EU Policy Factsheet

May 2024

Energy Transitions Commission

Financing the energy transition in the EU

Overview

- **Low-carbon finance in the EU must nearly double to achieve the bloc's climate targets. Estimates suggest annual investments need to increase by a minimum of 60%.**
- **In some areas, the EU can and has taken a global leadership role by making early investments in scaling up low-carbon technologies, driving down costs and accelerating their adoption globally. Provided that policies are well-designed and convincing, private investment can fund most of the transition.**
- **The EU's long-term climate roadmaps, carbon pricing through the Emissions Trading System (ETS), and streamlining permitting procedures have meant that low-carbon finance in the EU is growing at a rate second only to China.**
- **Despite this, confidence in the EU's commitment to low-carbon technologies is declining due to policy delays and weakening initiatives like the EU Sovereignty Fund. Timely and consistent policymaking, as well as de-risking investment, is essential.**
- **Public EU funds are comparable to the United States Inflation Reduction Act, but disbursement is slow due to complexity and administrative hurdles. Rather than increasing funds, the EU must coordinate and facilitate disbursement.**
- **Beyond its borders, the EU should push for a significant increase in the collective international target for low-carbon finance in developing countries.**

Low-carbon finance in the EU must be rapidly scaled-up to deliver the energy transition and limit global warming.

The ETC estimates that globally, annual low-carbon investments must reach $3.3 trillion by 2030.[1] Estimates for the scale of investment needed in the same period for the EU vary,[2] but even the more conservative estimates suggest that low-carbon finance needs to increase by at least 60% per annum by 2030.[3] The IEA suggests that annual investment in low-carbon energy in the EU must increase from €330 billion in 2022 to €530 billion by 2030,[4] whilst the EU Commission estimates that annual investment must grow from €680 billion per year to €1.04 trillion.[5]

This can be offset by savings on fossil fuel spending: the Commission estimates that by increasing energy efficiency and installing renewables, the EU will reduce its spending on fossil fuel imports by 50–63% between 2020–2040, offsetting much of the required investment cost.[6]

Buildings, electricity grids and wind power are in the most urgent need of investment.

The investment gap is not equal across sectors. The largest investment gaps remain in retrofitting residential buildings, installing onshore and offshore wind generation, and building out the EU's electricity grids.[7] Investments in solar panels were 78% of total annual needs. Hydropower and battery storage, however, saw a surplus of necessary annual investment in 2022.

Long-term targets, carbon pricing and simplified permitting policies have driven large investments since 2019, but recent wavering has caused concern.

Clear policy design is key to driving private financial investment. If national power sector strategies are clear and power markets well designed, finance will flow into renewable energy deployment and electricity grids.[8] Policies such as carbon pricing or fuel mandates can drive decarbonisation of steel, shipping and other hard to abate sectors and encourage significant private finance.

As EU climate policy has advanced, private financing has followed: low-carbon finance in the EU has grown faster than any other region outside of the People's Republic of China (PRC), increasing by 80% to €330 billion between 2019 and 2022.[9]

EU policies have been stimulating private investment through:

- **Increasing certainty via long-term roadmaps** like renewable capacity targets, regular auctions, updated Member State National Energy and Climate Plans, 10-year electricity and gas network development plans, building renovation targets, and emission reduction targets.
- **Making low-carbon investment more competitive**, e.g., via the EU ETS, which puts a price on carbon emissions.
- **Removing blockers** such as complex and lengthy permitting procedures and incompatible regulatory regimes (including the Electricity Market Reform and the Gas and Hydrogen Package).

Although the EU (and member states) has been setting ambitious policy targets, investor confidence in EU investment in the technologies necessary to reach these targets is falling.[10] The stalling or weakening of packages related to low-carbon finance (including the proposal for an EU Sovereignty Fund, or the revisions of the Energy Taxation Directive) have tempered the power of ambitious policy targets to stimulate the market.

