GREEN RECOVERY TRACKER

RECOVERY INVESTMENTS AND EU INDUSTRY DECARBONIZATION

A Green Recovery Tracker deep dive

The Green Recovery Tracker project analysed recovery plans and measures in 17 EU countries, covering 88% of the total grants available through the EU Recovery and Resilience Facility. This briefing focuses on the relationship between recovery spending and industrial decarbonization, looking at how much funding member states plan to dedicate to industrial sectors specifically, and what share of that funding is targeted at accelerating the green transition. Overall, €204bn out of the €685bn analysed will accelerate the green transition.*

We find that nearly 8% (about €52 bn) of the spending outlined in the 17 plans assessed is set to flow to industrial sectors. Nearly 20% (€9.3 bn) of this spending will accelerate the green transition. Although some plans contained specific measures to promote industry decarbonization (6%) and circular economy (9.4%), these areas ultimately did not feature strongly in most member state recovery plans.

CONTEXT: THE EU INDUSTRY DECARBONIZATION CHALLENGE

Industrial sectors, steel, cement, aluminum, paper and bulk chemicals, today account for roughly 21 % of EU CO_2 emissions (EU-27, year 2019)[1]. Meeting EU climate goals will require these sectors to make a fundamental shift from the CO_2 intensive processes and products that are central to their business models today. According to European Commission estimates, meeting the EU's increased climate target of a -55% reduction of GHG emissions on 1990 levels, by 2030, will require at least 25%[2] emissions reductions in industrial sectors over the next 9 years.

To date progress has been slow. Emissions from EU industrial sectors have remained largely flat since the early 2000s, aside from a sharp drop caused by the 2008/2009 economic crisis. The large potential for material circularity† – using fewer industrial materials by recycling and using them in different ways – remains underexploited. As low carbon investment accelerates in China and the US, Europe risks losing its advantage in clean industry. With many industrial plants (48% steel, 30% cement and 53% chemical)[2], coming up for reinvestment and refurbishment in the next

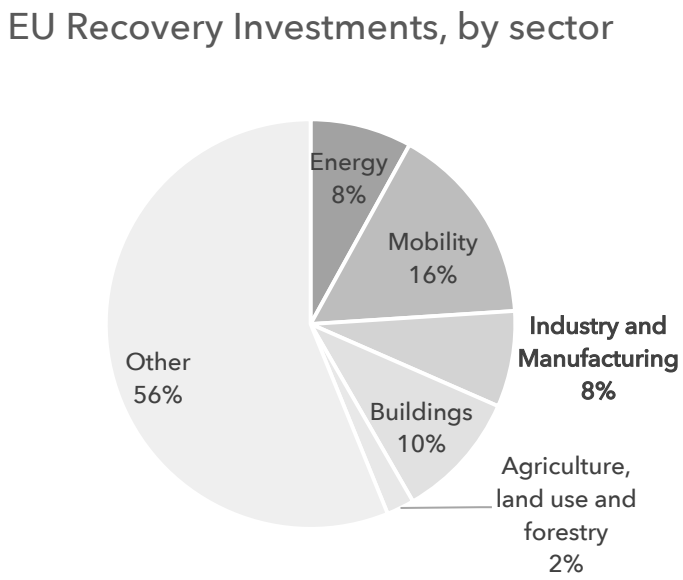
* Including RRF loans and other funding sources such as domestic budgets in cases in which they were used to (co-)finance recovery programmes

† Material Economics (2018), The Circular Economy: A Powerful Force for Climate Mitigation

9 years, time is running out to ensure the right investments are made to forge a pathway towards climate-neutrality.

As such, the EU Recovery and Resilience Facility presented a key opportunity for member states to start to make the required investments in transitioning industrial facilities, scaling up circular economy approaches and building out the renewable energy and green hydrogen infrastructure required for this shift.

ARE RECOVERY INVESTMENTS IN THE EU INDUSTRY SECTOR ALIGNED WITH THE GREEN TRANSITION?

