

Paris alignment: why there is no more space for European public money to finance fossil fuels

A brief review of the latest evidence



Photo: Arben Llapashtica

Introduction: the imperative to act immediately

The past nine years, 2015 to 2023, have been the warmest on record. And the World Meteorological Organization's (WMO) latest data shows that 2023 has shattered all climate records.¹

Extreme weather has wrought devastation and despair around the world. Longterm drought intensified in many parts of Central and South America, leading to crop losses and low water storage levels. In July, southern Europe and north Africa saw exceptionally severe heat, with temperatures in Italy reaching 48.2 °C and 50.4 °C in Agadir, Morocco.²

In August, the deadliest wildfire of the year globally – and the most deadly in over a century in the United States – hit Hawaii, with at least 99 deaths reported.

For more information

Pippa Gallop Southeast Europe energy policy officer CEE Bankwatch Network pippa.gallop@bankwatch.org



¹ World Meteorological Organization, <u>2023 shatters climate records, with major impacts</u>, 30 November 2023.



Meanwhile, wildfires in Canada raged more widely than ever before, leading to severe and far-ranging smoke pollution. At least 18.5 million hectares burned – more than six times the 10-year average (2013–2022).³

In September, Mediterranean Cyclone Daniel wrought flooding on Greece, Bulgaria, Türkiye, and Libya, with thousands of deaths in Libya. In November, consecutive seasons of drought in the Greater Horn of Africa were followed by floods, triggering even more displacements.⁴ These tragedies once again underline the need for urgent action to reduce greenhouse gas emissions.

The legal and political basis for such action is clear: the Paris Agreement, adopted by 196 Parties on 12 December 2015 and entering into force on 4 November 2016, has the overarching goal to hold '*the increase in the global average temperature to well below 2 °C above pre-industrial levels*' and pursue efforts '*to limit the temperature increase to 1.5 °C above pre-industrial levels*.'⁵

Crossing the 1.5 °C threshold risks unleashing far more severe disasters, including more frequent and severe droughts, heatwaves and rainfall. According to the UN's Intergovernmental Panel on Climate Change (IPCC), to limit global warming to 1.5 °C, global greenhouse gas emissions must peak before 2025 at the latest and decline 43 per cent by 2030, and global net zero CO₂ must be reached by around 2050.⁶

In fact, WMO data until the end of October 2023 shows that the year has been about **1.4 degrees Celsius above the pre-industrial 1850-1900 baseline** – and the difference between 2023 and the previous warmest years, 2016 and 2020, is so great that the final two months are unlikely to affect the ranking.⁷

We are painfully close to the 1.5 °C threshold. The IPCC, although it measures temperature rises as an average over several years, not by single years, anticipates that global warming⁸ will reach 1.5 °C by the early 2030s in nearly all projected emissions scenarios.⁹ It will continue to increase until around 2040 due to the impacts of increased cumulative CO_2 emissions in nearly all scenarios and modelled pathways. However, in some scenarios, temperatures could decline again to below 1.5 °C above pre-industrial levels by the end of the century, while in a very high GHG emissions scenario they could reach as high as 4.4 °C.¹⁰

⁴ Ibid.

³ Ibid.

⁵ For more information, see United Nations Framework Convention on Climate Change, <u>The Paris Agreement</u>, accessed 30 November 2023.

⁶ IPCC, <u>Climate Change 2023</u>: <u>Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental</u> <u>Panel on Climate Change</u> [Core Writing Team, H. Lee and J. Romero (eds.)], *IPCC*, 2023, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, B.1 and B.1.1.

⁷ World Meteorological Organization, <u>2023 shatters climate records, with major impacts</u>.

⁸ The IPCC's term, not Bankwatch's. Using such comfortable-sounding language has had an unfortunate impact in making the climate chaos threat appear much more pleasant than it really is.

⁹ 'By 2030, global surface temperature in any individual year could exceed 1.5 °C relative to 1850–1900 with a probability between 40% and 60%, across the five scenarios assessed in WGI (medium confidence). In all scenarios considered in WGI except the very high emissions scenario (SSP5-8.5), the midpoint of the first 20-year running average period during which the assessed average global surface temperature change reaches 1.5 °C lies in the first half of the 2030s.' IPCC, <u>Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, B-1.1.</u>

¹⁰ Ibid., 1-34.



This means we must fight hard for every fraction of a degree, as the future of civilisation literally depends on it. As the IPCC says, '*Risks and projected adverse impacts and related losses and damages from climate change will escalate with every increment of global warming*'.¹¹ And: '*There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all*.'¹²

Yet despite an ever-growing – if still too slow – understanding of the need for action, massively different understandings still exist of what this means in practice.

