

LEAD MARKETS FOR CLIMATE NEUTRAL BASIC MATERIALS AND PRODUCTS



KEY MESSAGE

- Given our 2050 climate-neutrality goals to keep climate change under check, it is **urgent** that **basic materials industries contribute to climate change mitigation** by reducing greenhouse gas (GHG) emissions.
- **Steel, cement, basic chemicals, aluminium and pulp and paper** account for over **70 percent of the current industry sector's emissions**.
- As these industries **need to reinvest heavily by 2030**, the EU has **only one investment cycle to shift production processes** and achieve domestic climate neutrality by 2050.
- **A mix of strategies is necessary** including **circularity, material efficiency and substitution, and innovative zero-carbon production for virgin materials**.
- **Investment** in low carbon, circular production and infrastructure **requires robust demand** for climate-neutral basic materials as well as resulting final products.
- Lifting existing barriers to industrial transformation requires an **enabling framework of robust regulations**.



OVERVIEW

Progressive industrial companies often encounter insufficient consumer demand for products made with climate neutral or circular materials due to:

- Higher costs of climate-friendly materials;
- Lack of familiarity or engagement with new materials among downstream users; and
- Lack of transparency and clear benchmarks for potential purchasers to compare different low-carbon alternatives.

This shows a need for **new regulatory tools** to **induce** the necessary **demand** from end consumers and **remove market entry barriers for new low-carbon and circular products**.

Accelerating and fostering such markets and turning them into **scalable mass markets** by providing a **comprehensive and integrated policy framework** is essential for creating a low-carbon and circular demand.

It must be done **in parallel with supply-side policies to promote clean-energy infrastructure and the development and upscaling of breakthrough technologies. The coordination of 'supply push' and 'demand pull' policies** at both EU and national levels is essential.

There are several co-benefits from an industrial transformation to climate neutrality:

- keeps industrial jobs in Europe,
- reduces local pollution,
- supports innovation and new markets and
- contributes to a more efficient use of resources in addition to climate mitigation.



AIMS & TARGETS

In order to achieve a European climate neutral industry, we need to create a market-driven demand for final products made from climate neutral and recycled basic materials:

- Existing **barriers** must be **lifted to unlock** sufficient **demand to enable a full-scale shift to climate-neutral production, supply chains and business models.**
- **Economic incentives** for climate-neutral and high-quality recycled production need to be **aligned across the full value chain.**

Both EU and national policy frameworks should aim to:

Integrate and gradually reduce embedded CO₂ limits on material-intensive final products

- Induce a willingness to pay for climate-neutral material solutions from final producers
- Promote competition between a full range of decarbonisation actions through the value chains (climate-neutral and circular materials, innovative substitute materials, material efficiency)

- Minimise operational emissions from final products (e.g. cars and buildings)

Make data on embedded life-cycle emissions available, reliable and comparable:

- Strict requirements for product emissions data along relevant value chains
- Standardisation and harmonisation of reporting requirements
- Dedicated information tools, such as standardised labelling and data comparison tools

Support early investment in new and innovative solutions:

- Introduce support when significant market entry barriers exist at the early development stage
- Use support as a temporary bridge until long-term, technology-neutral measures such as carbon pricing or embedded carbon requirements on final products are fully in place



POLICY INSTRUMENTS

We need **3 main types of policy intervention** at the EU and national levels in order to create lead markets for climate neutral basic materials and products, as described below, along with existing EU policy initiatives that can be used to introduce the required measures.

Unlock incentives along the entire value chain:

- Integration of embedded CO₂ limits on material-intensive final products, with requirements for lowering CO₂ limits over time, beginning with buildings.
 - Ecodesign Directive
 - Energy Performance of Buildings Directive (EPBD)
- Public procurement requirements

- Relevant sectoral policies for basic material-rich products, e.g. EPBD

Improve data availability, quality and comparability:

- Monitoring and reporting obligations to report Environmental Performance Declarations on inputs for material-intensive products in key value chains
 - Data reporting requirements
 - Non-Financial Disclosure Regulation
 - Environmental Claims
- Enhanced harmonization and comparability of reporting
 - Product Environmental Footprints (EF Pilots, EU's prototype tool)
 - Additional Product Category Rules (PCR) for products rich in CO₂-intensive materials

- Standardised rating systems for embedded CO₂ performance in basic materials (steel, cement, aluminium and plastics)
 - Sustainable Products Initiative
 - Energy Performance rating labels and data-bases for household appliances
 - Environmental Claims Initiative

Support early investment in strategic, circular and innovative solutions

- Develop demand guarantee instruments (as a temporary bridge to long-term climate neutral solutions)
- Introduce carbon pricing or embedded carbon requirements
- Set minimum content quotas for circular materials or for carbon negative products such as sustainable wood
- Use public procurement to induce demand for materials carrying a low carbon label
- Reform product norms for construction products from materials-based norms to performance-based norms.

