A restructuring of the global economy towards lower carbon goods and services is under way. The EU’s global competitiveness hinges on consistent investment in the accelerated transformation of its energy sector and industrial base. At the same time, reducing current differences between Eastern and Western Europe in terms of the economic risks and opportunities of the transition is crucial for the continued stability of the eurozone. This policy brief argues that the EU needs to fully align public and private financial flows behind this transformation and to support this by assessing and managing the macroeconomic, fiscal and monetary impacts of the transition.

**Keywords** Sustainable finance – EU budget – Climate change – Paris Agreement
Introduction

A restructuring of the global economy towards lower carbon goods and services is under way following the global Paris Agreement on climate change a few years ago. In 2017 the world invested more in solar energy than in coal, gas and nuclear combined. Requirements that have been set, such as the electric-vehicle sales target in China, have led to a significant expansion in the supply of electric vehicles, with market shares almost doubling in 2018 in Europe, North America and China. Seven EU countries have suggested phase-out dates for the sale of vehicles with combustion engines, and sales of fossil-fuelled vehicles are declining for the first time. The EU can play a significant role in this growing market if it builds the framework to direct financial flows towards growing its own low-carbon economy.

The challenge is significant: the gap in the investment needed for a cleaner economy is estimated at about €180 billion per annum to achieve the EU’s 2030 climate and energy targets. Meanwhile, significant funds are still going towards fossil fuel–related investments, whose role in the future global economy is expected to decline. This challenge is even more pronounced from a geographical point of view: the growth of the clean economy differs substantially between the east and the west in the EU, meaning that some parts of the EU risk being left behind in this global structural shift.

Throughout 2018/19, the EU has put efforts into increasing financial flows to the low-carbon economy. Discussions on the next EU multiannual financial framework (2021–27) will likely result in a gradual increase in climate-related funding (from 20% to 25%) compared to the current cycle. The European Commission has presented a ‘Sustainable Finance Action Plan’ aimed at improving the quality and transparency of private sustainable investments.

3 The seven countries are Denmark (2030), Finland (2040), the UK (2040), France (2040), Ireland (2030), the Netherlands (2030) and Sweden (2030). M. Holland, ‘Boom! Fossil Vehicle Sales Are Officially Now Decreasing in China, Europe, & USA’, CleanTechnica, 16 February 2019.
To ensure success, the EU needs to evaluate where it can create and increase policy coherence, and where some policies currently reduce the effectiveness of others. This is necessary given the scale of the restructuring of the global and European economies and the increasingly urgent need to mitigate climate-related risks.

This policy brief examines three areas of EU influence: EU public funding, the regulation of private finance and ensuring macroeconomic stability in the eurozone. It makes recommendations to aggregate these elements into a more synergetic, transformative package.

The context

Mobilising investments into clean infrastructure and technology is essential to address the structural gaps the EU is facing. This would tackle the sluggish competitiveness of European industries, facilitate Europe’s transition to a climate-neutral economy and contribute to a more cohesive EU economy.

The competitiveness gap

In the transition to a global clean economy, future growth markets are changing. They are increasingly becoming concentrated in low- or zero-carbon industries including energy efficiency, the circular economy, renewable energy, electric vehicles and the digital sector. More recently though, the EU’s leadership in these fields has been declining: in 2017, for example, China was the leader in renewable-energy investment (45% of global investment).\(^6\) Across nearly all fields of renewable-energy technologies, Asian countries display the highest patenting activities.\(^7\) Leaving this transition too late might cause European industry to lose pace with the global transition, sacrificing output and employment in the long term.

The climate investment gap

The EU estimates that there is a gap of about €180 billion in the investment needed to be able to deliver its 2030 energy and climate objectives. Reaching climate neutrality will require additional investments in the range of €142–€199

---


billion per year between 2030 and 2050. Public investment is crucial in early development and setting the direction, but only private investment can deliver the scale required. There needs to be a swift refocusing of public and private finance in Europe for the successful delivery of the EU’s priorities.

