

Monthly Report on Policy Developments - Energy and Climate Change June 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

Pope issues first papal encyclical on environment, calls for action on climate change

On June 18th, Pope Francis released his much anticipated encyclical on the environment and climate change. The document, titled [*Laudato Si \(Praise Be\), On the Care of Our Common Home*](#), calls for 'decisive action, here and now' to stop environmental degradation and global warming. The encyclical recognises human activity as the main cause of climate change, which is 'aggravated by a model of development based on the intensive use of fossil fuels' as well as 'changed uses of the soil, principally deforestation for agricultural purposes'. Drawing on 'the results of the best scientific research available', Pope Francis describes climate change as 'one of the principal challenges facing humanity in our day' and states that poor nations will suffer the most. *Carbon brief* has summarised the document's key points [here](#) and summarised media responses to the text [here](#). [Reuters](#) has also summarised the text's key statements.

G7 leaders to commit to 2°C, emphasise decarbonised economy this century

Leaders of the G7 have released a [declaration](#) in which they commit to holding the increase in global average temperature below 2°C, following their meeting in Germany earlier this month. The declaration emphasises that deep cuts in global greenhouse gas emissions are required, along with decarbonisation of the global economy over the course of this century. The leaders committed to developing low-carbon strategies, including the transformation of energy sectors by 2050. The declaration also includes aims to increase by up to 400 million the number of people in the most vulnerable developing countries who have access to direct or indirect insurance coverage against the negative impacts of climate change related hazards by 2020, and to support the development of early warning systems in the most vulnerable countries.

Court orders Dutch Government to cut greenhouse gas emissions

A Dutch court has ordered the government to [cut greenhouse gas emissions](#) by at least 25% by 2020 in a landmark court case. Dutch campaigners presented the case on behalf of 900 citizens, arguing

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.

that the government had a legal obligation to protect its citizens from the dangers of climate change. The court agreed, finding that based on current policy, the Netherlands would only achieve a 17% reduction at most in 2020, which is less than other nations. The ruling is legally binding and puts pressure on the government to speed up the process of meeting climate targets within the next five years. Similar cases are being brought against governments in Belgium and the Philippines.

Study calls for greater EU investment in CCS

A joint study by the London School of Economics & Political Science, and Imperial College London has argued that [the EU must increase its investment in carbon capture and storage](#) by between €18 billion and €35 billion by 2030 if it is to meet the decarbonisation goals set out in its 2050 Roadmap.

Green Investment Bank to be part-privatised

Business Secretary Sajid Javid has [suggested that](#) he will start 'exploring options' to sell part of the UK Government's [Green Investment Bank](#) to private investors. It is currently unclear what proportion of the Edinburgh based bank the Government intends to sell, however the [Financial Times](#) has reported that it could be as much 70%, with a sale price of well above £1bn. The proposed move has been criticised by the [Liberal Democrats and the think tank E3G](#), who contributed to the Bank's establishment, as well as senior [Conservatives Party members](#). The bank's Chief Executive, Shaun Kingsbury has [defended privatisation](#) as the best option for the bank.

Energy Policy

UK on track to meet Renewables target, despite EU progress report findings

[Updated figures](#) from DECC have [countered findings](#) presented by the EU indicating the UK is [failing to meet its interim targets](#) under the EU Renewable Energy Directive. Earlier in June the EU released its biennial progress report on the target, which found that Britain is trailing behind all other member states, failing to meet interim targets for 2013/14. However, DECC has since released updated figures which show that the UK actually surpassed its interim target for 2013/14. According to DECC's revised figures renewables supplied 7% of UK energy needs in 2014, up from the previously reported figure for 2013 of 5.1%. This means the UK got 6.3% of its energy from renewables on average in 2013/14, passing its interim goal of 5.4%. The figures were updated to account for improvements in methodologies for calculating various sources of renewable heat.

According to the EU's progress report, the bloc as a whole is on track to meet its 20% renewables target by 2020, with 15.3% of energy generated by renewables in 2013/14. A draft commission paper, which [was leaked](#) this month suggests that Europe will likely get more than half of its electricity from renewable sources by the end of the next decade if EU countries meet their climate pledges.

Report calls for continued policy support for energy efficiency

A research report released by the [UK Energy Research Centre](#) claims to show the importance of increased policy support for energy efficiency programmes. A strategic review by the Centre has

found the potential for energy savings in the region of 10% from well designed and implemented programmes, including minimum energy efficiency standards for buildings, incentives to encourage consumers to buy more energy efficient appliances, and investment and refurbishment programmes. The report's authors advise that policymakers continue to support energy efficiency policies and programmes, which they argue are likely to continue to offer a cost-effective route to achieving energy policy objectives.

