



Citation for published version:

Hammond, G & Newborough, M 2022, 'Glasgow climate pact: A step on the way towards a lower carbon dioxide world', *Proceedings of the Institution of Civil Engineers - Civil Engineering*, vol. 175, no. 1, pp. 8-8.
<https://doi.org/10.1680/jcien.2022.175.1.8>

DOI:

[10.1680/jcien.2022.175.1.8](https://doi.org/10.1680/jcien.2022.175.1.8)

Publication date:

2022

Document Version

Peer reviewed version

[Link to publication](#)

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Briefing: The 2021 Glasgow Climate Pact – Steps on the Transition Pathway Towards a Low Carbon World

Geoffrey P. Hammond* and Marcus Newborough†

*Professor Emeritus in Mechanical Engineering, University of Bath, Bath.UK

†Development Director, ITM Power, Sheffield. UK

The 26th United Nations (UN) Climate Change *Conference of the Parties* (COP26) held in Glasgow over 1 – 12 November 2021 was seen as a critically important staging post on the transition pathway towards stabilising the Earth’s warming climate (Ares, 2021, Hammond, 2021). It was organised by the UK Government in partnership with Italy (the UK-Italy Presidency), and brought together governments from around the world to agree co-ordinated action to tackle climate change. The summit sought to build on the *2015 Paris Agreement* on climate change (Ares and Hirst, 2015; IPCC, 2018) at COP21. That climate accord aimed to keep temperatures “well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels” (Gao *et al.*, 2017; Hammond, 2021; IPCC, 2018). However, *bottom-up* national pledges on ‘greenhouse gas’ (GHG) mitigation efforts – so-called *Nationally Determined Contributions* (NDCs) under the *UN Framework Convention on Climate Change* (UNFCCC) (Gao *et al.*, 2017) - received ahead of COP26 were expected to result in a warming of around 2.7°C (Ares and Hirst, 2015; UNEP, 2021). Humanity will therefore be required to take significant action in order to bring these emissions down to zero between 2050 and 2070.

The final outcomes from COP26 were encapsulated in the *Glasgow Climate Pact* (UNFCCC, 2021). Positive steps towards mid-century decarbonisation were achieved, along with some disappointments. In the credit column of the climate ‘balance sheet’ several 2030 commitments were made: by >40 countries, in a new *Global Coal to Clean Power Transition Statement* (GCTCPTS), to phase-down coal power and scale up clean energy technologies; by >100 countries to cut methane emissions by 30%; by 100 leaders to a *Glasgow Leaders’ Forests & Land Use Declaration* to end and then reverse deforestation and land degradation; by >40 countries plus the EU-27 to accelerate the development and deployment of clean technologies and sustainable solutions via a *Breakthrough Agenda* aimed at both climate change mitigation and adaptation, whilst ensuring that such solutions are affordable and accessible for all; and by 28 industrial companies to drive growth in the demand for, and supply of, hydrogen (WBCSD, 2021). Global carbon market rules to avoid double counting and to encourage private capital

flowing to developing countries – part of the so-called *Paris Rulebook* - were also reinforced. A private finance initiative bore fruit to the tune of US\$130 trillion for the *Glasgow Finance Alliance for Net Zero* (GFANZ) via 450 companies and financial institutions from 45 countries.

In the COP26 debit column, the move away from fossil fuels was hindered by the G77 group of developing countries plus China - led by India - objecting to the wording “phase-out coal” and, after tense ‘huddles’, it was replaced by “phase-down coal”. The *Alliance of Small Island States* (AOSIS) expressed profound disappointment at this result. Similarly, some of the big GHG emitters, such as China, India and Russia, declined to commit to the 30% cut in methane emissions. The GFANZ will provide a great, private finance support for LDCs, but was criticised by some environmental campaigners for its lack of commitment to the avoidance of high-carbon investments. A proposed *Glasgow Loss and Damage Facility* on intergovernmental or public climate finance was not included in the final decision to the dismay of many developing nations. Thus, whilst acknowledging that discussions had “come a long way in Glasgow”, the *Least Developed Countries (LDC) Group on Climate Change* (LDC, 2021) felt the Pact was “far from enough to match the scale of the crisis and to meet the needs of our countries”.

But did COP26 ‘keep 1.5°C alive’? The NDCs submitted by the end of meeting stood at a figure, according to the respected *Climate Action Tracker* website, that would result in 2.4°C of global warming by the end of the century; a 60% overshoot of the 1.5°C aspiration. However, if further pledges, for example, by India (of achieving net-zero emissions by 2070) were met, then warming would peak at 1.9°C before falling to 1.8°C by 2100. Some 17-20 Gt of additional CO₂ reductions, as well as a 40% reduction in methane emissions, would be required to actually ‘keep 1.5°C alive’ by 2100. Therefore, the Climate Summit ‘caravan’ will move on to COP27 in Sharm El-Sheikh, Egypt; scheduled for late 2022. It will need to encourage during the 2020s the ratcheting up of GHG emissions reduction, the ending of coal use, and the minimisation of methane emissions, particularly from China, the USA, the EU-27, India, and the Russian Federation. Only in that way will the current GHG emissions gap be eliminated (UNEP, 2021).

References

- Ares E (2021) *COP26 - the international climate change conference, Glasgow, UK*. House of Commons Library, London, UK, Briefing Paper CPB 8868.
- Ares E and Hirst D (2015) *Paris Climate Change Conference*. House of Commons Library, London, UK, Briefing Paper CPB 7393.
- Climate Change Tracker [CCT] (2021) *Glasgow’s 2030 credibility gap: net zero’s lip service to climate action*, CCT [<https://climateactiontracker.org/>].

- Gao Y, Gao X and Zhang X (2017) The 2°C global temperature target and the evolution of the long-term goal of addressing climate change—From the United Nations Framework Convention on Climate Change to the Paris Agreement. *Engineering* **3** (2) 272–278.
- Hammond GP (2021) Editorial. *Proc. Instn Civil. Engrs: Energy* **174** (3) 95-97.
- Intergovernmental Panel on Climate Change [IPCC] (2018) *Global Warming of 1.5°C – Summary for Policymakers*. World Meteorological Organization, Geneva, Switzerland.
- Least Developed Countries [LDC] Group on Climate Change (2021) *COP26 Delivering the Paris Agreement - A five-point plan for solidarity, fairness and prosperity*, LDC [<https://www ldc-climate.org/>].
- UN Environment Programme [UNEP] (2021) *Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered*, UNEP, Nairobi, Kenya.
- UN Framework Convention on Climate Change [UNFCCC] (2021) *Outcomes of the Glasgow Climate Change Conference - Advance Unedited Versions (AUVs)*, UN Campus, Bonn, Germany [<https://unfccc.int/>].
- World Business Council for Sustainable Development [WBCSD] (2021) *Hydrogen Pledges*, Geneva, Switzerland [<https://www.wbcsd.org/Programs/Climate-and-Energy/Energy/New-Energy-Solutions/Resources/Hydrogen-Pledges>].