The EU clean economy gap

Figure 1 Cost of capital estimations for onshore wind projects in Europe in 2014

Most of the renewable-energy and heat-pump employment and turnover is concentrated in five Western European countries (60% of all employment, 65% of all turnover in 2018 in terms of millions of euros). Private equity investment in Eastern European countries is substantially below the EU average (all below 0.1% of gross domestic product, with the EU average at 0.4%). This affects the ability to transition to new, emerging industries as equity is particularly important for new, higher-risk technologies or investments. Capital costs for financing clean energy projects vary greatly across Europe (see Figure 1). For example, in 2014 the

---


9 The five countries are Germany, Italy, France, Spain and the UK. EurObserv’ER, *The State of Renewable Energies in Europe*, 140–3.

cost of capital in Croatia was 12%, while in Germany it was 3.5%. This difference results in investments being concentrated in mature markets and, consequently, supply chains and manufacturing also being concentrated there. Capital costs and access to finance thus need to be tackled alongside an improved regulatory framework, the development of a skilled labour force and the creation of a favourable tax environment for low-carbon businesses.

Closing the gaps

The most effective way to close those three gaps is through ensuring that various elements of the financial system reinforce each other. There are broadly three areas of European influence over financial flows that, if well aligned, could be transformational.

The first is defining the investment priorities for public funds, for example, through the EU budget or public finance institutions such as the European Investment Bank (EIB). This can provide direction over which growth markets are consistent with EU policy and help to develop and mature new, zero-carbon technologies/infrastructure. In the past, the EU budget has been a guide for other funding sources—public and private—leveraging €15 for every euro spent.¹¹

Second, legislation in the realm of the Capital Markets Union could facilitate the scaling-up of private investment in zero-carbon sectors by ensuring that the climate-related risks of high-carbon assets are understood and reflected in decision-making, and by reducing the transaction costs for ‘green investments’.

Third, monetary policy in the eurozone could contribute to anticipating and addressing the macroeconomic impacts of the shift to a zero-carbon economy. The effectiveness of such a policy is likely to be reduced if the structural shifts end up being distributed unevenly across EU countries. Monetary policy is, in itself, also an important factor in the relative capital costs of zero-carbon investments.

**Lever 1: re-affirming EU priorities through public spending**

The role of EU public funding, alongside funding the EU administration, is to support priorities and policy delivery in areas where the EU holds or shares

---

competence. Among the areas directly or indirectly related to the transition to the clean economy where the EU has competences are monetary policy for eurozone countries (exclusive); economic, social and territorial cohesion; the environment; transport; trans-European networks; and energy (shared). In research and technological development, the EU has the ‘competence to carry out activities’ but this should ‘not result in Member States being prevented from exercising theirs’.

The Union’s objectives for the environment have substantially evolved during the soon-to-expire multiannual financial framework (MFF), and climate and energy objectives for 2030 have been added. Through the Paris Agreement the EU has committed to achieving a balance of emissions by the second half of the century and to regularly reviewing and enhancing its own contribution. In its document A Clean Planet for All – A Strategic Long-Term Vision for a Prosperous, Modern, Competitive and Climate Neutral Economy by 2050, the European Commission proposed two pathways that translate this commitment into an EU climate-neutrality goal for 2050. These can serve as overall guidance for what investing in line with the transition could mean.

The next MFF coincides with a crucial period for delivering climate neutrality. In this period, the EU needs to embark on a path of decarbonisation beyond the electricity sector, and develop and test solutions for sectors that are hard to decarbonise. This implies a need for a significant overhaul of how the EU spends its money rather than an evolution of the current framework. This suggests three design principles for the next MFF:

1. Funding to support the economic and social cohesion of the Union by investing in the low-carbon economy in Southern and Eastern Europe. The acceleration of climate action in Europe can only work politically and socially if public investments address the structural imbalance in the clean economy and create economic opportunities for all EU countries.