Renewable Energy

Scotland is generating record amounts of renewable energy

Data released by DECC show that that Scotland achieved [record levels of green energy generation](#) in 2014, with almost half of all electricity used coming from renewables. Scotland also broke its own records in the first three months of 2015, generating 4,452 Gigawatt hours of electricity from wind. This is up 4.3% on the previous record quarter and enough electricity to power the equivalent of around 960,000 Scottish households for a year.

UK leads solar energy expansion

A [record amount of solar power](#) was added to the world's grids in 2014, pushing total cumulative capacity to 100 times the level it was in 2000. Around 40GW of solar power was installed last year, meaning there is now a total of 178GW to meet world electricity demand. Britain has led the European solar expansion, adding 2.4GW of solar resources to the domestic market, and a third to Europe's overall 7GW of growth.

The Solar Trade Association this month published its '[Solar Independence Plan for Britain](#)', setting out a plan which it believes the new UK Government can implement to steer rooftop solar-generated electricity to parity with retail electricity prices and utility-scale solar farms to parity with new gas CCGT power station prices, both by 2020.

Power to Gas technology may reduce costs of grid-integrated renewable energy

A [recently published paper](#) in the International Journal of Hydrogen Energy has found that employing a 'Power to Gas' systems may significantly reduce wind power curtailment, as well as the operating costs of an integrated system. Power-to-gas (PtG) converts electricity into hydrogen using the electrolysis process and uses the gas grid for the storage and transport of hydrogen. The study shows that producing hydrogen from electricity is capable of decreasing the overall cost of operating the GB gas and electricity network. The northern part of GB was identified as a suitable region to develop hydrogen electrolysis and injection facilities due to its vicinity to a significant capacity of wind generation, as well as the existence of gas network headroom capacity, which is expected to increase as a result of depletion of UK domestic gas resources.

Finance

Miscalculation of climate risks by credit rating agencies could lead to major financial crisis according to a new report by the [Center for International Environmental Law](#). The report points to major firms such as Moody's Investors Service and Standard & Poor's, drawing similarities between their assessments of coal and gas values with the 'subprime mortgage' phenomenon associated with the 2008 financial crisis.

Climate Science

Low solar output won't halt warming trend

Research by the Met Office, published in [Nature Communications](#) this month suggests that a potential decrease in solar activity is likely to have a minimal impact on global mean temperatures in comparison to the effects of anthropogenic global warming. According to models, which simulate conditions from 2050 to 2099, a possible "grand solar minimum" would cool the planet by just 0.1C. Parts of northern Europe would feel a larger cooling effect of between -0.4 and -0.8C. The findings [undermine claims](#) by some climate change sceptics that it is solar activity – not greenhouse gas emissions – responsible for rising temperatures in recent decades.

Research [released by U.S scientists](#) this month has thrown into question claims of a 'pause' in global warming in recent decades. Figures released by the IPCC in the past suggest that [global average temperatures](#) have increased by around 0.05C per decade in the period between 1998 and 2012. This compares with an average of 0.12 per decade between 1951 and 2012. The new analysis suggests a figure of 0.116 per decade for 2000-2014, compared with 0.113 for 1950-1999. According to the report's authors, these figures show that "the IPCC's statement of two years ago - that the global surface temperature 'has shown a much smaller increasing linear trend over the past 15 years than over the past 30 to 60 years' - is no longer valid".

Bloomberg this month produced a [series of graphs](#) explaining the major factors influencing the world's changing climate.

Climate Impacts

2015 on track to break temperature records

NASA has released [global temperature data](#) for the month of May 2015. The figures show that temperatures were up .71°C on the average for the month. The figures also show that the 2015's first five months were the hottest ever recorded. [Thousands of people](#) have already died from extreme temperatures this year as the world enters what is expected to be a substantial 'El Nino' period.

NASA has also [released maps](#) this month, which show modelled predictions of how temperature and rainfall patterns around the world may change by the year 2100.

Climate change threatens to set development and health back 50 years, but also poses opportunities

A report by the [Lancet Commission on Health and Climate Change](#) states that climate change threatens to undermine 50 years of gains in development and health, but timely action could make it this century's "greatest global health opportunity,". According to the report, despite the challenge of mitigating climate change, many mitigation and adaptation responses to climate change are "no-regret" options, leading to direct reductions in the burden of ill-health. The report identifies affordable renewable energy as having potentially 'huge benefits for the most vulnerable to climate change'.