

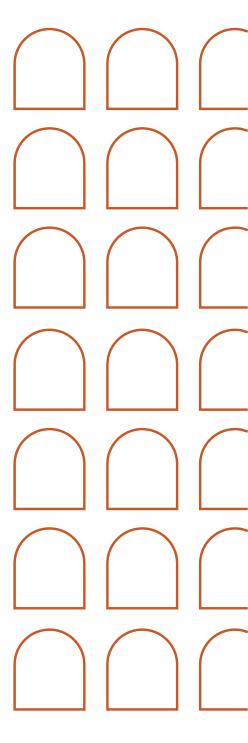
STG Policy Papers

POLICY ANALYSIS

A CLEAN INDUSTRIAL DEAL DELIVERING DECARBONISATION AND COMPETITIVENESS

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EXECUTIVE SUMMARY

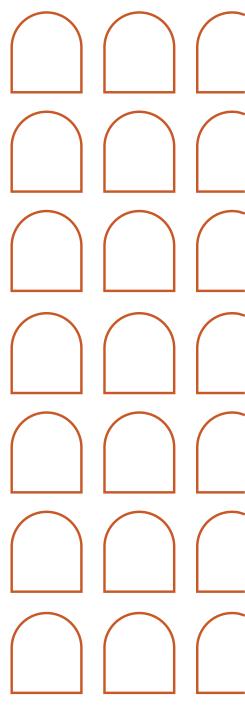
"Europe must bring down high energy prices while continuing to decarbonise and shift to a circular economy". This is a core message of Mario Draghi's report on European competitiveness. Decarbonisation is seen as an opportunity to improve the resilience of Europe's economy, but Draghi also warns of continued energy price volatility, higher investment costs and Chinese competition. Some months earlier, Enrico Letta called for a much deeper integration of the single market, not least via the finalisation of the Capital Markets Union. It is now clear to all that Europe needs a comprehensive industrial strategy encompassing the energy sector, the clean tech sector, but also basic industries such as steel, chemicals, and cement that so far did not receive sufficient attention. Commission President von der Leyen announced that a Clean Industrial Deal will be presented during the first 100 days of her second mandate. This paper focuses on three core issues such a Clean Industrial Deal must address.

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1. **POLICY CONTEXT**

In the 'Political Guidelines for 2024-2029', President von der Leyen re-confirmed the climate targets for 2030 and 2050 as well as the upcoming adoption of a net-zero target of 90% by 2040. The previous Commission adopted an impressive amount of legislative work under the European Green Deal. In the coming years this will be followed up by several pieces of implementing legislation, reviews, and revisions. This will be the occasion to improve the cost-effectiveness, the coherence, and the administrative efficiency of past legislation and to find ways to further accelerate decarbonisation. The proposed Clean Industrial Deal is therefore likely to be embedded in the EU's established policies related to energy and climate, to which corrections and new measures will be added.

1.1 Continuing carbon pricing

The EU ETS (Emission Trading System) will remain the central policy for reducing emissions and an adjacent system will introduce a carbon price for heating and transport fuels. Since 2005 the sectors covered by the EU ETS, namely power, and intra-EU aviation, have reduced emissions by 47.3%. This system differential a price disadvantage of more carbon-intensive modes of production and has a strong merit in reducing emissions cost-effectively.

A key question is how ETS sectors will react to the faster tightening of the total quantity of allowances with a linear reduction of 4.3% during the years 2024-27 and 4.4% during 2028-30, which is implied by the emissions reduction targets agreed for 2030 and 2050. shows that most emissions Evidence reductions occurred in the power system, while so far limited progress has been achieved in the manufacturing sector. Consensus exists that simply reducing industrial output to deliver the targets is not an option – that is, decarbonisation must not lead to Europe's de-industrialisation - but this raises the question of which additional measures are required to avoid that from happening. In some industrial sectors such as cement, current EU ETS prices start to allow for the introduction of new low carbon technologies such as CCS (Carbon Capture and Storage), but this is not yet the case in other industries, such as steel, or chemicals. A further increase of the EU ETS price will encourage the uptake of new low-carbon technologies and foster new activities such as on carbon removals. However, skyrocketing carbon prices are not in the EU's interest as they may encourage new industrial investments taking place outside Europe.