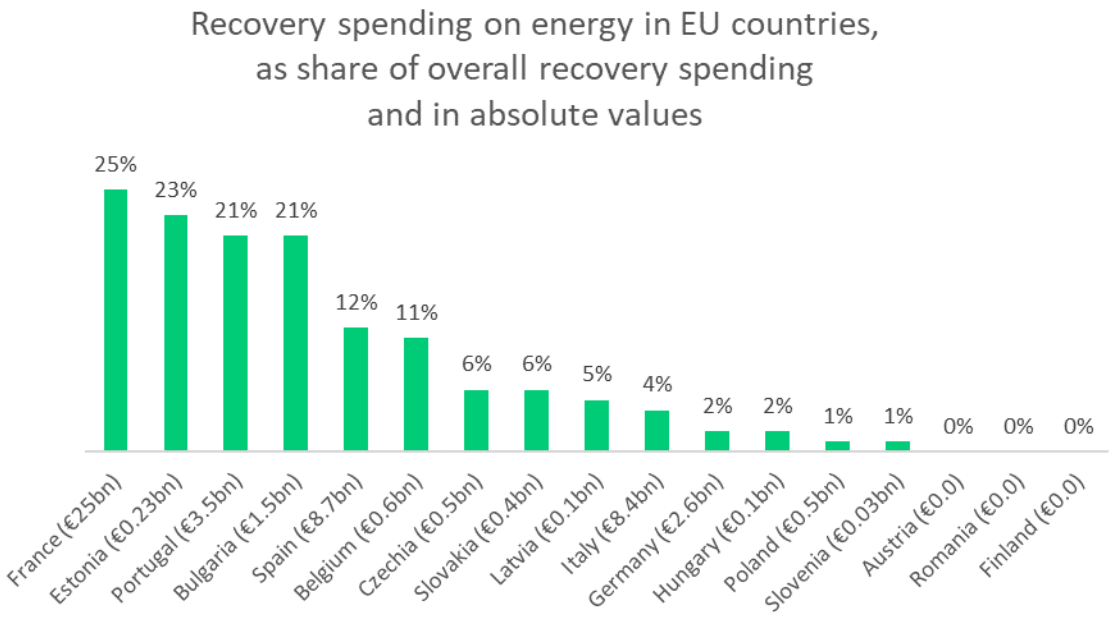


Our assessment of recovery measures in 17 EU member states shows that 7.6% of the total recovery investments (€52.2bn out of €685bn) are set to be invested in industrial and manufacturing sectors. By comparison, larger shares were allocated to mobility (16%) and buildings (10%).

About our data

This briefing is based on data gathered through the Green Recovery Tracker, a joint project between Wuppertal Institute and E3G, in collaboration with national experts. The data used was last updated on 15 July 2021 and is available on the website www.greenrecoverytracker.org. A full list of all countries covered, and the status of the documents on which this analysis is based for those countries, can be found in Annex 1.
Individual recovery measures have been assigned to specific sectors based on which sector's emissions are likely to be most affected by the respective measure. However, the boundary between sectors was not always clear cut. For example, investment in hydrogen assets and infrastructure featured prominently across energy, industry and mobility sectors. In this deep dive on industry, we included just those hydrogen measures that were clearly directed towards industrial usage. Resources set aside for renewable hydrogen production and capacity increase would, however, in practice also benefit industrial decarbonization. Measures allocated to the industry and manufacturing sector were quite far-ranging, encompassing R&D investments for energy-intensive industries and circular economy approaches, industrial waste water savings and include support services for SMEs.

There was a considerable variation in how much different member states chose to invest in industrial sectors. France, Estonia, Portugal and Bulgaria set aside the highest share for industry-related spending. France focused on lowering production taxes to boost competitiveness in combination with an acceleration program to simplify the starting of industrial businesses. In addition to its Recovery Plan 'France Relance', France recently also announced its 'France 2030' investment plan including €5bn for the decarbonization of industry. Belgium introduced measures to encourage companies to develop an industrial value chain for scaling up hydrogen use. Germany also focused on support for hydrogen use in industry. Germany proposes the establishment of an EU-wide integrated market of green hydrogen production and implemented a national hydrogen strategy[3]. Countries with access to more recovery funding were, of course, able to allocate higher absolute amounts to any single sector without necessarily having the highest share of spending, as can be seen in the absolute numbers which are also included in the chart below.

