

The Carbon Coup

How corporate capture
is locking Europe into
a fossil fuelled future

CCUS Forum



Summary and key findings

Despite three decades of failed projects and hundreds of millions of euros in public funding thrown down the drain, the EU has spent the past two years turbocharging policies to support Carbon Capture, Utilisation and Storage (CCUS). This technology aims to capture CO₂ from polluting activities like the burning of fossil fuels, and then store it in products or pump it deep underground (in the hope that it will stay there). In February 2024, the European Commission presented its Industrial Carbon Management Strategy (ICMS), which proposes an array of measures designed to massively scale up CCUS and related CO₂ transport infrastructure. The EU had already proposed a target of capturing 50 million tonnes (Mt) of CO₂ by 2030, and the ICMS ups this dramatically to 280 Mt by 2040 and 450 Mt by 2050. For the sake of comparison, EU countries currently capture just 1 Mt of CO₂ per year. That means CO₂ capture capacity would need to increase 450 times over the next 25 years.

Globally, just 0.1% of energy-related CO₂ emissions were sequestered in 2022, a tiny fraction. And much of this CO₂ was used to extract more oil, thereby adding yet more emissions.

CO₂ transport infrastructure is fraught with dangers. CO₂ pipelines can leak or rupture – potentially explosively – while the release of compressed CO₂ can result in the asphyxiation of humans and animals. In April 2024, for example, an ExxonMobil-owned CO₂ pipeline leaked in the US state of Louisiana, resulting in the issuance of a shelter-in-place order for local residents to avoid the risk of asphyxiation. Nonetheless, the Commission envisages a total of 19,000 kilometres of this type of infrastructure by 2040 (costing €16 billion). Meanwhile, underground storage comes with the risks of potential leakage, contamination of drinking water, and stimulation of seismic activity.

So why is the EU ignoring the urgency of phasing out fossil fuels and instead planning to vastly scale up this risky, costly, almost non-existent and repeatedly failed technology at a speed and magnitude that has no basis in reality? Why the focus on carbon capture when better alternatives exist? Who will benefit from this resurgence, and who will lose out? Who is setting the agenda? These are the questions examined in this report.

Key findings

Fossil fuel interests dominate the CCUS Forum

- > The oil and gas industry is a major actor behind these developments. The need for decarbonisation poses an existential threat to them, and they have created multiple 'escape hatches' to continue fossil fuel burning, including techno-fixes like CCUS.
- > Fossil fuel industry-dominated groups are increasingly being given an official role in shaping EU climate and energy policy. The CCUS Forum, set up in 2021 by the European Commission, has been invited to steer regulation and public funding for CCUS, associated CO₂ infrastructure, and speculative carbon capture and storage (CCS)-based 'carbon removal' technologies.
- > The CCUS Forum is not a group, but an annual event that sets up working groups, which in turn make proposals every year. Our report finds that the CCUS Forum becomes bigger and more dominated by fossil fuel interests each year – from companies like Equinor, TotalEnergies, Shell and Snam, to lobby groups like the International Association of Oil & Gas Producers (IOGP) and Zero Emissions Platform (ZEP). To date, every working group of the CCUS Forum has been co-chaired by the fossil fuel industry or organisations with links to it, and the largest sector represented in these working groups has consistently been the fossil fuel industry. Meanwhile, the role of NGOs and academia is comparatively tiny (while the role of groups critical of CCUS is practically non-existent).
- > Our report shows how the Commission's efforts to present the CCUS Forum as a 'balanced' multi-stakeholder group are misleading. This is doubly true in light of the 'neutral'-sounding organisations active in the CCUS Forum that, on closer inspection, have links to or a history with the fossil fuel industry: pro-CCS NGOs Bellona and the Clean Air Task Force (CATF) for example, or the Florence School of Regulation. The latter has a wide array of fossil fuel funders, and two of its 'part-time professors' – Andris Piebalgs, and Christopher Jones, who presented a pro-CCUS paper at the first Forum – were formerly high-level officials in the Commission's DG Energy. Jones subsequently moved to law firm Baker McKenzie (whose clients include IOGP), working on topics including oil, gas and hydrogen. 'Blue' hydrogen made from fossil gas with CCS is an oft-cited justification for CCUS infrastructure build-out.

- > Our investigations also show that current and former MEPs involved in the annual forums are closely tied to the fossil fuel industry, or have held frequent meetings with oil and gas lobbyists. This includes the former rapporteur on the 2009 CCS Directive, Christopher Davies, who played an instrumental role in securing public funding for CCS. Although billed only as a former MEP at the first two CCUS Forums, Davies was working for Rud Pedersen Public Affairs, a lobby firm with fossil fuel clients. By the third Forum, he was billed in his new position as CEO of lobby group CCS Europe – the first time his fossil fuel connections were explicitly acknowledged. Recruiting former EU political heavyweights can, no doubt, be an important avenue of influence for the fossil-fuel industry and connected groups.

The EU Commission's ICMS draws heavily on CCUS Forum recommendations

- > Energy Commissioner Kadri Simson told the 2023 CCUS Forum, "you called for a specific and verifiable target for storage capacity, industrial support, and structural solutions... And this proposal does exactly that... And I do believe that this is an opportunity for EU oil and gas producers."
- > Numerous proposals and entire sections of wording in the Commission's ICMS proposal closely resemble the recommendations in the papers published by the CCUS Forum's working groups. The proposal mentions the CCUS Forum by name ten times. It follows the template drawn up by the 'vision' working group (co-chaired by the Florence School of Regulation and CATF), and explicitly gives the CCUS Forum an even bigger role in shaping EU CCUS policy and funding in the future, including more say in planning CCUS and CO₂ infrastructure build-out. This ignores important lessons learned from other experiences, such as vested interests being allowed to plan for overinflated infrastructure needs in the gas sector. The 'vision' working group's template, furthermore, is based on the false premise that without large-scale CCUS – and CCS-based carbon removals – the EU cannot meet its climate targets.
- > The ICMS also takes on board a huge number of demands from the CCUS Forum's 'infrastructure' working group (co-chaired by IOGP, ZEP and Bellona). These include ways to collectivise risks while privatising profits, such as minimising costs for polluters when building CO₂ networks, funnelling EU and national public funds towards CO₂ pipelines and storage sites (despite the European Court of Auditors' conclusion that previous such transfers were a waste of public money), and planning provisions to protect fossil fuel companies from costs, risks or liabilities if things go wrong (or if the promised CO₂ market fails to emerge).
- > The ICMS proposal promises to "use the CCUS Forum" to "increase public understanding"– yet the Forum's working group on 'public perception' touts the message that "it is crucial to establish the legitimacy of CCUS technology among the public". This suggests that its aim is rather to manipulate public perception and fabricate consent for a dangerous and flawed techno-fix.
- > The co-chair of this working group is the influential carbon market zealot Andrei Marcu, whose fossil-fuelled think tank is pushing for the EU Emissions Trading System to be expanded into a carbon removals market (an ill-advised idea that the ICMS has promised to consider). This scheme would allow polluters to continue to emit CO₂, providing they purchase removal credits from 'offset' projects, such as those that involve CCS-dependent carbon removal technologies.
- > The Commission also has open ears for the Forum's demands for a CCUS Industrial Partnership, which would further formalise the role of fossil fuel and other polluting industries in shaping future CCUS projects, funding and regulations. Meanwhile, the CCUS Forum played a strategic role in convincing a number of Member States to board the CCUS train in 2023 via their signing of the Aalborg Declaration, which calls for a European CO₂ network and market.

Our report concludes that the CCUS Forum can have no place in a European Union that is democratic or that is capable of meeting its climate justice responsibilities. Rejecting fossil fuel influence is vital if the EU is to deliver real solutions to the climate crisis and reduce carbon emissions down to real zero, instead of the corporate greenwashed 'net zero' that relies on fossil fuel industry delay tactics like CCUS.

Introduction

People told to stay in their homes to avoid the risk of asphyxiation due to leaks in high-pressure CO₂ pipelines. Earthquakes triggered by the injection of CO₂ deep into the earth's rock. The fossil fuel industry waving its golden ticket to continue extracting oil and gas forever. These situations are among the unfolding results of a technology called Carbon Capture, Utilisation and Storage (CCUS).

The EU is planning a massive scale-up of this risky, costly, almost non-existent technology (due to its repeated failure) at a speed and magnitude that has no basis in reality. The fossil fuel industry's influence over EU policy-making – its 'carbon coup' – is the reason for the Commission's plans to walk this dangerous path. This is regardless of the fact that it is "illogical to continue using fossil fuels and emitting carbon dioxide and then spending money and energy to capture it, when we now have the technology not to produce it at all," as Professor Vincenzo Balzani from the University of Bologna explains.

So why is Europe ignoring the urgent need to phase out fossil fuels and transform the economy to one that is fairer, greener, more energy efficient and based on renewable energy? What's behind the resurgence in support for carbon capture schemes? Who will benefit, and who will lose out? Who is setting the agenda, and what are the implications for democratic legitimacy?

To answer these questions, we must first take a step back. Keeping average global temperature rise below 1.5°C requires a rapid, managed decline in fossil fuel production, which poses an existential threat to the oil and gas industry. Recent decades have seen the creation of multiple 'escape hatches' that allow for the continued burning of fossil fuels, including 'gas as a bridge fuel', techno-fixes like Carbon Capture and Storage (CCS), Direct Air Capture (DAC), hydrogen, and carbon offsets. These schemes underpin the fossil fuel industry's 'net-zero by 2050' claims, which in turn underpin their social licence to keep operating and their perceived legitimacy to influence climate policy.

Industry's 'net zero' greenwashing is paying off: groups dominated by fossil fuel companies and lobby groups are being given an official role in shaping EU climate and energy policy. The CCUS Forum, set up by the European Commission in 2021, has been invited to steer regulation and public funding for CCUS and associated CO₂ infrastructure, as well as speculative CCS-based 'carbon removal' technologies (see Box 4). The result is a spate of policies that further the fossil fuel industry's interests in CCUS (see Box 1) – at the expense of the public purse and with catastrophic consequences for the climate and communities.

For this report, we looked closely at the CCUS Forum: from its origins, scope and role to its composition, influence and lack of democratic legitimacy. We found not only that the CCUS Forum gets bigger and more dominated by fossil fuel interests every year, but also that fossil fuel industry interests prevail in all its working groups, which have had incredible influence on the content of the Commission's CCUS-focused proposal for an Industrial Carbon Management Strategy (see Box 1).

The CCUS Forum may sound technical and obscure, but it has been the fossil fuel industry's vehicle for the design of key energy policy for years. Even worse, structures that facilitate corporate capture have increasingly become more explicit, and channels for fossil fuel industry influence more entrenched and conspicuous. This is happening alongside political shifts that are turning an already fossil fuel-friendly 'European Green Deal' deal into one that is pivoted on 'industrial competitiveness' (see Box 1).

All of this could not be worse news for the climate. Globally, in 2022, CCS sequestered just 0.1% of energy-related CO₂ emissions (much of which was used to extract more oil, thereby adding more emissions). The Intergovernmental Panel on Climate Change (IPCC) anticipates only a modest growth of 2.4% in emissions sequestration by CCS by 2030 (and that's only if all planned CCS is actually implemented). By contrast, renewables, efficiency, electrification and the reduction of fugitive methane emissions can tackle more than 80% of global decarbonisation needs by 2030.

