

Monthly Report on Policy Developments - Energy and Climate Change July 2015

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 ClimateXChange¹ Secretariat and is intended to keep Scottish Policymakers informed of issues relevant to the Scottish Government's Energy and Climate Change policy portfolio.

Climate Policy

EU set to reform carbon market

The European Parliament approved a proposal to begin reform of the EU's carbon market. This comes as a response to the [surplus of emission](#) allowances that has built up in the Emissions Trading System since 2009, leading to low carbon prices and thus weaker incentives to reduce emissions. The European Commission attributes this surplus to the economic crisis (which has reduced emissions more than anticipated) and high imports of international credits. In 2014 the European Commission postponed the auctioning of 900 million allowances until 2019-2020 in an attempt to rebalance supply and demand. The proposal approved by Parliament will introduce from 2019 a Market Stability Reserve to remove some of the surplus allowances. The Commission also intends to implement a faster reduction of the annual emissions [cap](#). As part of the [ETS revision for phase 4](#) (2021-2030), the Commission proposes to reduce the overall number of allowances by 2.2% each year from 2021 onwards, compared to 1.74% currently. Analysts [have suggested](#) that carbon prices could now reach at least €20 per tonne by 2020.

Committee on Climate Change provides assessment of the UK's progress on emissions

The Committee on Climate Change presented the UK Parliament with a [report on progress](#) towards meeting the UK's emissions reduction targets. The report found that UK domestic greenhouse gas emissions were down 8% on 2013 levels in 2014, 36% below 1990 levels. This is within the annual average level set out in UK's second carbon budget (2013-17). The Committee notes that this reduction is significant, particularly as 2013-14 was a year with strong economic growth. However, it warns that this cannot be taken as a sign that the UK has shifted permanently to a lower emissions path. The Committee points in particular to the mild winter months in 2014, which depressed demand for heating, leading to a 15% reduction in emissions from buildings.

The UK has made good progress in the deployment of renewable electricity generating capacity, energy efficiency and low carbon heat in industry. However, there has been limited progress in other areas such as low-carbon heat in buildings, take-up of the most efficient domestic appliances and

¹ [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.

schemes to reduce travel demand. The Committee notes that some mitigation policies are at risk of failing to deliver, either due to design and implementation problems, or because they are currently unfunded. It also notes a 'gap' in existing policies' ability to meet the fourth carbon budget (2023-27).

The Committee provides recommendations for delivering the UK's mitigation goals for the remainder of this decade. The UK Government must respond by 15 October 2015 and will need to develop plans to make up for the shortfall between current projected emissions and the legislated fourth carbon budget (2023-27). The Committee will provide its advice on the level of the fifth carbon budget (2028-2032) later in 2015. The UK Government has until June 2016 to pass legislation on the fifth carbon budget.

Reports find strong case for low carbon growth

The economic case for low-carbon growth is even stronger now than it was when the [Stern Review](#) was published in 2006, according to a new [paper by Nicholas Stern](#). The paper finds that "the case for avoiding the risks of dangerous climate change through the transition to low-carbon economic development and growth is still stronger than when the Stern Review was published". It concludes that the costs of inaction are much greater than the costs of action. Lord Stern has called for a strong global target to reduce atmospheric CO₂ concentrations to 500ppm, which he estimates will require annual investment of no more than 2% of global GDP.

A UN backed report published by [University College London](#) this month has recommended measures that it claims will enable the UK to achieve a "deep decarbonisation" scenario, in which emissions fall to 1.5 tonnes of carbon dioxide per capita by 2050 (compared to 8.8 tonnes in 2010). The [New Climate Economy](#) has also released a report, which provides ten practical recommendations that it claims could deliver up to 96% of the emissions reductions required by 2030 to keep the planet on a pathway to limit global warming to 2°C.

Energy Policy

2015 already a record year for European offshore wind industry

The European offshore wind industry has already achieved record development in 2015. Since January, 584 offshore wind turbines have been connected to the European electricity grid, adding 2.3GW, according to new data from the [European Wind Energy Association](#) (EWEA). There is now 10GW of connected offshore wind, enough to [power about seven million homes](#). Germany has installed three times more generation capacity than the UK in the first half of this year, while the UK remains the largest holder of offshore wind generating capacity in Europe. Since January, Germany has installed 1.7GW, the UK 0.5GW and the Netherlands 0.1GW. [Read more.](#)

A report by [BVG Associates for Statkraft UK](#) claims that offshore wind is on track to become cheaper than gas power in the 2020s.

UKERC Working Paper on EU energy policy

The UK Energy Research Centre (UKERC) has released a [Working Paper on EU Energy Policy and the Third Package](#). The paper sets out the path along which EU energy policy has moved since the initial creation of the organisation in the 1950s, detailing the principle documents and legislation upon which the current and proposed policies were constructed.

US now the world's largest oil producer

BP has released its annual [Statistical Review of World Energy](#) for 2014. The key findings of the report are that:

- The US has become the world's biggest oil producer. Its oil production rose by 1.6 million barrels a day in 2014, by far the largest growth in the world, taking its total overall production to just over 11.5 million barrels a day.
- Non-OPEC countries are now producing more oil than ever, having increased their supply by 2.1 million barrels a day in 2014.
- Growth of global primary energy consumption slowed to just 0.9% in 2014. With the exception of the financial crisis, this is the slowest growth of energy demand since the late 1990s. This sharp deceleration in demand occurred despite the global economy expanding at 3.3%, a similar rate to 2013.
- China's energy consumption has grown by only 2.6%, despite its economy growing by 7%.