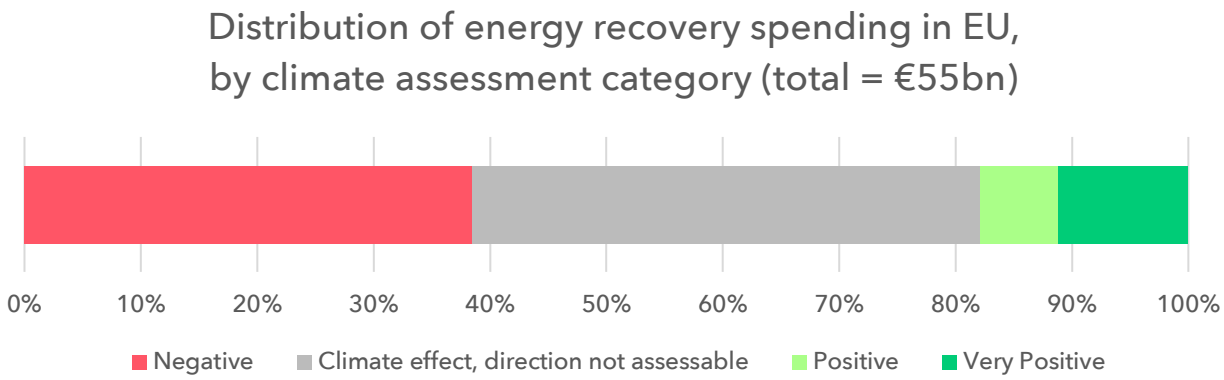


About 18% (9.4bn) of the industry investments assessed are expected to make a positive or very positive contribution to the green transition, for example by enabling improvements to waste and industrial water management, scaling up the usage of green hydrogen to replace more carbon-intensive energy feedstocks, and investments in energy efficiency measures.

However, the climate impact of €22.75bn (44%) worth of investments could not be determined and will depend on how the recovery plans are implemented. To put this into context, this is more than the entire recovery funding allocated to the Czech Republic, Austria and Hungary combined.

Most of these investments lack clear green targets, for example, investments in business support, digitization, innovation programs or support for industrial parks without specific links to the green transition. These measures could end up having a positive or negative impact depending on their ultimate design and implementation.

Lastly, we identified €20bn in industrial recovery spending which is likely to be harmful to the green transition. Critically, this amount is accounted for by just one measure: the reduction of the production tax in France. This measure was introduced without any links to climate targets of conditionality attached to the tax reduction that could lead to emissions reductions. As a result, we expect it to boost industrial production with a negative impact on overall emissions.



In preparing their Recovery and Resilience Plans, member states were also tasked with putting forward reform measures in addition to investments. The European Commission emphasized that "recovery and resilience plans need to reflect a substantive reform and investment effort. Both reforms and investments must be coherent and adequately address the challenges in the individual Member State."[‡] In our analysis, however, we found that few member states took the opportunity to introduce required reform measures. Moreover, almost all member state recovery plans were based on National Energy and Climate Plans (NECPs), which were often already unambitious compared to the EU's old climate target, and which will have to be updated now that the EU has agreed a new and higher climate target. NECPs also do not require member states to submit specific targets and plans for industrial decarbonization and, therefore, could not be used as a helpful basis for allocating funding for industry transition. Instead of using the availability of recovery funds and the associated planning process as an opportunity to enable additional ambition, including on the strategic level, most governments opted for the status quo.

