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COP26 and the Role of Nuclear Energy

The Conference of the Parties has a mandate to oversee the objective to "stabilize greenhouse gas emissions" at a level that would prevent dangerous anthropogenic interference with the climate system".[1] The sequence of COP's[2] now arrives in Glasgow at a time when a window of opportunity to act in a united and coherent way is reducing.

COP26 is due to take place in Glasgow in November 2021. It is the first time the UK has hosted the COP and represents a great opportunity for the UK to demonstrate its leading role in the international climate change agenda.

The UK has already shown initiative in committing to achieve a net zero carbon target by 2050.[3] It is the first major economy to commit to this target by law.[4] However, the UK Committee on Climate Change has warned that the next round of budgets under the ground-breaking 2008 Climate Change Act is going to be hard to achieve. The UK can, if it chooses, continue to lead the world by examples of mandated objectives and policy. These can influence the global policy agenda and emphasise the important role nuclear can play in the global fight against climate change, by way of examples the recent endorsement of the Sizewell C project and support for the SMR and AMR developments as leading global technologies.

Whilst the goal of international climate change regulation is clear and unambiguous, many consider that the approach adopted by the United Nations Framework Convention on Climate Change (UNFCCC) with its focus on the key principle of "common but differentiated responsibilities" ("CBDR") is outdated. The application of this principle means there is a major focus on the role played by industrialised nations leaving out some significant contributors of greenhouse gas emissions. In addition, the UNFCCC sets out goals and principles, but lacks detailed commitments.

In an attempt to add teeth to the UNFCCC, the Kyoto Protocol of 1997 was adopted and came into force in 2005. The Protocol imposed specific obligations on industrialized countries to reduce their greenhouse gas emissions

1 Article 2 of the United Nations Climate Change Convention (UNFCCC) of 1992 which came into force in 1994.
2 COP stands for the Conference of the Parties in relation to the United Nations Climate Change Convention (UNFCCC) of 1992 which came into force in 1994.
3 Via the Climate Change Act 2008 (2050 Target Amendment) Order 2019 which is available at www.legislation.gov.uk/uksi/2019/1056/contents/made.
4 This commitment has been followed by other countries, most recently China which has pledged to achieve net-zero emissions by 2060 although the precise form of this commitment remains to be seen.

reflecting their different capacities within set commitment periods. It also allowed for "burden-sharing" so that emissions reductions can be aggregated by agreement.[5] The Protocol also introduced market-based instruments, known as "Joint Implementation", allowing Annex 1 parties[6] to benefit from emission reduction activities by other Annex 1 parties through the transfer of "emission reduction units". The "Clean Development Mechanism" allows Annex 1 parties to benefit from emission reduction projects in developing countries that are also parties to the Protocol. "Emissions Trading" is allowed between Annex 1 parties.

The Kyoto Protocol was not without its failings. Although United States President, Bill Clinton, signed the treaty, the United States Senate never ratified it. Hence one of the world`s most significant contributors of greenhouse gas emissions was missing. The distinction between developed and non-developed countries (a continuation of the principle of CBDR) also caused damaging schisms. Many developed countries criticised the lack of obligations imposed on less developed countries which are big contributors to greenhouse gas emissions (i.e. China and India). For the critics this disparity threatens the reductions achieved by more developed countries. There are those that see Kyoto as a failure as the targets to reduce emission levels were not reached. Subsequent COP meetings looked to progress post-Kyoto commitments. A second commitment period for 2013-2020 was agreed in 2012 (under the Doha Amendment to the Protocol) but progress rather stalled.

In 2015 a significant breakthrough was achieved through the Paris Agreement (agreed at COP21). It introduced measures to limit the global temperature rise to 2°C with an aspiration to keep below 1.5°C. Among the instruments included are Nationally Determined Contributions, Adaptation and Mitigation measures. Whilst the principle of CBDR still persists, it exists in a more nuanced form. Now all parties have obligations although some have more defined contributions in specific areas (i.e. Climate Finance and Adaptation).