1.2 Reinforcing electrification

For more than a decade the Commission's impact assessments on climate policy have consistently pointed increased at electrification as a key to widespread decarbonisation. This argument reinforced following the Russian invasion in Ukraine that demonstrated the over-reliance on cheap and abundant supplies of natural gas coming from one country. However, the share of electricity in EU final energy demand has been hovering around 20% since 2016. To meet the EU's climate targets this should reach approximately 30% in 2030, 50% in 2040, and 60% in 2050. The announcement of an Electrification Action Plan is, in this respect, more than welcome. The bulk of the increase in electrification is expected to come from renewable sources. The uptake of the last years is encouraging but needs reinforcing. To meet the climate targets the share of renewable energy in final energy consumption needs to almost double from around 23% today to 42.5% by 2030.

Reinforcing electrification increasingly depends on expanding and modernising infrastructure. Slow permitting processes, inadequate grid infrastructure, insufficient share of energy storage, are primary obstacles hindering the acceleration of renewable energy deployment. decisions regarding grid deployment in view of 2030 have already been taken. Optimisation of the grid extension process can be ensured by greater granularity in price signals, both locational and temporal in view of avoiding excessive renewable **Implementing** curtailment. locational marginal pricing is necessary, as it best reflects network congestion and market conditions. Massive investments in gridscale storage seem to be on their way. At the same time a consolidation in this sector seems to be around the corner as a spectacular decline in prices for batteries for grid-storage is currently happening. This does not facilitate the EU's position in the battery market but reinforces the case for developing the next generation of solidstate batteries.

1.3 Clean tech, made in Europe?

The dominance of China in major critical sectors as well as the US IRA (Inflation Reduction Act) demonstrates the need for a supply-oriented policy complement to the demand driven orientation of the EU ETS. As the Draghi report points out, the EU is a global leader in clean tech innovation, but "it is not guaranteed that EU demand for clean tech will be met by EU supply given increasing Chinese capacity and scale". He suggests a mixed strategy, distinguishing between sectors where Europe's cost disadvantage is too large, sectors where production location matter, industries with security benefits and infant industries. His pragmatic approach also boils down to a massive surge of investments in low carbon innovative technologies in view of creating new jobs

and growth but also for improving the overall resilience of the EU economy. This reads as a qualification of the NZIA (Net Zero Industrial Act).

The daunting new economic described by the Draghi and Letta reports highlights that there are few incentives for businesses to invest in an oversupplied market. Reviewing the modalities of the EU's regulations related to carbon pricing, electricity, renewables, and hydrogen will not be enough. Other policies will be needed as well, including: robust trade defence measures; the need to redefine the market via new conditions such as lowcarbon and circularity obligations; and a variety of incentives to specific economic activities such as direct financial support, as has been introduced by the US under the IRA.

1.4 Engaging the citizen in all Member **States**

Maintaining cohesion within the EU and levelling opportunities across regions are priorities in both reports by Draghi and Letta. The capacity of individual Member States to finance the climate targets varies, as is the pace of change that politically can be exploited to realise the climate targets. Member States differ profoundly in terms of income levels, fiscal capacity, industrial jobs, public awareness, energy mix, and existing infrastructure. These issues will undoubtedly play out in policies related to the consumer price for electricity or the extension of the carbon price signal to households with the ETS-2. Nurturing broad public acceptance will be of capital importance and will have to be considered within the Clean Industrial Deal. In this respect, Member States could be encouraged to duly consider the industrial side of the transition also in the formulation of their Social Climate Plans in 2025 in view of engaging citizens as well as

small and medium-sized enterprises in the transition.

2. THE NEED FOR A MASSIVE **SURGE IN GREEN INVESTMENTS**

In the political guidelines for 2024-2029, Ursula von der Leyen has committed to establish "an investment Commission" to unleash the financing needed for the green transition, as well as for the digital and social transitions. Moreover, as emphasised in the Draghi report, "If Europe's ambitious climate targets are matched by a coherent plan to achieve them, decarbonisation will be an opportunity for Europe. But if we fail to coordinate our policies, there is a risk that decarbonisation could run contrary to competitiveness and growth". This is why Draghi proposes a "joint decarbonisation and competitiveness plan".

