

## Monthly Report on Policy Developments - Energy and Climate Change

January 2016

**Purpose:** This document provides a summary of recent key developments in policy and research relating to energy and climate change. It has been prepared by the ClimateXChange<sup>1</sup> Secretariat and is intended to keep Scottish Policymakers informed of issues relevant to the Scottish Government's Energy and Climate Change policy portfolio.

### International Climate Policy

#### US Appeals Court rejects bid to block President Obama's Clean Power Plan

A three-judge panel of the US Court of Appeals for the District of Columbia Circuit [denied an application](#) made on behalf of 27 US states to block the Obama Administration's Clean Power Plan. [The Plan](#) is the centrepiece of the Federal Government's strategy to meet the emissions pledge it made to the Paris Climate Conference in December last year. It aims to reduce carbon emissions from the country's existing power plants by 2030 to 32 percent below 2005 levels. The challenge, led by West Virginia, sought to prevent the Environmental Protection Agency (EPA) from enforcing the plan until legal challenges to have the regulations overturned were resolved. An order by the Judges stated that the challengers had 'not satisfied the stringent requirements for a stay pending court review'. The Court's decision means that the EPA's intervention will be allowed until at least the 2<sup>nd</sup> of June this year when the Court will hear oral evidence on the legality of the Plan.

#### Europe, US submit plans to reduce aircraft emissions

The EU and the US have filed plans with the UN's civil aviation agency, [ICAO](#), to introduce emissions standards for aircraft from 2020. [The Guardian reported](#) that ICAO is considering a 'twin track' approach to regulating the aviation industry, by pricing carbon emissions and introducing fuel efficiency standards for aircraft engines.

The aviation industry was not included in [last year's Paris Agreement](#), despite being predicted to account for 22% of global emission by 2050. Flights within the European Economic Area (EEA) currently fall under the EU Emissions Trading Scheme. Amendments were made to EU legislation to exempt emissions for flights to and from the EEA during the 2013-16 period. [The EU made this change](#) following agreement by the ICAO Assembly in 2013 to develop a global market-based mechanism addressing international aviation emissions by 2016 and apply it by 2020.

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<sup>1</sup> [ClimateXChange](#) is Scotland's Centre of Expertise on Climate Change, supporting the Scottish Government's policy development on climate change mitigation, adaptation and the transition to a low carbon economy. The centre delivers objective, independent, integrated and authoritative evidence in response to clearly specified policy questions.

The Chinese Government included aviation (including civil aviation, passenger transportation, air cargo transport, airports) in [a list of eight sectors and 15 sub-industries](#) likely to be covered by its national carbon market when it is launched in 2017.

### **Governments should aim to increase spending on low-carbon research and development beyond 2020: Grantham Institute**

Countries should set targets to increase public investment in low-carbon research and development (R&D) slowly and steadily beyond 2020, according to a [report published this month](#) by the Grantham Research Institute on Climate Change and the Environment at London School of Economics and Political Science. The study found that while policies that put a price on carbon are a crucial driver for low carbon technologies that are already close to market, they need to be complemented by direct support to emerging technologies essential to meeting long-term emissions reduction targets.

### **UN calls for doubling of investment in green energy by 2020**

UN Secretary General, Ban Ki-moon, called on business leaders to 'seize the opportunities for clean energy growth' following the Paris Climate Agreement. Addressing an audience of 500 business leaders in New York, he challenged investors to [at least double](#) their clean energy investments by 2020. UN Climate Chief, Christiana Figueres, has acknowledged that mobilising business investment will be critical for meeting the objectives of the Paris Agreement. A UN spokesperson told the annual meeting of the International Renewable Energy Agency meeting in Abu Dhabi this month that doubling renewable energy to 36% of the global energy mix by 2030 would take countries halfway to the Paris goal of limiting warming to 2C, and increase global GDP by up to \$1.3tn.

### **UK Climate Policy**

#### **UK Carbon Budget sufficient, despite Paris Agreement**

The Committee on Climate Change (CCC) has advised Energy and Climate Change Secretary, Amber Rudd, that the [UK's current carbon budget is sufficient to meet UK's emissions targets](#), despite the ambitions of the Paris Agreement. The Committee reiterated advice set out in its [Fifth Carbon Budget](#) that an emissions cut of 61% below 1990 levels by 2030 is the minimum ambition necessary to meet the UK's legislated target of 80% by 2050. The Paris Agreement aims to hold the increase in global temperatures to well below 2°C above pre-industrial levels, to pursue efforts to limit warming to 1.5°C and to reach net zero global emissions of greenhouse gases in the second half of the century. While these aims are more ambitious than the UK's current targets assume, the pledged contribution by the EU, to which the UK is Party, has not yet changed.

The measures set out in the CCC's Fifth Carbon Budget are intended to set a cost effective path to achieving the 2050 target whilst allowing for deeper reductions if they are required. The CCC has encouraged the UK to push for a revised EU pledge that is more consistent with the agreed global ambition. The Committee advised that such changes to the EU pledge may require tightening of the UK's carbon budget.

## Senior experts warn that Brexit would erode UK's environmental protections

[A group of environment and conservation experts](#), including four former chairs of UK environment agencies, has written to the Defra Secretary of State Liz Truss, about the risks to the environment if Britain leaves the EU. The letter states that 'Britain's membership of the European Union has had a hugely positive effect on the quality of Britain's beaches, our water and rivers, our air and many of our rarest birds, plants and animals and their habitats. Being part of the Union has enabled us to coordinate action and agree policies that have improved our quality of life, including the air we breathe, the seas we fish in, and have protected the wildlife which crosses national boundaries... The environmental rules of engagement with the EU after Brexit are very uncertain and would be subject to lengthy and protracted negotiation due to our new status as an outsider. We would no longer be able to shape EU policy and our influence on the environmental performance of other member states would decline very sharply once we were no longer at the negotiating table'. The [joint letter](#) was coordinated by the [Green Alliance](#) think tank.