An important example of this persists in the field of energy investments in the EU: Despite sustained efforts by civil society, members of the European Parliament and others, different public funds and banks and related policies have different rules on investments in fossil fuels.

Phrases such as 'net zero' and 'Paris alignment' abound, but we are not all speaking the same language. The aim of this briefing is, therefore, using the most recent evidence on the remaining carbon budget, to lay out our reasoning on why there is no more space for fossil-fuel investments if we aim to keep global temperature rises to below 1.5 °C by the end of the century.

Recent evidence on the remaining carbon budget

The amount of greenhouse gases we can still emit into the atmosphere before crossing certain temperature change thresholds is known as the remaining carbon budget. According to the IPCC, the best estimate of the remaining carbon budget from the beginning of 2020 for limiting warming to 1.5 °C, with a 50 per cent likelihood, is estimated to be 500 gigatonnes of CO_2 (GtCO₂). This could vary between 300 to 600 GtCO₂ depending on non-CO₂ warming.¹³ This would mean that **if the annual CO₂ emissions between 2020–2030 stayed, on average, at the same level as 2019, the resulting cumulative emissions would almost exhaust the remaining carbon budget for 1.5 °C by 2030**, with a 50 per cent likelihood.¹⁴

A more recent study from 2023 found that the situation is even worse. As of January 2023, **the remaining carbon budget for a 50 per cent chance of keeping warming to 1.5** °C **was around 250 GtCO₂ – equal to only around six years of current CO₂ emissions**.¹⁵ First, this is only for a 50 per cent chance – far from a guarantee. And second, nearly a year has passed since then, making it five years instead of six.

Translating this to a longer period, the IPCC has assessed 94 scenarios to limit warming to 1.5 °C with no or limited overshoot, known as "C1" pathways. The majority of these scenarios would require substantial reductions in coal and oil use between now and mid-century, but they show less consensus around the role of fossil gas. Some scenarios foresee an almost complete phaseout by around 2050, while others see

14 Ibid.

¹¹ Ibid., 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, B-2.2.

¹² Ibid., 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, C.1.

¹³ The central case remaining carbon budget assumes future non-CO₂ warming (the net additional contribution of aerosols and non-CO₂ GHG such as methane) of around 0.1 °C above 2010–2019, in line with stringent mitigation scenarios. If additional non-CO₂ warming is higher, the remaining carbon budget for limiting warming to 1.5 °C (with a 50 per cent likelihood) shrinks to around 300 GtCO₂. If, however, additional non-CO₂ warming is limited to only 0.05 °C (via stronger reductions of CH₄ and N₂O through a combination of deep structural and behavioural changes, e.g., dietary changes), it could be around 600 GtCO₂ for 1.5 °C warming. Ibid., 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, 3.3.1.

¹⁵ Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al., <u>Assessing the size and uncertainty of remaining carbon budgets</u>, *Nat. Clim. Chang.*, 30 October 2023.



continued or even increasing supply until 2100. Across all 94 scenarios, the central reductions in global coal, oil, and gas between 2020 and 2050 are 95 per cent, 62 per cent and 42 per cent, respectively.¹⁶

Such figures might give the impression that there is indeed space to keep some fossil fuel infrastructure operating well beyond 2050, and thus to build some limited new projects now. Indeed, even in these scenarios with the steepest emissions reductions, the IPCC does not appear to require complete decarbonisation by 2050, aiming 'only' for cuts of 84-85 per cent compared to 2019.¹⁷ This is explained by the 'net zero' concept, in which carbon dioxide removal (CDR), both in terms of natural sequestration and carbon capture, utilisation and storage (CCUS), is included into the equation to end up with overall zero emissions.

However, this is where the limits of scenario modelling come in, combined with political compromises that creep in during the IPCC report approval process.¹⁸ For example, earlier in 2023, it was reported that during negotiations on the Policymakers' Summary, several governments lobbied to water down or remove references to the environmental costs of burning fossil fuels and consuming meat, as well as to add language bolstering support for CCUS.¹⁹

While it may be theoretically possible to widely employ CCUS, its real-world usage has so far been limited, among other things due to its cost, energy intensity and the need for appropriate storage sites.

