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FROM BLOCKAGE TO BREAKTHROUGH

BENCHMARKS FOR EU INDUSTRIAL TRANSITION FOR FIT FOR 55 AND BEYOND

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Industry decarbonisation is currently a bottleneck for the EU's target of reaching climate neutrality by 2050. This briefing sets four key tests for shifting EU industrial decarbonisation from a blockage to a breakthrough for the wider European Green Deal.

Emissions from energy-intensive industries need to fall by almost a quarter by 2030 and by over 90% by 2050.[1] So far progress has been slow: industrial emissions reductions have stagnated since 2012 and key decarbonisation technologies are trapped at the pilot stage.

At the same time industrial products are critical inputs for the build out of renewable energy, sustainable infrastructure, as well as the automotive and construction sectors. Speeding up the decarbonisation of heavy industry will be key to unlocking barriers to deeper emissions cuts and sustainability efforts in other sectors.

Figure 1. Four benchmarks for shifting EU industrial decarbonisation from a blockage to a breakthrough for the wider European Green Deal

[1] European Commission (2020), **2030 Climate Target Plan Impact Assessment**

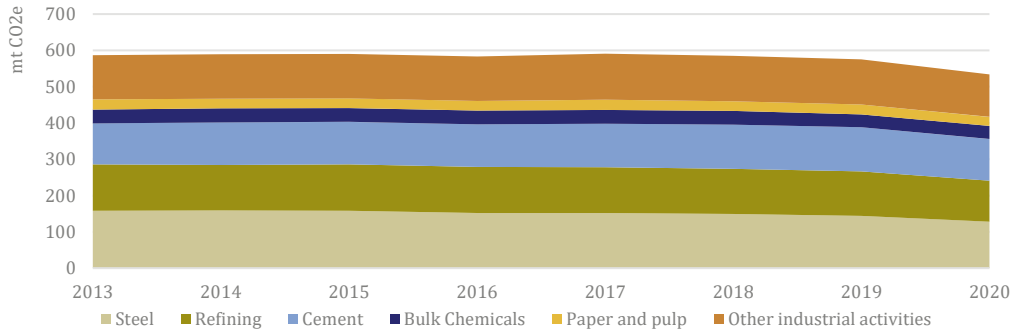
Context

A lack of concerted policy efforts

Energy-intensive industries (EII), steel, cement, aluminium, paper and chemicals, account for roughly 15% of EU emissions and over 16% of the EU's energy use.[2] There has been little robust policymaking to drive change to date, especially in comparison to other sectors. As EII products are globally traded and face strong price competition, policymakers have been reluctant to introduce stringent climate policies that could affect their competitiveness and risk carbon leakage.[3]

Perhaps the best example of this is the EU Emissions Trading System (ETS), which is often presented as the main tool to decarbonise EU industry. So far, industrial sectors have received most of their emission allowances for free, in many cases exceeding their emissions.[4] This has dampened the carbon price signal and, therefore, the incentive to invest in cleaner production processes. Moreover, EIIs are exempted from taxes related to the deployment of renewable energy and receive compensation for higher electricity prices in 12 EU Member States.[5] As a result, industrial emissions have remained largely flat since the early 2000s, aside from a sharp drop caused by the 2008/2009 economic crisis,[6] and again in 2020 resulting from the COVID-19 induced economic downturn.

Figure 2. Industry emissions covered by the EU Emissions Trading System, 2013-2020.



Source: E3G based on date from EEA, 2021

[2] European Commission (2020), **2030 Climate Target Plan Impact Assessment**

[3] Carbon leakage can occur when economic activities are displaced, or investment or consumption patterns change, for reasons of costs related to climate policies. This could directly or indirectly cause GHG emissions to be displaced to other countries with no or laxer emissions constraints in place.

[4] According to **data from the EEA**, industrial sectors covered by the EU ETS received enough free allowances to cover 99.67% of their verified emissions during the period 2013-2020 (own calculation).

