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INSTITUTE FOR SUSTAINABILITY LEADERSHIP

CLG Europe

Policy Briefing

Materials & Products Taskforce

Accelerating the transition to a climate neutral and circular economy

How the EU can deliver through the Sustainable Products Initiative

funded by

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Taskforce for climate neutral and circular materials and products

The Taskforce for climate neutral and circular materials and products was created in September 2021, with the aim of driving forward policy action on sustainable materials by bringing together a group of progressive businesses across sectors and value chains. The group brings together companies that are actively committed to producing and using climate neutral and sustainable materials, and who want to work together to promote and support EU-wide measures to decarbonise material production and use.

We Mean Business Coalition

The We Mean Business Coalition is a non-profit coalition working with the world's most influential businesses to take action on climate change. The Coalition is a group of seven non-profit organisations: BSR, CDP, Ceres, CLG Europe, Climate Group, The B Team and WBCSD. Together, the Coalition catalyses business and policy action to halve emissions by 2030 and accelerate an inclusive transition to a net zero economy by 2050.

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Executive summary

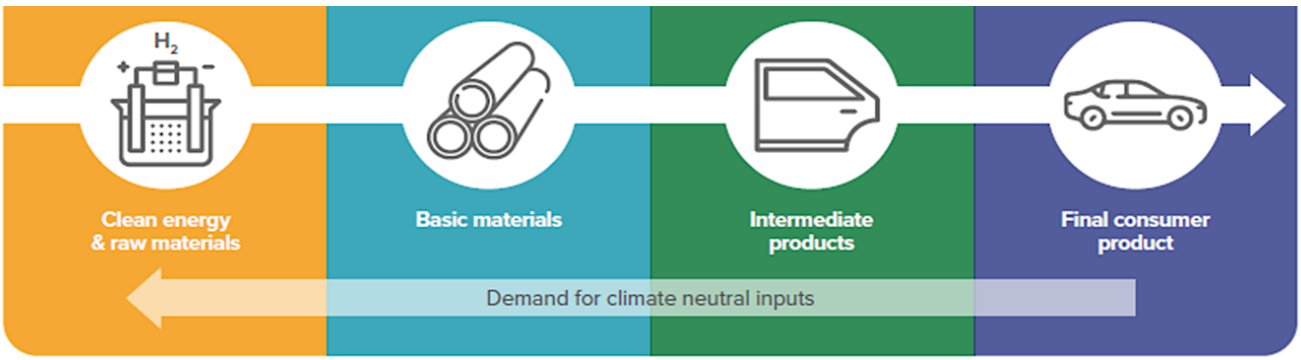
In early 2022, the European Commission is due to unveil its Sustainable Products Initiative (SPI),[1] a new proposal that is expected to contribute to the objectives of the European Green Deal[2] and the EU's Circular Economy Action Plan (CEAP).[3] The SPI will aim to reduce waste and make products made or sold in Europe fit for a climate neutral, resource-efficient and circular economy. This will be essential to ensure the competitiveness of European industry in the longer term, ensuring that its businesses retain competitiveness in the context of the transition to meet the net zero by 2050 target.

This transition represents the journey towards competitive sustainability. Competitive sustainability can be defined as the ability of an economy, companies and industrial ecosystems to excel relative to international competitors in their transition to a sustainable economy – with climate neutrality at its core – through investment in the necessary innovation.[4]

A successful industrial transition will require growing demand for climate neutral raw material inputs. Unfortunately, market demand for climate neutral basic materials and final products currently remains underdeveloped or even non-existent in some EU product markets.[5]

Carbon pricing is essential but insufficient on its own to create lead markets and unlock incentives for a full set of abatement levers, such as circular economy and material efficiency. An ambitiously implemented SPI could be extremely effective as a complement to carbon pricing tools, especially to kickstart and scale demand for low carbon materials, such as steel, cement, aluminium, wood and plastics.