These policy shifts can derail investment. In January 2024, industry leaders warned the European Commission that delaying the EU Heat Pump Action Plan (in part due to rising backlash against regulation on heating) threatened €7 billion of investments the sector is planning in Europe for 2022–2025.[11] Heat pump sales fell for the first time in ten years in 2023, decreasing by 5% from the previous year.[12]

EU financial regulations can de-risk private finance and encourage reallocation of capital towards low-carbon investments.

The EU Taxonomy enables investment by providing a standardised classification system for determining whether an economic activity is sustainable. Beyond noting where activities are net-zero compatible or crucial for enabling the transition to a net-zero economy, the Taxonomy sets timelines and technical standards for 'transition' investments. For example, fossil fuel pipelines are eligible only where there is commitment to transition to low-carbon gas by 2035. This has led to controversy, opening the door for continued investment in non-net-zero aligned technologies, and risking delaying the transition.[13] If classification is complete and evidence-based, the EU Taxonomy can help investors identify and prioritise sustainable investments and disclose what proportion of their relevant finance supports aligned and non-aligned activity.

EU financial institutions can also help to overcome barriers to private finance through endorsing projects, loan- and first-loss-guarantees, and technical assistance.

Although not all sectors require public support, targeted interventions can leverage additional private finance. For every €1 spent by the European Investment Bank (EIB) on energy, a further €1.4 is attracted from the private sector. Between 2018–2022, €56 billion from the EIB financed approximately €134 billion of clean energy projects.[14]

Where public funds are needed, significant public EU funds are already available, but they require better coordination.

Although private investment will fund most of the transition, there are specific types of capital investment needed where private finance alone may not be sufficient. These include:

- First-of-a-kind technologies and business models, where financial institutions are unwilling to take on funding risk,
- Residential buildings retrofits, which require significant up-front investments which may be out-of-reach for lower-income households,
- Scaling up key shared infrastructure (e.g., hydrogen transport, CO_2 networks and distribution network expansion).

Including Member State and EU funds, the size of EU funds for the energy transition are comparable to the United States Inflation Reduction Act (IRA), at around €800 billion total.[15] Public funds in the EU, which are expected to grow even further, could come from reducing fossil fuel subsidies, strengthening the ETS, and increasing taxation of fossil fuel energy.[16]

Regulatory complexity, lack of administrative capacity to disburse the funds, and uncertain timelines have led to low absorption rates for these funds. In 2022, the European Court of Auditors has found that only around 13% of the 2014–2020 EU budget was spent on climate action, rather than the pledged 20%.[17]

Where public subsidies are necessary, coordination is more important than additional funds. As an example, the recently established European Hydrogen Bank acts as a coordination mechanism for EU and Member State funds. Its pilot auction of €800 million gathered enough bids to cover 10% of EU targets for hydrogen production in 2030, and stimulated a top-up of €350 million from Germany.[18]

The EU must also scale up international low-carbon finance.

The ETC estimates that annual investment in clean energy in middle- and lower-income economies will need to increase dramatically from around $130 billion to $900 billion by the late 2020s.[19] The EU, its Member States, and the European Investment Bank are together the biggest contributors of public low-carbon finance to lower-income economies, providing €28.5 billion in 2022[20] albeit still falling far short of what is needed.

Beyond providing financing, the EU's diplomatic power can be used raise global ambition. High-income countries have pledged to collectively mobilise $100 billion (around €94 billion) per year for climate action in lower-income countries which was met in 2022.[21] At COP28 in 2023, governments agreed to discuss a new collective quantified goal on climate finance.