Reaching climate neutrality by 2050 will require substantial investment in energy supply (namely in the power sector), energy demand (namely in buildings, but also in industry and agriculture), and transport systems. Estimates amount to roughly 2% of GDP in addition to usual traditional investment levels. On top investments are required to support clean tech manufacturing, which in the NZIA have been estimated at €100bn for the period 2024-2030.

As the private sector is expected to do the heavy lifting when it comes to green investments, the credibility of the EU climate policy framework is key. That is, clear longterm targets, credible carbon pricing signals, and a stable regulatory framework have the power to stabilise the expectations about the future and help drive green investment decisions in both households and firms.

But Europe also needs significant public finance support (estimated between 0.5%

and 1% of GDP) in those areas where private finance alone would not be able to deliver, i.e., where clear market failures exist. This notably includes: i) R&D, as well as early adoption, of innovative clean technologies; ii) key infrastructure in the electricity and transport sectors, as well as the renovation of public buildings; iii) de-risking tools aimed at lowering the cost of capital of green projects for private investors; iv) financial support and compensation to the most vulnerable, so to ensure a socially fair transition.

2.1 The new EU fiscal framework and the need for an EU common debt instrument post-NGEU

Green public investments are predominantly national. However, the new EU fiscal framework imposes restrictions that risk making the financing of new green investments at the national level almost impossible for countries with debts and deficits exceeding the Treaty-based reformed EU fiscal benchmarks. The framework does not include a 'green golden rule', and it also does not provide exemptions from the safeguards for EUendorsed national green investments. The main incentive provided in the fiscal rules for green investments basically is the possibility for a country under adjustment to extend the adjustment period from 4 to 7 years. However, it is unlikely that this possibility of extension will offer sufficient incentives to public increase green investments. Importantly, the new fiscal rules also do not provide substantial exemptions to national co-financing of EU programmes.

One possibility to overcome these tight budget rules is to engage in EU joint common public debt. The experience with Next Generation EU (NGEU), and in particular with its core instrument, the Recovery and Resilience Facility (RFF), has been very important for financing the green

transition since the Covid-19 pandemic outbreak. However, it is due to end in 2026 and no continuation is planned for, given continued opposition from Germany and some other EU Member States. The conclusion is, however, that one of the two options needs to be envisaged to keep the decarbonisation investments namely either relaxing fiscal rules or creating of a new facility of common EU public debt financing. The Draghi report seems to support the latter, as it clearly says that "the EU should continue - building on the model of NGEU - to issue common debt instruments to finance joint investment projects that will increase the competitiveness and security."

2.2 Conditional mainstreaming of climaterelated expenditure in the MFF

The EU budget should keep supporting the reaching of the long-term climate goals in the future. The currently applied 'sustainable spending mainstreaming' threshold of 30% should be increased in the MFF 2028-2034 to at least 50%, so to reflect properly also the necessarv acceleration in green investments. This spending threshold should accompanied with a 'Do No Harm' principle developed in the context of the sustainable finance legislation so as to ensure that EU policies and programmes do not have a negative impact on its own climate and environmental objectives. Moreover, MFF disbursements in the new budget cycle should be linked to national green reforms and investments. The National Energy and Climate Plans (NECPs) could be turned into national green investment strategies - at which investors, stakeholders, and citizens could look up as a key point of reference in their investment decisions. Governments must be required to develop in their NECPs a solid analysis of their green investment needs and to plan implementation roadmap with clear

milestones or key performance indicators (KPIs). The disbursement of EU green funds should then be made conditional to the achievement of these KPIs.

2.3 A European Competitiveness Fund

The of creation а European Competitiveness Fund to invest in clean tech manufacturing and other technologies is a most useful idea to accompany the implementation of a truly European industrial policy, and it might well become the main EU industrial policy investment vehicle in the context of which other existing tools, such as the EU Innovation Fund, could framed while maintaining operational autonomy. Otherwise, public incentives to spur private investment in cleantech and other technologies would predominantly come from national state aid, which would create risks of single-market fragmentation and political between EU countries. The new Fund should: (i) focus on supporting the development and scaling-up of pan-European public-private eco-systems, for instance topping-up national support to the Important Projects of Common European Interest (IPCEIs); (ii) support the whole innovation cycle in an integrated manner, from disruptive innovation to deployment at scale; (iii) prioritise areas in which market, network and transition failures are most likely and government selection failures least likely, ensuring additionality and leveraging of other (member state) public and private funding.