2. Increase funding dedicated to future-oriented, clean technologies. This should be directed towards areas where testing is needed and solutions to achieve a competitive zero-carbon economy remain immature—for example, seasonal balancing for power and heat or industrial decarbonisation.

---

12 Art. 4, Treaty on the Functioning of the European Union.
13 The climate legislation now includes a 40% greenhouse-gas reduction target, while the Clean Energy Package stipulates targets for renewable energy and energy efficiency that are to be met by 2030.
14 UNFCCC, ‘Nationally Determined Contributions (NDCs)’.
3. Phase out spending that is not in line with the EU’s decarbonisation commitments, that is, investments that lead to avoidable increases in greenhouse-gas emissions. This could be based on outright exemptions of fossil fuels from EU funding or through a robust methodology to ‘climate proof’ investments.

**State of play**

Negotiations are under way on different parts of the MFF, including (1) a discussion on the overall envelope and horizontal principles, and (2) sub-funds with their own sectoral legislations. These tracks are progressing at different speeds.

The negotiations on the overall envelope are ongoing. The focus of political discussions is on the overall size of the budget and allocations per programme rather than on a modernised and efficient budget. The need to address the EU’s competitiveness challenge and its widening clean economy gap has been sidelined and revolves around a gradual increase in climate earmarking (from 20% to 25%). To ensure efficient spending that leads towards the modernisation of the EU economy, the MFF needs to rule out any spending that does not support cleaner and more efficient technologies.

The following is a selective analysis based on the current state of negotiations (April 2019) covering Cohesion Policy, the Connecting Europe Facility, InvestEU and Horizon Europe.

- **Closing the clean economy gap.** Negotiations currently point towards an outcome that could facilitate an increase in funding for modernising industries in Europe’s structurally weak and often carbon-intensive regions. Both the European Commission’s proposal for Cohesion Policy, which currently represents about a third of the EU budget, and the European Parliament have proposed the full exclusion of fossil fuels and spending more on climate objectives (30%) than the budget average. The Connecting Europe Facility dedicates at least 15% of its energy budget to cross-border renewables projects. This could be an opportunity to tap into the large-scale renewables potential in South-East Europe or the Baltic Sea.16

- **Closing the competitiveness gap.** Several funds that invest in the strategic infrastructure behind digitisation, electric-vehicle infrastructure and

---

innovation propose more dedicated climate funding than the horizontal average.\textsuperscript{17} Closing the competitiveness gap is not only about allocating money to clean technologies, but also about innovation in key decarbonisation challenges such as seasonal balancing, industrial decarbonisation, and behavioural and regulatory change.\textsuperscript{18}

- \textit{Avoiding expenditure that is incompatible with a clean and modernised future}. There is currently no consistent approach to this across funds, which sends conflicting signals to project planners and investors. Horizon Europe does not include a reference to the Paris Agreement or a fossil-fuel exclusion. However, sustainability screening for InvestEU has been extended to all windows, and implementing partners will need a justification if no positive impact on the climate can be found. The Connecting Europe Facility does not have a clear fossil-fuel exclusion.

The role of the EIB

Closely related to this is the role of the EIB, the EU’s public bank, which manages an average annual lending portfolio of €75 billion. The EIB has shown international leadership in the past: it pioneered green bonds over a decade ago, and its last energy strategy successfully introduced measures to move away from coal lending and to ramp up energy-efficiency lending.\textsuperscript{19} The EIB is currently revising its energy lending criteria, which covers nearly 20% of its portfolio.\textsuperscript{20}

The EIB can play a transformational role in the EU’s decarbonisation by supporting large-scale programmes for zero-carbon technologies that are not yet fully mature or where there are financing gaps. Since 2013, the EIB has spent over 13% of its energy portfolio on fossil fuel–related lending, and a large share of this goes to gas networks.\textsuperscript{21} The European gas networks are now considered nearly complete and the process for prioritising cross-border energy infrastructure is under review in light of decarbonisation targets.\textsuperscript{22} This funding could be re-allocated to developing Europe’s clean infrastructure for the next phase of deep decarbonisa-

\textsuperscript{17} InvestEU: 55% of sustainable infrastructure window investments to be Paris-aligned; Connecting Europe Facility: 60% of the total investment package is earmarked for climate projects across the digital, energy and transport sectors; Horizon Europe: ‘at least’ 35% of total funding to be used for climate projects.