After the acronym-heavy technical jargon has been scraped away, the danger and ludicrousness at the heart of this renewed push for CCUS is apparent. This so-called 'solution' involves throwing vast amounts of public resources at a technology that has already repeatedly failed. The proponents of CCUS are companies with a vested interest in maintaining the existing system, and will benefit from the adoption of this status-quo-preserving technology. The fossil fuel industry is the very industry that is responsible for – and is profiting from – causing climate change: it should have no place at the table in discussions around climate and energy policy.

Box 1: Fossil-friendly policy developments in the EU

The fossil fuel industry has enjoyed a staggering series of favourable policy developments within the EU in recent years. The following pro-CCUS and fossil-friendly concessions are symptomatic of a policymaking process that has welcomed the fossil fuel industry with open arms:

Communication on Sustainable Carbon Cycles (CSCC): Released in November 2021, the CSCC outlines the Commission's plans to kick-start and upscale 'carbon removals' (see Box 4), setting an 'aspirational' objective for technological removals and permanent storage of 5 million tonnes (Mt) of CO₂ annually by 2030. Published just a month after the first CCUS Forum, the CSCC noted that this gathering was "a successful first step" towards developing a CCUS market, and will be held annually.

Carbon Removal Certification Framework (CRCF): Proposed in November 2022 and agreed in February 2024, the CRCF sets certification rules for carbon removals – both land-based and technological removals that depend on CCS (see Box 4). This is likely to increase the perceived legitimacy of CCS and boost public support in favour of the technology (just as the fossil fuel industry wanted). Carbon removals shift attention away from the real need to keep oil and gas in the ground and towards the removal of emissions after the fuels have been burned. The CRCF is the first step in the direction of making carbon removal certificates tradable in expanded carbon markets (see Box 4).

Net-Zero Industry Act (NZIA): Proposed in March 2023 and agreed in February 2024, the NZIA includes an EU CO₂ storage target of 50 Mt of CO₂ annual injection capacity by 2030. This is a far cry from reality, since "as of today, no CO₂ at all is being captured for permanent storage within the EU" according to pro-CCUS lobby group CCS Europe. Still, the NZIA aims to develop cross-border CO₂ transport infrastructure in order to create a "fair and competitive CO₂ market".

2040 climate target: In February 2024, the Commission proposed a new 2040 climate target of 90% reduction in *net* greenhouse gas (GHG) emissions, resting on the assumption that carbon removals will need to reach 400 Mt CO₂ by 2040. This, in turn, would require significantly faster investment in CCUS as well as an earlier deployment.

Industrial Carbon Management Strategy (ICMS): The Commission also published its ICMS proposal in February 2024. 'Industrial carbon management' is the new catch-all term for carbon capture and storage (CCS) and carbon capture and utilisation (CCU) – together referred to as CCUS – as well as the technological carbon dioxide removals (CDR) that depend on them (see Box 4). Or, as Lili Fuhr from the Center for International Environmental Law (CIEL) has put it, "carbon management" is a new code word for climate inaction and fossil fuel subsidies".

The ICMS proposes an array of measures – regulations, targets, funding, a market – to scale up CCUS, CDR and the "key enabler" of both, CO₂ transport infrastructure. It builds on the NZIA's 2030 target of 50 Mt, with the suggested goal of capturing 280 Mt of CO₂ in the EU by 2040¹ and 450 Mt by 2050. To put this in perspective, International Energy Agency (IEA) data reveal that as of April 2024, operational CCUS projects in Europe captured just 2.7 Mt of CO₂ per year. A total of 1.7 Mt of this happened in Norway, meaning that the EU – after three decades of failed CCS projects and hundreds of millions of euros in public funding thrown down the drain (see Box 6) – captured just around 1 Mt of CO₂.² As CCS Europe's Chris Davies (see Box 2) put it, the industry needs to "scale up a hundredfold by 2050", equivalent to building "a 400,000-tonne [CO₂ per year] capacity plant every 8 days" for the next 25 years.

But even this is an underestimate, as CO₂ capture capacity would actually need to increase 450 times over the next 25 years to meet the new ICMS target – despite the last 25 years of repeated failures to get CCS projects off the ground. The scale of CO₂ transport infrastructure planned is also colossal, with the Commission envisaging 7,300 kilometres (of shipping routes and dangerous high-pressure CO₂ pipelines) by 2030 (costing €12.2 billion), rising to 19,000 kilometres (costing €16 billion) by 2040. This is all with the aim of creating a single market for CO₂ in Europe – a market that may never take shape, due to the risks and the expenses, which makes it all the more absurd to start building such a vast dedicated infrastructure.

All in all, CCS has been lavished with unprecedented political, financial and regulatory support during the tenure of the Von der Leyen Commission (starting in December 2019) and the ninth European Parliament (from 2019 to 2024). This backing shifted into a higher gear with the Green Deal Industrial Plan, announced by Von der Leyen in January 2023. The NZIA proposal that followed shortly afterwards, which was partly in response to the US Inflation Reduction Act that provides billion dollar subsidies for technologies such as CCS, was an additional boost. Keen to secure another term, Von der Leyen is now promising to build an altar to competitiveness in the next Commission. At the same time, corporate lobbies (aided by conservatives in the European Parliament) have

¹ With 250 Mt CO₂ injection capacity for storage per year needed by 2040.

² There is 0.8 Mt CO₂ per year operational CCUS capacity in the Netherlands, 0.1 Mt in Belgium, and 0.2 Mt in Hungary, according to IEA data.

seized their moment in the run-up to European elections, orchestrating a green backlash that has killed the Green Deal's more progressive environmental policies (including on pesticide reduction and regulation of dangerous chemicals). Meanwhile, climate policy is increasingly and more openly being steered by the perceived need for the fossil fuel and other energy intensive industries to remain relevant and profitable.

A massive corporate offensive is now seeking to put an 'Industrial Deal' at the core of the European Strategic Agenda for 2024-2029, which will be decided in June 2024. This is an omnibus proposal that includes massive deregulation, an upgrade of the single market (which would allow new progressive national and local level initiatives to be blocked and existing ones to be rolled back), the creation of new markets for CO2 and hydrogen, and support for flawed 'net-zero' technofixes. Big polluters have become emboldened by the 'competitiveness-before-climate' attitude of governments, the right-wing European Peoples Party (EPP) and the Commission (including President Von der Leyen, Vice President Šefčovič and Energy Commissioner Simson and her DG for Energy). Oil and gas lobby group IOGP, for example, has produced its own Manifesto for 2024-2029, claiming that the "current trend towards overregulation and prescriptive policies exacerbates polarization and stifles economic growth", thereby forcing Europe into "an artificial choice between climate and industrial objectives" that erodes our "industrial backbone". This disingenuousness follows from the backtracking by the sector on many of its climate pledges after the Ukraine war resulted in the EU ramping up oil and gas deals. The fossil fuel industry's unashamed business model is now openly two-pronged: majorly investing in oil and gas expansion while simultaneously capitalising on alleged 'low carbon' technologies and products.

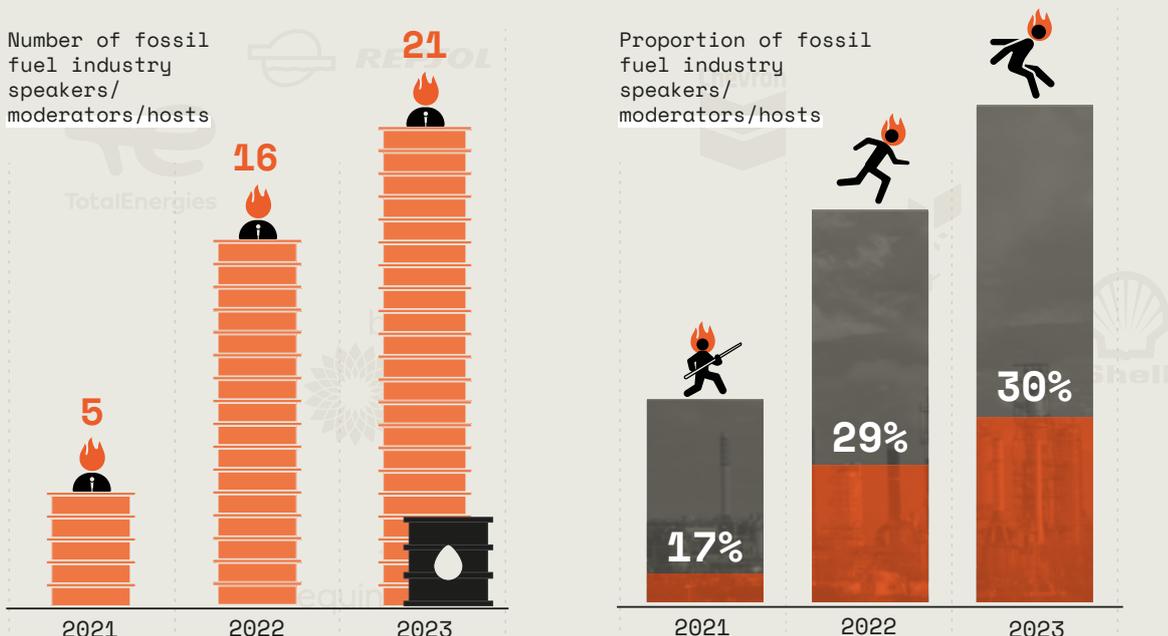
I. Institutionalised Corporate Capture:

steering of CCUS Forum and its working groups by the fossil fuel industry

Set up by DG Energy in 2021 under the guise of bringing together the public sector, industry, NGOs and academia, the CCUS Forum has now become an annual event. In 2024, the Forum is scheduled to happen in October in Pau, France (home to TotalEnergies' CCS pilot project Lacq). Our analysis shows that the event has gotten bigger and more dominated by fossil fuel interests each year, while the role of NGOs and academia remains comparatively tiny. What's more, the fossil fuel industry has been the single biggest sector represented in every CCUS Forum working group, all of which have been co-chaired by the fossil fuel industry or organisations which have ties to it (see Annex 2 for our methodology). As we will explore in Section II, the impact of this institutionalised corporate capture is that the fossil fuel industry's favourite false solution has been catapulted into the heart of the EU's climate plans.

The annual CCUS Forum: a fossil fuel jamboree

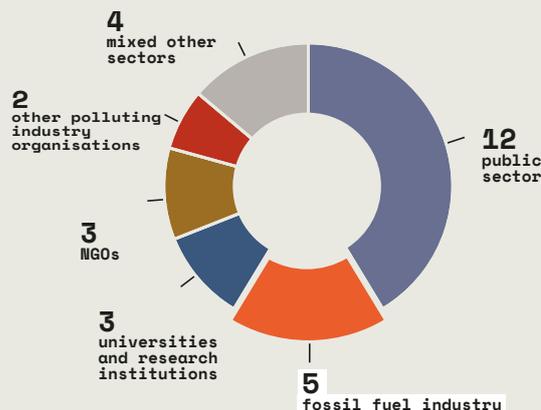
The proportion of fossil fuel industry representatives named on the agenda of the annual CCUS Forum has grown each year, even as the events get bigger – but at every single one, the fossil fuel industry has been the largest private sector represented.