2.4 Allowing the EIB to further increase its green financing firepower

In view of supporting the private sector when it comes to green investments, the EU budget should allow for an increase of the firepower of the European Investment Bank (EIB). The EIB Group 2024-2027 Strategic Roadmap foresees a financing activity of up

to €95 billion for the 2024-2027 period, with well above 50% of investments in the green transition. This strategy goes in the right direction but is not enough given the scale of the investments the EU requires in the coming years. The EU should provide the EIB with an appropriate volume of mandates and guarantees from the MFF, as they are essential to maintain the EIB's current funding levels and possibility of deploying more high-risk impact finance. For instance, as suggested by the Draghi report, the EIB lending policy could be refocused to provide greater support to higher risk investments and most innovative companies in strategic European supply chains, via a reinforced InvestEU programme.

Another important proposal advanced in the Letta report is the launch of a specific European Green Guarantee to support bank lending to green investment projects and companies. The EIB would evaluate the specific proposals from commercial banks and/or national financial institutions and award the guarantee that would enable them to provide the necessary funding to companies. Considering а resource multiplier of 12 (like the original European Fund for Strategic Investments EFSI), €25-30bn in guarantees would allow to support €300-350bn in green investments. Such an EGG would allow European banks to play a much greater role in funding green companies, thereby neutralising the socalled 'green transition risk'.

3. MAKING CLEAN ELECTRICITY **AVAILABLE IN ABUNDANT QUANTITIES** AT LOWER PRICES

A core objective of the Clean Industrial Deal should be the lowering of energy prices for European industry. This is in line with the 'joint decarbonisation and competitiveness plan' recommended by Draghi, which also prioritises the task of "lowering energy costs for end users by transferring the benefits of the decarbonisation and accelerating the decarbonisation of the energy sector in a cost-efficient way". Price volatility is threatening this transfer. Long-term contracts could support this transfer by attenuating the effect of marginal price setting, but these are still underdeveloped.

The latest reform of the EU's electricity market, enacted earlier this year, focuses on the use of long-term arrangements such as Power Purchasing Agreements (PPAs) and Contracts for Difference (CfDs) to provide direct access to cheap, non-marginal renewable electricity. Moreover, several successful instruments already exist to bring innovative solutions to the market and to support industrial decarbonisation. First, an Innovation Fund was created in 2021, funded by ETS auction revenues, which provides CAPEX and OPEX support for 'first-of-a-kind' deployment of clean tech innovations. So far, the Commission has granted €6.5bn to 65 projects following three calls, with the fourth call closed but not yet awarded. Later, in 2022, the Hydrogen Bank was launched, also funded by ETS auction revenues, granting a 10-year feed-in tariff for the supply of domestically produced or imported Renewable Fuels of Non-Biological Origin (RFNBO) to European off-takers. In the first round €720m was granted to 7 projects, while a further €350m was made available for German projects 'auction-as-a-service' the provision. Meanwhile, state aid support was facilitated with the launch of Important Projects of Common European Interest (IPCEI) for batteries and hydrogen, in addition to the guidelines for climate, energy and environment aid (CEEAC) and and Transition Temporary Crisis Framework (TCTF), allowing for matching aid with the US IRA support levels.

However, we are now entering a new phase, where the goal is to secure a stable access to cheap carbon free energy for energy intensive industries. It is unlikely that the current suit of instruments can deliver that. Moreover, repeating the same calls for tender for five more years would probably also have decreasing returns in terms of uptake of innovative technologies. The scale of the problem and the nature of the energy intensive industries demand for a stronger response, building on the experience of the past years.