\textsuperscript{19} IEEFA, ‘European Investment Bank Looks to Expand Green Bond Market with New Sustainable Product’, 23 April 2018.

\textsuperscript{20} EIB, \textit{Public Consultation on the EIB Energy Lending Policy} (Luxembourg, January 2019), 4.

\textsuperscript{21} Ibid., 5.

\textsuperscript{22} European Commission, \textit{Fourth Report on the State of the Energy Union}. 
Lever 2: making private investment in the clean economy easy and attractive

Climate change itself, as well as transition policies, can impact the return on investments—either because a shift to a zero-carbon economy could render certain investments valueless, or because climate change impacts the viability of an investment.

This changes the risk profile associated with investments and portfolios, most prominently in the energy industry. A review of the financial statements of eight European oil and gas companies shows that there may be a systemic overstatement of capital and performance due to overly optimistic long-term energy price assumptions. But these risks also apply to other sectors—demand for combustion-engine cars is likely to be affected by changing mobility patterns and electric vehicles, while the agriculture and tourism sectors will be affected by a changing climate.

23 N. Landell-Mills, Are Oil and Gas Companies Overstating Their Position?, Sarasin & Partners (August 2018), 2.
The Taskforce for Climate-Related Financial Disclosure (TCFD) groups these risks into four categories: governance, strategy, risk management, and metrics and targets.

There has been growing interest from investors in greening their portfolios. Motivations for this include reputation, risk management and seeing an opportunity for growing returns.

Yet, private equity in the fields of energy and the environment only represents around 3% of the market, while the increasing role of new firms and technologies would indicate an increased need for equity investment. For a more systemic uptake some of the failures in the market need to be addressed. There are several things policymakers can do:

- Standardise the language for climate-related risk to reduce the transaction costs of managing exposure to it, thus making it easier for an investor to assess which type of investment carries a risk.
- Mandate the disclosure of relevant data: balance sheets expose all sorts of risks, but hide those related to climate change. Some data exists but it is still patchy.
- Clarify the legal responsibility of investors to take climate-related risks into account: even if climate-related risk has been disclosed in accordance with a common standard, it still needs to be embedded into governance and decision-making to have an effect.

In 2018 the EU presented its Sustainable Finance Action Plan, which addresses many of the areas mentioned above. While still being translated into agreed legislation, it has already inspired others to follow suit, notably Canada. A parallel discussion to align a ‘sustainable finance taxonomy’ with China is creating the potential for Europe to set global standards for sustainable finance.

---

When it comes to standardisation, the Action Plan includes proposals to standardise what can be considered ‘sustainable economic activity’ under the taxonomy proposal. A recently agreed legislative proposal will create voluntary labels, or ‘low carbon benchmarks’, that can be used to label a portfolio as ‘low carbon’ or ‘Paris aligned’. Investors can then choose these products if they wish to minimise exposure to climate-related risks. Both the taxonomy and the labels will need to be regularly reviewed in line with the latest science to ensure their effectiveness.

Another regulation sets out that those who develop financial products need to integrate environmental, social or governance risks and opportunities in their processes and inform investors about their compliance with this integration. This means investors are required to consider financially material environmental, social or governance risks in their investment decision-making. The recently renewed Shareholder Rights Directive (II) also requires institutional investors to develop a policy that describes ‘how they monitor investee companies on relevant matters, including strategy, financial and non-financial performance and risk, capital structure, social and environmental impact and corporate governance’. With these investors’ significance in the EU capital markets having grown substantially over the past 15 years this is likely to have a noticeable effect.