The European Commission also called out shortfalls in national planning for the industrial transition in many of its assessments of recovery plans. It is important to note that there is no

[‡] European Commission (2021). Guidance to Member States: Recovery and Resilience Plans – Part 1

specific section for the industrial sector in the Commission's assessments (and in general in the EU – instead the distinction tends to be between sectors included in the EU emissions trading system (ETS), including energy-intensive sectors and non-ETS industries). As a result, we looked at sections referring to energy and carbon intensity, energy efficiency and circular economy, where assessments relevant to the industrial sector were also included. Below are four examples from the Commission's assessments on "challenges related to the green and digital transition" in the working documents analysing national plans:

- France:"*While the legal framework is in place to transition to a circular economy, France has not yet implemented all necessary steps, especially as regards waste management. France has put in place an ambitious national circular economy roadmap, a National Pact on Plastic packaging, and legislation to tackle waste and promote the circular economy. Nevertheless, many provisions remain to be implemented, and their enforcement may prove challenging. Some efforts are necessary to meet the new recycling targets. The municipal waste recycling rate of 44% is below the 2025 target of 55%. Investments needed to reach the EU recycling targets for municipal and packaging waste are estimated at EUR 4.6 billion.*"
- Belgium: "*The Belgian contributions to the energy efficiency target lack ambition and flexible energy networks are needed. [..] In addition to the infrastructure for electrical vehicles charging, the transition of industry and heavy-duty transport will require new infrastructure to produce and distribute new energy vectors, such as hydrogen, as well as to support carbon capture use and storage.*" [..] "*Achieving emission reduction in industry will involve substantial investments. Crucial for Belgian's economic resilience will be the climate transformation of energy-intensive industries, such as the major petrochemical pole around Antwerp and steel around Liège and Ghent, which will require important investments in carbon capture, low-carbon hydrogen and biomass-based feedstock production and related transmission/distribution infrastructures.*"
- Slovakia: "*Despite resource efficiency gains, and a relative decoupling of raw material use and economic growth, natural resources use remain at an environmentally unsustainable level. Slovakia´s secondary raw material use rate is well below EU average, with almost no progress since 2010. [..]However, fundamental changes in core systems of production and consumption which are prerequisite for the transition towards sustainability are even more challenging in Slovakia due to its existing economy model.*"
- Estonia*: "Since oil shale is Estonia's largest source of hazardous and non- hazardous industrial waste and key to improve its energy and resource efficiency as well as to reach its climate goals, the transition away from oil shale mining and use is by far the most important in terms of the green transition. This would require termination of financing of new oil shale infrastructure, including oil shale refineries. The government has, in the coalition agreement, agreed to phase out oil shale for power generation by 2035 and shale oil by 2040. For a long-term firm commitment and predictability of the investment environment, these targets should be laid down in strategic documents and accompanied by concrete steps towards the targets.*"

These examples illustrate that the recovery planning process has, all in all, not been used to strategically reorient national planning and budgeting in line with the EU's climate targets. Given that this process is now unavoidable due to the EU Climate Law, this task must remain a top priority item on the agenda of national governments – and solutions must be found for all financing needs which are not yet covered, either through other sources of public finance, or private finance, depending on the context.

CONCLUSIONS AND OUTLOOK

Overall, the Green Recovery Tracker identified €204bn in recovery spending that will accelerate the transition in the countries which we analyzed. 8% of overall recovery spending is set to go to the industrial sector, in comparison to 16% and 10% for the mobility and buildings sectors respectively, and a further 8% for the energy sector.

Despite the urgent need for investment and reform in EU industrial sectors, industry decarbonization, ultimately, did not feature strongly in most member state recovery plans. This follows a longer pattern of a lack of robust policymaking to drive change in industry sectors at member state level. Aside from notable exceptions such as Sweden and the Netherlands, most EU member states do not have a dedicated policy framework in place to incentivize mitigation efforts industrial sectors specifically. The main policy levers for EU industrial decarbonization lie at the EU level via the EU Emissions Trading System and the Industrial Emissions Directive.

Moreover, member states are currently not required to develop plans for decarbonizing industrial sectors as part of the National Energy and Climate Plans (NECPs) planning and reporting framework, under the Energy Union Governance Regulation. NECPs formed the basis for many member states recovery plans. Without an existing framework, set of targets and measures for industrial decarbonization, member states will have found it more challenging to quickly pull together concrete and comprehensive investment plans for industrial sectors.