3.1 Creating an EU CCfDs mechanism for energy intensive industries

Industrial decarbonisation could be accelerated through a broadening of the Innovation Fund/Hydrogen Bank (IF/HB) towards a European mechanism for Carbon Contract for Differences (CCfDs). CCfDs could provide OPEX support and support large-scale deployment of low-carbon and circular production. Auctioning ensures that the least-cost supplier will be chosen. The Commission offer of 'auctions-as-a-service' on behalf of Member States could also be extended to future CCfD auctions. Moreover, CCfD's could add important added features compared to the current IF/HB auctions: Support should be linked to conditionalities such as progressive carbon reduction in line with climate targets, e.g. 80%, 90% or 100%, circularity indicators, domestic content requirements under the NZIA and/or qualitative criteria. Sectoral auctions could be envisaged, e.g. starting with steel, construction materials or cement, base chemicals, or low-carbon fertilizers. Additional financial means could leveraged by making free allowances received under the EU ETS conditional on the conclusion of such CCfD's, certainly for as long as CBAM is not fully operational.

What is relevant here is that an evolution from the current IF/HB to EU CCfD's means a shift in focus, compatible with Draghi's recommendations, namely a shift from the supply of innovative technologies in Europe

to the uptake of decarbonisation solutions by European energy intensive industries. In doing so, EU CCfD's also respond to some of the criticism on the IF/HB, which was perhaps too focused on CAPEX support to singular installations, on first-of-a-kind to mass uptake of clean technologies (IF) and on a particular type of hydrogen molecules (RFNBO) (HB). EU CCfD's would widen the scope again, to the stabilisation at a sufficiently low level of the offtake price of hybrid decarbonisation solutions involving efficiency, 24/7 carbon free electricity, and low-carbon molecules. By moving closer to what can be scaled in the current market, such CCfD's would also support Draghi's recommendation to not only focus on clean tech innovation – in which Europe is leading - but also in clean tech commercialisation.

3.2 Making good use of ETS revenues

A European CCfD mechanism will require substantive resources, quite likely beyond those available for the IF/HB. The Member States are the main beneficiary of the auctioning revenues of the EU ETS and are committed to use them for climate action. They could be invited to use an important part of it under a European CCfD mechanism, to the benefit of their own energy-intensive industries. The 'auction-asa-service' offers an excellent screening process as well as an automatic clearance on state aid provisions.

The ETS revenues have been rising from around €5bn in 2017 to €38.8bn in 2022, along with the increasing carbon prices. Of the total auctioning revenues generated in 2022 by the ETS, some €30bn went directly to EU Member States, while the remaining went to the EU Innovation Fund (€3.2 bn) and the Modernization Fund (€3.4bn). The entry into force of the ETS2 in 2027 will also generate substantial additional revenues, in the order of €50bn annually at a carbon price of €45/t, the level of the 'soft' cap that will be in place during the first three years of operation of the ETS2.

ETS and ETS2 revenues will thus play a very important role in sustaining investments in the coming years. Such revenues could be expanded further if free allocation were to become conditional on investments in decarbonised equipment. For the period 2026-2030, the total value of free allocation is still substantial and is calculated to represent some 2.3bn allowances.1 If only 25% of these were to be used in favour of CCfD's additional €40bn could become available. In addition, in 2026 Commission will have to make important decisions on how to deal with the rapidly arowina emissions from international aviation. If all departing flights from EU soil were to be brought under the EU ETS - a decision that has been agreed but suspended since 2012 - the amount of EU ETS revenues could further increase to the benefit of the CCfD construction. In fact, doing so would be similar to the CBAM regulation for industrial products.

CREATING LEAD MARKETS FOR LOW CARBON AND CIRCULAR **INDUSTRIAL PRODUCTS**

While presenting the Clean Industrial Deal, President von der Leyen particularly stressed in her political guidelines for 2024-2029 the idea of supporting "European lead markets for the development, production and diffusion in industry of clean tech". An important way of doing this is the setting of low-carbon and circular product standards for industrial commodities. Such standards can be seen as a complement to the EU ETS. The abatement costs of these technologies

are not yet covered by the CO2 price, hence there is a 'green premium' to be covered. Setting low carbon product standards will help carving out product markets where buyers are willing or forced to pay for the 'green premium'. In some cases, the price increase by using low-carbon and circular products to the consumer is marginal because the input share of energy intensive products in the total production value of a consumer good is relatively small. This is typically the case for white goods, electronics, high-end buildings, premium cars, or military equipment.

