

Weekly Summary

Economics of Climate Change

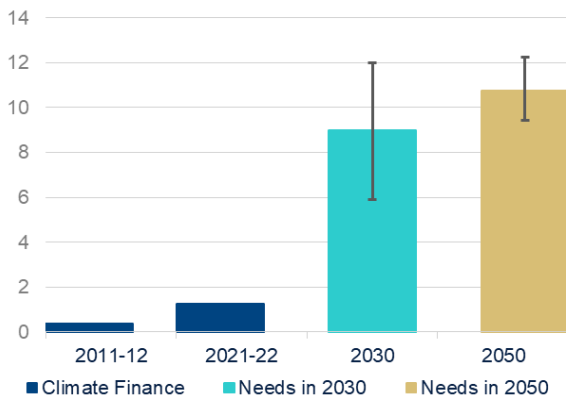
July 12, 2024

How much needs to be invested in climate change? It depends

Climate investment needs depend on both the definition of what is needed and the reference scenario for climate change. All in all, for keeping “net zero” within the realm of possibility there is a funding gap to close by both public and, mainly, private sources. Appropriate incentives for private funding are key.

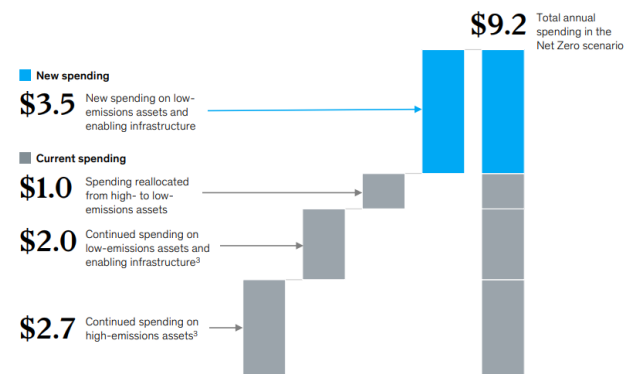
Comparable estimates? not really. According to [Climate Policy Initiative \(CPI\)](#) estimates, to avoid the worst impacts of climate change, climate financing needs to multiply by five compared to current levels, reaching nearly USD 9 trillion annually, as quickly as possible (**Figure 1**). This estimate is very close to that provided by [McKinsey](#) (**Figure 2**), which suggests USD 9.2 trillion per year to remain on a path consistent with the NGFS net-zero scenario, an annual increase of as much as \$3.5 trillion from today. These comparable figures seem the outcome of similar definitions, but actually, they are not.

Figure 1. **WORLD. CLIMATE FINANCE. GLOBAL TRACKING AND AVERAGE ESTIMATED ANNUAL NEEDS¹** (USD TRILLION)



Source: BBVA Research from [Global Landscape of Climate Finance 2023](#)

Figure 2. **ANNUAL SPENDING ON PHYSICAL ASSETS FOR ENERGY AND LAND-USE SYSTEMS² IN THE NET-ZERO 2050 SCENARIO³** (AVERAGE 2021-50 USD TRILLION)



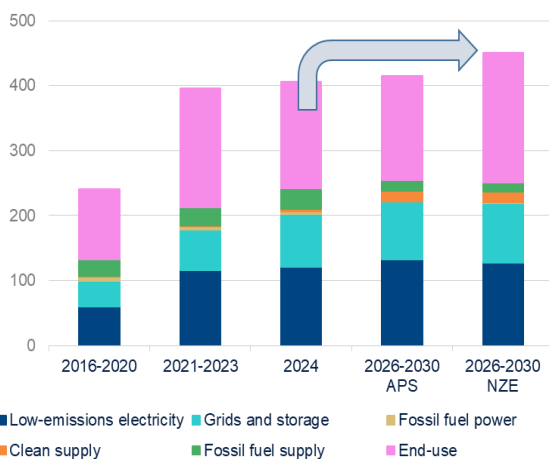
Source: [The net-zero transition What it would cost, what it could bring.](#) McKinsey. January 2022.