Figure 1. How sustainability requirements on final products create demand for climate neutral and circular inputs along the value chain



Source: CISL, Agora Energiewende (2021)[5]

When addressing the critical need to mitigate greenhouse gas emissions and tackle climate change, the focus is often on climate policy as a main driver. The Green Deal has provided a vision for how all the different elements should be brought together but it now needs to deliver. It is vital that complementary policies are implemented relative to the wider environmental challenges. This includes the way our systems function, and how our economy is built.

The Taskforce for climate neutral and circular materials and products, a new business grouping working to accelerate this transition, aims to support the key objectives as set out through the EU Green Deal and the CEAP. The SPI is an upcoming piece of legislation that serves as one of the key flagship policy proposals within the CEAP. We can therefore expect the SPI to be a test case on how successful the EU will be in truly developing a more circular economy that can support the transition to climate neutrality.

Having examined the issues around circular economy based upon our expertise across business sectors and value chains, our Taskforce believes that the SPI must take an ambitious approach that upholds key principles set out within this paper. The Taskforce therefore is releasing this briefing to support the introduction of a holistic and ambitious piece of legislation that embodies the following five principles:

1. Be ambitious in its aims in delivering the Green Deal
2. Build a progressive policy framework based upon competitive sustainability
3. Improve transparency of product sustainability
4. Support innovation and be future-proof
5. Provide policy coherence across the wider EU industrial and climate initiatives.

Furthermore, we have also set the following policy recommendations that the SPI should seek to deliver:

- Implement measures that support EU manufacturers and producers in their journey towards decarbonisation and circularity, notably by putting declining limits on embedded life cycle emissions for the most CO_2-intensive, materials-rich, final products.

- Strengthen embedded CO_2 reporting requirements and materials passporting requirements, and also adopt standardised CO_2 rating labels for the most CO_2-intensive inputs into key value chains, whilst making this process practical for companies.

- Set minimum recycled content, reuse or reduced use of virgin raw materials requirements for key materials-intensive sectors, such as buildings, vehicles and packaging.

- Set cross-cutting requirements to ensure that low carbon and circular public procurement requirements are placed in all future revisions of EU sector legislation for key sectors (especially for buildings, vehicles, public works and infrastructure).

- Reform the rules regarding the EU standard setting process for construction products (particularly cement and concrete), working alongside the upcoming Construction Products Regulation and under the Eurocodes.

- Establish an ambitious scope for the SPI, working with accompanying legislation to include as many sectors as possible based upon an assessment of the most carbon- and resource-intensive products. This could include new buildings and construction projects, automotive and packaging.

Background

In early 2022, the European Commission is due to unveil its Sustainable Products Initiative (SPI),[1] a new proposal that is expected to contribute to the objectives of the European Green Deal[2] and the EU's Circular Economy Action Plan (CEAP).[3] The SPI will aim to reduce waste and make products made or sold in Europe fit for a climate neutral, resource-efficient and circular economy.

This will be essential to ensure the competitiveness of European industry in the longer term, ensuring that its businesses retain competitiveness in the context of the transition to meet the net zero by 2050 target. By 2050, the world population is expected to be consuming resources at a rate three times higher than the Earth can replenish. Moreover, global consumption of materials such as fossil fuels, metals and minerals is expected to double by 2060, while annual waste generation is projected to increase by 70 per cent by 2050. Production, consumption and waste linked to products are responsible for many types of pollution including around 40 per cent of global greenhouse gas emissions.[6]

Achieving a climate neutral, circular and competitively sustainable economy requires changes to how we produce and consume products. To meet the EU's climate targets and sustainability aspirations, it is crucial to deliver on the green transition of energy-intensive and hard-to-abate industrial sectors. Basic materials that are essential inputs in manufacturing value chains that are difficult to decarbonise include iron and steel and ferro-alloys, aluminium, cement and concrete, glass, brick and ceramics, wood, pulp and paper, and a range of basic chemicals, such as olefins, polyolefins and aromatics.[5]

However, a successful industrial transition will require an increasing demand for climate neutral raw material inputs. Without it, there is no business case for companies and value chains to fundamentally shift their production technologies and business models. Unfortunately, market demand for climate neutral basic materials and final products currently remains underdeveloped or even non-existent in some EU product markets.[5]

Green Deal

In December 2019, the European Green Deal (EGD)[2] was introduced as the new economic strategy for Europe, aiming to drive growth while also putting the continent on track for a climate neutral future.