2021: First CCUS Forum

The inaugural CCUS Forum, on 11 October 2021, was an online-only event that the [Commission says](#) gathered nearly 400 participants. Of the 17 speakers, moderators and reception hosts listed in the agenda that were not from the public sector, nearly one-third were from the fossil fuel industry – the single biggest (non-public) sector. They included Shell, Eni, the Zero Emissions Platform (ZEP), the International Association of Oil & Gas Producers (IOGP), and the Porthos CCS project, whose partners include Shell and ExxonMobil. The remaining entities included two pro-CCUS NGOs – the Clean Air Task Force (CATF) and Bellona – as well as two speakers from the fossil fuel-funded Florence School of Regulation (see Box 3), and former MEP and long-time fossil fuel industry ally Chris Davies (see Box 2).

29 speakers/moderators/reception hosts



In the spotlight: the Zero Emissions Platform (ZEP).

Originally set up by the Commission as the [European Technology and Innovation Platform \(ETIP\) on CCS](#), ZEP has become an enormously influential pro-CCUS group. Today, due to its oil and gas-heavy [membership](#) – including BP, Eni, Equinor, ExxonMobil, Repsol, Shell and TotalEnergies – and [activities](#) that serve the industry's interests, ZEP is in effect little more than an institutionalised fossil fuel industry lobby group.

Box 2: A recurring role for the fossil fuel industry's MEP allies

In the agenda for the first CCUS Forum, Chris Davies, as moderator of a discussion panel on 'How to build political momentum for CCUS', is described as a "Former MEP and the rapporteur of the CCS Directive". In his role as [rapporteur of the 2009 Directive](#), Davies was [instrumental in securing public funding for CCS](#). A 2010 investigation by Corporate Europe Observatory [revealed that](#) Davies had strategised and co-drafted amendments with Shell, BP and ZEP, and that he ultimately told the Commission that if it didn't agree to his proposals around public subsidies for CCS demonstration projects he would block all progress on the dossier. Davies is not only a veteran fossil fuel industry ally, but during the 2021 CCUS Forum he was a senior advisor at Rud Pedersen Public Affairs, a Brussels-based lobby firm whose 2021 clients included oil and gas lobby group IOGP on the subject of CCUS.

At the second CCUS Forum in 2022, Davies moderated a panel on 'How to successfully deploy CCS and CCU'. Again, he was billed only as a former MEP and rapporteur on the CCS Directive. At the time of the 2022 event however, he was still in his position at Rud Pedersen Public Affairs, whose [2022 clients included](#) BP and Liquid Gas Europe. In [April 2023](#), Davies became the Director of [CCS Europe](#), a pro-CCS 'political advocacy and communications campaign body' whose [members include](#) gas transmission system operators Snam and [Open Grid Europe](#) and oil and gas services firm [Baker Hughes](#). By the third CCUS Forum, Davies, again a moderator, was billed as the CEO of CCS Europe – the first time his fossil fuel connections were explicitly acknowledged.

Chris Davies isn't the only MEP who has been involved in the annual CCUS Forums. His panel at the 2021 Forum also featured a sitting MEP: Cristian-Silviu Buşoi from the EPP, who chairs the Industry, Research and Energy (ITRE) Committee. During the current parliamentary term, Buşoi has declared having 44 lobby meetings in his role as ITRE chair, 12 of which were with the fossil fuel industry (by far the biggest single sector he met with). A further 11 of his meetings were held with various other polluting industry players; just one was with a university/research body, and not a single one was with NGOs.³

In a similar vein, the 2023 Forum featured a keynote speech from EPP MEP Christian Ehler, who was the rapporteur on the Net Zero Industry Act (NZIA). During his tenure in this role, Ehler had 31 lobby meetings on the NZIA. This included six meetings with the fossil fuel industry, a further 19 meetings with other polluting industry players, and not a single meetings with NGOs.⁴ The fact that the current and former MEPs who have featured on the agendas of the annual CCUS Forums have close ties or have met frequently with the fossil fuel industry is indicative of the Forum's broader participation: it is a club for the fossil fuel industry and other big polluters and their allies (see Box 3).

³ The remaining meetings were with other industries, e.g. medical technology and pharmaceuticals (which do not count as polluting industries like the heavy industries, the automobile industry, etc.). Source: [IntegrityWatch](#), accessed on 18/03/2024.

⁴ Of the remaining meetings, two were with the solar industry. Source: [IntegrityWatch](#), accessed on 18/03/2024.



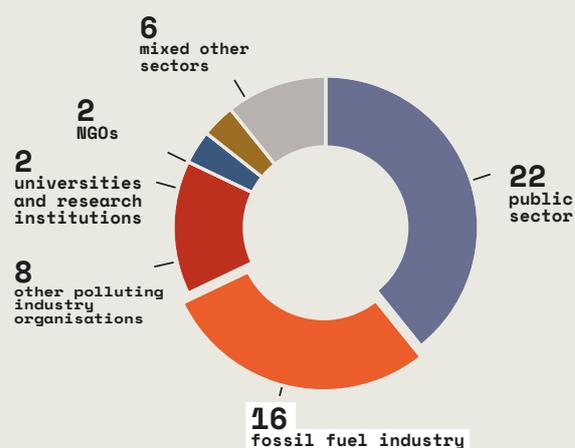
In the spotlight: International Association of Oil & Gas Producers (IOGP).

This fossil fuel lobby group's members include practically every oil major you can think of, from ExxonMobil and Equinor to Chevron and Shell. IOGP has a history of lobbying for false solutions like 'blue hydrogen' made from fossil gas with CCS – one of the industry's main justifications for both CCS and continued gas extraction. IOGP Europe declares spending up to one million euros each year lobbying the EU, has eight lobbyists with access passes to the European Parliament, and has held over 50 top-level meetings with the European Commission in the past decade.

2022: Second CCUS Forum

The second CCUS Forum, from 27-28 October 2022, took place in Oslo. Equinor, Norway's state-owned oil company, is both a major proponent of CCS and a recipient of public money for the technology as part of the country's Northern Lights project (see below). The hybrid event gathered "almost 300 in-person participants and up to 1400 online, showing a growing interest and importance of CCS and CCU in mitigating climate change" according to the Commission. Of the 34 speakers, moderators and reception hosts that weren't from the public sector, nearly half came from the fossil fuel industry – by far the largest private sector represented. They included Equinor, Wintershall, Neptune Energy, Snam, IOGP, ZEP, the Global CCS Institute (whose members include BP, Chevron, Eni, Equinor, Shell et al.), Belgian gas grid operator Fluxys, and the Aramis Project, a collaboration between TotalEnergies, Shell, Energie Beheer Nederland (EBN) and Gasunie. The remaining entities again included CATF, Bellona and the Florence School of Regulation (see Box 3).

56 speakers/moderators/reception hosts



In the spotlight: Equinor, Shell and TotalEnergies / Northern Lights.

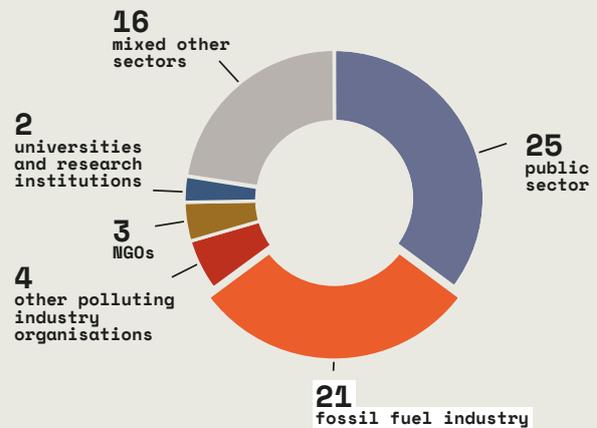
Norway's Northern Lights CO2 transport and storage project is a partnership between Equinor, Shell and TotalEnergies. The companies have received well over €1 billion from the Norwegian government (which promised to publicly fund 80% of the project) and at least €131 million from the EU's Connecting Europe Facility. Northern Lights plans to sequester large amounts of CO2 beneath the North Sea, despite problems with Equinor's earlier CO2 storage efforts in Norway. These projects, at Sleipner and Snøhvit, cast doubts on the feasibility of offshore CCS. Although they have been portrayed as 'success stories', pressure rises and unexpected CO2 movements posed the risk of leakages and caused project suspensions, leading the Institute for Energy Economics and Financial Analysis (IEEFA) to conclude that the world may lack the "technical prowess, strength of regulatory oversight" and long-term commitment to safely manage large-scale CCS.

Meanwhile, Northern Lights' partners all have vested interests in the future of fossil fuels, and lobby hard for false solutions that provide an escape hatch for the industry whilst delaying real climate action. These corporate 'solutions' include carbon offsets, carbon markets, fossil gas as a 'transition' fuel, blue hydrogen, and of course CCUS. In 2022, 86% of Equinor's investments went to fossil fuels. The company spends up to €2.75 million each year lobbying Brussels, has four lobbyists with access passes to the European Parliament on staff, and has held over 70 top-level meetings with the European Commission since 2014. Shell, which is upping its fossil fuel investments whilst scaling back its climate commitments, spends up to €4.5 million per year lobbying the EU, has five lobbyists with Parliamentary passes, and has held over 120 top-level Commission meetings since 2014. TotalEnergies, which is using its record profits to double down on new fossil fuel investments, spends up to €3 million each year lobbying Brussels, has eight lobbyists with Parliamentary passes, and has held nearly 60 top-level Commission meetings in the last decade.

2023: Third CCUS Forum

The third CCUS Forum, from 27-28 November 2023, took place in Aalborg, Denmark – home to the country's largest single source of fossil CO₂ emissions, the Aalborg Portland cement plant, which plans to use CCS to decarbonise. Another hybrid event, the Commission said the Forum involved 450 in-person participants and up to 1400 online participants, illustrating its "rising popularity". Of the 46 speakers, moderators and reception hosts that weren't public sector, nearly half were from the fossil fuel industry – by far the single biggest (non-public) sector represented. These included Shell, TotalEnergies, Wintershall, OMV Petrom, INEOS, Snam, Fluxys, Aramis Project, IOGP, ZEP, Carbon Capture and Storage Association (CCSA – see page 11), Global CCS Institute (see Box 3) and CCS Europe (by then chaired by Chris Davies – see Box 2). The remaining entities again included the Florence School of Regulation, CATF and Bellona (see Box 3).

71 speakers/moderators/reception hosts



Box 3: 'Neutral'-sounding research institutions and NGOs with fossil fuel ties

At the inaugural CCUS Forum in 2021, two 'part-time professors' from the Florence School of Regulation presented a discussion paper, which the Commission subsequently published alongside the Forum's agenda and minutes. Both 'professors' are former high-level Commission officials: Andris Piebalgs, former Commissioner for Energy (2004-2009), and Christopher Jones, former Deputy Director-General at DG Energy (2014-2018). Jones subsequently spun through the revolving door to work with the law firm Baker McKenzie (whose current clients include IOGP) on topics including oil, gas and hydrogen.