Sources

Agora Industry and Material Economics:

Making Circular Economy work to decarbonise heavy industry in Europe (forthcoming, January 2021).

University of Cambridge Institute for Sustainability Leadership (CISL) and Agora Energiewende. (2021).

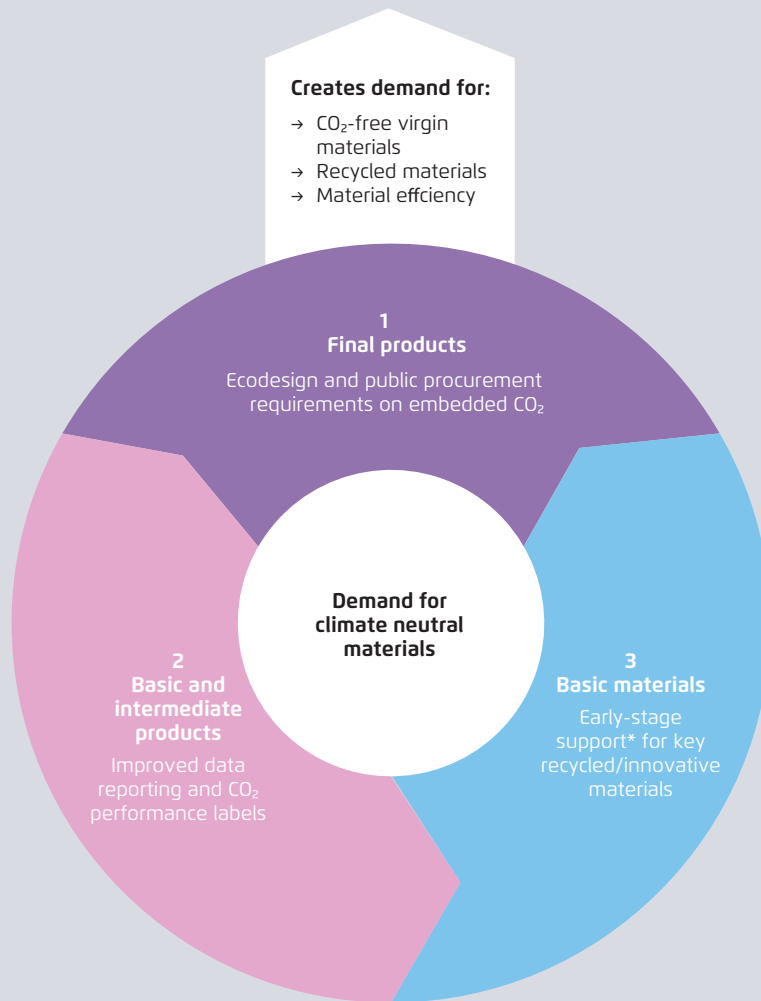
Tomorrow's markets today: Scaling up demand for climate-neutral basic materials and products. CLG Europe

Agora Energiewende and Wuppertal Institute (2020):

Breakthrough strategies for climate-neutral industry in Europe (summary): Policy and technology pathways for raising EU climate ambition.