## Energy Policy

### Hinkley Point Power Station delay a risk to UK carbon budget

[The Carbon Brief](#) suggests that further delays to the proposed Hinkley Point C nuclear power station would threaten the UK's ability to meet its carbon budget. According to Carbon Brief's analysis, each year of delay would add 8-10 mtCO<sub>2</sub> to the UK's emissions. The Board of the French energy firm, EDF, has [delayed a scheduled meeting](#) to decide whether the company will invest in the development. The company agreed in a deal with China General Nuclear Power Company in October last year, to take a 66.5% stake in the power plant. However, there is growing concern over [EDF's ability to fund its share](#) of the £18bn project. The plant is now due to be operating by 2025, eight years after its original completion date of 2017.

### Half of Scotland's energy should come from renewables by 2030: Scottish Renewables

Scottish Renewables' new [election manifesto argues that](#) Scotland should aim to generate at least 50 per cent of its energy use from renewable sources by 2030. The industry body also called on the Scottish Government to create plans to integrate electricity, heat and transport. Scottish Renewables said the renewables target would require a threefold increase in green energy generation. The manifesto is accompanied by a [briefing paper](#), which shows the approximate levels of renewable energy output that would be required to achieve the proposed target of the equivalent of 50% of all energy use coming from renewable sources by 2030.

### Modest carbon tax on all UK fuels would have little impact on consumer prices

The UK government could apply a modest uniform tax on greenhouse gas emissions across the whole economy and have little impact on consumer prices, [according to a paper published this month](#) by the Grantham Research Institute on Climate Change and the Environment and the ESRC Centre for Climate Change Economics and Policy at the London School of Economics. The authors

found that a carbon tax of £20 per tCO<sub>2</sub>e applied to all fuels could increase UK consumer prices by up to just 0.9 per cent, assuming all costs were fully passed along supply chains. However, the estimates are at the “upper bounds” of the actual costs expected for consumers. According to the authors, costs would likely be reduced through behavioral change and business innovation, and as a result of tax revenues from carbon pricing being recycled back into the economy.

### **Solar power may meet 20% of global energy demand by 2027**

A report published in [Research Policy claims that](#) mainstream energy forecasts have underestimated the growth of solar energy. The price of generating energy from solar panels has decreased by 10% each year since the 1980s, and solar is likely to meet 20% of global energy demand by 2027, according to the report. This prediction [is in contrast](#) to the International Energy Agency's 'high renewable' scenario, under which solar power is predicted to meet 16% of electricity demand by 2050.

India's energy minister, Piyush Goyal, stated that [solar energy is now cheaper than coal](#) in some Indian states, following the auction tender of 420MW of solar capacity conducted by the Rajasthan government. Japan meanwhile began work on the [world's largest floating solar farm](#), which is anticipated to supply enough electricity for nearly 5,000 households when it is completed in early 2018.

## **Climate Impacts and adaptation**

### **2015 the hottest year on record**

The Met Office has released figures showing that 2015 was the [hottest year on record](#). [NASA](#) and the National Oceanic and Atmospheric Administration ([NOAA](#)) also confirmed 2015 as the warmest year on record. Scientists at the Met Office have attributed this record to rising atmospheric greenhouse gases, as well as a '[small impact](#)' from the El Niño in the Pacific, which did not peak until winter 2015/16. The Met Office has predicted that 2016 is likely to be even warmer than the preceding year, with El Niño predicted to contribute around 25% to what will most likely be a new record global temperature.

### **December 2015 the UK's wettest month since records began**

The Met Office has confirmed that December 2015 was not only the wettest December on record, but also the wettest calendar month overall since records began in 1910. [Rainfall was well above average](#), by two to four times, in the west and north of the UK, causing severe flooding in Northern England and parts of Scotland. A [paper published in the Hydrology and Earth System Sciences journal](#) concluded that the heavy rainfall which fell on northern England and Scotland during Storm Desmond between 4 and 6 December 2015 had been made 40 per cent more likely by climate change. Policy and communications director at the Grantham Research Institute on Climate Change, Bob Ward, [called for the UK Government to initiate an independent inquiry](#) into the UK's preparedness for coastal, surface water and river flooding, the risks of which are increasing in the UK due to more intense rainfall and sea level rise as a result of climate change.

The UK Government has since launched a National Flood Resilience Review, which will be chaired by the Chancellor of the Duchy of Lancaster, Oliver Letwin. The review will assess how the UK can be better protected from future flooding and increasingly extreme weather events. It will focus on four key areas: updating climate modelling and stress-testing the nation's resilience to flood risk; assessing the resilience of important infrastructure like electricity substations; temporary defences; and a future investment strategy.

### **Climate change and its associated risks are the biggest threat to global economy in 2016**

Failure of climate change mitigation and adaptation is the number one global risk to the world economy in terms of impact, [according to a survey of 750 experts conducted by the World Economic Forum](#). The annual assessment of risks conducted by the WEF before its annual meeting in Davos on 20-23 January also found increasing evidence that interconnections between risks are becoming stronger. It cites as an example, the major and unpredictable impacts that climate change can have on global markets, through involuntary migration and international security threats.