Notably, 'blue' hydrogen made from fossil gas with CCS is an oft-cited justification for CCS infrastructure build-out; it also featured in the paper published by the CCUS Forum 'vision' working group, which was co-chaired by the Florence School of Regulation. The discussion paper that Piebalgs and Jones presented at the 2021 forum, entitled 'CCUS is necessary to reach climate neutrality', likewise argued that "we will need significant quantities of blue hydrogen" for the EU to meet its Green Deal objectives. It went on to urge more public funding and regulatory support for the building of a "CO₂ grid" and "adequate storage", as well as a "European Strategy for CCUS and legislative package". Fast forward two and a half years, and we're well on the way with the NZIA and ICMS. Jones, it should be noted, also spoke on behalf of the Florence School of Regulation at the 2022 and 2023 CCUS Fora, emphasising the slogan "no CCUS, no Green Deal" in his 2022 speech.

So why is a neutral-sounding academic institution mirroring the fossil fuel industry's wish list? There is no doubt that the Florence School of Regulation is an active proponent of CCUS, and it's easy to see why with a closer look at the organisation: its funders include BP, Shell, TotalEnergies, Cheniere, Snam, Enagás, Endesa, Eni and RWE. As their website explains, being an "Ielnergy donor means becoming an integral part of our community of experts and benefitting from privileged access to our activities".

The Clean Air Task Force (CATF) was another co-chair of the vision working group; this organisation also contributed to the infrastructure and public perception working groups, and has spoken on or moderated panels at every annual CCUS Forum to date. CATF is a pro-CCUS NGO that describes itself as "a non-traditional, fact-based, environmental organization" and lists corporate support as one of its funding sources. Two of CATF's board members have ties to the fossil fuel industry: one is a senior fellow at the Brussels-based neoliberal think tank Bruegel (whose corporate members include Shell, Snam, PGE, Fortum, Eni, E.On and Enel); the other is a senior advisor at the NorthBridge Group, a natural gas sector consulting firm.⁵

Bellona is another NGO that features heavily in the annual CCUS Forums and working groups. The group has links to fossil fuel companies and a long history of advocating for CCS – including helping to secure public funding from the EU.⁶ According to its website, Bellona receives financial support from companies – including offshore oil and gas services firm Subsea7 – though not, it says, directly from oil companies. However, the group has received oil funding in the past, and as recently as 2021 the Equinor-Shell-TotalEnergies CCS partnership Northern Lights (see page 8) declared giving financial support to Bellona. Furthermore, for over a decade, Bellona has been vice-chair of the pro-CCUS fossil fuel-dominated group ZEP (see page 7). Over the years, Bellona has also lobbied high-level Commission representatives on CCS at joint meetings with fossil fuel groups including ZEP, the Global

⁵ Dr. Simone Tagliapietra and Bruce Phillips, respectively (accessed on 22/04/2024).

⁶ "Bellona was a significant contributor to the development of NER300, a support scheme that became a blueprint for the EU's Innovation Fund."

CCS Institute and Open Grid Europe. It counts a whopping 13 lobbyists with access passes for the European Parliament, and it hosted a pro-CCS event there in 2023.

Despite their links to and history of collaboration with the fossil fuel industry, it is notable that press coverage of the Forum tends to refer to CATF and Bellona as evidence of support for CCUS by environmental NGOs. For example, [Euractiv's coverage](#) of the 2022 CCUS Forum claimed that "a growing number" of environmental NGOs "now believe action is needed to get CCS technology off the ground", though only CATF was named and quoted. Meanwhile, the Commission is desperate to portray the CCUS Forum as a multi-stakeholder platform rather than the fossil fuel and polluting industry club that it is. The [Commission's website](#) says the CCUS Forum's working groups are "organised by the Commission and moderated and supported by co-chairs selected from participating stakeholders, ensuring balanced representation (NGOs, think tanks, public administration, academia and industry associations)." Similarly, its [Industrial Carbon Management Strategy \(ICMS\) proposal](#) refers to the "CCUS Forum stakeholder coalition (industry, NGOs)".

These descriptions are extremely misrepresentative. The proportion of NGOs involved in the CCUS Forum is incredibly small; in the working groups, NGOs range from 2% to 5% of members, and many of them have fossil fuel links. Meanwhile, the fossil fuel industry is the single largest sector in every working group, represented by between 19% and 28% of the total members (with industry as a whole forming the overall majority). Furthermore, the working group on industrial partnerships argues that only pro-CCUS NGOs should be given a role in shaping and implementing CCUS policy and funding via a future CCUS Industrial Partnership (which the fossil fuel-steered group has been given a role in designing, as detailed in Section II).

Groups like the Florence School of Regulation, CATF and Bellona – alongside other players such as the University of Stavanger, which receives millions in funding from Equinor⁷ and is a member of both the infrastructure and public perception working groups – illustrate that the dominance of the fossil fuel sector in the CCUS Forum is even greater than direct fossil fuel industry participation suggests. Because this doesn't include the Trojan horses: the seemingly neutral academic organisations and NGOs that, on closer inspection, turn out to have ties or links of some kind with the fossil fuel industry.

CCUS Forum Working Groups

dominated and steered by oil and gas

The fossil fuel industry has been the single largest sector represented in the membership of every single CCUS Forum working group. And every working group has been co-chaired by the fossil fuel industry, or organisations with links to it.

Vision

Members



are fossil fuel industry



Co-chairs

2/3

have fossil fuel industry links



Infrastructure

Members



are fossil fuel industry



Co-chairs

2/3 are fossil fuel industry

1/3 have fossil fuel industry links



Public Perception

Members



are fossil fuel industry



Co-chairs

1/3

are fossil fuel industry



Industrial Partnership

Members not listed, but...



of named contributors are fossil fuel industry



Co-chairs

1/3

are fossil fuel industry



⁷ Equinor granted the University of Stavanger 42.5 NOK (approx. €3.7 million) in February 2024, following previous grants in 2019.

CCUS Forum vision working group



Among this group's three co-chairs, none directly represent the fossil fuel industry (i.e. companies that extract, transport, store, refine, sell or burn fossil fuels to produce electricity, and the groups they belong to). However, on closer inspection it is clear that two of the co-chair organisations have ties to the fossil fuel industry and are strong proponents of CCUS:⁸ the Florence School of Regulation and the Clean Air Task Force (CATF, [see Box 3](#)). Within the working group's 86 members, at least 24 represent the fossil fuel industry – including Shell, BP, Chevron, Snam, Repsol, RWE, TotalEnergies, Wintershall, Eni, Equinor, Uniper, IOGP, the Global CCS Institute, the European Roundtable on Climate Change and Sustainable Transition (ERCST, [see below](#)) and CCSA/ZEP ([see below](#)). The fossil fuel industry is by far the largest single sector represented.

Among the other members, nine represent ministries or public bodies, two are from universities or research institutions, and there are two NGOs. At least 17 members are from other polluting industries, ranging from steel and cement to chemicals and shipping. Many other members that don't fit the narrow definition of the fossil fuel industry nonetheless serve or are integral to its interests. These range from oil and gas service companies like Baker Hughes to the eight additional CCUS industry actors or projects.⁹ What's more, some of the 'NGO' or 'research institution' members also have fossil fuel links ([see Box 3](#)).



In the spotlight: Carbon Capture and Storage Association (CCSA).

The membership of this major lobby group for CCUS is heavily populated by fossil fuel companies, including BP, Eni, ExxonMobil, GRTgaz, Shell, Snam and TotalEnergies. CCSA runs the secretariat for ZEP ([see page 7](#)), and has been pushing for financial and policy support for CCS at least as far back as the Copenhagen climate talks in 2009.

CCUS Forum infrastructure working group



The main paper published by this working group reveals that two of its three co-chairs represent the fossil fuel industry: IOGP and ZEP ([see page 7](#)). The third co-chair, Bellona, is an NGO with a long history of working with the fossil fuel industry to promote CCS ([see Box 3](#)). Of the 200 contributing organisations named in the paper, at least 43 represent the fossil fuel industry – by far the largest single sector represented. These include TotalEnergies, Shell, BP, Chevron, Snam, Uniper, Repsol, Eni and CCSA, as well as multiple representatives of ExxonMobil, Equinor, RWE and Wintershall. By comparison, 27 contributors were from ministries or public bodies, 22 from universities or research institutions, and just seven from NGOs ([see Box 3](#)). At least 40 contributors came from other polluting industries, and many of the other representatives are not classified as fossil fuel industry but nonetheless uphold its continuation. These include 13 additional CCUS industry actors or projects, numerous oil and gas services, and engineering and infrastructure firms.

A second paper from the infrastructure working group – coordinated by ZEP on the topic of CO₂ specifications – also names three co-chairs. Two of these represent the fossil fuel industry: oil and gas producer Wintershall and Progressive Energy, which is involved in "low carbon hydrogen" and CCS projects including a joint venture with Essar Oil UK and EET Hydrogen. According to DG Energy's CCUS Forum team, the members of the infrastructure working group "drafted both papers".¹⁰



In the spotlight: The European Roundtable on Climate Change and Sustainable Transition (ERCST).

The members of this Brussels-based 'think tank' include TotalEnergies, Shell, PGE, ExxonMobil, Enel, Eni, BP and FuelsEurope, whilst its project funders include ExxonMobil, FuelsEurope, Enel, and the Oil and Gas Climate Initiative (OGCI). ERCST – which is the brainchild of influential fossil fuel industry ally and carbon market zealot Andrei Marcu – has been pushing for a carbon removals market ([see Box 4](#)).

Public perception working group:



One of this group's three organisational co-chairs represents the fossil fuel industry, namely ERCST ([see above](#)). One of the ERCST staff named as co-chair is its founder Andrei Marcu, a long-time proponent of false solutions like CCUS and carbon markets ([see Box 4](#)). Of the working group's 145 members, at least 28 represent the fossil fuel industry – the largest proportion of any sector represented. These include Chevron,

⁸ The third co-chair, who withdrew on 5 October 2022, was from the Danish Ministry of Climate, Energy and Utilities.

⁹ Where the fossil fuel industry is e.g. a project partner in a CCUS project, it is counted as fossil fuel industry. See Annex 2 on methodology for more details.

¹⁰ Based on correspondence with ENER-CCUSFORUM@ec.europa.eu in March/April 2024.

Eni, Equinor, ExxonMobil, Gasunie, Neptune Energy, Repsol, Shell, Snam, Wintershall, IOGP, ZEP and CCSA. 17 members come from ministries or public bodies, 21 from universities or research institutions, and seven from NGOs (see Box 3). A further 26 are from other polluting industries, and additional members that whilst not categorised as fossil fuel industry but nonetheless facilitate its existence include eight additional CCUS industry actors or projects, various engineering firms, and oil and gas service companies.



In the spotlight: Eni and Snam / Ravenna.

The joint CCS project of Italian oil giant Eni and gas infrastructure company Snam near Ravenna, Italy aims to transport 25,000 tons of CO₂ captured at Eni's Casal Borsetti gas power plant each year. After being liquefied, the CO₂ would be moved to the Porto Corsini Mare Ovest offshore platform, where it would be injected into an exhausted offshore gas field. The Ravenna CCS project is described as 'phase 1' (due to start up in 2024) of a much larger cross-border project: the Callisto (CARbon LIquefaction transportation and STOrage) Mediterranean CO₂ Network. The development of 'phase 2' – the liquefaction, transport and storage of CO₂ originating in the Marseille-Fos industrial district in France – is expected to start in early 2027 and aims to store up to 4 million tons (Mt) of CO₂ per year by 2030. Eni and Snam say that further expansion could allow up to 16 Mt of CO₂ per year to be stored (to a maximum capacity of 500 Mt).

