

Monthly report on research and policy developments
Energy and climate change

June and July 2023

Purpose: This document provides a summary of recent key developments in policy and research related to energy and climate change during June and July 2023. It has been prepared by [ClimateXChange](#) and is intended to keep policymakers informed of issues relevant to the Scottish Government's energy and climate change policy portfolio.

International climate and energy research and policy

Preparations for COP28, the UN's climate conference from Dubai, UAE, in November

- **Tensions and progress at Bonn climate talks**

Tensions around climate finances and disagreements about the agenda were prominent at the Bonn climate talks, as reported by Climate Home News. The talks lay groundwork for the political decisions required at COP28. By the end of the two-week meeting, progress was made on loss and damage, the global stocktake, climate finance and adaptation, according to the UN climate change body, the UNFCCC.

Sources: [Climate Home News](#); [UNFCCC](#)

16 June
- **EU to push for earlier fossil fuel phaseout at COP28**

The European Union will push for a global pledge to phase out fossil fuels before 2050 at COP28, according to Euractiv.

Source: [Euractiv](#)

14 July
- **COP28 president presents plan at Brussels meeting**

Sultan al Jaber, the COP28 president, laid out an action plan including confirmation that the phasing down of fossil fuels will be pursued at the conference, according to Euronews. The plan is split into four pillars: fast-tracking the energy transition, fixing climate finance, focusing on people's lives and livelihoods and full inclusivity.

Source: [Euronews](#)

14 July
- **G20 nations fail to reach agreement ahead of COP28**

Agreement was not reached on targets to phase down fossil fuels and scale up renewables when energy ministers from the world's largest economies met at the G20 summit in Goa, India. The lack of agreement puts pressure on the COP28 hosts, as reported by Climate Home News. In the following days, at G20 meetings in Chennai, nations were unable to agree on issues such as net zero goals and financing to support developing countries, according to Reuters.

Sources: [Climate Home News](#); [Reuters](#)

24 and 28 July

Preparations for COP28 (continued)

- **EU climate policy lead steps down**

20 July

The European Union climate policy lead, Frans Timmermans, is leaving the European Commission to pursue the position of Dutch Prime Minister, according to Climate Home News. He has held the EU position since December 2019, being responsible for the European Green Deal and leading EU's delegation to three COP climate talks. Timescales for the appointment of his successor are unknown, but possibly by June 2024, with an interim appointment attending COP28.

Source: [Climate Home News](#)

Jim Skea appointed as new IPCC chair

26 July

The professor of sustainable energy at Imperial College London and previous co-chair of the IPCC report on solutions has been elected as the new chair of the UN's climate expert panel. Dundee-born Skea, a University of Edinburgh graduate, currently chairs Scotland's Just Transition Commission and was a founding member of the UK Government's Committee on Climate Change.

Sources: [The Guardian](#); [The National](#)

Steel industry moves towards lower-carbon production

20 July

The transition from coal-based steelmaking is underway but is moving far too slowly, according to a report from Global Energy Monitor. In an improvement from last year's figures, 57% of globally planned steelmaking by 2050 would use coal-based blast furnaces, with the remaining 43% using electric arc furnaces. Although viewed as progress in the right direction, it still falls short of a 1.5C-compatible pathway, which requires 53% of steelmaking to use electric arc furnaces by 2050, according to Carbon Brief.

Sources: [Global Energy Monitor](#); [Carbon Brief](#)

First net zero target for the global shipping industry

12 July

Nations at the UN's International Maritime Organization meeting agreed to cut greenhouse gas emissions from the shipping industry to net zero by or around 2050. Agreement on emissions checkpoints for 2030 and 2040 was also reached.

Source: [Carbon Brief](#)

EU deforestation regulation in force

29 June

A new EU law requiring key goods exported or placed on the EU market to be deforestation-free has come into force. The regulation on deforestation-free supply chains supports EU commitments to tackle climate change and biodiversity loss.