[5] In 2020 alone, EIIs received almost €1.3 billion to compensate for these higher electricity prices. See: Marcu et al. (2021), **2021 State of the EU ETS Report**

[6] EEA (2019), **Greenhouse gas emissions by aggregated sector**

Growing momentum

Recently, however, the political narrative has started to shift. Transitioning towards more sustainable production processes is increasingly being recognised as an enabler, or even a prerequisite, for the continued competitiveness of EU industry, creation of decent jobs, and economic growth.[7] The update of the EU's industrial strategy stressed that the business case for the green transition is stronger than ever, reinforced by the experience of COVID-19.[8] For example, while the demand for new cars dropped substantially during the pandemic, the impact on demand for electric vehicles was less severe.[9] During 2020, moreover, net assets in, financial portfolios which have integrated environmental, social and governance factors into the investment process (ESG funds), grew over seven times faster compared to non-ESG funds.[10]

This shift in thinking comes off the back of a wave of positive announcements from the private sector. The so-called "hydrogen hype" has injected much-needed optimism in the possibility of transitioning to cleaner production processes, particularly in the steel sector. Over the last year there has been a string of announcements about clean steel pilots as companies line up to capitalise on this shift and set net-zero targets.[11] The world's first hydrogen-reduced sponge iron was produced at pilot scale at the end of June 2021.[12] Growing confidence in the feasibility of industry transition has opened up the political space for more concerted policy efforts at EU level.

Time for the EU to up its game

Other major trade partners are joining the global race to decarbonise their industrial base. China is accelerating the clean-up of its steel industry[13] and United States Steel Corporation recently announced a net-zero target.[14] The Biden administration and the US congress are also exploring the use of new public procurement rules and tax incentives to grow the market for US-produced greener industrial products.[15]

[7] CISL (2020), **Developing the EU's 'competitive sustainability' for a resilient recovery and dynamic growth**

[8] European Commission (2021), **Updating the 2020 New Industrial Strategy**

[9] De Vet et al. (2021), **Impacts of the COVID-19 pandemic on EU industries**

[10] Reuters (2021), **Europe's sustainable assets surge in 2020, more to come: EFAMA**

[11] SEI and LeadIT (2021), **Green Steel Tracker**

[12] HYBRIT (2021), **SSAB, LKAB and Vattenfall first in the world with hydrogen-reduced sponge iron**

[13] Bloomberg (2021), **China Ramps Up Push to Make World's Biggest Steel Industry Green**

[14] Business Wire (2021), **US Steel Corporation Announces Goal to Achieve Carbon Neutrality by 2050**

[15] 117th US Congress (2021), **Clean Energy for America Act**

While the EU will need to step up its decarbonisation game if it wants to be a leader in the markets of the future, it is still in a prime position to do so. Europe has valuable assets in the form of its single market and regulatory framework through which it can drive a green transition in industrial supply chains. Moreover, EU companies are leading industry decarbonisation efforts globally. The majority of the planned low carbon steel pilots (31 out of 47) are in the EU.[16]

However, the EU only has a narrow policy window to act within. EII sectors are characterised by "lumpy" investment cycles over long time periods. Industrial facilities typically operate between 20-50 years, with reinvestments and refurbishments only required every 15-25 years.[17] Between 30% and 53% of the EU's cement, steel and steam cracker plants will require major reinvestments in the coming decade.[18] The key question for this reinvestment wave is how to give asset owners the confidence and support to invest in low-carbon processes instead of locking in three more decades of carbon-intensive production. Given this fleeting window, it is paramount that the right policy signals are sent in the coming years.

Calls for a Clean Industry Package

There has been a steady drumbeat of reports outlining the policy package needed for EU industrial transition.[19] There is a strong consensus that carbon pricing alone will not do the trick. Instead, these reports call for a mix of push and pull policies, focusing on:

1. Ensuring a **stronger carbon price signal** and **robust anti-carbon leakage system**
2. Supporting early-stage commercialisation of innovative production processes through **direct support mechanisms**
3. Developing **lead markets for low-carbon industrial products** through demand-pull instruments
4. Ensuring access to enough **renewable electricity, carbon capture and storage (CCS) infrastructure, green hydrogen** and other low-carbon fuels to decarbonise industry

[16] Gerres et al. (2021), **Green steel production: How G7 countries can help change the global landscape**

[17] Material Economics (2019), **Industrial Transformation 2050**

[18] Agora Energiewende (2021), **Breakthrough Strategies for Climate-Neutral Industry in Europe**

