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T7 Task Force Climate and Environment

POLICY BRIEF

THE G7 NEEDS TO STEP UP CLIMATE AMBITION, ACTION AND FINANCE

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Executive Summary

At the UN climate summit COP26, governments made a collective commitment to bring forward 2030 targets this year that are in line with the Paris Agreement's 1.5°C temperature goal. This policy brief outlines six key policy recommendations for this June's G7 summit that, if adopted, would demonstrate the ambition and leadership needed to keep the 1.5°C limit in sight and to maintain the momentum that was developed at COP26. The G7 governments need to:

1. Commit as a group to lower the G7's emissions by 60% by 2030 compared with 2010 levels.
2. Strengthen national 2030 targets this year to align with the Paris Agreement's 1.5°C temperature goal, consistent with the Glasgow Climate Pact.
3. Commit to phasing out coal by 2030 and fossil gas power generation before 2040, in line with what is needed to keep 1.5°C in reach.
4. End public support for fossil fuel projects, and more than triple investment in low carbon energy systems by 2030, including in renewable energy, heat pumps, energy efficiency, power grids and storage.
5. Commit to substantially scale-up their international climate finance contributions, to go well beyond the 100 billion pledged in 2009.
6. Develop innovative financing instruments to accelerate the provision of accessible finance to vulnerable countries.

In its Working Group II report, the Intergovernmental Panel on Climate Change (IPCC) sends another stark warning about the threat of climate change for human well-being, while the Working Group III report showed with the greatest clarity yet that with strong action, it is possible to limit warming to 1.5°C.

At the same time, Russia's unprovoked invasion of Ukraine further underlines the urgent need for Europe to fundamentally rethink its relationship with fossil gas and dependence on fossil fuel imports.

Moving to 100% renewable energy systems will not only be necessary to avoid the worst impacts of climate change. It is also one of the most important contributions to peace-building in the 21st century.

Against this backdrop, at the 2022 G7 summit, governments of the world's wealthier countries must show leadership to the rest of the world by committing to strong action.

Challenge

The G7 is not yet doing enough to keep the Paris Agreement's 1.5°C temperature goal in reach. So far, no major emitter has aligned its domestic and international commitments with the Paris Agreement's temperature goal. Global warming is headed for 2.4°C under the current Nationally Determined Contributions (NDCs) (Climate Action Tracker, 2021b).

The Working Group II report from the Intergovernmental Panel on Climate Change (IPCC) confirms the need for urgent action. The report, focusing on impacts, adaptation and vulnerability to climate change, clearly shows that warming beyond 1.5°C poses serious risks to planet and people and increasingly brings humans and ecosystems to their adaptation limits (IPCC, 2022a).

Against this backdrop of urgency, the recently released IPCC Working Group III report showed with the greatest clarity yet that it is possible to limit warming to 1.5°C, and underscored the need to peak emissions immediately and shift to a future powered by renewables (IPCC, 2022b).

In the current volatile geopolitical situation, it has become clear that moving away from fossil fuels to sustainable, renewable energy systems not only brings the necessary emissions reductions but is also a matter of security.

In 2021, the G7 committed to halve their emissions by 2030, from 2010 levels (G7, 2021). However, this target is not aligned with modelled 1.5°C mitigation pathways¹ assessed by the Intergovernmental Panel on Climate Change (IPCC) (Climate Analytics, 2021c).

Perhaps of more concern is that none of the G7 member countries are on track to meet their current, insufficient 2030 targets (Climate Action Tracker, 2021b). They need to rapidly close this implementation gap to ensure the credibility of targets, maintain a strong signal to domestic and global markets that the low carbon transition is underway, and avoid risks of carbon lock-in and stranded assets.

Finally, none of the G7 members are providing sufficient support for decarbonisation measures in developing countries (Climate Action Tracker, 2021b). Such support is essential for facilitating the rapid global economic transition necessary to keep 1.5°C within reach, as well as for staying true to the principles of equity and common but differentiated responsibility that are enshrined in the Paris Agreement.

Leadership from the G7 will be essential to speed up the global green energy transition and to drive climate action forwards this year. The window to keep 1.5°C in sight is rapidly closing and immediate, ambitious climate action is required to ensure a liveable future. This policy brief outlines six key policy recommendations for this June's G7 summit that, if adopted, would bring the G7 on a 1.5°C-compatible path and demonstrate the required global leadership.

Proposals

A G7 commitment to raise 2030 mitigation ambition:

Recommendation #1: Commit as a group to lower the G7’s emissions by 60% by 2030 compared with 2010 levels.

Recommendation #2: Strengthen national 2030 targets (NDCs) this year to align with the Paris Agreement’s 1.5°C temperature goal, consistent with the Glasgow Climate Pact.