Three policy priorities to scale demand for climate neutral materials and products

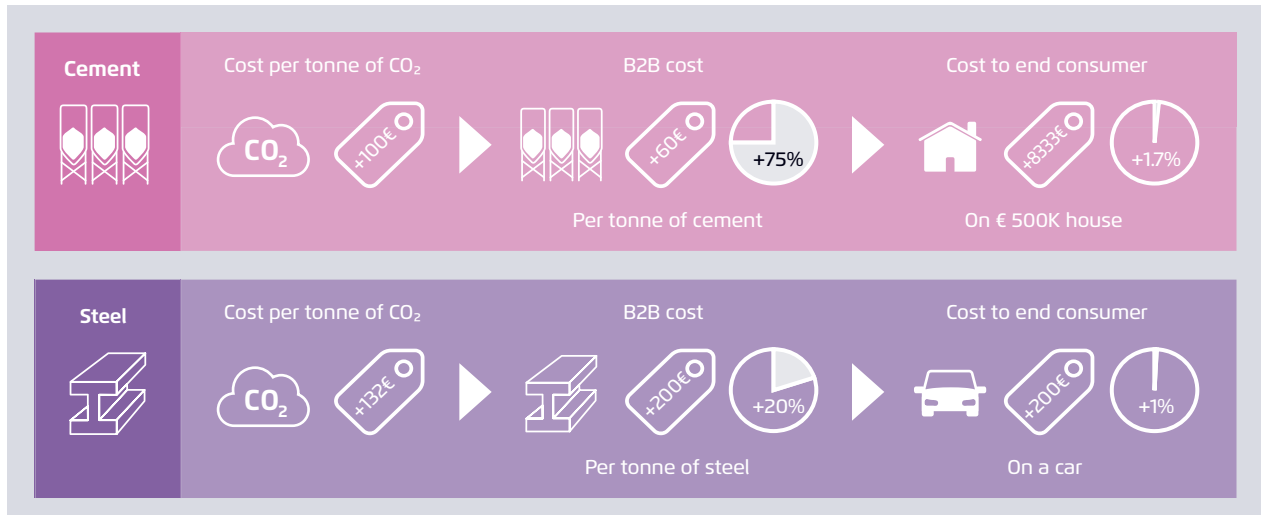
Figure 1



* NB. Such policies should be temporary and designed only to overcome barriers to market entry to avoid distortions of competition between materials.

University of Cambridge Institute for Sustainability Leadership (CISL) and Agora Energiewende. (2021). Tomorrow's markets today: Scaling up demand for climate-neutral basic materials and products. CLG Europe

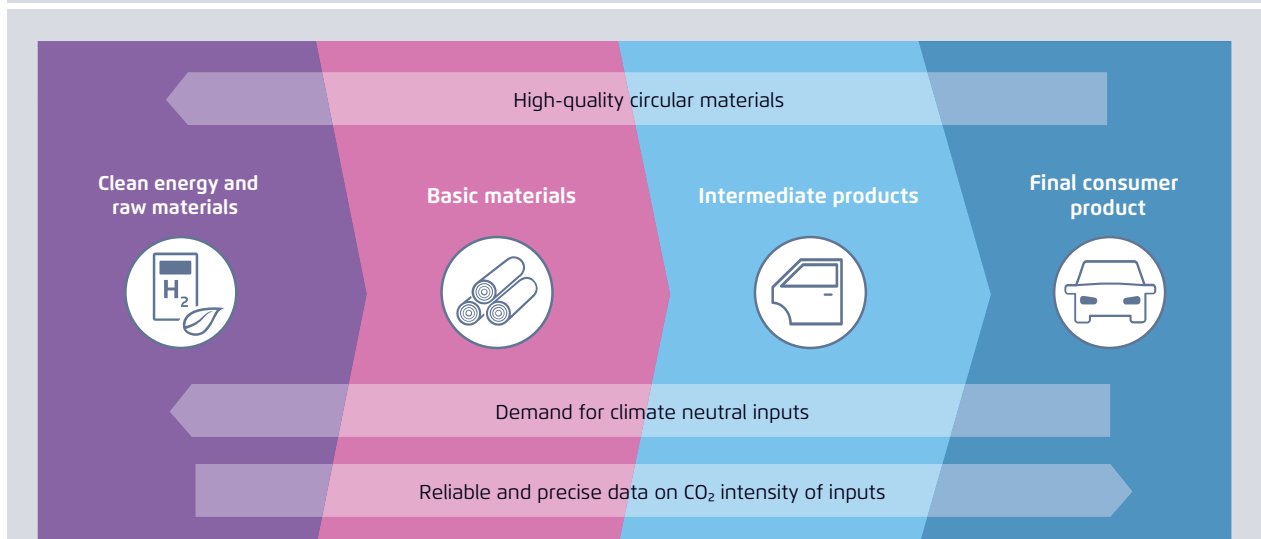
How the higher costs of climate neutral basic materials would affect final product prices for consumers Figure 2