The IPCC does acknowledge this: 'Implementation of [carbon capture and storage (CCS)] currently faces technological, economic, institutional, ecological, environmental and socio-cultural barriers. Currently, global rates of CCS deployment are far below those in modelled pathways limiting global warming to 1.5 °C to 2 °C. Enabling conditions such as policy instruments, greater public support and technological innovation could reduce these barriers.²⁰

According to the International Energy Agency, (IEA), around 40 commercial facilities are in operation globally, in industry, fuel transformation and power generation.²¹ Considering there are still – despite numerous closures – more than 2,000 coal power plants²² and more than 4,000 gas power plants²³ operating globally, not to mention other high-emitting industrial facilities, this is very limited indeed.

¹⁶ Dr Ploy Achakulwisut et al., <u>Global fossil fuel reduction pathways under different climate mitigation strategies and ambitions</u>, *Nature Communications*, volume 14, 13 September 2023, summarised in Dr Ploy Achakulwisut et al., <u>'Guest post: Why all fossil fuels must decline rapidly to stay below 1.5C'</u>, *Carbon Brief*, 26 October 2023.

¹⁷ IPCC, <u>Climate Change 2023</u>: <u>Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental</u> Panel on Climate Change, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, Table 3.1.

¹⁸ The IPCC is an international scientific group of hundreds of top climate scientists from around the world carefully selected by the United Nations to monitor and assess all global science related to climate change. The IPCC reports are developed through multiple rounds of drafting and review, ultimately to be endorsed by IPCC member governments. IPCC, <u>IPCC Factsheet: How does the IPCC approve reports?</u>, *IPCC*, revised July 2021. However, the process of adoption by 195 governments inevitably involves decisions on what to emphasise or de-emphasise and how to phrase it.

¹⁹ Kristoffer Tigue, '<u>Corporate Interests 'Watered Down' the Latest IPCC Climate Report, Investigations Find</u>', *Inside Climate News*, 28 March 2023.

²⁰ IPCC, <u>Climate Change 2023</u>: <u>Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental</u> <u>Panel on Climate Change</u>, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, 3.3.3.

²¹ International Energy Agency, <u>Carbon Capture, Utilisation and Storage</u>, *International Energy Agency*, accessed 30 November 2023.

²² Global Energy Monitor, <u>Global Coal Plant Tracker</u>, *Global Energy Monitor*, accessed 30 November 2023.

²³ Global Energy Monitor, <u>Global Oil and Gas Plant Tracker</u>, *Global Energy Monitor*, accessed 30 November 2023.



Although the IEA points to increased momentum in recent years, it admits that '*CCUS deployment has trailed behind expectations in the past*,' and that even with the facilities currently planned by 2030, '*CCUS deployment would remain substantially below (around a third) the around 1.2 Gt CO*₂ per year that is required in the Net Zero Emissions by 2050 (NZE) Scenario.'²⁴

The need for caution was also underlined by research published in 2021 on the first expert survey on the feasible scale of CDR deployment in various forms. It found that '*large-scale CO₂ removal may be possible, but its feasibility remains highly uncertain. This uncertainty provides a strong rationale to accelerate climate action in the present and avoid the risks of betting on CDR, which could then fail to materialize.*²⁵

Based on this research, researchers then applied it to the IPCC C1 scenarios. They found that if CDR is limited to what the surveyed experts think is reasonably achievable, **then staying below 1.5** °**C would mean that global production and use of gas would have to be cut twice as fast, to 84 per cent below 2020 levels by 2050,** rather than the 42 per cent implied by the full set of IPCC C1 pathways. The corresponding cuts for coal and oil become 99 per cent and 70 per cent, respectively.²⁶

They concluded that:

'Our analysis finds scenarios with long-term high reliance on gas are contingent upon high levels of deployment of CCS and CDR.'

'(...) such high dependence on CCS and CDR is most likely driven by inadequate model representation of real-world constraints on their potential, as well as on energy system path dependencies.

Our findings show that when CCS and CDR are restricted to plausible levels, gas use must also decline rapidly if warming is to be limited to 1.5C, along with coal and oil. This suggests that narratives around gas as a "bridge", "transition", or "cleaner" fuel may be misplaced.²⁷

Even cuts of 84 per cent, 99 per cent and oil by 70 per cent by 2050 may prove to be too low, depending on how CDR unfolds in real life in the coming years. This depends not only on technologies such as CCUS but also on nature's ability to function in an era of increased climate chaos.

In scenarios with increasing CO_2 emissions, the IPCC finds that both land and ocean carbon sinks are projected to be less effective at slowing the accumulation of CO_2 in the atmosphere. While natural land and ocean carbon sinks are projected to take up a progressively larger amount of CO_2 under higher emissions scenarios than in lower ones, the IPCC has found, with high confidence, that they become less effective in terms of the proportion of emissions taken up.²⁸

²⁴ International Energy Agency, <u>Carbon Capture, Utilisation and Storage</u>.