On the cusp of a decade in which a major wave of reinvestment in EU industrial assets is due, this was a missed opportunity. There are two main ways to rectify this going forward:

- Many of the milestones for member state recovery plans have already been set. However, where there is still space for revisions with plans still being drawn up, the European Commission should encourage member states to ensure a strong focus on industrial decarbonization.
- Ensuring comprehensive legislation on industrial decarbonization and funding for investments in the transition at EU level.

The European Commission has already made substantial progress on the second of these two levers. The Fit-for-55 package, released in July 2021, included a range of measures specifically aimed at accelerating industry decarbonization: additional support for early-stage

commercialization of innovative production processes via a stronger Innovation Fund and the provision of Carbon Contracts for Difference (CCFDs), a more robust anti-carbon leakage system in the form of the proposed Carbon Border Adjustment Mechanism (CBAMs) and targets to ensure green hydrogen uptake and prioritization for industry sectors.

As these proposals make their way through the legislative process over the course of 2022, it will be critical to ensure they are strengthened in such a way that they create strong enough incentives for industrial companies to shift to cleaner production processes. There is already a widespread perception backed up by numerous studies[§] that industry sectors have had a relatively free ride so far. To ensure that CBAMs and CCFDs do not contribute to that dynamic they will need to be accompanied by a strong ask from industrial sectors in return, effectively coming at the cost of some of the supports (e.g. free emissions allowances) they benefit from currently.

Ensuring sufficient and targeted investment at EU and member state level in industrial decarbonization is a key issue for the just transition and for Europe's economic cohesion. EU industrial sectors have faced considerable challenges since the global financial crisis 2008-09: structural declines in demand, increased international competition, volatile raw material prices and overcapacity in the global market. By supporting the shift to near-zero emissions industrial production processes and scaling up circular economy approaches, EU member states will be able to create a long-term future for these sectors in Europe, securing jobs throughout the industrial value chain. By doing so in a way that benefits all regions, EU recovery funding and an EU clean industry package can reduce the risk of fragmented national policies and start to bridge inequalities in the shift to a climate neutral economy.

This analysis was written by Johanna Lehne (E3G) and Helena Mölter (Wuppertal Institute). The authors would like to thank Timon Wehnert and Jacqueline Klingen (both Wuppertal Institute) for valuable inputs and support.

[§] https://carbonmarketwatch.org/wp-content/uploads/2021/05/Presentatie_AdditionalProfits7Junevs2.pdf

ANNEX 1: COUNTRIES AND MEASURES INCLUDED IN THE QUANTITATIVE ANALYSIS

Country	Recovery plans and/or measures analyzed
Austria	Recovery and Resilience Plan (April 2021)
Belgium	Recovery and Resilience Plan (April 2021)
Bulgaria	Draft Recovery and Resilience Plan (February 2021)
Czech Republic	Recovery and Resilience Plan (May 2021)
Estonia	Programming for Recovery and Resilience Facility (May 2021)
Finland	Recovery and Resilience Plan (May 2021)
France	Domestic recovery package ("France Relance", September 2020) and Recovery and Resilience Plan (April 2021)
Germany	Domestic recovery package (June 2020) and Recovery and Resilience Plan (April 2021)
Hungary	Recovery and Resilience Plan (May 2021)
Italy	Recovery and Resilience Plan (April 2021)
Latvia	Draft Recovery and Resilience Plan (January 2021)
Poland	Recovery and Resilience Plan (April 2021)
Portugal	Recovery and Resilience Plan (April 2021)
Romania	Draft Recovery and Resilience Plan (March 2021)
Slovakia	Draft Recovery and Resilience Plan (March 2021)
Slovenia	Recovery and Resilience Plan (April 2021)
Spain	Recovery and Resilience Plan (April 2021)

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[1] European Environment Agency (2021). EEA greenhouse gases - data viewer
[2] Agora Energiewende and Wuppertal Institute (2020). Breakthrough Strategies for Climate-Neutral Industry
[3] Bundesministerium der Finanzen (2021). Deutscher Aufbau- und Resilienzplan