University of Cambridge Institute for Sustainability Leadership (CISL) and Agora Energiewende. (2021). Tomorrow's markets today: Scaling up demand for climate-neutral basic materials and products. CLG Europe

Sufficiently precise and comparable data on embedded CO₂ of inputs must flow along the value chain to enable embedded CO₂ limit policies to work effectively

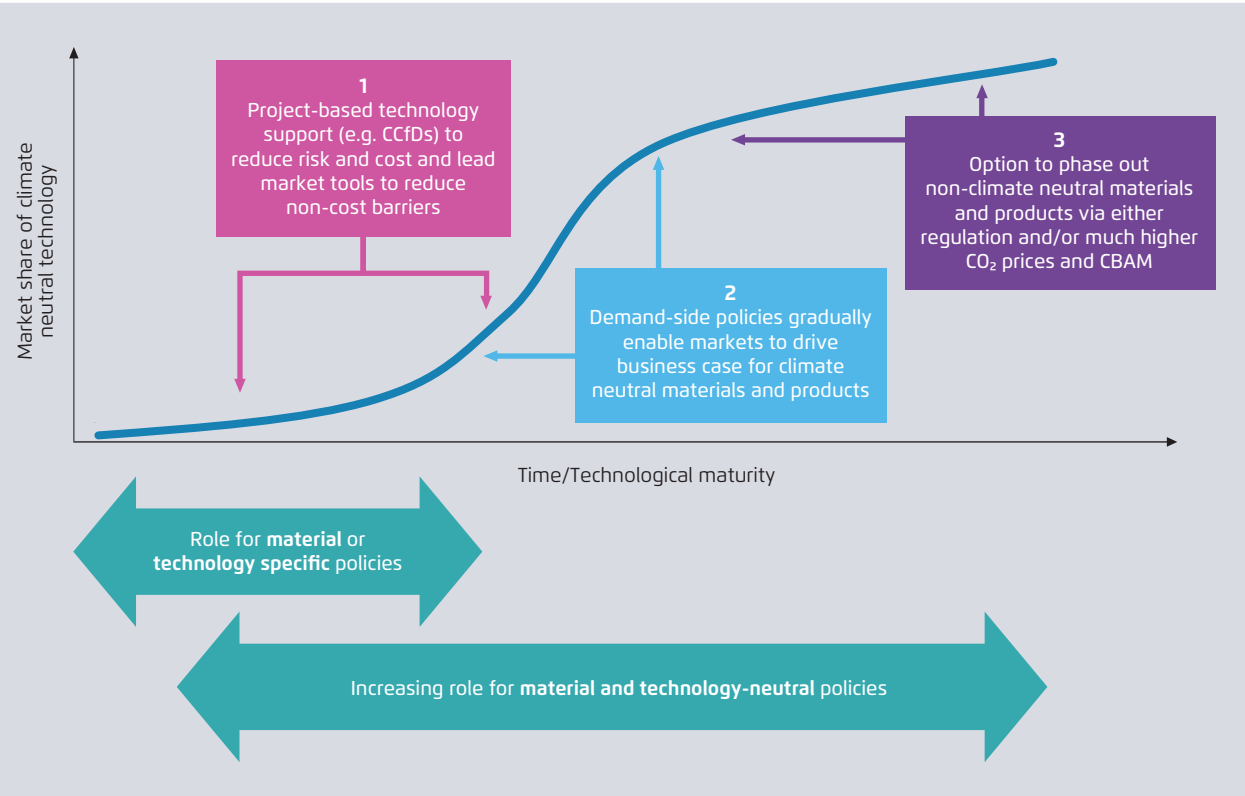
Figure 3



University of Cambridge Institute for Sustainability Leadership (CISL) and Agora Energiewende. (2021). Tomorrow's markets today: Scaling up demand for climate-neutral basic materials and products. CLG Europe

The possible role of material-specific vs material-neutral policy drivers at different stages of the transition

Figure 4



University of Cambridge Institute for Sustainability Leadership (CISL) and Agora Energiewende. (2021). Tomorrow's markets today: Scaling up demand for climate-neutral basic materials and products. CLG Europe

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