²⁵ Neil Grant et al., <u>The policy implications of an uncertain carbon dioxide removal potential</u>, *Joule, Volume 5, Issue 10*, 20 October 2021, 2593-2605.

²⁶ Dr Ploy Achakulwisut et al., <u>Global fossil fuel reduction pathways under different climate mitigation strategies and ambitions</u>, summarised in Dr Ploy Achakulwisut et al., '<u>Guest post: Why all fossil fuels must decline rapidly to stay below 1.5C'</u>.

²⁷ Ibid.

²⁸ IPCC, <u>Climate Change 2023</u>: <u>Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental</u> <u>Panel on Climate Change</u>, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, 3.3.1.



In addition, ecosystem responses to temperature rises not yet fully included in climate models, such as the gaps between emissions and removals from wetlands, permafrost thaw, and wildfires, would further increase concentrations of these gases in the atmosphere.²⁹

Considering these factors and uncertainties, it would be unwise to count too much on carbon dioxide removal to limit temperature changes to 1.5 °C.

What does this mean for energy sector investments?

If gas use needs to be cut by at least 84 per cent below 2020 levels by 2050, coal by 99 per cent and oil 70 per cent, respectively, and serious doubts remain about the potential of both mechanical and natural carbon dioxide removal, then clearly no new fossil fuel infrastructure can be built.

If the real potential of CDR is taken into account, the IPCC in fact reaches what amounts to the same conclusion:

[•]Projected CO₂ emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5 °C (50%) (high confidence).³⁰

Even if some abatement equipment is built into existing plants, the need to cut fossil fuel use by the percentages cited above clearly does not allow the construction of any new fossil fuel infrastructure.

The IEA also came to the same conclusion in its Net Zero by 2050 report: 'There is no need for investment in new fossil fuel supply in our net zero pathway'. 'Beyond projects already committed as of 2021, there are no new oil and gas fields approved for development in our pathway, and no new coal mines or mine extensions are required.'³¹

Considering that the IEA was established in the mid-1970s to secure OECD³² member states' access to oil, its admission that no new fossil fuel projects can be approved in a net zero scenario is particularly significant. The IEA's Net Zero Emissions (NZE) scenario still contains some risky modelling choices on technologies such as CCUS in order to reach net zero by 2050, so the need to reduce actual emissions is most likely even higher than the NZE scenario suggests. This makes it even clearer that new public finance for fossil fuel projects needs to end now.

As well as the imperative to stop investing in fossil fuels in order to massively cut greenhouse gas emissions, it is also crucial to make sure that every available euro is spent on technologies which *will* help to curb climate chaos. Wasting them on those that won't not only diverts resources from real climate financing but also undermines the effectiveness of climate-beneficial investments. The IPCC has also expressed concern that:

'Public and private finance flows for fossil fuels are still greater than those for climate adaptation and mitigation (high confidence). The overwhelming majority of tracked climate finance is

²⁹ Ibid.

³⁰ Ibid., 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, B.5.

³¹ International Energy Agency, <u>Net Zero by 2050 - A Roadmap for the Global Energy Sector</u>, *International Energy Agency*, October 2021.

³² Organisation for Economic Co-operation and Development.



directed towards mitigation, but nevertheless falls short of the levels needed to limit warming to below 2 °C or to 1.5 °C across all sectors and regions (...).'

How are the EU's public financiers doing and what next?

While the science – if taking realistic CDR levels into account – is clear, as of early December 2023, EU-related energy sector financing is still subject to a bewildering array of different rules concerning new fossil fuel investments.

The European Investment Bank has virtually eliminated all direct investments in fossil fuels, ³³ while the European Bank for Reconstruction and Development still has not.³⁴ The EU's Just Transition Mechanism does not finance fossil fuels, ³⁵ while two of the Cohesion Policy funds (namely the European Regional Development Fund (ERDF) and the Cohesion Fund³⁶), as well as the Modernisation Fund³⁷ still do. Fossil fuels investments are also eligible under the Recovery and Resilience Facility (both in its original version³⁸ and even more widely since its recent amendment related to REPowerEU chapters³⁹). The new Social Climate Fund also does not clearly exclude investments for fossil fuel-based technologies (e.g. hybrid vehicles, gas boilers).⁴⁰

The TEN-E Regulation,⁴¹ which governs the definition of priority projects eligible, among others, for Connecting Europe Facility financing, no longer allows fossil gas projects to be chosen. But the EU

³³ European Investment Bank, <u>EIB energy lending policy</u>, <u>Supporting the Energy Transformation</u>, Version with updated technical annexes, *European Investment Bank*, May 2023.