The Green Deal is a new strategy that aims to transform the EU into a resource-efficient and competitively sustainable economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.

This strategy also aims to protect, conserve and enhance the EU's natural capital, while ensuring a just transition. The European Green Deal also has a strong focus on people and pays attention to the regions, industries and workers who will face the greatest challenges.

Circular Economy Action Plan (CEAP)[3]

The March 2020 Circular Economy Action Plan (CEAP) is one of the main building blocks of the Green Deal and sets out several initiatives along the entire life cycle of products with the intention of achieving the EU's climate goals, reducing pressure on natural resources and stopping biodiversity loss.

The action plan introduces legislative and non-legislative measures targeting how products are designed, promoting circular economy processes, encouraging sustainable consumption, and aiming to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible.

The CEAP includes plans to strengthen EU rules on green public procurement (GPP) and to review the Industrial Emissions Directive in order to increase circularity in industrial processes. The action plan covers numerous sectors, and special attention is given to those that use the most resources and have the highest potential for circularity, including electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction, buildings and energy-intensive industries.[7]

Fit for 55 Package[8]

On 14 July 2021, the European Commission published the largest part of the Fit for 55 Package; the second half is due in December 2021. This is the first action plan for how to achieve an updated climate target (internationally known as a Nationally Determined Contribution or NDC) by a major economy.

This major policy package has been adopted to deliver on the Green Deal's blueprint for transformational change across the economy and society and to achieve the new 2030 climate target, which will require the EU to achieve a net 55 per cent reduction in greenhouse gas emissions by 2030 (compared with 1990 levels).

The Fit for 55 Package establishes a cross-sectoral and integrated policy framework to ensure that the EU can achieve the 2030 and 2050 targets in a fair, cost-efficient and competitive way. It outlines a set of interconnected revisions to eight existing EU regulations and directives, including fuel taxation, energy efficiency, renewable energy, and nature and land use. It also introduces five new policy measures, including the much-discussed Carbon Border Adjustment Mechanism (CBAM),[9] which is designed to prevent carbon leakage as the EU strengthens its Emissions Trading System (ETS)[10] and phases out the existing system of free allowances by 2036.[11]

Together, the broad range of proposals in the Fit for 55 Package set a pathway to a climate neutral economy by 2050. For further information, refer to the CLG Europe policy briefing on the Fit for 55 Package.[11]

The SPI is likely to widen the scope of the Ecodesign Directive[12] and propose additional legislative measures as appropriate. Through this revision, the Commission will establish sustainability principles and specific requirements linked to environmental aspects to regulate sustainability-related issues in a wide range of product-related instruments.

The legislative proposal is expected to include a set of sustainability principles that will apply horizontally, ie to all product groups. This piece of legislation, once adopted, will subsequently be complemented by implementing acts setting the specific requirements for different product groups.

This initiative will be developed in co-ordination with other initiatives announced in the CEAP, particularly the *initiative on strengthening the role of consumers in the green transition*[13] and the *initiative on the substantiation of claims on the environmental performance of products and businesses*.[14] Together, these initiatives will aim to establish a comprehensive policy framework to ensure products and, to some extent, services on the EU market are more sustainable. The three initiatives were due to be presented in December 2021 as a package. However, given delays in the SPI, the package now appears to have been split, as the initiative on empowering consumers for the green transition is being released separately.

In particular, the SPI intends to address the following policy and market gaps:[6]

1. The need for an urgent shift from a linear energy- and resource-intensive production and consumption pattern, whereby environmental impact and poor working conditions are often overlooked, to a circular economy model whereby products are easily and safely reused, repaired or recycled, and single-use products are no longer an option.

