



Industrial Decarbonisation Policy News – November 2021

COP26 (1st - 14th November) was the primary focus of political discourse throughout November, in particular the progress (and lack thereof) toward achieving the global ambition of Net Zero. This culminated in the now infamous final wording of the Glasgow Climate Pact regarding the future of coal. However, beyond the headlines, several multi-national and global initiatives were introduced to accelerate the development and deployment of technologies necessary for energy transition and industrial decarbonisation, as well as several opportunities for research collaboration.

UK-specific debates during COP26 included the future of planned new UK oil and gas developments such as the Cambo field in the North of Scotland. Wales became the latest core member of the Beyond Oil and Gas Alliance, a new international coalition for the managed phase-out of oil and gas production, while Scotland is currently in talks for joining as a 'friend' of the alliance, highlighting the tension between Scotland's ambitious net zero targets and its continuing reliance on North Sea oil and gas production.

Out with COP26, key developments in November included the publication of the Scottish Government's draft Hydrogen Action Plan and the announcement of UK Government funding for the largest UK green hydrogen production and storage facility near Glasgow. Political interest in CCUS cluster developments and Negative Emissions Technologies has also heightened, with several debates and inquiries taking place in the UK and Scottish parliament this month.

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COP26 – Breakthrough Agenda and industrial decarbonisation initiatives

Initiatives and advances relating to industrial decarbonisation during COP26 included:

Glasgow Breakthroughs. In the first week of COP, the so-called 'Breakthrough Agenda' was launched at the World Leaders Summit to commit countries to collaborate on making clean technologies and sustainable solutions the most affordable, accessible and attractive option before 2030. The first set of goals for 2030, the '[Glasgow Breakthroughs](#)', aim to dramatically accelerate the innovation and deployment of clean technologies in five high emitting sectors underneath this agenda and include Power, Road Transport, Steel, Hydrogen and Agriculture. Progress will be reviewed annually, starting in 2022, and supported by the IEA, IRENA and the UN High Level Action Champions.

- **The Industrial Deep Decarbonisation Initiative (IDDI)**, a coalition between UK, India, Germany, Canada and UAE launched in July 2021, announced its intention to create a new market for low-carbon construction materials [by buying low-carbon steel and concrete for public procurement](#). Coordinated by the UNIDO, member governments commit to the disclosure of embodied carbon of major public construction by no later than 2025 and pledged

to achieve net zero in major public construction steel and concrete by 2050, with more work towards an emission reduction for 2030 to be announced next year.

- **Mission Innovation**, a coalition of 23 governments, including the UK, created in June 2021, announced four new 'innovation missions' to bring together governments, public authorities, corporates, investors and academia to [accelerate innovation and enable widely affordable clean energy globally](#). Innovation missions focusing on Carbon Dioxide Removal, Net Zero Industries, Integrated Biorefineries and Urban Transition are to join the three existing missions relating to Clean Hydrogen, Green Powered Future and Zero Emissions Shipping. The Mission Innovation was launched alongside the Paris Agreement in 2015, its members are responsible for 95% of global public investment in clean technology, research and development
- **Technology Driven Transition**. COP also created opportunities for expanding ties among research centres at the heart of technological innovation for net zero. IDRIC participated at the [Technology Driven Transition Summit](#). Organised by the Net Zero Technology Centre (formerly The Oil and Gas Technology Centre), the summit brought together 11 leading research centres from the UK, the US, Canada, Australia and the Netherlands to discuss the most recent innovations enabling energy transition and industrial decarbonisation, including on key technologies such as CCUS and hydrogen. IDRIC welcomed the opportunity to exchange experiences with cluster approaches and will continue to explore opportunities for international collaboration.

CCUS Cluster Sequencing Process – Track 1 selection and Phase 2 update

In October, Phase 1 of the UK government's CCUS Cluster Sequencing process concluded with the selection of the HyNet and East Coast Clusters as "Track 1" clusters, with the Scottish Cluster selected as a reserve. The Department for Business, Industry and Industrial Strategy has since launched [Phase 2](#) of the cluster sequencing process, which invites specific CCUS projects to apply for government support in linking to the Track 1 clusters, in the form of subsidised business models.

Although the details are not yet finalised, [published guidance on industrial carbon capture business model design](#) outlines a combination of capital grant support through the CCS Infrastructure Fund (CIF) and ongoing revenue support via a contracts for difference (CfD) model. The call for project submissions to Phase 2 will close on 21st January 2022, with the announcement of successful projects planned for May 2022.

Scotland Hydrogen Action Plan and Consultation

9th November 2021

The Scottish Government has published its [draft Hydrogen Action Plan](#), setting out a five-year plan and 37 policy actions for building Scotland's hydrogen economy. Building on the previous Hydrogen Policy Statement (December 2020), the ambition is to become 'a leading nation in the production of reliable, competitive and sustainable hydrogen'. The ambition of producing 5 Gigawatts (GW) of renewable (green) and low-carbon (blue) hydrogen power within the next ten years and 25 GW by 2045, will be underpinned by a £100 million five year funding commitment supporting regional renewable hydrogen production hubs and renewable hydrogen projects. A first tranche of investment, the £10 million Hydrogen Innovation Fund, aims to drive technological progress and advance innovation and cost reduction within this emerging sector. Other measures include support for Scottish industries to use hydrogen in their decarbonisation plans through match-funded grants (via the Scottish Industrial Energy Transformation Fund (SIETF)) and several programmes of investment in innovation, including collaborative industry-academia projects and German-Scottish hydrogen research collaboration. The [consultation on the draft Hydrogen Action Plan](#) will run until 19 January 2022.