Source: [European Commission](#)

Europe and Argentina strike energy deal

19 July

The European Commission has signed a non-binding agreement with Argentina to supply gas to Europe, with Argentinian commitments to building renewables capacity and cutting methane emissions from gas leaks.

Source: [Climate Home News](#)

New targets for EU greenhouse gas emissions by 2040

14 June

The EU's first legally binding target to cut emissions by 2040 is being drafted by the European Commission, according to Reuters. The EU's advisory board on climate change has recommended the goal should be a 90% to 95% cut in net emissions by 2040, compared with 1990 levels.

Source: [Reuters](#)

Funding to cut oil and gas methane emissions

24 July

The US Government has announced US\$1.55 billion of funding to monitor and reduce methane emissions from the oil and gas sector, according to Reuters. An International Energy Agency (IEA) report in June said the oil and gas industry has some of the best and most cost-effective opportunities to reduce methane emissions.

Sources: [Reuters](#); [IEA](#)

UK climate and energy research and policy

ClimateXChange research reports published in June and July 2023

- **Mapping the hydrogen skills landscape**

Hydrogen has the potential to be a valuable part of the Scottish economy, with an estimated cumulative turnover of £22.9bn between 2031 and 2035, according to findings from our project. More than 18,500 new jobs will be created annually in the hydrogen economy in 2030-2035.

Source: [ClimateXChange](#)

- **Adapting Scottish agriculture to a changing climate**

This study identified regions with a similar climate to that which Scotland expects to have in the future, to identify agricultural products that could be adopted or expanded in Scotland. The report proposes adaptation actions, including adjusting planting and harvesting dates, and selecting crop types resilient to extreme weather.

Source: [ClimateXChange](#)

- **Zero emissions heating in new buildings across Scottish Islands**

This study examined which zero direct emissions heating technologies are best suited to the unique consumer and geographical characteristics of Scottish islands and remote communities. Overall, the research found that the uptake of these technologies in new buildings in island and remote areas of Scotland do not face more significant barriers than in other parts of Scotland.

Source: [ClimateXChange](#)

ClimateXChange research reports published in June and July 2023 (continued)

- **The benefits of sustainable travel to local high streets and town centres**
This report provides an evidence base on the environmental, economic and social impacts of sustainable travel for local high streets and town centres for those promoting, campaigning on, designing and delivering sustainable travel interventions. A suite of engagement materials is also available as a companion to the report, for use when engaging with communities and businesses on plans to implement sustainable travel measures.
Source: [ClimateXChange](#)
- **TIMES model industry sector update**
Scottish TIMES is a whole system energy model of Scotland, used by the Scottish Government as an analytical tool to support the development of climate change and energy-related policies and plans. This review has led to the updating of a range of parameters, such as capital and operating cost. Several new processes for inclusion were identified, including hydrogen above ground storage.
Source: [ClimateXChange](#)
- **Scottish agricultural knowledge and innovation system**
Transformation in agricultural land management is critical to dealing with climate change, addressing the biodiversity crisis and achieving a just transition for land and agriculture. Providing advice and collaborative learning opportunities is the key mechanism to deliver behaviour change in the sector. This report provides a review and options appraisal for an agricultural knowledge and innovation system for Scotland, which links organisations, institutions, incentives and funding.
Source: [ClimateXChange](#)
- **International heat and energy efficiency policy review**
This research identified regulations and policies relevant to heat and energy efficiency internationally, investigated their effectiveness and, where possible, identified why some approaches work and others fail. The report highlights key considerations within the international policy area to inform how similar regulations could work in Scotland.
Source: [ClimateXChange](#)

Slow UK climate action criticised

28 June

The UK Government's plans to meet its net zero targets are unsatisfactory, advisers in the Climate Change Committee say. Targets are being missed on almost every front and Britain has lost leadership in climate action, according to the 2023 Progress Report to Parliament. There are concerns for instance around airport expansions, the low number of homes being insulated and the expense of public charging for electric vehicles.