2. EU legislation does not comprehensively address sustainability aspects of all products placed on the EU market. The Ecodesign Directive focuses only on energy efficiency and some circularity features of energy-related products. Furthermore, other initiatives that are broader in scope such as the EU Ecolabel or the EU green public procurement have limited impact due to their voluntary nature.

3. The lack of transparency and clear information on products' sustainability reduces the ability of upstream suppliers and downstream purchasers to offer and choose low carbon products.

The CEAP identifies priority product groups that are likely to be those initially targeted by the SPI, widening the range of products covered to non-energy-related products. However, the SPI's inception impact assessment indicates that only some categories will be excluded (food and feedstuff), leaving open the list of product groups to be affected by this piece of legislation.

This briefing sets out how the upcoming SPI can help drive forward the transition to climate neutrality, while simultaneously strengthening the EU's business competitive sustainability. The briefing builds on CLG Europe and Agora Energiewende's report *Tomorrow's markets today: Scaling up demand for climate neutral basic materials and products*,[5] which sets out the key conditions for the transition to more circular and climate neutral production, supply chains and business models.

The SPI is a foundational piece of legislation to underpin our future economy within Europe. The Taskforce believes this should be based on the concept of competitive sustainability – the ability of an economy, companies and industrial ecosystems to excel relative to international competitors in their transition to a sustainable economy, with climate neutrality at its core – through investment in the necessary innovation.

Enabling investment in climate neutral and circular production requires robust demand for climate neutral and circular basic materials and resulting final products. A solid business case for clean production investments depends on market-based demand for products made from the efficient use of climate neutral materials. Such demand is crucial to the overall industrial transition strategy of the EU. If executed correctly, it can create economic incentives for increased material efficiency in manufacturing and increased use of circular materials, whilst also providing the often-missing business case for large investments in the production of climate neutral materials.[5]

Policy principles

The SPI must become a central policy tool, as part of a package of clean industry policies, for the EU to transition to climate neutral industrial production and consumption by 2050.

From our examination of the SPI, we have set out the following key five principles that we believe are fundamental for the success of both the legislation and the wider CEAP. The SPI should:

1. Be ambitious in its aims in delivering the Green Deal
2. Build a progressive policy framework based upon competitive sustainability
3. Improve transparency of product sustainability
4. Support innovation and be future-proof
5. Provide policy coherence across the wider EU industrial and climate initiatives.

Be ambitious in its aims in delivering the Green Deal

It is key that the SPI is an ambitious, forward-looking piece of legislation that takes the opportunity to realise a truly circular economy. In the context of the wider climate ambitions of the EU following the Paris Agreement and the recently concluded COP26, it is key that the EU uses this moment to improve environmental-based legislation. The move towards a truly circular economy will greatly reduce waste products and is a key aspect of achieving climate neutrality.

We also are aware that the SPI is likely to be based upon the Ecodesign Directive, which means implementing acts may not be delivered until 2024/2025. It is vital that an ambitious timeline can be set, otherwise we risk having too little time to meet our 2030 objectives.

Build a progressive policy framework based upon competitive sustainability

The SPI is an opportunity to build a vision for future products in terms of their durability, reusability, recyclability and energy efficiency. It is also important that it addresses the reduction of carbon footprint and reduced use of non-renewable raw materials.

The transition to climate neutrality presents an enormous opportunity for EU companies in the context of the global paradigm shift that will reshape competitiveness and develop huge new markets for clean technologies and products. The policy framework will play a key role in developing such markets, and an ambitious SPI could significantly contribute to scaling demand for low carbon materials and products.

It is key that the EU takes this opportunity to set a clear and progressive policy framework on how we believe products should be manufactured, used, recycled and reused in the future. This will benefit businesses that understand the importance of creating products in a more circular way, while also pushing companies with less sustainable processes to innovate and update their business model.