In 2021, the G7 committed to halve the group’s emissions by 2030 relative to 2010 levels (G7, 2021). If the members of the G7 were to fully implement their existing 2030 targets, the group would almost achieve this commitment. However, the targets are not sufficient as contributions to the Paris Agreement’s temperature goal (Climate Action Tracker, 2021a; Climate Analytics, 2021c).

At COP26, governments gave a clear signal in the Glasgow Climate Pact that stronger targets and actions are needed, with a collective commitment to revisit and strengthen their 2030 targets to align with 1.5°C this year (UNFCCC, 2021). The G7 needs to lead on this commitment.

Analysis based on the IPCC’s mitigation scenarios shows that the G7 can, and should reduce emissions faster, and that *it would be cost-effective for them to do so* (Climate Analytics, 2021c, 2021b).

In this analysis, which was undertaken for the 1.5°C national pathway explorer, we use a set of mitigation pathways from the IPCC’s Special Report on Global Warming of 1.5°C. These are then filtered to exclude pathways with unsustainable levels of land-based carbon dioxide removal and downscaled to derive results at the national level for all G7 members (Climate Analytics, 2021b).

The results demonstrate that for the G7 to align with IPCC assessed 1.5°C pathways, emissions levels in 2030 need to be 54-66% below 2010 levels (excluding land-use) (Climate Analytics, 2021b; IPCC, 2018). The land sector is projected to be a sink for the G7 as a whole by 2030, hence when emissions and carbon sequestration from land-use, land-use change and forestry are included, the reduction to 2030 is likely to be even larger. We therefore recommend a commitment to reduce emissions by *at least 60%* by 2030, compared to 2010 levels.

If the G7 were to commit to and achieve a 60% cut in emissions, this could lower global emissions in 2030 by around 2 GtCO₂e, compared with projected emissions under current targets. This would reduce the global emissions gap in 2030 between where emissions are heading under existing targets and a 1.5°C aligned pathway by about 10%. When a projection based on current policies is used as a baseline instead, the saving is even greater – around 4 GtCO₂e. ²

A 60% emissions reduction is faster than the global average (which is 43% below 2010 excluding land-use, based on the same set of filtered IPCC scenarios) because G7 countries can decarbonise earlier, having already reduced their emissions substantially from 2010 levels. Importantly, they need to do so in order to

buy time for those developing countries who will need longer to complete their energy transitions, and to generate spill-over benefits that can support other countries (Climate Analytics, 2021c; IEA, 2021a).

Our analysis focusses on cost-effectiveness at the global level and does not include principles of equity and common but differentiated responsibility. Under equity principles, the G7 would be responsible for substantially steeper emissions cuts, which would likely not be feasible domestically. This means the G7 needs not only to reduce emissions as fast as possible at home, but also to provide substantial support to developing countries to reduce their emissions.

Achieving steeper emissions cuts to 2030 is also critical for getting on a path to the G7's target for net zero emissions by 2050 at the latest. At COP26 last November, countries highlighted the importance of aligning near-term and long-term targets, amid criticism that existing net zero targets are not credible without faster decarbonisation in the near-term (Climate Action Tracker, 2021b; UNFCCC, 2021). This is because steep reductions after 2030 would not be able to make up for the sheer amount of greenhouse gases emitted this decade without deep and sustained reductions (Climate Analytics, 2021a).

Concrete steps to implement 1.5°C aligned policies:

Recommendation #3: Commit to phasing out coal by 2030 and fossil gas power generation before 2040, in line with what is needed to keep 1.5°C in reach.

Recommendation #4: End public support for fossil fuel projects, and more than triple investment in low carbon energy systems by 2030, including in renewable energy, heat pumps, energy efficiency, power grids and storage.

As it stands, there is a clear credibility gap between what the G7 members say they want to do, and what they are doing: none of the G7 members are on track to meet their existing targets. Under current policies, the G7 are set to reduce emissions as little as 16% by 2030 compared to 2010 levels. This would lead to emissions in 2030 exceeding a 1.5°C compatible level by 80%³. Such a shortfall in ambition does not provide the leadership signal needed from the richest countries, covering around 30% of the global economy, for others to step up.

A clear signal that the G7 is accelerating implementation is necessary to give other governments assurance that the G7 are leading on climate. Decarbonising the power sector is an urgent priority. According to the IEA's roadmap to net zero, the G7 needs to achieve net zero emissions electricity generation by 2035 (IEA, 2021b, 2021a), and official energy scenarios for the UK, USA and EU show that achieving clean power generation in the 2030s is key for aligning with 1.5°C (Rosslowe, 2021).

The high emissions intensities and stranded asset risks associated with burning coal and fossil gas, combined with the availability of cost-effective alternatives in the form of renewables, energy efficiency storage, mean that setting clear phase-out dates for coal and fossil gas generation needs to be a priority.