The EU package provides a potentially strong framework to help private investors navigate climate-related financial risks and prioritise clean investments. This framework will need to be updated regularly in line with the latest scientific evidence. The labelling of investment portfolios should gradually move from voluntary to mandatory to ensure a level playing field across investments.

---

Lever 3: supporting eurozone convergence in light of decarbonisation

Eurozone stability is dependent in part on what is commonly referred to as ‘convergence’. Joining the eurozone requires countries to meet a set of ‘convergence criteria’, including, among others, benchmarks for price stability and the sustainability of public finances. After the economic and financial crisis in 2007, new convergence instruments were introduced. As well as monitoring budget deficits and debt, indicators such as household debt and unemployment are now also included so that imbalances can be addressed earlier.

As the zero-carbon sector gains a larger share of the economy, the impacts on some of these macroeconomic convergence indicators need to be better understood. This is particularly important as these impacts might be regionally imbalanced if the clean economy gap persists or even deepens.

The main potential avenue of impact is on the sustainability of government finances. Environmental taxation currently represents around 6% of the tax base in the EU28. In the short to medium term, an alignment of fiscal policies with environmental policies could help to increase government revenues.

However, what does a sustainable tax base look like, given that

- carbon taxes often impact those on a low income disproportionately;
- if successful, the base for a carbon tax would shrink in the medium term;
- carbon-intensive capital investments might no longer generate the anticipated output given climate policy constraints?

There are already examples of countries incorporating climate objectives into budget planning. For example, the Finnish budget includes assessments of the sustainability impact of the budget on an annual basis. For a similar idea to work for the EU, it would be necessary to take this assessment beyond an annual one and look at the medium-term development of the budget and how this aligns with the climate targets set.

---

34 European Commission, ‘Convergence Criteria for Joining’.
37 A. Liinamaa, Sustainable Development and the Budget, Ministry of Finance Finland, Presentation at the Sherpa Meeting of the Finance Ministers Coalition for Climate Action (21–22 February 2019).
The output of the economy will shift due to the structural changes associated with climate change and the transition. The volatility of this output might increase if climate policies do not deliver a smooth transition path but lead to ‘non-linear adjustments’ instead. This is likely to happen if certain regions or sectors fall significantly behind the European or global trend.

This is relevant for the eurozone, as illustrated by the 40%–54% level of equity exposure of the European Central Bank to climate policy relevant sectors. In addition, financing needs will change: in a slow, gradual transition, existing firms might be able to gradually adapt their business models. However, the entry of new firms will be a critical factor in achieving the necessary scale and pace of transition. This will change the balance of demand between debt and equity in the capital markets, since start-ups require more equity finance.

Fiscal and monetary policy in the EU needs to anticipate these changes to ensure price stability and convergence. In an ideal world, a growing tax base on high-carbon assets would be gradually replaced—as the quantity of carbon in the economy decreases—by a strong, tax-paying, zero-carbon economy. Carbon tax revenues can be used to foster the growth of the zero-carbon economy and industries with fiscal rebates or through investing in pilot schemes, as well as to balance the socially unequal impacts of many carbon policies.

Monetary policy itself can also facilitate this: currently central banks buy a ‘representative’ portfolio of the current capital market. Yet, this is dominated by capital intensive high-carbon assets, with the growing smart, clean-energy industries underrepresented. Adjusting this portfolio to represent the growing share of clean industries could be one of several options to reduce the cost of capital for this sector. This could also help those countries, such as Italy, which have a low-carbon sector that struggles to access finance following the financial crisis due to the small size of the firms involved.

---

38 D. Schoenmaker, Greening Monetary Policy: An Alternative to the ECB’s Market-Neutral Approach, Bruegel (1 September 2018).
40 Schoenmaker, Greening Monetary Policy, 5.
Policy recommendations

This analysis points to a number of recommendations for the European Commission, the European Central Bank/Eurogroup and the EIB.