In parallel, as described in the Draghi report, explicit minimum quota for the local production of selected products, could play an important role to strengthen the competitiveness and resilience of European industry. This local content requirement ('Made in Europe') calls for combining existing and new European approaches and tools to foster demand for European lowcarbon and circular products.² The Letta report calls for leveraging the power of the European single market through setting EU wide standards.

It is important to set low-carbon product standards in a pragmatic and workable manner, ideally for a limited set of key products. A low carbon standard should be expressed as specific greenhouse gas emissions per ton of product produced at a level that can be realistically achieved by the most advanced technologies. Perfectionism easily leads to overly lengthy processes that cannot hide that vested interests are real and that conflicting policy objectives will have to be traded off with one another. It may be envisaged to start with a limited number of products (cement, steel) and

¹ Damien Meadows, Beatrice Yordi, Peter Vis, 'Adressing Carbon Leakage under the EU ETS' in Jos Delbeke (ed), Delivering a Climate Neutral Europe, Routledge, 2024, p. 84

² The terms and conditions under the second auction of the European Hydrogen Bank, published on 27 September 2024, is specifying resilience criteria for the first time.

chemical feedstocks (such ethylene, propylene, hydrogen), which constitute together a large proportion of total industrial greenhouse gas emissions in the EU and globally.

Useful examples already exist. The German steel industry has been able to agree on a certification system, LESS (Low-Emissions Steel Standard), whereby performance classes of steel, including near-zero carbon steel have been identified. A pragmatic process at EU level could start with an anchor point that is already enshrined in one or the other piece of legislation. One possibility is to start with a percentage improvement to the applicable benchmark for installations under the EU legislation. For example, low carbon steel production is defined as a production plant that has a greenhouse gas performance of say 60 to 80% better than the currently applicable ETS benchmark, which then needs to be corrected for the relevant production capacity.

Several Member States have already been adopting standardised low-carbon and environmental sustainability criteria public procurement. The potential for greening public procurement is important as it represents some 14% of the EU's GDP and it is especially important in Central and South-East Europe, where large parts of the infrastructure are being built. Moving forward, common EU standards that could be applicable horizontally would be of great support for the implementation of the EU Green Deal legislation. Apart from the area of green public procurement, the setting of low-carbon default values for industrial commodities could make the CBAM implementation much simpler. Similarly, reporting by private companies under the CSRD legislation could be facilitated and simplified. Moreover, these standards can be used as the benchmark for policies Member States may want to develop for

internal purposes. And finally, could be used for private procurement, i.e. by companies that voluntarily buy low-carbon and circular products to reduce their carbon footprint.

5. **CONCLUSION**

The new EU policy cycle that is about to start has a huge task: delivering the climate targets and at the same time making the EU resilient and a place of technological and industrial leadership. Abundant, clean, and cheap energy is at the heart of the challenge. Massive new green investments are needed, and these mainly depend on ensuring a solid business case for private Member States face different economic and political realities and some differentiation in the implementation of new policy instruments will be required.

The Draghi and Letta reports represent an important blueprint to build a new, pragmatic, and smart clean industrial policy at EU level. Many policy proposals are contained in these reports, and as political capital is limited, prioritisation will be key. This paper points to three main actions that could help deliver an effective Clean Industrial Deal:

- 1. The new Commission must be an 'investment Commission'. The macro-economic context and the new investment needs in both clean tech deployment and manufacturing require a profound re-thinking of the EU fiscal rules and of the possibility of having new EU joint debt financing applicable to green investments. The new EU budget must have stronger green conditionalities, and strong provisions to increase the green financing firepower of the EIB.
- 2. Energy prices for manufacturing industry must go down. A European

CCfD's mechanism should provide OPEX support to make clean electricity and molecules available at a stable and low price to energy intensive industries that invest in low carbon commodities. EU revenues, also those flowing to the Member States, as well as a share of free allocation should be used to finance such a mechanism.

3. Sustainable and circular lead markets need to be created for uptake in legislation related to green public procurement, ETS, CBAM, and sustainable finance.

A new course of EU policy action is necessary to marry decarbonisation with industrial competitiveness, and to ensure the political and social viability of the European Green Deal implementation. A strong Clean Industrial Deal delivered during the first 100 days of the new European Commission represents a major opportunity to strengthening European competitiveness and resilience, while delivering climate neutrality by 2050.

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