[19] See for example: Agora Energiewende (2021), **A Clean Industry Package for the EU**; Material Economics (2019), **Industrial Transformation 2050**; Climate Strategies (2021), **Closing the Green Deal for Industry**; DIW (2021), **Green Deal for Industry: A Clear Policy Framework Is More Important than Funding**; Sartor & Lehne (2020), **A Policy Vision for the EU Industrial Strategy**

5. Tools to encourage **material efficiency and enhanced recycling**

Table 1. Key legislative files in the 'Fit for 55' package and beyond to implement a Clean Industry Package

Key legislative files	Key elements for an EU Clean Industry Package: Carbon price signal & carbon leakage protection	Support early-stage commercialisation	Develop lead markets	Renewable energy and low-carbon infrastructure	Material efficiency and enhanced recycling	
EU Emissions Trading System	✓	✓	✓	✓	✓	14 July 2021 'Fit for 55'
Carbon Border Adjustment Mechanism	✓		✓		✓	
Renewable Energy Directive			✓	✓		
Energy Efficiency Directive				✓	✓	
Energy Taxation Directive	✓			✓	✓	
State aid for environmental protection and energy	✓	✓		✓	✓	Q4 2021
Industrial Emissions Directive			✓		✓	
Sustainable Products Initiative			✓		✓	
European Ecodesign Directive			✓		✓	
Energy Performance of Buildings Directive			✓		✓	
TEN-E Regulation				✓		Q4 2020

Source: E3G

The 'Fit for 55' package and other key climate and energy files expected later this year provide key opportunities for many of these policies to become a reality. Table 1 highlights where the various files up for revision can contribute towards achieving an EU Clean Industry Package.

The 'Fit for 55' package

On 14 July 2021 the European Commission adopted a first package of proposals to revise key climate and energy files in line with the new 2030 target. [20]

Table 2 sums up the main elements of the proposals relevant for industrial sectors.

With these proposals, the Commission has taken a first step towards introducing a Clean Industry Package as outlined in Table 1. However, there remain a set of cross-cutting challenges fundamental to the success of the above package that are at risk of not being addressed. In the next section, we unpack these, setting

[20] European Commission (2021), **Delivering the European Green Deal**

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out **four key benchmarks for shifting EU industrial decarbonisation from a blockage to a breakthrough for the wider European Green Deal.**

Table 2. Main elements for industrial sectors in the proposals for the 'fit for 55' package.

	Main elements of the proposal for industrial sectors
EU Emissions Trading System	> **The 2030 Target** is increased to -61% (vs. 2005 emissions), up from -43%. > **Free allocation** o Industry sectors deemed at risk of carbon leakage will continue to receive 100% of their allowances for free. o 25% of this amount is made conditional on installations implementing the recommendations of energy audits with a payback time of five years. > **Indirect costs compensation** remains optional for Member States. The amount of compensation granted to industrial operators is to be deducted directly from auctioning revenues. > **100% of auctioning revenues** to be used by Member States for climate and energy purposes (e.g. clean technologies, renewables, CCS). > **The Innovation Fund** is significantly increased in size and will be provide support to projects through competitive tendering mechanisms such as carbon contracts for difference (CCfDs).[21] > **The Modernisation Fund** is increased in size and financing fossil fuels is proposed to be excluded from its scope.
Carbon Border Adjustment Mechanism	> **The Carbon Border Adjustment Mechanism (CBAM) aims to ensure robust carbon leakage protection** for the cement, steel, fertiliser, power and aluminium sectors by ensuring foreign producers face an equivalent carbon price at the EU's borders for their scope 1 emissions. > **After an initial pilot phase** from 2023 to 2025, importers to the EU will have to purchase credits to cover their scope 1 emissions *(for those emissions above the amount of free allocation granted to EU producers).* > **The CBAM is proposed to provide *additional* protection** for a decade as free allocation will only be phased out gradually (10% reduction per year) for covered sectors between 2026 and 2035. > **The free allocation no longer provided** to the CBAM sectors will be auctioned and revenues are proposed to accrue to the Innovation Fund.
Renewable Energy Directive	> **The 2030 target** is increased from 32% to at least 40%. > **The share of renewable sources** used by the industry sector should annually increase by an (indicative average) of 1.1 percentage points by 2030. > **50% of the hydrogen used in industry** should be renewable by 2030. > **A common methodology** for industry products that are labelled as having been produced partially or fully using renewable energy, including renewable feedstocks, will be introduced.

