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Towards an agreement on fossil fuel phase-out at COP28: what leadership role from the EU?

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Released in advance of the COP28 Pre-COP ministerial meeting in Abu Dhabi on October 30 and 31, the [European Union Council's recent conclusions on the bloc's collective positions for COP28](#) faced some criticism for its elements on fossil fuel phase-out not going far enough. However, a closer look reveals that it goes beyond previous announcements and actually lays a solid foundation—based on the three elements detailed in this blog post—for the EU to play a leadership role on one of the key—but highly challenging—outcomes countries are expected to reach collective agreement on at COP28: a global just energy transition package that keeps the 1.5°C temperature limit in reach amidst a rapidly closing window.

A package, not a menu: global fossil fuel phase-out as an essential component of a truly 1.5°C-aligned just energy transition

The IPCC has clearly warned that the window for keeping the 1.5°C temperature threshold is rapidly closing, and primarily depends on accelerating deep emission cuts this decade, followed by a steep decline by 2050 (-48% CO₂ emission by 2030, and -99% by 2050, relative to 2019). This requires a steep decline in fossil fuels. The [International Energy Agency](#) (IEA) has echoed this call for steep decline, affirming expansion of coal, oil and gas is incompatible with a 1.5°C energy pathway. At COP27, eighty countries—including the EU—backed a call to ‘phase down all fossil fuels,’ yet this was blocked from the final outcome by others.

This year's EU Council conclusions explicitly underscores the need for a global fossil fuel phase-out as an integral part of the package to be delivered at COP28. It states tripling of renewables and doubling of energy efficiency “*must go hand in hand with energy savings and the phase-out of fossil fuel energy production and consumption, to be adopted by COP28.*” The EU also recognises a just global phase-out will require “*working with developing countries, including through capacity building, technical and financial assistance from all sources, to address the challenges and secure the benefits, including in terms of energy access and security, of the transition*”—likely to be a central call for many Global South countries on all energy-related COP28 outcomes.

Insisting that fossil fuel phase-out is an integral component of a broader energy package, not an option that can be picked or discarded, is essential, given that a strong risk exists that some states at COP28 call only for global goal of tripling renewables by 2030—now seemingly like a distinct possibility due namely to support from the [G20 Leader's Declaration](#) (albeit with important caveats)¹—and potentially a doubling energy efficiency goal (which does not seem very contentious). Greater contention remains on a fossil fuel phase-out, given namely the [G20 countries' inability earlier this year](#) to reach such a commitment. Meanwhile, the [UAE Presidency's vision document for COP28](#), also released on October 17, mentions a “responsible phase-down of unabated fossil fuels” yet supported namely by “*accelerated deployment of all available solutions and technologies*”—which can be read as a call for large-scale deployment of carbon capture and storage (CCS) in the power sector, and carbon dioxide removal (CDR).

Ensuring strict safeguards on the role of ‘abatement’ in global fossil fuel phase-out is key

Recent growing political momentum on a fossil fuel phase-out has sparked further debate on the role ‘abatement’ technologies—i.e., which reduce fossil fuels emissions, primarily the costly, 50-year-old carbon capture and storage (CCS) technology—are to play in the transition, without further delaying it.

The call to phase out all fossil fuels with no mention of abatement—seen as a more ambitious option, and supported in the EU by a dozen of countries including France, Germany, and the Netherlands, and globally by Pacific Island States² and other signatories of the Fossil Fuel Non-Proliferation Treaty Initiative—did not make it to the final version of the Council's conclusions. However, by pairing its call for a “*global phase-out of unabated fossil fuels*” to reach collective net-zero emissions around mid-century, with strong key safeguards on ‘abatement’, the Council conclusions' positions the EU to be able to lead a push for an equally strong outcome at COP28, and ideally even more detailed ‘abatement’ safeguards.

Echoing recent [cautionary positions of the IEA on the role of CCS](#), and a [statement from the High Ambition Coalition at the UN General Assembly](#), the EU Council conclusions provides three strong safeguards on abatement

technologies, while also mentioning carbon-dioxide removal (CDR) technologies (some CDR methods include CCS in their process, such as direct air carbon capture and storage (DACCS))—which:

- Importantly start with acknowledging that *“emission abatement technologies which do not significantly harm the environment, exist at limited scale”*—this is especially true in the next coming two to three decades, and is also the case of many CDR methods;
- Prioritise limited deployment to the most high-value uses: to *“reduce emissions mainly from hard to abate sectors,”* while CDR *“is to contribute to global negative emissions”*;
- Counter ‘mitigation deterrence’ risk by emphasising these technologies *“should not be used to delay climate action in sectors where feasible, effective and cost-efficient mitigation alternatives are available, particularly in this critical decade.”*