Analysis of Paris compatible pathways shows that unabated coal power generation needs to be phased out in advanced economies by 2030, and global fossil gas use in power generation should already peak and

start to rapidly decline in this decade, with only very low levels remaining by 2040 (Climate Analytics, 2021f). In the IEA's net zero roadmap, unabated gas power generation falls to less than 2% in G7 countries by 2035, and less than 1% by 2040 (IEA, 2021a). Fossil gas is *as important a* fossil fuel to phase out of the power system as coal.

Initiatives such as the Powering Past Coal Alliance⁴ and the Beyond Oil and Gas Alliance⁵ are important for building momentum in this transition, but not all G7 governments have joined these.

The latest evidence shows that renewables are more economic, safer and healthier than coal and fossil gas for power generation, and that fossil gas should not be considered as a "bridging" fuel. The Russian invasion of Ukraine has forced Europe in particular to rethink its relationship with fossil gas, which the European Commission only in February proposed to label as "sustainable" under the EU's green taxonomy rules.

It is important to note that coal can under no circumstances be considered a bridging fuel. *Instead, the current crisis must lead countries to accelerate the inevitable transition to renewable energy sources.*

Domestic renewable energy resources combined with energy efficiency and storage are not only good for the climate but will also reduce a country's dependence on imported fossil fuels and help achieve energy security objectives. A major mobilisation effort will be needed to scale up the deployment of these solutions at a pace that is commensurate with the energy and climate crises.

According to the IEA, investments in clean energy worldwide need to *more than triple* by 2030 to get the world onto a pathway to net zero (IEA, 2021b).

The IPCC's Working Group III report highlighted the importance of phasing out fossil fuel subsidies in the near-term, which could reduce global emissions by up to 10% by 2030 while at the same time improving public revenue and macroeconomic performance. The report also found that wind and solar are the cheapest and most powerful options for closing the 2030 emissions gap, and that there is enormous potential for low-cost mitigation through reducing energy use, for example through energy efficiency and demand management measures (IPCC, 2022b).

From these findings it is clear that to get on a 1.5°C aligned pathway, public support for unabated coal and gas projects will need to end. At COP26, all G7 members except for Japan signed onto the Statement on International Public Support for the Clean Energy Transition⁶, committing to end new direct international public support for unabated fossil fuels not aligned with 1.5°C by the end of 2022. This commitment needs to be upheld, with financial flows urgently shifted to clean energy innovation, development and deployment instead.

Special attention should be given to energy efficiency in the buildings sector, which is significantly behind not only what is needed but also what is possible: such investments reduce energy poverty and energy dependency and increase quality of life. Additionally, a more widespread use of heat pumps, especially if accompanied by onsite solar panels, could significantly reduce consumption of fossil fuels. Concrete measures could include training programmes for job creation in key sectors, shifts in manufacturing capacities driven by government contracts, subsidies and obligations for home renovation and heat pump

deployment. For example, the use of emergency measures to dramatically scale-up heat pump production has been considered in the USA as a way to boost exports to Europe⁷.

Ramp up climate finance provision and accessibility

Recommendation #5: Commit to substantially scale-up their international climate finance contributions, to go well beyond the 100 billion.

Recommendation #6: Develop innovative financing instruments to accelerate the provision of accessible finance to vulnerable countries.

Without a dramatic upscaling of international support, developing country governments may not be able to implement the necessary pace and scale of emissions cuts to keep 1.5°C in reach, nor to put in place adequate adaptation measures to cope with the worsening impacts of climate change.

The 100 billion USD per year of climate finance that developed countries pledged in 2009 to deliver to developing countries by 2020 still has not been met. Recent analysis suggests that this finance goal will only be reached in 2023 (COP26 Presidency, 2021). Missing this target in this way has created a perception in the developing world that developed countries are not following through on their commitments. The timely delivery of the 100 billion is a clear priority.

However, this is not enough and does not constitute a ‘fair’ contribution to the developing world.

Analysis by the Climate Action Tracker has shown that none of the G7 members have put forward sufficient international climate mitigation finance to make a fair contribution to limiting warming in line with the Paris Agreement’s temperature goal (Climate Action Tracker, 2021b).

Contributions for mitigation, adaptation and loss and damage need to be urgently scaled up to go *well beyond the 100 billion*. For example, estimates of adaptation financing needs, while highly uncertain, suggest that they are five to ten times higher than current international public adaptation finance flows (United Nations Environment Programme, 2021).

It is not just the quantity of climate finance available that is a problem; accessibility remains a major challenge, particularly for vulnerable countries. The lack of accessibility has been highlighted in the IPCC’s analyses and elsewhere (Climate Analytics, 2021d, 2021e; IPCC, 2018).