Sources: [CCC report](#); [The Guardian](#); [The Conversation](#)

UK Government to grant hundreds of new oil and gas licenses 31 July

UK Prime Minister Rishi Sunak has announced that more than 100 North Sea oil and gas extraction licences are to be granted, along with plans for hundreds of future licenses. In a statement he said that the licenses are being granted to improve energy security, according to Reuters.

Source: [Reuters](#)

Scotland misses emissions target 20 June

Official statistics published by the Scottish Government show that total greenhouse gas emissions were 49.9% lower in 2021 than in 1990, falling short of the 51.1% target. Emissions fell in 2020 due to lockdown measures but bounced back in 2021. In 12 years, it's the eighth time that the legally binding target has been missed, according to the BBC.

Source: [BBC](#)

UK climate adaptation plan is insufficient, experts say 17 July

Measures to tackle overheating and flooding are included in the third National Adaptation Plan, which outlines how the UK Government intends to prepare for the impacts of climate change. Experts criticised the plan for not containing any new legislation or significant new financial commitments, according to the BBC.

Source: [BBC](#)

Climate science, impacts and adaptation

Record-breaking June and July 2023 heat events

- **June and July heatwaves impossible without climate change** 25 July
The US, China and Europe heatwaves in June and July would have been virtually impossible without human-induced climate change, according to scientists from World Weather Attribution. Nearly one-third of the US population was under heat warnings as several heat records over 37.8C were set. The heatwave in China, with a new national temperature record of 52.2C, was at least 50 times more likely due to climate change. Hospital cases across southern Europe soared and wildfires have been devastating parts of Greece.
Sources: [Carbon Brief](#); [iNews](#)
- **World's hottest day, hottest week and hottest June records broken** 7 July
The world's hottest average temperature for a day was broken three times in one week in early July. The EU's climate monitoring service Copernicus also announced it was the hottest June on record, according to the BBC. Unofficial data analysis of average world temperatures at the start of July showed it was the hottest recorded week on record, as reported in the Guardian.
Sources: [BBC](#); [The Guardian](#)

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- **Sea temperature records broken in Europe and the USA** 19 June and 27 July
North Atlantic temperatures around the UK and Ireland in June were 3C to 4C above normal. These were caused by climate change and natural variation within the climate system, according to the Met Office, as reported by Sky News. Meanwhile, the sea water temperature around Florida was 37.8C in late July, possibly the hottest ever recorded, according to the BBC.
Sources: [Sky News](#); [BBC](#)
- **Antarctic sea ice loss concerning scientists** 30 July
A land mass nearly the size of Argentina is missing from Antarctic sea ice, according to data from the National Snow and Ice Data Center, as reported by CNN. Scientists are concerned about the possible impacts on sea life and the role the Antarctic plays in regulating global temperatures.
Source: [CNN](#)

New portal improves accessibility of climate data 29 June
The Met Office has launched a new website giving organisations improved access to climate data and other resources. The free resources on the Climate Data Portal allow businesses and government organisations to combine open climate data with their own data, enabling them to better understand and respond to climate change.
Source: [Met Office](#)

Higher carbon tax on luxury goods fair, study finds 11 July
A system with a higher rate of carbon tax for luxury goods and services would be fairer and help deliver climate justice, according to a paper published in One Earth. Under the proposed system, products that meet basic needs, such as heating or cooking fuel, could have a lower tax rate than the tax rate applied to luxury goods, such as high-performance cars or long-haul holidays.
Source: [University of Leeds](#)

Food security risk from concurrent extreme weather underestimated 4 July
Climate models tend to underestimate the risks of extreme weather events occurring simultaneously, according to a study published in Nature Communications.
Sources: [Nature Communications](#); [Carbon Brief](#)

Funding boost for net zero energy research 12 July
Six research centres have received investment of £53 million from UKRI to create innovative green technologies and work on solutions to reduce demand for energy.
Source: [UKRI](#)

Poorer UK households more vulnerable to climate change 1 June
Poorer households in the UK are more vulnerable to climate change because temperature shocks are associated with deepening wealth inequality, according to a new study.
Source: [Anglia Ruskin University](#)