Study attributes US carbon cuts to recession, not fracking

A study published in [Nature Communications](#) found that recent decreases in the US emissions are due mainly to the recession, not a switch away from coal use. US fossil fuel CO₂ emissions decreased by around 11% between 2007 and 2013. This decline has been widely attributed to a shift from coal to natural gas in US electricity production. However, analysis by the Universities of Maryland and California finds that the decline was largely a result of the recession, with changes in fuel mix (for example, substitution of natural gas for coal) playing a comparatively minor role. The report's authors have suggested that policy change may therefore be necessary to lock-in the recent emissions reductions and drive further decarbonisation of the energy system as the US economy recovers and grows.

CCC presents assessment of the National Adaptation Programme

The Committee on Climate Change's (CCC) [report to parliament](#) (described above) included the CCC's first ever statutory assessment of the UK National Adaptation Programme (NAP), carried out by the Adaptation Sub Committee (ASC). The ASC's assessment found four key areas of climate change risk where progress has been made but further steps are necessary: water scarcity; flood risks; heat stress in the built environment; and impacts on natural assets and agriculture. The ASC will publish its evidence report and advice to the UK Government on the next Climate Change Risk Assessment in the summer of 2016. The UK Government will respond to this and present the UK Climate Change Risk Assessment to Parliament in early 2017. The Risk Assessment will cover Scotland.

LWEC releases 'Report Card' on UK infrastructure

[Living with Environmental Change](#) (LWEC) has released a ['Report Card'](#) on the potential impacts of climate change on the UK's infrastructure. The report card describes the nature and scale of those impacts, and aims to inform infrastructure management and development decisions. It summarises the findings from twelve expert reports. Other report cards cover climate change impacts on marine and terrestrial biodiversity, on water and on health.

Overheating in UK homes identified as an 'unmanaged risk'

A UK Government funded [study by the Zero Carbon Hub](#) calls for action to ensure that new and existing homes do not overheat during heatwaves. The study concluded that there is enough evidence about the causes, extent of, and solutions to overheating in homes to warrant taking action. The report points in particular to a lack of consistency in policy frameworks and regulations to guide the housing sector on issues of overheating and health risks.

DECC, in collaboration with [ARCC Network](#), this month released a [guidance note](#) to assist the identification of homes which may be most at risk of overheating. The guidance provides details of measures which, if implemented at the same time as energy efficiency improvements, can significantly reduce the risk of overheating, and the potential use of energy for cooling.

June 2015 warmest ever recorded globally

The combined average temperature over global land and ocean surfaces for June 2015 was the highest for June since records began 136 years ago. According to the [US National Centres for Environmental Information](#), global temperatures in June this year were 0.88°C above the 20th century average of 15.5°C, surpassing the previous record set just one year ago by 0.12°C. June was the fourth month this year to break its monthly temperature record, along with February, March, and May.

Climate change doubles the chances of the 2015 European heatwave

A [collaborative study](#) involving the non-profit environmental news organisation *Climate Central* and an international team of climate researchers has concluded that the European heatwave of June/July this year was made at least twice as likely over much of the continent as a result of global warming. The work, which has not yet been peer-reviewed, may be the first real-time example of “weather attribution” - assessing the impact of climate change on extreme weather events.

The World Meteorological Organisation affirmed earlier in the month that the [frequency of heatwaves is increasing](#) in the Northern Hemisphere.

Study finds ‘hiatus’ in surface warming a result of indo-pacific ocean heating

A study published in [Science](#) this month assessed the causes of the apparent ‘hiatus’ in global surface warming trends that occurred during the first decade of the 21st century. The study found that during this period the surface of the Pacific Ocean cooled, while at lower depths the Indian and Pacific Oceans warmed. The study’s authors conclude that the decade-long ‘hiatus’ that began in 2003 appears to be the result of a redistribution of heat in the oceans, rather than a change in the whole-Earth warming rate.

A separate study by the Institute of Atmospheric Physics has found that the planet’s oceans are warming [faster than previous models have predicted](#).

Volume of Arctic sea ice increased by 14% due to cool 2013 summer, despite long term decline

Scientists from University College London and the University of Leeds have found that volume of Arctic sea ice [increased by a third after the summer of 2013](#), as unusually cool air temperatures prevented the ice from melting. The study, which used data from the European Space Agency’s CryoSat-2 mission between 2010 and 2014, found that there was a 14% reduction in the volume of summertime Arctic sea ice between 2010 and 2012. However, the volume of ice jumped by 41% in 2013, when the summer was 5% cooler than the previous year. The report’s authors suggest that the cooler temperatures during this period allowed thick sea ice to persist northwest of Greenland because there were fewer days when it could melt. The study’s findings will help researchers to



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predict future changes in the volume of Arctic sea ice, including its ability to recover during shorter 'melting periods'. [Read the full report here.](#)