Additionally, it only goes a small way to meet the concessional/grant payments needed where there is no market incentive for transitioning to low-carbon options.[22] Together, these payments would amount to around $300 billion (€280 billion), to avoid emitting a 10.2 Gt of CO_2 per year – around 20% of current global GHG emissions.[23]

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[1] ETC (2023), *Financing the Transition.*
[2] Variation can be attributed to the exclusion or inclusion of certain sectors and different price data.
[3] IEA, ECB, EIB (2023), *Ensuring an Orderly Transition: Europe's competitiveness and financial stability in a period of global energy transformation.*
[4] IEA, ECB, EIB (2023), *Ensuring an Orderly Transition: Europe's competitiveness and financial stability in a period of global energy transformation.*
[5] European Commission (2020), *Stepping up Europe's 2030 Climate Ambition: Investing in a climate-neutral future for the benefit of our people.*
[6] European Commission (2024), *Communication on 2040 emission reduction targets.*
[7] I4CE (2024), *European Climate Deficit Report.*
[8] ETC (2023), *Financing the Transition, Chapter 2.*
[9] IEA, ECB, EIB (2023), *Ensuring an Orderly Transition: Europe's competitiveness and financial stability in a period of global energy transformation.*
[10] European Investment Bank (2023), *Putting our money where the gap is.*
[11] European Heat Pump Association (2024), *60+ CEOs warn €7 billion at risk if EU heat pump action plan delayed.*
[12] European Heat Pump Association (2024), *Heat pump sales fall by 5% while EU delays action.*
[13] Green European Journal (2022), *EU Taxonomy: The Dirty Politics of Greenwashing Energy.*
[14] IEA, ECB, EIB (2023), *Ensuring an Orderly Transition: Europe's competitiveness and financial stability in a period of global energy transformation.*
[15] Existing subsidies to European industry exist in a variety of forms, from ETS free allowances, tax breaks on capital investments, and investment support schemes through EU instruments such as the Innovation Fund.
[16] EC (2024), *Staff Working Document, 2040 emission reduction targets.*
[17] European Court of Auditors (2023), *Special report 18/2023: Climate and energy targets.*
[18] European Commission (2024), *European Hydrogen Bank pilot auction: 132 bids received from 17 European countries.*
[19] Energy Transitions Commission (2023), *Financing the Transition.*
[20] European Council (2024), *Europe's contribution to climate finance.* Available at: https://www.consilium.europa.eu/en/infographics/climate-finance/#:~:text=The%20EU%20and%20its%2027,the%20fight%20against%20climate%20change.
[21] OECD (2023), *Climate finance and the USD 100 billion goal.* Available at: https://www.oecd.org/climate-change/finance-usd-100-billion-goal/
[22] Including the early phase-out of coal assets, avoiding deforestation, and funding carbon removals.
[23] ETC (2023), *Financing the Transition.*

Energy Transitions Commission

FINANCING THE TRANSITION: CAPITAL INVESTMENT

Two distinct forms of financial flow are required for the energy transition:

CAPITAL INVESTMENT

$3.5 trillion a year to 2050 globally

+

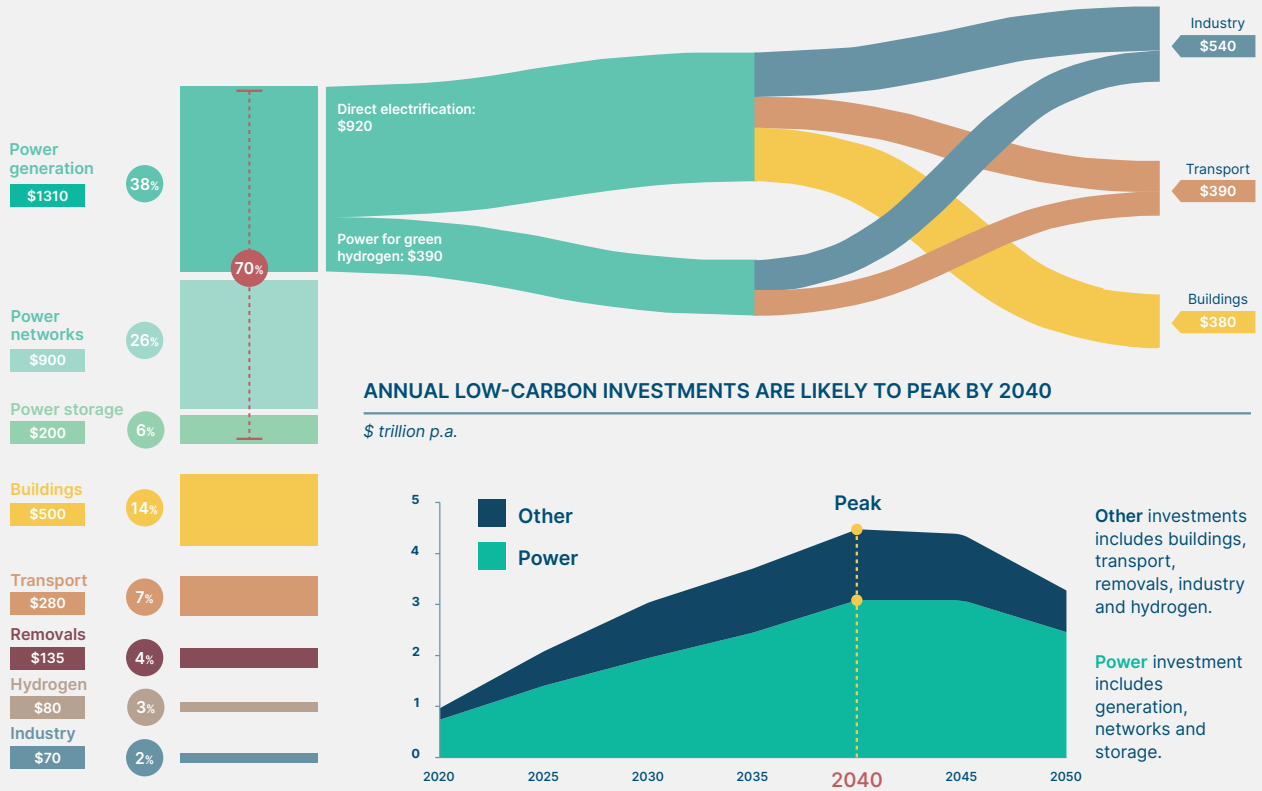
CONCESSIONAL/ GRANT PAYMENTS

>$300 billion a year by 2030 in middle and low income countries

Capital investment: where should investment flow?

INVESTMENT IN LOW-CARBON POWER = 70% OF TOTAL INVESTMENT, SPURRING DECARBONISATION IN OTHER SECTORS

$ billion p.a. 2021-2050



ANNUAL LOW-CARBON INVESTMENTS ARE LIKELY TO PEAK BY 2040

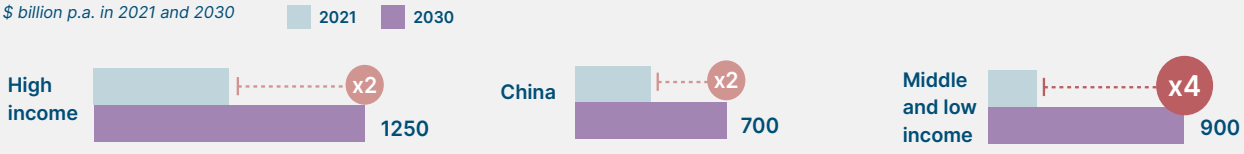
$ trillion p.a.

Other investments includes buildings, transport, removals, industry and hydrogen.

Power investment includes generation, networks and storage.

INVESTMENT IN MIDDLE AND LOW INCOME COUNTRIES NEEDS TO INCREASE 4-FOLD BY 2030

$ billion p.a. in 2021 and 2030



$3 trillion — Clean investment (minus declining fossil fuel investment)

1.3% — Equivalent to 1.3% of global GDP a year to 2050

x3 — Scale up needed by 2030 globally

Energy Transitions Commission - March 2023

Read full report:

Financing the Transition: How to Make the Money Flow for a Net-Zero Economy