Improve transparency of product sustainability

A key issue around building demand for sustainable products is the lack of transparency. Without transparency of what products are truly sustainable, it is difficult to differentiate between materials based upon their carbon footprint.

We understand this is the reason why the European Commission is looking to create a Digital Product Passport, which we believe is a positive step forward as it will give access to clearer data sets around how sustainable the materials truly are. The SPI should take inspiration from other existing initiatives. For construction products, information is already collected through the use of environmental product declarations, including indicators that go beyond CO_2. Likewise, the proposed EU regulation on batteries and waste batteries also incorporates a product passport. Lessons can also be learned from the in-depth work around the Product Environmental Footprint (PEF).

Increased transparency is essential to ensure that downstream companies can easily and reliably compare alternative suppliers based on their embedded CO_2 intensity and wider environmental footprint (eg use of virgin raw materials, recycled content), and therefore market their final products with confidence. Measures should include greater transparency on the share of pre- and post-consumer scrap when claiming recycled content, which will allow better monitoring in this space. This is important to incentivise recycling of post-consumer scrap, which is needed to ensure a truly circular economy. Furthermore, to ensure product circularity has a positive impact on the embedded carbon and complies with the EU Taxonomy on circularity, the SPI must also include calculation tools. This will ensure that the CO_2 emissions generated through the production process and the transportation of recycled or reused material are not higher than the CO_2 emissions generated through the production process and the transportation of virgin material.

Support innovation and be future-proof

The SPI must find a good balance by ensuring greater ambition through policy levers that encourage greater sustainability, while also ensuring these policy frameworks are not overly restrictive to future innovation and alternative methodologies that may not yet be fully developed. The realities of product creation across sectors can be complex, meaning that a proportionate approach is needed – one that builds on industries' best practices and pushes companies to adapt and innovate.

The acceleration of innovation cycles is key to industrial decarbonisation and requires significant research and innovation investment plus access to a skilled workforce to advance and deploy, at scale, decarbonisation technologies across key industries. The SPI should therefore be complementary to other initiatives such as the Innovation Fund.[15] The SPI should support the longer-term development of industry as a whole, while the Innovation Fund addresses fewer businesses and SME investment in clean energy, with specific attention to heavy industry projects.

Provide policy coherence across the wider EU industrial and climate initiatives

The SPI is being introduced during a wider context of intensive focus around climate change and sustainability. The release of the Fit for 55 Package in July 2021 highlights that much action is due to address issues relating to climate change. Likewise, the EU Industrial Strategy was updated in May 2021. The SPI and CEAP play a key role in both of these initiatives. It is therefore key that policy coherence is built across the EU, as failure to do so may lead to missed opportunities or negative externalities caused by conflicting pieces of legislation.

It is vital that the SPI works coherently with other proposals within the CEAP. For example, the Construction Products Regulation is due to be revised, with expected requirements to be set regarding product sustainability, while the proposed EU regulation on batteries and waste batteries has already introduced the concept of a product passport. It is important therefore to co-ordinate policies, recommendations and background methodologies. Likewise, the SPI must fit into the wider policy landscape, including the objectives of the European Climate Law and the upcoming Fit for 55 legislation.

CASE STUDY:
HYDRO – Low carbon and recycled aluminium: Hydro REDUXA and Hydro CIRCAL[16]

Hydro REDUXA and Hydro CIRCAL are low carbon products, for continuous recyclability, certified by independent verifiers and covering emissions along the entire value chain.

Hydro REDUXA is low carbon aluminium based on renewable power that has a footprint of 4.0 kg CO_2 per kg of aluminium – which is less than a quarter of the global average.

Hydro CIRCAL is recycled aluminium made with a minimum of 75 per cent recycled, post-consumer scrap. Remelting aluminium requires only 5 per cent of the energy needed to produce the primary metal. More than 100 large building projects globally are underway with Hydro CIRCAL low carbon aluminium, only a year after the launch.