UK Government support for large scale hydrogen storage project

22nd November 2021

On 22 November, the UK Government announced its [decision to back a first-of-a-kind hydrogen storage project near](#) Glasgow with nearly £9.4 million. The Whitelee Renewable Hydrogen Project, set at the UK's largest onshore windfarm will see the development of the UK's largest electrolyser with a planned production of 20MW green hydrogen.

CCUS - All Party Peer Group meeting

22nd November 2021

On 22 November, the CCUS All Party Peer Group hosted a meeting showcasing the ongoing work in the UK's CCUS clusters. Organized in co-operation with CCSA, the event featured presentation from each CCUS cluster, including Andy Lane (East Coast Cluster), David Parkin (HyNet North West Cluster), Pierre Girard (DelpHYnus), Chris Williams (South Wales Industrial Cluster), Phil Kirk (Humber Zero), Nick Cooper (Scottish Cluster). With ca. 220 participants including representatives of parliamentary parties and the wider public, the meeting generated lively discussions. Key issues of interest were:

- Technology, including questions around capture (esp. capture rates), transport (esp. connection between clusters/places beyond pipelines, including shipping) and storage (esp. around leakage, pressure, failure of projects abroad) as well as the production of hydrogen (esp. the carbon footprint of blue hydrogen)
- Economics, including questions around the costs and benefits of CCS, the export potential of technologies, possible skills shortages, the existence of demand for H2 and the impact of gas prices on hydrogen
- Policy and business models: a key theme throughout the discussion were questions relating to the governments' forthcoming business models for CCUS (their publication date and content) and the consequences of the cluster sequencing decision for the Scottish Cluster and the UK's Net Zero ambition in general.

Scottish Parliament Debate on CCUS

25th November 2021

On Thursday 25th November 2021, the Scottish Parliament debated the motion 'Carbon Capture Utilisation and Storage as Part of Scotland's Net Zero Ambitions', with members' positions split predictably along party lines. The SNP and Labour were critical of the UK Government's decision not to progress the Scottish Cluster to full Track 1 status, with Gillian Martin (SNP) calling for the decision to be reversed, and Paul Sweeney (Lab) suggesting that it undermines Scotland 2045 Net Zero ambitions. The Scottish Conservatives were broadly defensive of the UK Government's decision, with Maurice Golden (Con) criticising the Scottish Government for a lack of investment in CCUS. Fergus Ewing (SNP) highlighted the importance of existing infrastructure and skills within the oil and gas industry to the development of CCUS, while Mark Ruskell (Green) argued that developing CCUS means diverting from green renewable solutions because of its reliance on oil and gas production.

House of Commons Environmental Audit Committee – Technological Innovations and Climate Change: Negative Emissions Technologies

25th November 2021

Following a call for evidence last month, the Environmental Audit Committee (EAC) is conducting an inquiry into the proposed role of negative emissions technologies (NETs) in UK Government's Net Zero Strategy, with a particular emphasis on Bioenergy with Carbon Capture and Storage (BECCS) and Direct Air Carbon Capture and Sequestration (DACCS). On the 25th of November the [EAC hosted an oral evidence session](#) split over two panels. The first panel considered the wider role of NETs in reaching net zero and consisted of: Ruth Herbert, Chief Executive at the Carbon Capture and Storage Association (CSSA), Dr Steve Smith, Executive Director of the Oxford Net Zero Initiative and

CO2RE, and Prof. Jon Gibbins, Centre Director of the UK Carbon Capture and Storage Research Centre at the University of Reading.

Key talking points from the first panel included:

- The need for rapid development and provision of business models to support deployment and scale up of NETs if 2030 targets are to be met, with the in-development CCUS models cited as examples to follow. It was argued that this will provide the certainty and stability required for private sector investment.
- The need to progress more than two Track 1 clusters in parallel to achieve 2030 targets.

The second panel considered the role of BECCS specifically and consisted of: Mair Floyd-Bosley, Senior Policy Officer at the Royal Society for Protection of Birds (RSPB), Dr Daniel Quiggin, Senior Research Fellow with the Environment and Society Programme at Chatham House, and Jason Shipstone, Chief Innovation Officer at Drax Group. In a highly contentious session, key talking points included:

- The adverse consequences large-scale BECCS deployment would have on global ecosystems, land use, food security and supply chains, due to the scale of feedstock production required.
- Discussion of the carbon accounting methodologies used inform assessments of BECCS, highlighting a lack of clarity around associated soil carbon, land use and supply chain emissions in particular.
- Panel discussion left open the question of the ultimate scale of deployment, with an over-reliance of BECCS in UK Government pathways to Net Zero highlighted.