1: Direct investments in climate-specific physical assets, excluding transition-related unabated fossil fuel finance. Estimates are based on secondary data collected from over 15 sectoral scenarios (see [Methodology document](#) for detail). To reflect this variability, the climate needs estimates are presented as ranges of investments needed, rather than single values. Climate finance needs for 2023-2050 are expressed in 2022 USD to ensure comparability from different scenarios.
 2: Physical assets in power, mobility, fossil fuels, biofuels, hydrogen, heat, CCS (not including storage), buildings, industry (steel and cement), agriculture, and forestry. Estimation includes spend for physical assets across various forms of energy supply, energy demand, and various forms of land use.
 3: Based on the NGFS Net Zero 2050 scenario using REMIND-MAGPIE (phase 2). Based on analysis of systems that account for ~85% of overall CO₂ emissions today.

Relevant differences that coincidentally produce similar estimates at the global level. To start with, CPI does not include investments in fossil energy, which McKinsey does include in its estimates⁴, but most importantly, the reference scenarios are different: various sectoral scenarios in the case of CPI, and a single net-zero scenario in the case of McKinsey.

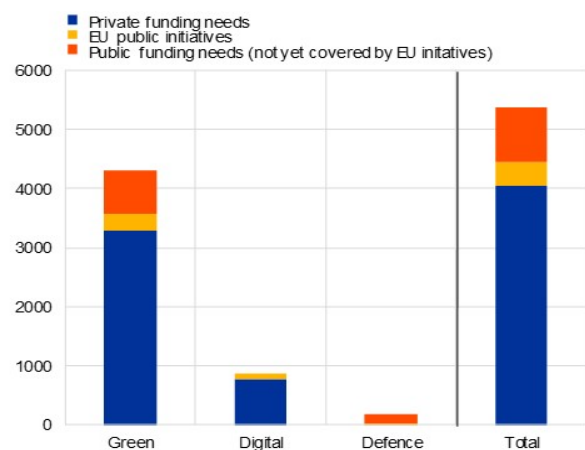
As regards to the EU, uncertainty about investment needs remains. Between the most recent references for the EU, the [International Energy Agency](#) estimates an annual gap of USD 45 billion for energy investments to be consistent with its net-zero scenario (**Figure 3**). The European Central Bank multiplies this estimate by more than ten times (**Figure 4**) to "move forward with the green transformation."⁵ ECB's range of investment needs seems much broader than IEA's, limited to energy.

Figure 3. **EU. ENERGY AND END-USE INVESTMENT IN THE APS(*) AND NET ZERO EMISSIONS BY 2050 SCENARIOS (USD BILLIONS, 2023 MER)**



(*) APS: Announced Pledges Scenario
Source: BBVA Research from European Union – World Energy Investment 2024 – Analysis - IEA

Figure 4. **EU. ADDITIONAL ACCUMULATED INVESTMENT NEEDS AND ITS FUNDING. (2025-2031. EUR BILLIONS)**



Source: [Mind the gap: Europe's strategic investment needs and how to support them](#).

Public financing: it's not enough, but it's also not the most significant barrier to the climate investment increase. The ECB estimates that the public financing gap would be between 0.6% and 1% of the EU's GDP⁶, approximately one-quarter of its 2023 deficit. Fiscal positions are well different across the EU countries, with some high-debt countries having large underlying fiscal deficits (**Figure 5**).⁷

The new EU fiscal governance, anchored around primary expenditure pathways consistent with fiscal consolidation (plausible declining paths of debt) may give some leeway for strategic investment taking into consideration both a lessened annual fiscal adjustment and the allowance of higher structural deficit up to a maximum of 1.5% of GDP. All of this assumes a credible reform plan and fiscal consolidation.

4: See the accompanying footnotes and explanatory references.

5: [Mind the gap: Europe's strategic investment needs and how to support them](#). ECB, June 2024.

6: Ibid 5.

7: The line separates the combinations of debt and primary budget balance into two regions. Above the line, the primary budget balance increases more rapidly than public debt, eventually reaching a steady state. Below the line, the opposite occurs: public debt increases more rapidly than the primary budget balance, leading to paths where public finances are unsustainable. See [Doménech and González-Páramo \(2017\)](#).

Figure 5. **EU. GOVERNMENT DEBT RATIO AND PRIMARY BALANCE**



Source: BBVA Research based on [European Commission \(May 2024\)](#) and [Doménech and González-Páramo \(2017\)](#).