³⁴ European Bank for Reconstruction and Development, <u>Energy Sector Strategy</u>, European Bank for Reconstruction and Development, 2018; European Bank for Reconstruction and Development, <u>Methodology to determine the Paris Alignment of EBRD Investments</u>, *European Bank for Reconstruction and Development*, December 2022.

³⁵ European Parliament, <u>Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition</u> <u>Fund</u>, *OJL 231*, 30 June 2021.

³⁶ As per article 7, point 1(h) related to fossil fuels related investments, of the ERDF/CF regulation. European Parliament, <u>Regulation (EU) 2021/1058</u> of the European Parliament and of the Council of 24 June 2021 establishing the European Regional Development Fund and on the Cohesion Fund, *OJL 231/60*, 30 June 2021

³⁷ It claims that its investments must be consistent with the 2030 climate and energy objectives of the Union, as well as the Paris Agreement, but its list of confirmed and recommended investment proposals shows that its investments include new gas-fired power plants and gas pipelines. Modernisation Fund, <u>What can be financed</u>, *Modernisation Fund*, accessed 1 December 2023.

³⁸ European Commission, <u>Annex III of the Commission guidance on the application of the Do No Significant Harm principle under the RRF specifically</u> <u>allows certain gas related investments under the facility. Commission Notice Technical guidance on the application of 'do no significant harm' under</u> <u>the Recovery and Resilience Facility Regulation</u>, OJ 58/01, *EUR-lex*, 18 February 2021.

³⁹ An explicit derogation allows investments for gas infrastructures (and oil ones for three countries) under REPowerEU chapters in the amended National Recovery and Resilience Plans. European Parliament, <u>Regulation (EU) 2023/435 of the European Parliament and of the Council of 27</u> <u>February 2023 amending Regulation (EU) 2021/241 as regards REPowerEU chapters in recovery and resilience plans and amending Regulations (EU)</u> <u>No 1303/2013, (EU) 2021/1060 and (EU) 2021/1755, and Directive 2003/87/EC</u>, OJ 63/1, *EUR-lex*, 28 February 2023.

⁴⁰ European Parliament, <u>Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund</u> <u>and amending Regulation (EU) 2021/1060</u>, OJ L 130/1, *EUR-lex*, 16 February 2023.

⁴¹ European Parliament, <u>Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European</u> energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013, OJ L 152, *EUR-lex*, 3 June 2022.



taxonomy rules,⁴² defining so-called 'sustainable' investments, allow certain downstream gas investments to be labelled as transition investments in specific countries under various conditions, giving them a highly controversial seal of EU approval.⁴³

This state of affairs cannot continue. Both the EU funds and EU-associated financial institutions like the EBRD finally need to stop financing fossil fuels, with no ifs or buts.

Given that in 2019, approximately 34 per cent of net global GHG emissions came from the energy sector, 24 per cent from industry, 22 per cent from Agriculture, Forestry and Other Land Use, 15 per cent from transport and 6 per cent from buildings,⁴⁴ those funds which have not yet stopped financing investments in fossil fuel projects in energy and industry – including via financial intermediaries – must stop immediately.

Considering that emissions from the transport sector grew faster than other sectors from 2010-2019, it is also imperative to stop financing high-carbon transport such as aviation and new motorways.

Investments in companies significantly reliant on fossil fuels must also be conditioned on time-bound decarbonisation plans, even if the project is aimed at non-fossil development. Companies which still plan new fossil fuel investments must not be eligible for public financing at all. Only by sending out clear signals will EU public financiers finally convince their beneficiaries that the EU means business in tackling climate chaos, and that they must do so too.





CEE Bankwatch Network

'The RegENERate project has received funding from the LIFE Programme of the European Union.'

⁴² European Commission, <u>Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as</u> regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities, OJ L 188, *EUR-lex*, 15 July 2022.

⁴³ The delegated act allowing this is subject to multiple legal challenges as of early December 2023. Jennifer Rankin, '<u>EU faces legal action after</u> including gas and nuclear in 'green' investments guide', *The Guardian*, 18 April 2023.

⁴⁴ IPCC, <u>Climate Change 2023</u>: <u>Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental</u> <u>Panel on Climate Change</u>, 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, 2.1.1.