[21] CCfDs aim to finance first-of-a-kind commercial-scale industrial projects by providing public support to cover the difference between the ETS price and an agreed 'strike price', the price necessary to make the project cost-competitive with incumbents.

Energy Efficiency Directive	> **The 2030 target** is increased from 32.5% to 36% and proposed to be binding at EU level. > **Large energy consumers** would be obliged to implement an energy management system and carry out energy audits every 4 years. > Reduced energy use in sectors that would have occurred as a result of emission trading through the EU ETS Directive cannot be counted towards Member States' energy savings obligation.
Energy Taxation Directive	> **Proposes minimum tax rates for energy carriers,** which are proposed to be higher for fossil fuels than for electricity and renewable fuels, while proposing to largely remove existing tax exemptions for the use of fossil fuels. > **Member States may continue to apply tax reductions for energy-intensive industries**, but not below the minimum tax rates. > **Low-carbon fuels for all uses**, including low-carbon hydrogen, will be subject to the same tax rate as electricity.

Benchmarks for EU Industrial Transition

1. Ensure a balance between the support offered to EII sectors to help them transition and the ask made of them in return.

As described above, there has been a strong focus to date on preserving European industry in the face of external competition. The review of the EU ETS and the wider "Fit for 55" package provides a unique opportunity to break with the past, transitioning away from a system of untargeted free allocation and other exemptions, towards a policy framework that delivers concrete emission cuts. **The success of such a shift will be predicated on a careful balance between the "give and take" for EII sectors.**

So far, the proposals adopted by the European Commission on 14 July are still very generous to EII sectors. Industry players are set to benefit from a stronger Innovation Fund and more direct support for deploying cleaner technologies via CCfDs. They are also set to gain a CBAM to level the playing field with foreign producers and will continue to receive indirect cost compensation and most of their emissions allowances for free for the foreseeable future, with only weak conditionality introduced in return. [22]

[22] As the payback time is relatively short (5 years) and a similar conditionality was already introduced for EII sectors receiving indirect costs compensation – see European Commission (2020), **Guidelines on certain State aid measures in the context of the system for greenhouse gas emission allowances trading post 2021**.

Individually, each of these measures can be justified. A stronger Innovation Fund with the potential to offer CCfDs will be vital to bolster the business case for industrial transition. The CBAM offers a long-term solution for robust carbon leakage protection but requires a gradual phase-in period given its complexity and the associated political and legal challenges, hence the need to progressively phase out free allowances for sectors covered by the CBAM.

Taken together, however, this additional support unaccompanied by a strong ask from EII sectors in return, has the potential to be a political flashpoint. There is already a widespread perception backed up by numerous studies that EII sectors have had a relatively free ride so far.[23] To rebalance the offer, the following elements will need to be addressed during the negotiations:

> **Commence the phase-out of free allowances under the ETS during the current trading period.** A gradual phase-out of free allowances for all sectors in the ETS would incentivise clean investments and encourage sectors deemed at risk of carbon leakage to be covered by the EU CBAM. A share of the resulting revenues could be used to bolster the Innovation Fund and ensure a larger pool of funding for CCfDs and, therefore, tangible support via other means to EU producers to invest in cleaner production processes.

> **A shorter period during which sectors covered by the CBAM also receive free allowances.** While there is need for a transition period, the currently proposed ten-year period (2026-2035) is too long and the 10% reduction in free allowances per year is too slow. The objective of the CBAM is to set clear incentives for investing in cleaner production processes in the EU and abroad. It needs to do that in the near term to match the critical reinvestment window ahead of 2030. A faster transition period would clearer support that aim. For the CBAM sectors, free allowances should be phased out by 2030 at the latest, with a progressively increasing % reduction per year.

> **Increased conditionality for free allowances and indirect costs compensation granted during the phasedown period**. While the mandatory implementation of energy audit recommendations is a first step in the right direction, more ambitious conditionalities need to be put in place for those companies wishing to continue to benefit from this support. This should include requirements for companies to provide net-zero transition plans, including setting intermediate emissions reduction and resource efficiency targets, transition plans for existing carbon-intensive plants, commitments to

[23] CE Delft (2021), **Additional profits of sectors and firms from the EU ETS**

investments in cleaner processes and subscribing to a transparent governance framework to monitor progress against these plans.