The Paris Agreement represents a mix of hard (legally binding), soft law and non-obligations.[7] Although it was not a perfect agreement it did at least represent a consensus approach, that is until the formal withdrawal by the United States.[8] It is generally acknowledged that a failure to have a comprehensive global approach is a recipe for disaster for the planet. A key element agreed on was the concept of Nationally Determined Contributions (NDCs), which are designed to capture a member`s contributions in a plan to reduce greenhouse gas emissions. These NDCs need to be communicated every 5 years.[9] A further significant requirement is for a global stocktake every 5 years to assess the collective progress towards achieving the purpose of the agreement and to inform further individual actions.[10]

Post-Paris, discussions have moved forward to focus on how to build on the fundamentals of the Paris Agreement. The Intergovernmental Panel on Climate Change's Special report on Global Warming[11] is worth considering.

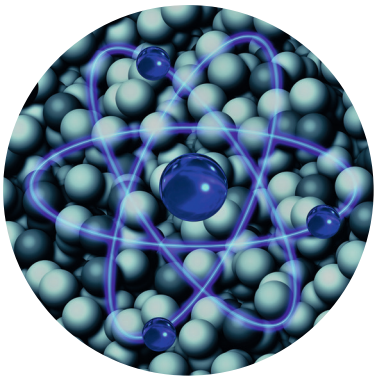
This report looks at a range of different mitigation pathways that keep the global temperature rise at or below 1.5°C. In most of these scenarios nuclear energy plays a significant role. It is recognised that individual

5 The EU by way of example took advantage of this approach for the first Kyoto "commitment period"
6 This links back to the Annex 1 parties in the UNFCCC and represents the industrialized countries and economies in transition and the European Union.
7 See for example: Rajamani, "The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations" (2016) 28 JEL 337.
8 The United States began the process of formal withdrawal on 4 November 2019, with withdrawal taking effect 1 year later, i.e. on 4th November 2020.
9 The next round is due in 2020.
10 That global stocktake is due by 2024.
11 The report was published in October 2018. See: https://www.ipcc.ch/sr15/download/.

countries will have different views and sensitivities (public acceptance, financial cost, make up of their own existing energy portfolios, support and preferences for nuclear). It is time for COP to embrace and promote nuclear power production as a vital part of the energy mix and put nuclear energy at the top of the agenda alongside other low carbon energy sources.

If we accept that the energy system being developed today needs to be fit to survive for the next two or three generations, it is time to realistically consider the available and future energy sources and specifically nuclear energy. For COP26 and the national governments represented there to argue otherwise would seem negligent in the face of the growing world energy demand and the need for emissions reduction.

Nuclear energy production can support industrialised heat applications, the production of synthetic fuels, hydrogen fuels and water desalination. Renewables are important to the energy mix but they have limitations of their own. An example of this is Germany and its policy of ceasing to rely on nuclear energy. Despite investments from the government and efforts to explore and develop its renewable energy sources, Germany has found itself having to import a significant amount of its energy from abroad and ironically from neighbouring France whose principal energy generation source is from nuclear.



We must view different energy sources as part of a blend to secure the right balance, taking account of a wide range of factors. We cannot allow ourselves to be blinded by an obsession to use the energy sources which achieve the best results under a “Levelized Cost of Electricity” approach. Financial cost of electricity is not the only factor we need to consider. There are other factors such as: system flexibility; energy security; consumer prices (over the duration); storage options; flexibility in use; ability to provide both baseload and follow-on load. The reality is that we need a proper balance of varied low carbon energy sources and nuclear in its many forms fits the bill. The lifetime of a nuclear energy plant is in most cases more than double that of other forms of generation and provides a secure supply of energy generation for national need on a multi generation basis.

A number of significant Environmental Activists (George Monbiot in the UK and Michael Schellenberger in the US) are convinced of the role that nuclear can play.

It is only logical that nuclear has a place at the climate change table and with the UK taking a central role at COP26, we propose that now is the moment for the nuclear card to be played to its full potential. Perhaps the forthcoming UK government`s long awaited statement on energy policy for the UK will at last show that the UK government embraces the need for change and the role nuclear can play in saving the world from what many consider to be an impending climatic disaster.

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