**European Commission**

The next Commission should take a comprehensive look at how different sources of finance can reinforce each other to drive investment in zero-carbon sectors. Actions should include

- setting principles for public funding and standards for private finance to ensure the alignment of all investments with the Paris Agreement;
- regularly reviewing both EU taxonomy and eligibility for EU funding under the next MFF in line with the latest scientific evidence;
- moving the labelling of investment portfolios from voluntary to mandatory to create a level playing field; and
- defining EU funding priorities for regulatory, behavioural and technological innovation in support of the low-carbon transition.

**European Central Bank and the Eurogroup**

The European Central Bank and the Eurogroup need to ramp up understanding of the risks and opportunities associated with the macroeconomic shifts in the EU economy. They should carry out a comprehensive assessment that looks at

- the long-term sustainability of public finances in view of decarbonisation as carbon-related incomes decrease;
- the risks to output and price stability from an unbalanced transition across the eurozone, the instruments available to tackle them (monetary, fiscal and EU budget) and the role of monetary policy in enabling this shift; and
- the potential for developing indicators to measure the systemic impact of climate-related policies in its convergence criteria, including the physical risks of climate change.

**EIB**

The EIB should seek a more strategic involvement to drive clean investments. This requires it to
ensure its screening criteria are fully aligned with the Paris Agreement and preclude fossil-fuel investments; and

reduce reliance on the project screening approach and instead use technical assistance to strengthen the pipeline of clean investments. It should update its valuation of project benefits so that they take into account the aggregate system security contributions from decentralised investments, for example in energy efficiency, renewable energy and demand-side response.

Conclusion

The EU has made remarkable progress in some areas—notably on the allocation of some EU funds and the development of guidelines for private investment. But while these steps are necessary and have proven the EU's ability to lead in some areas, they are far from sufficient.

A globally competitive, zero-carbon future requires much more decisive policies that look to phase out support for fossil fuels and instead invest in emerging global industries, such as the electric-vehicle sector, the circular economy or artificial intelligence for the more efficient use of resources. Only then can the estimated funding gap of around €180 billion be met, enabling the EU to catch up with Asia in terms of innovation and the deployment of clean technologies.

Currently, there is a significant risk to economic and social cohesion as both public funds and monetary policy are being modernised and more efficient industries are being concentrated in Western Europe. The current gap in equity investment between Eastern and Western Europe means that it is hard for the former to catch up and create its own emerging, clean technology sector. This can be addressed if both EU funding and monetary policy work towards closing this gap.

Europe needs to up its game if it wants to establish itself as a global leader in fighting climate change—but it also needs to do this if it wants to safeguard its own competitiveness and cohesion.


About the author

Lisa Fischer is a Senior Policy Adviser at the think tank E3G. In her work, she focuses on the enabling factors for the EU’s clean economy transition and more ambitious EU climate policy. She leads E3G’s work on EU energy infrastructure in the context of decarbonisation. Lisa has previously worked for the UK government as an economic adviser on transport and climate finance.

Lisa holds an M.Sc. in the political economy of development from the School of Oriental and African Studies, University of London, as well as a BA in international relations from the Technical University of Dresden in Germany.

Credits

The Wilfried Martens Centre for European Studies is the political foundation and think tank of the European People’s Party (EPP), dedicated to the promotion of Christian Democrat, conservative and like-minded political values.

Wilfried Martens Centre for European Studies
Rue du Commerce 20
Brussels, BE - 1000

For more information please visit: www.martenscentre.eu

Editor: Dimitar Lilkov, Research Officer, Martens Centre

Typesetting: Victoria Agency
Printed in Belgium by Drukkerij Jo Vandenbulcke

This publication receives funding from the European Parliament.

© 2019 Wilfried Martens Centre for European Studies

The European Parliament and the Wilfried Martens Centre for European Studies assume no responsibility for facts or opinions expressed in this publication or their subsequent use.

Sole responsibility lies with the author of this publication.