> **Rapidly update the free allocation benchmarks in a transparent manner**. The EU ETS proposal rightfully recognises that the current methodology to determine the scope of the product benchmarks puts innovative low-carbon technologies at a competitive disadvantage.[24] The European Commission should revise the benchmarks as soon as possible, using objective and verifiable data, to ensure that the benchmark values consider the actual best performers in the EU. This will encourage greater emissions reductions and improve the business case for innovative technologies, such as for green hydrogen.[25]

2. Fully integrate the principles of circular economy and resource efficiency in decarbonisation policies for EU industry

There has been a narrow focus to date on pursuing industrial decarbonisation via fuel shifts (e.g. shifts to hydrogen or electrification), energy efficiency and CCS. These mitigation levers will be critical to decarbonise EU industry. However, **the potential for deploying circular economy levers to reduce how much steel, cement and plastic we need in the first instance remains underexploited despite a growing evidence base indicating their importance.**[26] The International Energy Agency's (IEA) 'Net zero by 2050' report estimates that material efficiency alone can reduce demand for cement and steel by 20% in 2050.[27] Beyond mitigation potential, circular economy levers also have the potential to address wider environmental challenges, including biodiversity loss and pollution.[28]

In practice, circular economy measures would include taking a new approach to design, using higher quality materials, substituting materials for lower carbon alternatives, improving the efficiency with which these materials are used in production and construction, and increasing the share of materials that are reused and recycled. These demand-side tools have their own challenges – not least the need to coordinate a large number of players along supply chains. However, many of them are already deployable today, allowing the EU to make

[24] Lytton (2020), **Relaunching a sustainable industrial sector. Europe's zero carbon moonshot**

[25] Gonzalez Holguera (2021), **Untangling the knots. Clearing the way to fast green hydrogen deployment**

[26] Material Economics (2018), **The Circular Economy – a Powerful Force for Climate Mitigation**

[27] IEA (2021), **Net Zero by 2050**.

[28] Forslund (2021), **The circular economy is key to halting biodiversity loss**

progress on industrial transformation in the next decade without having to wait for full-scale hydrogen or CCS deployment.

There is, moreover, a strong geopolitical and economic imperative to maximise the potential from circular economy approaches for industry decarbonisation. In contrast to emerging and developing economies, the EU has an established building and car stock with valuable reuse and recycling potential. However, the EU currently exports a large share of its scrap, close to 22 million tonnes of scrap steel in 2019.[29] At the same time, reducing strategic dependencies in international supply chains has been high on the political agenda since the COVID-19 crisis hit, with heightened concerns over access to critical raw materials and technologies that are key to the green and digital transitions. While the EU will likely continue to be dependent on international supply chains for some of these feedstocks, including the production of green hydrogen,[30] much more can be done to ensure the full value of secondary material flows is captured and used in Europe.

Although circular economy is a key priority for the European Commission, it has not yet managed to properly integrate this agenda with its industrial decarbonisation policies. The Circular Economy Action Plan[31] launched in March 2020 focused on specific supply chains: ICT, textiles, construction and food. EII materials – steel, cement and chemicals – are mentioned once, cited as high-impact intermediate products but with no specific measures named for these sectors.[32] Circular economy and industrial decarbonisation policies continue to be handled by separate units in the European Commission (or separate teams within directorates) making it difficult to ensure a more integrated approach. This divide was once again evident in the proposals adopted by the European Commission on 14 July – with a focus under the ETS, CBAM and Renewable Energy Directive (RED) on decarbonisation and fuel shifts but no provisions or incentives set for enhanced material efficiency and circularity.

The Commission is expected to release proposals under the Circular Economy Action Plan towards the end of this year which will hopefully include measures for EII sectors and products. In the context of these proposals, the Commission should:

[29] Eurofer (2021), **European Steel in Figures 2020**

[30] European Commission (2021), **Strategic dependencies and capacities**

[31] European Commission (2020), **Circular economy action plan**

[32] European Commission (2020), **Circular Economy Action Plan**

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- **Introduce a cross-cutting 'Resource Efficiency First' principle** to ensure circular levers are strongly embedded and given a clear push in policymaking for industrial decarbonisation. We currently have an 'Energy Efficiency First' principle to ensure that energy efficiency potential is maximised to bring down the costs and environmental impacts of the energy system transition. [33] A 'Resource Efficiency First' principle would integrate more efficient use of energy with smarter use of materials and put a strong emphasis on policies to reduce consumption of EII materials alongside policies targeted at cleaner production.
- **Introduce ambitious product requirements to enhance material efficiency, circularity and lower the carbon-content of EII materials** under the upcoming Sustainable Products Initiative (SPI) and the Energy Performance in Buildings Directive (EPBD) (both expected to be released in Q4 2021). The Ecodesign Directive should be expanded to strengthen embedded CO_2 and resource use requirements and introduce an EU-wide labelling scheme for the performance of basic materials and products down their value-chain, like the existing EU energy label.[34]