CASE STUDY:
ISOVER SAINT-GOBAIN – A pioneer in glass wool recycling[17]

In 2018, ISOVER France launched ISOVER Recycling, the world's first closed-loop recycling service for glass wool construction and demolition waste. In partnership with recycling professionals, ISOVER developed an offer to increase the proportion of recycled raw materials in its insulation products. Other countries, such as Switzerland, Denmark and Sweden, already offer construction site waste take-back and recycling services. ISOVER glass wool products contain up to 90 per cent of external recycled content, compared with 60 per cent on average worldwide.

Policy recommendations

The SPI provides a key opportunity for the EU to build long-lasting and progressive policies around sustainable products. The Taskforce therefore believes that the European Commission should seek to deliver the following actions:

1. Implement measures that support EU manufacturers and producers to put declining limits on embedded life cycle emissions for the most CO_2-intensive, materials-rich, final products. These measures could link, for instance, to the Ecodesign Directive, the EU Vehicles legislation, such as CO_2 standards for cars regulation, and key regulations on construction, such as the Construction Products Regulation and the Energy Performance of Buildings Directives. Embedded CO_2 limits, based on the embedded life cycle emissions in the materials used to produce products, could be an extremely powerful lever in several ways:

    - Create scalable demand-side incentives for value chains to decarbonise CO_2-intensive material inputs.
    - Incentivise not only low carbon primary materials but also material efficiency in design, material substitution, low carbon material innovation and circular use of materials.

2. Strengthen embedded CO_2 reporting requirements and materials passporting requirements, and also adopt standardised CO_2 rating labels for the most CO_2-intensive inputs into key value chains, notably for materials such as cement and concrete, steel, non-ferrous metals and plastics, and for products containing high amounts of these materials. This is essential to ensure that downstream companies can easily and reliably compare alternative suppliers based on their embedded CO_2 intensity, and ultimately market their final products with confidence.

3. Set minimum recycled content requirements for key materials-intensive sectors, such as buildings, vehicles and packaging. It is crucial to obtain alignment on the definition of recycled content that will have a positive impact on the overall reduction of waste sent to landfill, both pre- and post-consumer. This may vary from sector to sector and needs to be fit for purpose. Measures should also exist to find alternatives to virgin, carbon-intensive raw materials via reused products and/or by-products. Experience with PET bottles and with recycled concrete has shown that this approach can be extremely effective to remove the littering of single-use plastic packaging and the initial market entry barriers, or non-price barriers to demand, for recycled materials.

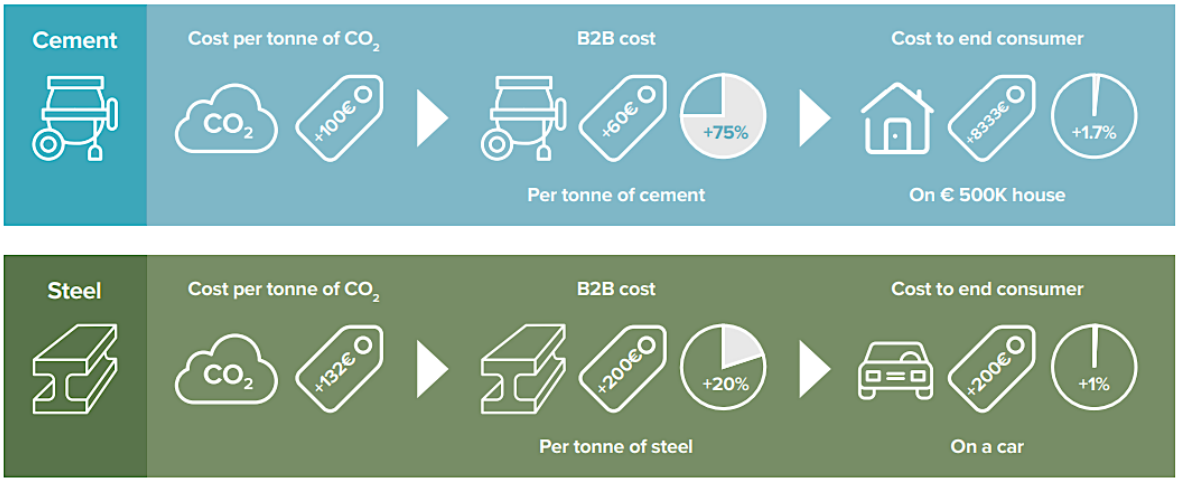
4. Set cross-cutting requirements to ensure that low carbon and circular public procurement requirements are placed in all future revisions of EU sector legislation for key sectors (especially for buildings, vehicles, public works and infrastructure). The European Commission could also take inspiration from the work of Level(s), the existing European framework for sustainable buildings, which has already led to a dedicated workstream on the integration of Level(s) into green public procurement.