Callisto's promoters – Snam, Eni and French company Air Liquide – say it will be the "biggest open access multi-modal CO₂ Hub in the Mediterranean". The Commission has rewarded this ambition by including it in its most recent list of Projects of Common Interest (PCI), meaning it could access public funding through the EU's Connecting Europe Facility. Amazingly, however, information about the economic sustainability and safety of the project remain unclear, and according to ReCommon are not in the public domain. This lack of transparency over safety, feasibility and cost is accompanied by a complete blank around the market 'demand' for CO₂ transport and storage. Snam launched its survey on the potential market for CO₂ transport and storage at the Ravenna site only in February 2024 (and at the time of publication had already extended the deadline by a month, to give companies "more time"...).

Industrial partnership working group:



Unlike the publications of the other working groups, the paper published by the industrial partnership group does not list its members or contributors. Instead, it names the group's three co-chairs, all of whom represent polluting industry organisations,¹¹ and one of whom is also a vice-chair of the influential fossil fuel industry-dominated group ZEP. The paper also names five organisations from which "specific input" was received, amongst "many others". Of these five groups, three represent the fossil fuel industry, namely ZEP, ERCST (see page 11), and CO₂ Value Europe (whose members include gas transmission and storage company Teréga, Mitsubishi Corporation – which has an oil and gas division – and Engie – whose fossil gas interests include growing LNG imports and the development of new gas-fired power plants).

II. Mirroring strategies:

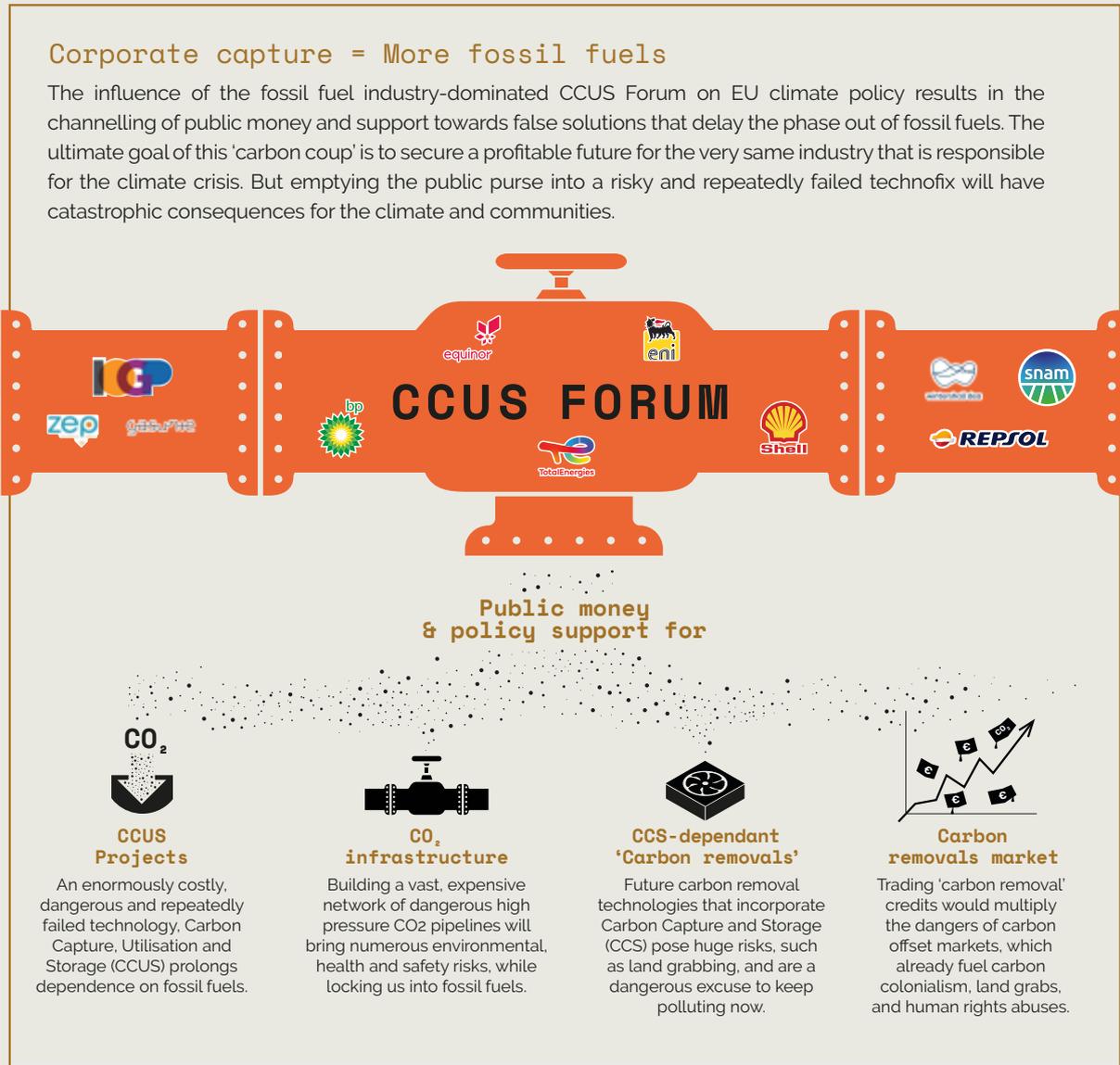
Commission's CCUS policy reflects CCUS Forum demands

Numerous proposals and entire sections of wording in the European Commission's February 2024 Industrial Carbon Management Strategy (ICMS) proposal – essentially a strategy outlining large-scale regulatory and financial support for CCS, CCU and carbon removals, as well as the creation of a single market for CO₂ – closely resembles the recommendations in the papers published by the CCUS Forum's influential and fossil fuel-dominated working groups (see Annex 1). As Energy Commissioner Kadri Simson, an established fossil fuel industry ally, told the 2023 CCUS Forum, "you called for a specific and verifiable target for storage capacity, industrial support, and structural solutions... And this proposal does exactly that... And I do believe that this is an opportunity for EU oil and gas producers."

The ICMS proposal mentions the CCUS Forum by name ten times, from citing its views to explicitly giving it an even bigger role in shaping EU CCUS policy and allocation of public funding down the road. It refers to the Commission's intention to "continue drawing on" the CCUS Forum in future work on industrial carbon management, with specific references to areas where the "CCUS Forum will provide input", will work "in cooperation with" the Commission, and will be 'used' to ensure "good coordination". The mechanism that will allow the CCUS Forum – an annual event that forms its own working groups – to play this role is unclear; the lack of democratic legitimacy in giving such power to a corporate capture club could not be more plain. We have asked DG Energy the crucial question of how the ICMS envisages its cooperation with the CCUS Forum:

¹¹ The European Lime Association, the European Cement Association (CEMBUREAU), and Heidelberg Materials/ZEP.

Will it be with the working groups? Their co-chairs? Or any company or organisation that attends a CCUS Forum or takes part in a working group? To date, we have not received an answer.¹²



A vision for the fossil fuel industry's future:

At the inaugural CCUS Forum in 2021, a working group was set up to create a vision for CCUS. Ultimately, the paper published by the vision working group became the blueprint for DG Energy's subsequent ICMS proposal, which picks up all of the working group's main proposals and cites it directly no less than three times. This carbon copy of the fossil fuel industry-dominated group's desires occurred despite the fact that the vision working group's paper is based a number of false premises: for example, that without large-scale CCUS – and CCUS-based carbon removals – the EU cannot meet its climate targets ("no CCUS, no net zero"), and furthermore that CCUS fossil power stations can "support" renewables. Although these assumptions are far from unassailable (see Box 6), they have been to a large extent embraced by the Commission. For example, Kadri Simson noted at the third CCUS Forum that "we will have to scale up CCS under all scenarios". Having invited the fossil fuel industry to serve as its advisers, it is inevitable that the Commission is hearing the message that the prevailing fossil fuel-dependent system must be preserved at any cost. As a result, the voices of those calling for the necessary transformation to a system that is better for both people and planet are being weakened and marginalised.

The ICMS proposal follows the vision paper's recommendations to a staggering degree (see Annex 1). It includes major plans to channel public funding into fossil fuel industry pockets and to give them more power over planning CCUS infrastructure build-out in the following ways:

¹² As of 15 April 2024 (our requested date for a reply).

- > **By including CO2 transport and storage infrastructure projects in the Important Projects of Common European Interest (IPCEI)**, which removes key EU exemptions for state aid. In other words, this makes CCUS infrastructure eligible for public money from Member States' national budgets. These funds could be better spent on real solutions like scaling up renewable energy and energy efficiency measures, rather than on risky, fast-tracked infrastructure that supports a technology promoted by the fossil fuel industry to allow the continuation of its climate-catastrophic business model.
- > **By giving industry a central role in designing an EU-wide CO2 transport infrastructure network, modelled on the gas sector.** This approach in the gas sector, however, enabled the European Network of Transmission System Operators for Gas (ENTSO-G) to predict future gas use and to propose gas infrastructure projects. As a result, ENTSO-G's members – companies like Enagás, Snam, Gasunie, Fluxys and GRTgaz – received public money to build and profit from the gas pipelines and LNG terminals they proposed. Unsurprisingly, giving companies with a vested interest in building infrastructure the role of deciding upon what is needed has resulted in consistent over-estimates of gas demand, leading to the lock-in of fossil gas and creating 'stranded assets' whereby public money is wasted on infrastructure we cannot use. Notably, ENTSO-G was a member of the CCUS infrastructure working group and a speaker at the 2023 CCUS Forum.
- > **Through the creation of a carbon removals market**, which the ICMS promises to consider. This would allow polluters to keep emitting CO2 so long as they purchase removal credits from 'offset' projects, such as those that involve speculative CCS-dependent carbon removal technologies. This demand has been repeatedly pushed by Big Oil (see Box 4).

It is both astonishing and appalling that an official Commission proposal for an EU strategy mirrors the 'vision' of an undemocratic, illegitimate and fossil fuel-dominated 'working group' set up by the CCUS Forum.

A 'vision' based on folly:

Two other elements of the vision working group paper illustrate why it should have no role in influencing EU policy. First, its characterisation that "a 'chicken and egg' problem exists" whereby it is "impossible" to know how much and when demand for CO2 transport and storage will develop. And, in addition, it is "not possible to wait until the demand develops to build the pipelines and storage required". In other words, even though there is currently no demand for CO2 transport and storage (as the CCUS industry barely exists), Europe should throw vast amounts of public money towards the building of speculative and risky infrastructure on a scale that will dwarf the current oil industry (see Box 6). The outcome of this vision is the preservation of the fossil fuel industry's business model, rather than the transformation of our economy to one that is fossil free.