3. Ensure an EU-wide industrial transition is possible, safeguarding against a two-speed dynamic

A fragmented, national approach to industrial decarbonisation will only widen divisions among Member States and slow the deployment of cleaner industrial production technologies. [35] **It will be important to avoid that only those countries with sufficient financial means move forward while others lag, leading to a two-speed transition.**

During the pandemic, large disparities between state aid amounts approved in different Member States were apparent.[36] Even when correcting for the size of their economies, large Member States relied more heavily on state aid to mitigate the impacts of the pandemic.[37] EU solidarity via NextGenerationEU has helped ensure that all Member States have access to resources to ensure a green recovery. The 'Fit for 55' package similarly needs to ensure a geographically balanced transition towards a net-zero economy.

[33] European Commission (2021), **Energy efficiency directive**

[34] European Commission (2017), **EU Regulation setting a framework for energy labelling**

[35] De Pous, Popp and Dufour (2019), **The race to decarbonise industry**

[36] European Commission (2021), **The use of COVID-19 related State aid measures by EU Member States**

[37] European Parliament Think Tank (2020), **Impact of state aid on competition and competitiveness during the COVID-19 pandemic: an early assessment**

So far, we have seen a handful of Member States take the lead on industrial decarbonisation, including Germany, Sweden and the Netherlands, announcing ambitious strategies[38] and stimulus packages[39] aimed at greening their industrial base, including through innovative instruments such as CCfDs, while discussions in other countries are yet to seriously begin.[40]

To really reap the benefits of the EU single market, industrial decarbonisation will need to be coordinated and based on joint strategies. This could help harness the renewable energy potential of southeast Europe and foster important joint industrial enterprises, such as the European Battery Innovation project.[41] With much of the industrial base in Central and Eastern European (CEE) countries remaining both energy- and labour-intensive, **the industrial transition has the potential to act as a green bridge across the EU's traditional East-West divide on climate ambition.**

The proposals adopted by the European Commission on 14 July include some encouraging provisions to address this challenge. By introducing CCfDs at the European level through the Innovation Fund, the Commission is trying to ensure that these tools are accessible to companies in all EU Member States. Moreover, the proposals also allow for additional support for countries in CEE, e.g. through the enlargement of the Modernisation Fund. However, more will likely need to be done to ensure CEE countries fully benefit from the transition, including:

- **Facilitating large-scale investments in low-carbon and clean energy infrastructure in CEE.** Many CEE countries are landlocked and, therefore, have more limited access to safe geological CO_2 storage sites for CCS (e.g. in the North Sea) or renewable energy technologies such as off-shore wind. Continuous European-level infrastructure planning is needed to determine where EU resources can best be leveraged and identify the need for cross-border infrastructure linkages. In particular, the TEN-E regulation should lay the ground to implement cross-border renewable energy projects set out in the post-2020 Connecting Europe Facility. Such projects of common interests (PCIs) could boost clean and reliable energy provision in coal and heavy

[38] Clean Energy Wire (2021), **Germany's National Hydrogen Strategy**

[39] Netherlands Enterprise Agency (2021), **Stimulation of sustainable energy production and climate transition (SDE++)**

[40] McWilliams and Zachmann (2021), **Commercialisation contracts: European support for low-carbon technology deployment**

[41] European Commission (2021), **Commission approves €2.9 billion public support by twelve Member States for a second pan-European research and innovation project along the entire battery value chain**

industry regions in particular, by making them more attractive compared to traditional, high-carbon investments.