5. Reform the rules regarding the EU standard setting process for construction products (particularly cement and concrete), working alongside the upcoming Construction Products Regulation and

under the Eurocodes. It is essential to expedite the revision of old or outdated European standards for CO_2-intensive products (such as concrete or building structures), which have the effect of limiting otherwise safe low carbon or recycled product innovations from entering the market.

6. Establish an ambitious scope for the SPI, working with accompanying legislation, such as the Construction Products Regulation, the Energy Performance of Buildings Directive and the Batteries Regulation, to include as many sectors as possible based on an assessment of the most CO_2-intensive products. This could include new buildings and construction projects, automotive and packaging. Together, products in these sectors account for the majority of the demand for the most CO_2-intensive basic materials.

Figure 2. The higher costs of decarbonising CO_2-intensive basic materials are negligible as a share of final product costs for the construction and automotive sectors



Source: CISL, Agora Energiewende (2021); based on Energy Transition Commission data (Ref. 26 in CISL, Agora Energiewende (2021))[5]

CASE STUDY:
ROCKWOOL Reclaim and recycling schemes[18]

The Rockcycle® service is supporting a major housing project in Leipzig, Germany, to significantly reduce the amount of waste that otherwise would be sent to landfill. Built in the early 1980s, the façade of the housing project is currently being retrofitted with ROCKWOOL stone wool insulation.

Typically, cutting insulation panels to size on a construction site like this would result in 5–10 per cent of the material being discarded and thrown away. Instead, via Rockcycle®, the cut-offs are collected and returned to their factories for processing and recycling back into new stone wool with the original quality, durability and thermal properties. This service is offered to ROCKWOOL's clients in 17 countries, with the commitment to expand to 30 countries by 2030.

CASE STUDY:
Signify – Copenhagen Airport: 3D-printed solution designed for the circular economy[19]

Copenhagen Airport wanted an energy-efficient and sustainable lighting solution in the energy renovation of their offices in Terminal 3. In collaboration with Signify, Copenhagen Airport chose to replace 250 conventional downlights with the tailormade and 3D-printed GreenSpace Downlights. Because it uses 3D print technology, the GreenSpace Downlight is designed for the circular economy. The downlight is printed from recycled polycarbonate, which reduces CO_2 emissions by 76 per cent, and can be recycled over and over again to achieve further CO_2 reductions. Furthermore, this 3D-printed solution meant that the budget for the project could be kept to a minimum, as the 3D-printed downlights could be mounted directly in the existing installation.

Conclusions

Overall, the SPI is an excellent opportunity for the EU to implement its vision of a circular economy, as set out in its action plan. The SPI is an important test case to see how effective such a policy can be; as such, it is critical that the SPI is an ambitious, effective piece of legislation that drives Europe forward in becoming more sustainable in its products.

We therefore call on the European Commission to ensure that the SPI follows the principles we have set out in this document. This paper demonstrates that there is a growing cadre of progressive businesses that believe in the need to unlock the vast potential of climate neutral and circular products. This strategy will be essential for delivering a climate neutral economy; and without it, we will fail to meet our wider climate ambitions.

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