Much more than public funding for closing the climate investment gap. The majority of funding for strategic investments, mainly for the green transition, will need to originate from private sources, flows that are not given without appropriate policies. [Letta Report](#) makes a case for Single Market deepening, critical to: i. boosting investment to finance Europe’s needs; ii. lowering decarbonization costs; iii. Strengthening Europe’s ability to defend itself; iv. and making it easier for companies to grow and achieve scale. In order to meet those targets three levers are relevant: i. simplifying and reducing EU administrative burden; ii. reinforcing market integration and extending to an energy, savings and investments union; iii. and targeted public funding for R&D and innovation.

Figure 6. **LETTA REPORT. ENERGY TRANSITION, ENVIRONMENTAL SUSTAINABILITY AND COMPETITIVENESS**

Topic	Challenge	Recommendation
Renewable Energy Transition	<ul style="list-style-type: none"> • High energy costs, fossil fuels dependency. • Electricity prices divergence. • Limited infrastructure for energy transition. 	<ul style="list-style-type: none"> • Market integration, cross-border electricity trading, deployment of renewables. • Robust, continent-wide infrastructure networks for electricity, hydrogen, CCS.
Environmental Sustainability	<ul style="list-style-type: none"> • Fragmented standards & regulations. • Raw materials dependency. • Cleantech: High cost & slow adoption. 	<ul style="list-style-type: none"> • Streamline regulatory processes. • Critical Raw Materials Act, recycling, global partnerships for trade diversification. • New financial instruments, Green Bonds, Clean Energy Delivery Agency.
Climate Change Mitigation	<ul style="list-style-type: none"> • Ambitious emission reduction targets. • Inadequate funding for green tech scale-ups. 	<ul style="list-style-type: none"> • Mobilize private and public investment, establish a Savings and Investments Union, and streamline funding access for clean technologies. • Provide targeted funding for growth, project finance, and commercial rollouts without diluting ownership.
Competitiveness	<ul style="list-style-type: none"> • Uneven playing field for clean technology industries. • High 'green premium' for clean technologies. 	<ul style="list-style-type: none"> • Adopt proactive de-risking policies, bolster clean tech manufacturing, and foster credit enhancement models. • Reduce time to market for clean technologies, simplify access to funds, and replicate successful execution models.

Source: A Single Market to strengthen Europe, including energy and climate policies.

Highlights of the Week

- **Global | Oil Market Report - July 2024 – Analysis - IEA.** Global oil demand continues to slow as EVs and economic headwinds temper growth.
- **Global | BP raises forecasts for oil and gas demand as clean energy switch slows.** Renewable power sources such as wind and solar fail to increase at a fast enough pace to keep up with the growth in global energy demand. Fuel demand is up more than 5 per cent compared with last year's projection when BP slashed its growth forecasts for both oil and gas. The group's forecasts for CO₂ emissions are also higher than last year's projection.
- **Global | Global goal of tripling renewables by 2030 still out of reach, says IRENA.** Despite growing at an unprecedented rate last year, renewable energy sources are still not being deployed quickly enough to put the world on track to meet an international goal of tripling renewables by 2030, new data shows.
- **Global | Integrating Economic and Climate Data Will Strengthen Climate Policy. IMF.** Data Gaps Initiative helps policymakers better understand the environmental impact of economic activities and the effectiveness of climate policies.
- **Global | OECD employment at record high while the climate transition expected to lead to significant shifts in labour markets.** More than a quarter of jobs will be strongly impacted by the net-zero transition
- **China | Analysis: China's clean energy pushes coal to record-low 53% share of power in May 2024 - Carbon Brief.** Clean energy generated a record-high 44% of China's electricity in May 2024, pushing coal's share down to a record low of 53%, despite continued growth in demand.
- **China | Gridlock in China: huge spending on network in shift to green energy.** Beijing rolls out \$800bn investment over six years to upgrade system as shift from coal piles pressure on creaking grid.
- **España | La retribución a las redes de electricidad y gas en España: análisis y propuestas. Fedea.** Las redes son un activo esencial para el éxito de un proceso de transición en el que se necesita más participación de la generación renovable, más almacenamiento y más electrificación del consumo final de energía.

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