The second element, equally as absurd, is the paper's assertion that the "multiple billions of euros" of needed investment will not flow unless the Commission acts to "catalyse the development of markets" for carbon capture and utilisation (CCU) products. In other words, industry wants the Commission to artificially create markets for a so far non-existent commodity – CO2 – as a feedstock for chemicals, fertilisers, plastics, building materials, synthetic fuels. This in turn would incentivise the creation of so far non-existent CCUS infrastructure. This folly rests on the back of an even bigger folly: the major shortcoming of CCU, which is that captured CO2 is often released back into the atmosphere at the end of a product or material's life. Put plainly, CCU fails to keep CO2 permanently out of the atmosphere (see Box 6).

Although the CCUS working group's vision paper wasn't published until April 2023, a draft version was presented at the 2022 CCUS Forum, the "most important outcome" of which was the "Commission's commitment to issue a communication in 2023 setting out the strategic vision for CCUS". Summarising the draft paper, ERCST explains that it called on the Commission "to play a coordinating role at EU and Member State level to ensure the acceleration of CCUS deployment" through "clear communication, setting concrete targets, creating a transparent and predictable regulatory framework, and increasing funding for these projects". This 'vision' quite clearly became the template for the Commission's promised CCUS communication, the ICMS proposal.

The vision paper sets out industry's wish for the Commission to push Member States to embrace CCUS, and there is no doubt that the CCUS Forum itself has played a strategic role in getting governments on board the CCUS train. Following the 2022 Forum's announcement that 73 CCUS projects were being developed across Europe, the 2023 Forum saw the signing of the 'Aalborg Declaration by Denmark, France, Germany, Sweden and the Netherlands (the EU countries leading the CCUS drive). This declaration recognises CCS as a "climate tool" and calls for a European CO2 network and market. Oil and gas lobby IOGP praised the signatories of the declaration, adding that the "political momentum for CCUS must now be accompanied by pragmatic enabling measures (and we happen to have some ideas 😊)".

There are, it should be noted, clear parallels between the fossil fuel industry's push for CCUS and the "exaggerated claims around the need for hydrogen and LNG infrastructure in recent years", as [IEEFA points out](#): "An industry push for business case development means maximising the potential size of the market, in order to drive investment and profits, rather than allowing a more holistic, systems-level approach to planning for the energy transition, which might leave a smaller role for certain industries and technologies. Such an industry-led approach can drive vast sums of public and private resources into inefficient projects, wasting time and budgets and creating stranded assets".

Box 4: The push for a 'carbon removals' market – and some of the key figures behind it

Carbon Capture and Storage (CCS) is a key component of speculative carbon removal technologies like Bioenergy with Carbon Capture and Storage (BECCS) and Direct Air Carbon Capture and Storage (DACCS). CDR is a [greenwashing fantasy](#) for fossil-entrenched governments and corporate interests who claim that their pollution can someday be compensated for by sucking equal amounts of carbon back out of the atmosphere. The fossil fuel industry uses the promise of these problematic, risky and colossally expensive future technofixes to justify the immediate prioritising (and public funding) of CCUS infrastructure.

A key element on industry's agenda to further profit from this flawed approach is the push for a Carbon Dioxide Removals (CDR) market. This would involve the trading of 'carbon removal' credits – or 'negative emissions' allowances – in new or existing carbon markets, such as the EU's Emissions Trading System (ETS). Certificates for 'carbon removals' from technologies like BECCS and DACCS would be traded as a form of carbon offsetting; in other words, polluters would be allowed to keep emitting CO₂ so long as they purchase removal credits. In the last two years, the EU has prepared major regulations that will likely turn this nightmare scenario into a reality.

For a start, the EU's recently approved [Carbon Removal Certification Framework \(CRCF\)](#) gave offsets a credibility boost and will extend their scope and use. In 2022, more than 200 groups within the [Real Zero Europe](#) campaign had [called](#) for the EU to scrap the CRCF proposal, asking instead for actual reductions in carbon emissions and real solutions to the climate crisis. Meanwhile, fossil fuel industry players including Shell, Eni, Repsol, E.ON, IOGP Europe and Eurogas have been using the CRCF to push for a carbon removals market (for details, see [Deadly Climate Gamble](#)). Emerging discussions about [integrating CRCF credits into the EU's Emissions Trading System](#) and endorsing voluntary 'net zero' claims in the [Green Claims Directive](#) are harbingers of dangers to come. The threat is real; both the EU and the fossil fuel industry see these developments as building blocks in the construction of rules for global carbon removals markets, allowing polluters to keep profiting while the crisis gets worse.

One particularly influential figure in this area is Andrei Marcu, the founder of think tank ERCST (which has numerous fossil fuel members, [see page 11](#)) and chair of the CCUS Forum's public perception working group. Marcu has had a long career within fossil fuel lobby groups that push false solutions to the climate crisis, like CCS and carbon markets. His CV includes stints at the World Business Council for Sustainable Development (WBCSD), which counts BP, Chevron, Eni and Equinor [among its ranks](#), as well as the influential pro-carbon market think tank CEPS, [whose members include ExxonMobil and Shell](#). No stranger to the revolving door, Marcu has also worked for the World Bank and the UN Development Programme and has served as a negotiator for various countries at the UNFCCC climate talks. In fact, he used his role as a negotiator for Papua New Guinea during COP16 in 2010 [to push for CCS](#). Perhaps most significantly, Marcu was the founder, president and CEO of the International Emissions Trading Association (IETA), [whose membership includes](#) fossil fuel majors ranging from BP, Chevron and ExxonMobil to Repsol, Shell and TotalEnergies. IETA has been incredibly influential in [pushing carbon markets globally](#), and was instrumental in establishing Article 6.4 on carbon markets in the Paris Agreement.

Marcu's latest venture, [ERCST](#), [argues that](#) the EU should allow "certificates generated by the CRCF into the ETS". In other words, this would mean that the ETS – [which for years](#) has provided windfall profits to polluters whilst blocking more effective policies – would be expanded to include the trading of carbon removal certificates. [ERCST has also presented](#) the idea that this would fit in with the Paris Agreement's Article 6.4 on global carbon markets, thereby paving the way for an international removals market. The CCUS Forum's vision working group – of which ERCST is a member – [likewise promotes](#) the creation of a carbon removals market. These demands have been incorporated into the [ICMS proposal](#), in which the Commission promises to consider how the EU ETS could help to support carbon removals ([see Annex 1](#)).

Locking-in a fossil-fuelled future with CO2 infrastructure:

The push for CCUS and CO2 infrastructure hasn't only come from the CCUS Forum's vision working group. A dedicated working group on infrastructure was also set up at the 2021 Forum and has been renewed each year since. The two papers it has published to date (more are in the pipeline, as [the group's mandate is ongoing](#)) have both had significant influence on the Commission's plans. Its [cross-border CO2 infrastructure paper](#), published in September 2023, calls on the Commission to "develop a strategy and clear targets for a common European CO2 transport network" – which the Commission's ICMS proposal and 2040 targets went on to do.

A huge number of the paper's more specific recommendations were also taken on board in the Commission's [ICMS proposal](#) (see [Annex 1](#)). These major demands from the fossil fuel industry and its allies – which want public support to build the infrastructure needed to establish a CO2 market, regardless of the likelihood that such a market will never take shape due to the high risks and great expense – have thus been seamlessly translated into official EU plans. This will have major impacts, including the following:

- > The funnelling of EU and national public funding towards CO2 pipelines and storage sites (despite the conclusion of the European Court of Auditors that previous such transfers were a waste of public money; see [Box 6](#)).
- > The undemocratic and fossil fuel-dominated CCUS Forum will be given an official role in planning this 'CO2 network'.
- > Provisions will be made to ensure that fossil fuel companies won't have to bear the costs, risks or liabilities when things go wrong (or when a CO2 market fails to take shape). These risks will be exacerbated by speeded-up permitting processes.

The infrastructure working group's [second paper](#) concerns technical specifications for CO2 transport. It argues that safe transport of impure CO2 streams "is possible today", but at the same time lists at least 12 research questions that must still be answered, among them the risks linked to chemical reactions resulting from "the mixing of different impurities from different CO2 streams". It gets around this contradiction by arguing that wherever "fundamental understanding of processes is incomplete", the design of CO2 transport networks will follow common engineering safety practices to ensure they are "on the safe side". In other words, the message is: go ahead and build the infrastructure, regardless of the fact that we don't yet know what the safety risks might be. The paper implies that answering these questions is merely about improving future infrastructure design so that it is more economical (as "less conservative" safety margins will be needed once we have a better understanding of e.g. how different CO2 impurities interact). At the same time, however, the working group argues against prohibitive costs for industry when building CO2 networks. This desire to minimise costs for polluters is in turn reflected in the ICMS proposal (see [Annex 1](#)).

The whole approach of the CO2 specifications paper – which the Commission has taken on board – is more broadly indicative of the fossil fuel industry's strategy: go full steam ahead with building massive, multi-billion euro transport and storage infrastructure for CO2 that has not yet been captured, for a CO2 market that doesn't currently exist. Furthermore, this market may remain too risky and too costly to ever exist; technical and safety questions are unknown, and there are no guarantees that CO2 storage will keep 'captured' CO2 underground forever. All of this is part of a huge gamble on a fossil-fuel prolonging technology that has a long history of over-promising and under-delivering (see [Box 6](#)).

Box 5: Lock in CO2 infrastructure, secure the future of fossil fuels

The fossil fuel industry places great importance on the securing of public finance and regulatory support for the cross-border CO2 transport infrastructure needed to facilitate its CCUS vision. The reasoning is simple: if you can secure the infrastructure, you've locked in continued dependence on the fossil fuel industry. Why is that? Because you only need to capture, transport, store or use the CO2 from burning fossil fuels if you're still burning them. And if you've spent billions of public money building CO2 infrastructure (rather than transforming the economy away from fossil fuel dependence), then you have a serious sunk investment to recoup. And what if CCUS continues to over-promise and under-deliver? Well, the fossil fuel industry still gets additional time to carry on with business-as-usual under the (erroneous) assumption that CCUS (and subsequent carbon removals) will sort it all out. Put plainly, throwing vast amounts of scarce public resources into building CO2 transport infrastructure is a trap we cannot afford to fall into.

The scale of the infrastructure needed to support the fossil fuel industry's vision for CCUS cannot be understated: [it has been estimated](#) that by 2050, the CCUS industry and associated CO2 infrastructure would need to be two to four times larger than the current global oil industry. This infrastructure includes high-pressure, low temperature

CO₂ pipelines to transport the captured carbon to geological storage sites; these can leak or rupture, potentially explosively. In addition, the release of compressed CO₂ can result in the asphyxiation of humans and animals. In April 2024, for example, leakage from an ExxonMobil-owned CO₂ pipeline in the US state of Louisiana resulted in the issuance of a shelter-in-place order for local residents to avoid the risk of asphyxiation. This followed a similar pipeline rupture in Mississippi, which necessitated evacuations and medical treatments. Underground storage, meanwhile, comes with the dangers of potential leakage, contamination of drinking water, and stimulation of seismic activity. Furthermore, by prolonging the extraction of fossil fuels rather than leaving them in the ground, CCUS would be responsible for negative impacts on communities and their environments along fossil fuel supply chains. These include oil spills, habitat destruction, soil and water contamination, air pollution and severe health impacts, all of which tend to fall disproportionately on marginalised communities.