> **Ensure geographically balanced access to the Innovation Fund and CCfDs,** including through improved technical assistance and targeted calls for proposals from underrepresented regions**.** The first call for large-scale proposals for the Innovation Fund saw fewer than 25% of applications coming from within CEE countries.[42] Likewise, companies located in Western Europe will receive the lion's share of the grants from the first call for small-scale projects and project development assistance.[43]

> **Introduce a common EU framework for the national use of CCfDs** and other types of state aid for EIIs to avoid unfair competition and distortion of the internal market. Next to providing CCfDs and other types of support at a European level, a European framework should be established to ensure consistency between different national support schemes. This could be achieved through the revision of the guidelines on state aid for environmental protection and energy measures, and could include common rules for eligibility criteria, design of competitive bidding processes, type of contracts, and requirements to ensure consistency with net-zero target.[44]

> **Further boost the solidarity mechanisms in the EU ETS** such as the Modernisation Fund, matched with strong climate conditionalities and exclusion criteria to ensure it accelerates the transition in the region. The proposed requirement for Member States to use 100% of the EU ETS auction revenues for climate purposes, as well as the exclusion of fossil fuels investments in the Modernisation Fund, should be adopted.

4. Establish a governance framework to accelerate and coordinate industry transition

A successful EU industrial transition will require intense coordination across a wide range of policy areas that have traditionally been managed separately. The European Commission will need to bring together expertise from a diverse set of stakeholders, as well as set a strong overarching vision and ensure coherence and complementarity across policy files. However**, no adequate governance framework to manage this complexity is currently in place.**

[42] European Commission (2020), **First Innovation Fund call for large-scale projects**

[43] European Commission (2021), **Innovation Fund small-scale projects**

[44] McWilliams and Zachmann (2021), **Commercialisation contracts: European support for low-carbon technology deployment**

The Commission has set up several different fora for managing aspects of the transition: industrial alliances, the high-level group for EIIs and the Industrial Forum. While these initiatives allow for cross-stakeholder exchange and some aspects of monitoring and accountability, none of them have a clear mandate to look across policy files and ensure a coherent implementation of a Clean Industry Package. These processes have, moreover, been dominated by (incumbent) industry actors and lack the necessary transparency, accountability, and ambition. The role of civil society and the wider research community should also be strengthened.

This is not only a challenge for industrial transition, but for the entire European Green Deal. The European Scientific Advisory Board on Climate Change established through the European Climate Law has a mandate to cover some of these challenges, including providing advice on the coherence of climate measures and identifying actions and opportunities needed to successfully achieve the EU's climate targets.[45] This Advisory Board could potentially also play a role in the transition of EU industry specifically.[46]

A robust governance framework for industry transition is one of the key elements that is currently missing in the 'Fit for 55' package. EU institutions should seek to introduce several governance elements through the revision of the climate and energy files, including:

> Given the complexity of the challenge and the large scale of investments required to put heavy industry on track to fully decarbonise by 2050, it will be necessary to **develop sectoral roadmaps at multiple governance levels** (regional, Member State and EU). These will help set out infrastructure, energy and financial needs and set a direction of travel including clear intermediate milestones. There are currently two entry points for shaping EU-level roadmaps for industry decarbonisation: the EII ecosystem transition pathway announced in the updated industrial strategy and the (optional) sectoral roadmaps introduced under the Climate Law. The European Commission will need to clarify how these processes relate to each other, ensure transparency around how pathways are drawn up, strengthen the process and requirements (i.e. making them mandatory and setting criteria for sectoral roadmaps) and introduce a framework to hold participants to account in delivering the targets set.

[45] European Union (2021), **European Climate Law regulation**

[46] Skillings and Gianelli (2021). **Climate Law and European Green Deal Delivery**

- **Require transition plans to be adopted at company level** outlining investments, intermediate progress on emissions, circularity, material efficiency. Support provided through the Clean Industry Package, such as CCfDs or any future free allocation should be made conditional on companies setting ambitious targets and delivering on them.
- **Establish a competent, empowered governance body within the Commission to monitor progress on industrial transition,** define targets, establish systems for evaluation and reporting and support access to information and transparency for civil society and the private sector. This body should be sufficiently politically independent, yet accountable for its achievements, with a set of clear, realistic milestones and metrics.
- **Create a dedicated place for Member States to outline and report progress on industry decarbonisation as part of their National Energy and Climate Plans**[47] to monitor progress and ensure policy coherence between Member States.

About E3G

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[47] European Commission (2020), **National energy and climate plans (NECPs)**