The countries that need climate finance are struggling with multiple crises, not only relating to climate change but also from the COVID-19 pandemic. This is leading to increasing volumes of debt and a vicious cycle of increasing financial burden and decreasing fiscal space (Climate Analytics, 2020; Thomas & Theokritoff, 2021). Innovative finance mechanisms and debt relief efforts will be essential to alleviate these challenges.

The G7’s stake in international finance institutions such as the International Monetary Fund and Multilateral Development Banks places it in a unique position to make climate finance more accessible and more responsive to the needs of vulnerable countries. For example, G7 governments could consider

rechannelling excess Special Drawing Rights (SDRs) towards developing countries to enhance liquidity and accelerate green investments.

Implementation

The recent IPCC reports clearly show the accelerating risks with warming beyond 1.5°C, and the narrowing window for acting to keep this limit in reach. They highlight the increasing challenges for adaptation, with adaptation limits for human and ecosystems emerging beyond 1.5°C. Loss and damage has been documented globally and will increase with every increment of warming. More than 190 Parties signed the Paris Agreement to limit warming to 1.5°C not only to preserve the environment, but also for economic and security reasons.

The G7 was responsible for 21% of annual greenhouse emissions in 2019 and 37% of historical emissions since the start of the 20th century (excluding land-use emissions) (Gütschow, Günther, & Pflüger, 2021). These countries' economic power gives them the means to decarbonise earlier than developing nations, and their historic emissions confer responsibility to achieve further emissions cuts outside of their own borders through support to developing countries.

The Elmau G7 meeting is a critical time for the G7 to show its commitment to the Glasgow Climate Pact, where governments promised to bring forward 1.5°C aligned 2030 targets, to accelerate climate action and to scale up climate finance.

It is essential that the momentum built in Glasgow is maintained.

The three major IPCC reports from its 6th assessment cycle provide an alarming backdrop to this year's G7 meeting, making it a critical moment for addressing climate change. These reports reinforce the need for urgent action and increased ambition, drawing together the latest scientific understanding of climate change impacts and risks, as well as pathways for achieving the Paris Agreement's temperature goal.

In terms of the concrete actions that G7 members would need to take to follow these recommendations, a key step would be the submission of updated NDCs by COP27, which they have agreed to as part of the Glasgow Climate Pact.

They would also need to revisit their energy transition plans to ensure that these align with what is necessary according to the best available science. This includes ending public support for unabated fossil fuels. The war in Ukraine and the related ongoing fossil gas supply issues in Europe provides an excellent example of why countries need to move away from dependence on imports of a fuel with such high and volatile costs.

Finally, G7 members would need to revisit their international climate finance commitments, and explore options for innovative finance mechanisms that can accelerate the flow of finance to the countries that need it most. Accelerating climate change and its risks for people, economies and global security, combined

with a changing geopolitics of energy supply, add impetus to the need to strengthen cross-border cooperation and ensure adequate finance for a just transition.

G7 countries alone will not be able to make the necessary cuts this decade to keep 1.5°C within reach; they need to engage collaboratively with other countries to accelerate global climate action. Increased commitment from G7 countries would put further pressure on other countries, including in the G20, to step up their own commitments in line with the best available science.

The G7 holds immense capacities for investment and innovation. They must put these into action to help wean the world off fossil fuels and to address climate change. The G7 summit is an ideal place for an act of leadership by the wealthier countries in the world.

Endnotes

¹ The mitigation pathways assessed in the IPCC’s Special Report on Global Warming of 1.5°C that are consistent with the Paris Agreement’s temperature goal are termed “low or limited overshoot” scenarios. For more information on how we use these scenarios, see the Climate Analytics 1.5°C national pathway explorer methodology: at <http://1p5ndc-pathways.climateanalytics.org/methodology/>.

² Under current NDCs, the G7’s emissions are projected to be 6.6 – 7.1 GtCO₂e in 2030. Under current policies, projected emissions from the group are 9.3 – 9.7 GtCO₂e. We take the upper end of the NDC range, because G7 members would be able to claim achievement of their NDCs when they have reached this level, and we take the median of the range under current policies, following the Climate Action Tracker’s methods. The 1.5°C compatible range from the 1.5 national pathway explorer for G7 members is 3.9 to 5.3 GtCO₂e. Note that all of these calculations exclude emissions from land-use, land-use change and forestry.

³ Comparing the median emissions level under current policies in 2030 (9.5 GtCO₂e) and comparing this with the upper end of the 1.5°C compatible range for G7 members described above (5.3 GtCO₂e) gives an 80% difference.

⁴ <https://www.poweringpastcoal.org/>

⁵ <https://beyondoilandgasalliance.com/>

⁶ <https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition/>

⁷ See <https://www.washingtonpost.com/politics/2022/03/08/biden-bans-russian-oil-imports/>

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