As well as the dangers, there are also huge uncertainties about the feasibility of large-scale CO₂ infrastructure – with particular concerns coming from engineering firms. In its greenwashing PR, Italian gas infrastructure giant Snam (see page 12) refers to developing “future proof multi-molecule infrastructure” –i.e., pipelines suitable for fossil gas, biomethane, hydrogen, and CO₂ for example. From an engineering perspective, however, these gases have very different requirements. Hydrogen is a much smaller molecule than fossil gas (methane), for example, and therefore cannot be transported in fossil gas pipelines (unless blended with methane, and then containing only around 5% hydrogen). As one engineering consultancy points out, transporting hydrogen or CO₂ requires the “use of different materials, methods of construction, quality control testing and operational procedures than traditional hydrocarbon pipelines”.

Furthermore, the concept of ‘repurposing’ existing gas pipelines for CO₂ doesn’t match up with industry’s expectations. At a 2023 gas industry event, for example, gas infrastructure operator Gasunie candidly stated: “Most of the assets are not available because gas production is still going on. We will need a lot of new infrastructure for CCUS”. In other words, CO₂ pipelines will neither replace nor repurpose gas pipelines, precisely because CCUS is about giving a lifeline to the fossil gas industry to continue business as usual. Additionally, despite its greenwashing, Snam’s 2023-2027 investment plan shows that the vast majority of the €11.5 billion it plans to spend on ‘multi-molecule infrastructure’ will actually go towards more gas infrastructure (approx. €10.3 billion), while its ‘energy transition’ investments amount to a mere €1.2 billion (including €350 million for CCS and €100 million for hydrogen).

“Developing CCUS infrastructure speculates on the (promised) potential to capture, transport, and store CO₂ in future – but no corporation can say for how long that CO₂ will stay put. 50 years, 100 years? Forever? Snam and its peers are exposing us to an unbearable uncertainty for the planet and for society as a whole,” concludes Elena Gerebizza of ReCommon.

A pipeline for pro-CCUS propaganda:

The working group on public perception, which was created at the 2022 CCUS Forum, produced its first paper in September 2023. The paper reveals just how formalised the role of CCUS working groups has become; this group describes its main objective as to “contribute to” the upcoming ICMS proposal “by providing the Commission with recommendations on accounting for public perception of CCUS in the Strategy”. Given this working group’s influential role, it is particularly worrying that there is a major contradiction at the core of the paper. It recommends both that:

- A. “As a first step, it is crucial to establish the legitimacy of CCUS technology among the public”; and
- B. Communication on CCUS needs to provide audiences with “information on which they can formulate an opinion” including “clear and transparent presentation of the benefits, costs, and risks associated with CCUS”, and that all stakeholders (“citizens, organisations and institutions”) have the proactive “opportunity to be informed and to participate in discussions on CCUS”, whilst “avoiding one-way dissemination of information and facts”.

The goal of establishing the legitimacy of CCUS in the eyes of the public is in clear contradiction with the goal of allowing the public to form an opinion based on all of the costs, benefits and risks. As long as establishing a CCUS-favourable outcome is the pre-determined end game, the public perception working group is nothing less than a pro-CCUS propaganda shop: steered by the fossil fuel industry and other big polluters, yet nonetheless given the Commission’s ear.

The fossil fuel industry is helping Commission to create a 'CCUS Industrial Partnership':

The Commission has open ears for industry's demands for a CCUS Industrial Partnership that would give the fossil fuel and polluting industries an even more formalised role in shaping future CCUS projects, funding and regulations. For example, at a [November 2022 event run by ERCST \(see page 11\)](#), the Commission [presented the results of its survey on a CCUS Industrial Partnership](#); the findings were that 100% of the (unspecified) 14 responding participants believed that the partnership was needed.

This followed the setting up of a fossil fuel-dominated working group on industrial partnership at the 2021 CCUS Forum, [to work towards "better industry involvement in technology deployment"](#). In [August 2023](#), the group published a paper calling for a CCUS Industrial Partnership that would support the current and future Commission in "developing and implementing" the ICMS. Notably, the paper says the partnership should involve "all relevant stakeholders" including "environmental NGOs, R&D institutes... and social partners". However, it also stipulates that its task forces, which would organise the Industrial Partnership's activities, should only be open to applicants that "subscribe to the goal of accelerating the deployment of CCUS" in line with NZIA targets. In other words, only pro-CCUS NGOs should be allowed to participate in these task forces. The devil is in the details: by ensuring that only NGOs, academia and unions that already support the massive build-out of CCUS infrastructure are allowed any influence, this 'inclusive' partnership is anything but inclusive.

This trend is further exemplified by the paper's proposals that the CCUS Industrial Partnership be funded by its corporate members; that its Secretariat be run by the fossil fuel-dominated Zero Emissions Platform (ZEP, one of the organisations that gave "specific input" on the paper); and that members of its governing board could include "civil society representatives" from "ETIP CCS". That last proposal may sound obscure, but it is significant in that it attempts to portray ZEP (which is the European Technology and Innovation Platform (ETIP) on CCS) as a civil society organisation, despite its heavy fossil fuel [membership \(see page 7\)](#) and the fact that [ETIPs are recognised as "industry-led communities"](#). The history of similar such structures, like the EU's industrial alliances, also bodes ill. Take for example the European Clean Hydrogen Alliance, which was [critiqued by Friends of the Earth Europe](#) as a "self-regulation project, giving companies with a vested interest yet another avenue to advocate for public money for the recovery and just transition to go to false solutions like carbon capture and storage and fossil-based hydrogen".

It is small wonder, then, that the paper focuses on creating business models for CCUS and its associated CO₂ infrastructure that 'de-risk' investment for companies and transfer liability from industry to regulators. In other words, even as the fossil fuel industry pushes CCUS as the magic solution that enables companies to continue extracting, using and profiting from fossil fuels, it does not want to be liable for the risks inherent in the technology. Although this is a clear breach of the EU's [Polluter Pays Principle](#), the Commission's ICMS proposal, published in February 2024, takes these demands on board and emphasises the need for "partnership with industry" ([see Annex 1](#)).

Box 6: Betting on a repeatedly failed technology is a risk we cannot afford to take

As we noted in the 2022 report [Deadly Climate Gamble](#), the fossil fuel industry has been promising for the last three decades that commercially viable, at scale carbon capture and storage (CCS) is 'just around the corner'. But we don't have time to wait. The [IPCC warns](#) that the world's cumulative emissions each year up to 2030 will determine if we stay within 1.5°C of warming – and CCS cannot be expected [until at least the 2030s](#) (if it ever emerges at scale). Even the CCUS Forum's vision working group recognises that "timelines for building such infrastructure are long", citing a CO₂ storage project with a seven-year timeline. Only real emissions cuts at source – through a swift, equitable and just phase out of fossil fuels – can help us to avoid catastrophic climate change. Ultimately, CCUS is an escape hatch for the fossil fuel industry. It is designed to give companies the license to continue polluting, while at the same time distracting and redirecting funding from [real climate solutions](#) – including renewables and energy efficiency – and delaying the energy transformation. Arguments that CCUS will help to decarbonise hard-to-abate industrial sectors do nothing to change the reality that CCUS will act as a lifeline for – and lock-in future dependence on – fossil fuels.

The IPCC does not herald CCUS as the solution: The [CCUS Forum's vision working group](#) invokes the IPCC's Sixth Assessment Report as evidence that without CCUS, the EU cannot meet its 2050 climate goals. This is disingenuous, however, as the emissions reduction pathway in the IPCC's report that gives the best chance of staying within 1.5°C actually [makes limited to no use of engineered carbon capture technologies](#). Instead, it focuses on a rapid phase out of fossil fuels, and a limited amount of carbon removal by natural sources.¹³ What's

¹³ Such as reforestation and enhanced soil carbon uptake. For more information, see [Deadly Climate Gamble](#).

more, the IPCC points to "uncertainty in the future deployment of CCS" and cautions against reliance on the technology, given "concerns about storage safety and cost" and the "non-negligible risk" of CO₂ leakage from geological storage and transport infrastructure (see Box 5).

A waste of public money: In 2018, the European Court of Auditors criticised the EU for channelling €424 million into unsuccessful CCS projects, public money that failed "to deploy CCS in the EU." Real Zero Europe have noted that although €587 million in subsidies went to EU CCS initiatives between 2007 and 2016, this did not result in a single demonstration plant. Nonetheless, in November 2022 the EU Innovation Fund doubled the finance available for large-scale proposals to decarbonise Europe to €3 billion, much of which is expected to fund more CCS projects (based on the first call for proposals).

CCUS projects have a history of spiralling costs and project delays; many of them ultimately do not even materialise. Indeed, Commissioner Simson noted at the first CCUS Forum that none of the 12 large-scale CCS projects planned to be completed by 2015 has been built – despite the EU providing "enabling legislation" and significant economic resources. Yet the fossil fuel industry is trying to rewrite history: the CCUS Forum infrastructure working group claims that "While industry is ready to deploy, political support has not always been sufficient, leading to uncertainty and delays." The industrial partnership working group, meanwhile, says that CCUS deployment should have started "some time ago" yet "only a handful of projects are under construction and with heavy involvement of state or EU resources." Despite hinting at this history of false starts and failures (that have nonetheless depended on public funds), the paper says the EU must "significantly accelerate these investments by 2030" if it is to meet its 2050 climate targets. This conclusion from the industry – and the EU's willingness to dole out yet-more taxpayers money to it – brings to mind the well-known saying that insanity is doing the same thing over and over and expecting different results.

The fossil fuel industry is the first to point out that scaling up CCUS isn't viable without public funding, but the reality is that it is often cheaper to generate a unit of electricity by using wind or solar than by using natural gas (and that's without the vast expenses associated with CCUS on top). At the same time, using CCUS to mitigate emissions in hard-to-abate industries "overlooks or downplays considerations like cost, alternatives to fossil fuel inputs, and the risks posed by transporting and storing captured carbon underground", explains the Center for International Environmental Law (CIEL). Due to the array of emission sources in these industries, it is even more complex and costly for them to be fitted with CCUS than it is in the power sector. And while using renewable sources for electricity and heat can dramatically reduce industrial emissions, so can the reduction, reuse, and recycling of steel, aluminium, plastics, and so on. Critically, this reduces the need for these industrial emissions in the first place.

CCS has done little to reduce emissions: The CCS projects implemented to date have systematically over-promised and dramatically under-delivered on emissions reductions. Combining CCS with fossil fuel power plants has been an abject failure; despite receiving hundreds of millions in subsidies, very few are in operation. The two existing CCUS coal plant projects in North America have been plagued by problems, including the failure to capture the promised rates of CO₂ due to frequent breakdowns; requiring far more energy than anticipated to run; and even being mothballed for years on end in response to plunging oil prices. As CIEL noted in 2021, the 28 CCS facilities operating around the world (at industrial sites as well as power plants) have the capacity to capture just 0.1% of fossil fuel emissions. Furthermore, the vast majority (81%) of CO₂ captured globally has been used to pump out previously unreachable oil (a process called Enhanced Oil Recovery), adding yet more emissions. What's more, it is irresponsible to assume that any CO₂ injected underground (CCS) or used in the manufacture of other products like plastics or cement (CCU) will be permanently kept out of the atmosphere. As CIEL points out, this approach "merely kicks the can down a very short road, to be a burden to the next generation".