In the run-up to COP28, the EU should build on these safeguards and detail them further for both CCS and CDR, clearly distinguishing between their separate roles (which are often conflated)³. It should adopt a [‘Paris-compliant’ definition for ‘abated’ fossil fuels](#) (which IDDRI associate researcher Chris Bataille and other experts claim should only refer to those emissions that are captured (e.g., by CCS) at a rate of 90-95%). It is also essential the EU ensures any inclusion of CDR in COP28 outcomes [follows the five principles for a science-based, sustainable and feasible approach we recently outlined](#), as dependence on large-scale CDR risks overstepping planetary boundaries which would in turn compromise the Kunming-Montreal Global Biodiversity Framework goals. Both CCS and CDR are likely to become an important negotiation ‘bargaining chip’, with some Parties likely calling for large-scale expansion—as hinted in the G20 Leaders’ Declaration and the UAE Presidency’s COP28 vision⁴—presenting the major risk of delaying mitigation that the EU decries, and compromising the 1.5°C limit. The EU should also keep accountable any ‘carbon management’ goals or initiatives adopted to the high standards set out in the Council positions.

Drawing out the strong consequences of a mid-century global phase-out of unabated fossil fuels with strong abatement safeguards

Although the EU does not provide a strict date for fossil fuel phase-out per se—another element on which it faced some criticism—it clearly underscores the importance *“for the energy sector to be predominantly free of fossil fuels well ahead of 2050.”* When taken together with the strong ‘abatement’ safeguards, the EU’s statement goes beyond the [G7 climate ministerial agreement](#) in April to “accelerate the phase-out of unabated fossil fuels so as to achieve net zero in energy systems by 2050 at the latest,” and is in line with the IPCC which states that in 2050, 1.5°C pathways almost full electricity supply in 2050 is from “zero- or low-carbon sources.”⁵ Drawn to their full conclusions, these statements have strong implications, including on the demanding shifts required in the coming two decades:

- A limited role for abated fossil fuels in the energy sector, which in turn implies a very limited role of fossil fuels in energy sector by 2050 altogether—abated or unabated: In line with its ‘abatement’ safeguards above, the latest IPCC science, and IEA projections, the EU has strong reason to project a limited role for CCS in the power sector, as much more cost-effective measures exist—the latest IPCC AR6 report states CCS costs USD 50-200/ton in the power sector and has a potential of reducing 1 Gt/CO₂ by 2030, compared to negative costs for solar and wind energy when compared to business as usual scenarios, and a mitigation potential almost 10 times higher. CCS’ cost-attractiveness in the power sector—and even heavy industry—is likely to continue reducing as it competes with [renewables and other solutions whose costs are projected to keep plummeting further](#).

- Concrete and demanding milestones to get to a mid-century phase-out: The EU takes that a mainly fossil free energy sector in 2050 has steep implications for what we need to do in the next two decades. It highlights “*the importance of aiming to achieve a fully or predominantly decarbonised global power system in the 2030,*” which in turn requires strongly reducing fossil fuel power generation by 2030, and hence a “close to” phase-out of fossil fuels production (for power) by 2050. The EU also calls for two key near-term priorities: halting new coal power production, and phasing out “*as soon as possible of fossil fuel subsidies which do not address energy poverty or just transition.*” In 2022, G20 countries spent [1.4 trillion USD in fossil fuel subsidies](#).

In the run-up to COP28, the EU should further detail its vision and interim steps for phasing out unabated fossil fuels by 2050, in other sectors that the Council conclusions did not specifically cover. A key such sector is transport, currently accounting for over a third of global CO₂ emissions from end-use sectors, mainly from fossil fuel consumption, and the focus of the recent UNFCCC Mitigation Work Programme 2nd global dialogue.

The EU council conclusions on fossil fuel phase-out—insisting it is an integral (not optional) component of the broader energy package; presenting key safeguards on ‘abatement’; outlining key milestones in coming decades—lay a strong foundation that the bloc of 27 now needs to build on and stand strong to play an essential leadership role alongside other champion states of the [High Ambition Coalition](#) and beyond, pushing for an ambitious and truly 1.5°C-aligned just energy transition package at Dubai.

¹ The G20 calls for a tripling of renewables to be conducted “through existing targets and policies”, and alongside similar ambition on “other zero- and low-emission technologies, including abatement and removal technologies.”

² Including Pacific Island States who this summer invited countries to commit with them to “managing a global, equitable, and unqualified phase-out of coal, oil and gas.”

³ ‘Abatement’ technologies such as CCS reduce new fossil fuel point-source CO₂ emissions, whereas CDR removes CO₂ from the atmosphere, and stores it in geological, terrestrial, or ocean reservoirs., resulting in net reduction of atmospheric CO₂ concentration (if certain conditions are met, including ‘permanence’ of storage).

⁴ The G20 Leaders’ Declaration calls for the tripling of renewables to be conducted “alongside similar ambition on “other zero- and low-emission technologies, including abatement and removal technologies.” Meanwhile, the UAE Presidency calls for a “responsible phase-down of unabated fossil fuels” to be supported namely by “accelerated deployment of all available solutions and technologies,” which can be namely read as a call for large-scale deployment of carbon capture and storage (CCS) in the power sector.

⁵ IPCC AR6 WGIII Report, Summary for Policymakers, C.3.2.

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