long-term transformative objectives.
- Focus on subsidiarity to multiply opportunities for innovation and overcome national barriers.

For example, applying these criteria to the policy gap “Missing markets for climate-friendly options” helps prioritize three policies: first, green public procurements to create early lead markets for climate-friendly product design and material choice; second, project-based carbon contracts for difference to stabilize revenue streams and back investments in climate-friendly production processes and new materials; third, a consumption charge on basic materials to raise revenues to fund policies for climate-friendly materials. Integrated in the EU ETS, the charge will make the carbon price effective for all climate friendly choices and enhance long-term credibility of carbon leakage protection.

Completing the policy package for material production and use is a shared responsibility between different levels of governance within a jurisdiction, across the EU, as well as across global jurisdictions. The EU’s new Energy Union Governance and the related National Climate and Energy Plans present an important opportunity for coordination and mutual commitment.

The basic materials sector in Europe is in a precarious limbo. It has often depreciated and relatively CO2-intensive assets. In the next 10 to 15 years, these assets will require major decisions on reinvestment or closure. Carbon-intensive choices are incompatible with existing emission reduction targets and thus face the risk of more stringent climate policies. At the same time, the investment case for climate-friendly choices remains weak and uncertain in the current policy regime. This limbo situation can be broken if the EU and its member states provide the missing conditions and policy incentives to develop, demonstrate and commercialise innovative climate-friendly materials options.

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