Conclusion

The CCUS Forum is an archetypal example of corporate capture. Worse, it is fully endorsed – and increasingly institutionalised – by the European Commission. This is a major coup for the fossil fuel industry. The unaccountable and fossil fuel-dominated CCUS Forum has been given a huge role in shaping DG Energy's vision for CCUS, and its recommendations have been consistently followed in the new ICMS proposal. This proposal gives the Forum an official role in developing further CCUS-enabling legislation and finance, in planning CO₂ infrastructure needs, and in designing an internal market for CO₂ – currently a non-existent 'commodity' for which there is no demand.

Despite the Commission's efforts to present the CCUS Forum as a multi-stakeholder group, the reality is very different. The fossil fuel industry has been the single biggest sector represented on the agenda of every annual CCUS Forum (aside from the public sector) – and that proportion is growing each year. What's more, every working group that has so far published a paper has been co-chaired by the fossil fuel industry (or organisations with ties to it), and the membership of each working group is dominated by the fossil fuel industry (the single largest sector represented in each working group). And while there are plenty of other polluting industry players involved – from steel to cement to chemicals companies – the number of NGOs and research organisations involved is proportionally tiny, and some of them have their own links to oil and gas. Not that 'balance' is the issue: the fossil fuel industry's history of climate denial and lobbying to delay, weaken and sabotage climate action, along with its vested interest in keeping fossil fuels flowing, means it should have no place influencing climate policy.

The corporate capture of the EU's climate, energy and industrial agenda by the fossil fuel industry is no less than a coup over our democracy, and the political prioritisation of CCUS is an assault on rational climate policy. By giving the CCUS Forum so much influence, the Commission is falling into a costly and dangerous trap. Rather than prioritising a swift, just and equitable phase out of fossil fuels and the transformation of our economy to one that is fairer, greener and less resource and energy intensive, fossil fuel interests are ensuring that Europe throws even more public support at a technology that has drained public funds while failing to progress for decades. The Commission is blindly supporting CCUS on a scale that will lock Europe in to continued fossil fuel dependence in the vain hope that this time it will work (and that future carbon removals can undo all the damage of continued fossil fuel use). The renewed push for large-scale CCUS, CO₂ infrastructure and a CO₂ market is about only one thing: providing an escape hatch for the fossil fuel industry – at the taxpayer's expense – that allows it to preserve and prolong the business model that has enabled it to profit from causing climate change.

The EU's tight embrace of oil and gas companies and their lobby groups gives them a more explicit role in steering policymaking to suit their own interests. When the well-polished PR is stripped away, the danger and ludicrousness of this approach is plain. The CCUS Forum can have no place in a democratic European Union that is capable of meeting its climate justice responsibilities. Instead, we need fossil free politics. Cleaning up our democracy is vital if the EU is to deliver real solutions to the climate crisis and bring carbon emissions down to real zero, instead of the corporate greenwashed 'net zero' that relies on fossil fuel industry delay tactics like CCUS. Only then can we decarbonise our energy system in line with climate science, with a planned phase-out of all fossil fuels and associated infrastructure, and a just transition that puts communities and workers over corporate profits.

Annex 1. How the Industrial Carbon Management Strategy (ICMS) mirrors fossil fuel wish list as set out by the CCUS Forum's working groups

CCUS Forum Working Group	Working group's recommendations	Commission's <u>ICMS proposal</u>
Vision working group paper	Calls for a CCUS Important Project of Common European Interest (IPCEI) Framework.	Regarding the setting up of a CO ₂ transport and storage infrastructure IPCEI, foresees using "the existing CCUS Forum platform to ensure good coordination, set the timing, monitor progress and maintain the pace of the project. Consider establishing a dedicated high-level platform to work beyond 2030."
	Asks for "CO ₂ Network Plan" to be "developed by a wide consortium of companies".	Foresees designing "EU-wide CO ₂ transport infrastructure" in cooperation with the CCUS Forum, and "network planning" based "on a participatory approach, as taken in the electricity and gas sectors".
	Wants a "compliance market for permanent and measurable CO ₂ removals".	Promises to "develop policy options and support mechanisms for industrial carbon removals, including if and how to account for them in the EU ETS".
	Calls for the launch of "platforms for greater knowledge sharing and collaboration between Member States, relevant authorities, and industry".	Plans to create a "knowledge-sharing platform to facilitate the collection and sharing of information and best practices on and between CCUS projects in the EU".
Infrastructure working group paper on CO₂ transport and storage infrastructure	Wants a regulatory framework to support "the development of a non-discriminatory, open-access, multimodal CO ₂ transport network".	Refers to developing "a non-discriminatory, open-access, transparent, multimodal, cross-border CO ₂ transport and storage infrastructure".
	Says "a European Storage Atlas" of information about "areas where CO ₂ storage sites can be permitted" is needed.	Promises to "kickstart work to create an EU-wide investment atlas of potential CO ₂ storage sites".
	Says that the Commission must keep "engaging with industry players to create favourable conditions" for CCUS infrastructure projects.	States that the Commission will "work towards proposing an EU-wide CO ₂ transport infrastructure planning mechanism in cooperation with... the CCUS Forum stakeholder platform", and that the "CCUS Forum will provide input" on CO ₂ network planning.
	Emphasises the need for de-risking investments, risk-sharing and "transfer of liabilities" between the storage developer and the regulatory authority/state.	Promises to help member states tackle "CO ₂ -specific cross-value-chain liability risks for operators", describes methods to "de-risk investment" (such as 'Carbon Contract for Difference' (CCfD), and suggests the combined use of various public funding streams to compensate for the "higher-risk nature of CCS and CCU projects". Plans to develop guidance for permitting processes for 'net-zero strategic projects' for CO ₂ storage that include the "the transfer of responsibility from operators back to the competent authorities and the corresponding financial security and financial mechanism requirements" and transparency on the "risk-based approaches to facilitate final investment decisions by storage operators".
	Says EU and national funding programmes should be "adapted to maximise their potential to fund CO ₂ infrastructure projects" so as to avoid the "chicken and egg" challenge whereby CO ₂ storage is ready before CO ₂ transport infrastructure is built to fill it.	States that the Commission will "facilitate investment needs in industrial carbon management up to 2040 and 2050, including by making smart use of public funding to leverage private investment", and recognises that "CO ₂ transport infrastructure is the key enabler" of CCS, CCU and carbon removals (see Box 4). Also lists numerous EU funding programmes for CCUS projects and infrastructure, including InvestEU and the Connecting Europe Facility.
	Argues for a "value chain approach" to "ensure that the CO ₂ capture and transport infrastructure are developed in parallel with storage", including "facilitated provisions regarding infrastructure planning and permitting" for CO ₂ transport as well as CO ₂ storage (which should both be classed as "net zero strategic projects").	Says that developing CO ₂ infrastructure "requires coordination across the value chain" and "timely permitting," and that Member States "should recognise and support storage sites and related capture and transport infrastructure as net-zero strategic projects under the NZIA". It adds that to "support early CO ₂ (cross-border) infrastructure projects, the Commission will consider, in close engagement with industry, nominating European coordinators to address issues such as particular difficulties or delays and to inform the development of fit for purpose regulatory framework. The CCUS Forum will provide input to this work."
Infrastructure working group paper on CO₂ specifications	Warns that higher CO ₂ purity levels for pipelines and storage "may impose prohibitive costs on the emitters, since purity comes with additional energy requirements and higher costs".	On the subject of minimum CO ₂ stream quality standards, refers to the need for "balance between cost effectiveness and risks, as different CO ₂ purity levels come with different costs".
Public Perception working group paper	Says it is "crucial to establish the legitimacy of CCUS technology among the public" and that the ICMS should "commit to enhancing public understanding and awareness of CCUS".	Promises to "use the CCUS Forum" to "stimulate public debate and increase public understanding and awareness on industrial carbon management".
Industrial Partnership working group paper	Calls for a new CCUS Industrial Partnership that would support the Commission in "developing and implementing" its ICMS strategy "beyond this legislative term" and would focus on creating business models for CCUS and CO ₂ infrastructure that "de-risk" investment for companies and transfer liability from the industry to regulators. Warns that "Uncertainties and changes in legislation" are bad for CCUS projects' longer-term feasibility.	States that achieving a "well-functioning and competitive market for captured CO ₂ requires partnership with industry" and "resources to develop a coherent policy framework that provides regulatory certainty and incentives for investments" in CCUS. Adds that the "Commission intends to continue drawing on this platform [the CCUS Forum] in the future work on industrial carbon management", as well as making several references to ways to de-risk CCUS and address liability risks for industry (see above).

Annex 2: Methodology

The 'fossil fuel industry' in this report refers to companies that extract, transport, store, refine, sell or burn fossil fuels to produce electricity, as well as to the groups they are members of.

Entities that do not meet the above definition may still:

- > have various types of links, ties or relationships (to various degrees) with the fossil fuel industry, e.g. through funding, board members, or a joint lobbying history;
- > serve the interests, continuation or business model of the fossil fuel industry, e.g. by providing oil and gas or offshore engineering services, or 'escape hatches' that justify the continued use of fossil fuels, such as CCUS projects, carbon offsets, etc.

Neither of the above, however, are included in our calculations that refer to 'fossil fuel industry' – although some organisations with fossil fuel links are explored further in the text.

Regarding calculations relating to entities that are listed on the agendas of the annual CCUS Forums:

- > if an organisation features as a speaker/moderator/reception host more than once in a CCUS Forum agenda, it is counted more than once;
- > 'public sector' refers broadly to representatives of ministries, public bodies, intergovernmental organisations, politicians, etc.;
- > 'other polluting industry organisations' refers to heavy industries/major polluters such as steel, cement, chemicals, shipping, et al.;
- > 'university/research institutions' refers to those or similar;
- > 'NGOs' refers to non-governmental organisations or similar;
- > 'mixed other sectors' refers to the remaining entities, which broadly range from consultancies, think tanks and financial actors to energy infrastructure (including oil and gas services), Direct Air Capture, other energy industry actors (e.g. district heating, solar), et al. If an entity's affiliation/interests are not clear, it is included in this category.

Regarding calculations relating to members of, or contributors to, the CCUS Forum working groups:

- > each entity is classified in one category only, with the fossil fuel category taking precedence if an entity fits in to multiple categories including the fossil fuel industry. For example, if a CCUS project involves fossil fuel companies it will be classified as fossil fuel industry only to avoid double counting;
- > reference to 'additional CCUS industry actors/projects' refers to CCUS industry actors/projects that do not appear (based on e.g. their project partners) to be directly fossil fuel industry linked (whereas, as noted above, CCUS ventures clearly involving fossil fuel companies are counted as fossil fuel industry);
- > categories as above for annual CCUS Forums. The remaining entities that would fit into 'mixed other sectors' broadly includes those noted above (in the CCUS Forums themselves), as well as e.g. offsetting companies, bioenergy firms, business groups, etc.

The same system of categorisation was also used for the calculation of MEP meetings.

All such categorisations and calculations should be considered subject to reasonable human error.

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