

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

November 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 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.

### UK Climate and Energy Policy

#### Climate Change Committee releases Fifth Carbon Budget

The Committee on Climate Change released its [Fifth Carbon Budget](#). It recommends that the UK should cut its emissions to an average of 57% below 1990 levels between 2028-2032 in order to cost-effectively achieve its legislated commitment to reduce emission by 80% by 2050. The Committee suggested that the target would require greater behavioral adjustment than emissions reductions to date and stressed the need for clear policy direction. It identified the following measures as priorities for policy development:

- Developing effective, low-cost approaches to energy efficiency in buildings and to drive a shift to low-carbon forms of heating (e.g. heat pumps and heat networks).
- Continuing efficiency improvement in vehicles, especially by shifting towards ultra-low emission (e.g. electric and plug-in hybrid) vehicles.
- Ensuring that low-cost, low-carbon power is rolled out in the 2020s.
- Supporting development of key emerging options such as carbon capture and storage.

#### UK Government pledges phase-out of coal by 2025

UK Secretary of State for Energy and Climate Change, Amber Rudd, announced a Spring consultation on proposals to close all UK coal power stations without carbon capture and storage by 2025. While this ambition has generally been welcomed, much concern has been expressed about the Government's apparent intention to replace coal's generating capacity with gas. Rudd stated the initiative would only proceed if the Government could be 'confident that the shift from coal to new gas can be achieved within these timescales'. While the restrictions to be placed on coal will not be known until Spring, Rudd promised that the government will push for additional gas using the Capacity Market established through Energy Market Reform. Environmental campaigners including

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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.

WWF hailed the announcement [as a success](#). But leading academics, including Professor Richard Templar of the Grantham Institute, [expressed concern](#) that there is no apparent plan for how the government will use gas as a 'bridge' to a decarbonised electricity supply.

While gas companies, [including fracking firm iGas](#), have predictably welcomed the announcement, the business lobby group CBI has warned of a lack of incentives to secure investments in gas. Professor Paul Ekins, Director of the UCL Institute for Sustainable Resources stated his concern that 'U-turns' on energy policy, such as the recent removal of subsidies for onshore renewables, would undermine investor confidence in gas. Renewable energy firms accused the Government's policy of supporting nuclear energy, fracking and new gas-fired power stations while removing support for renewables on cost grounds as '[utterly inconsistent](#)'.

### **£1b carbon capture and storage competition scrapped**

UK Treasury announced the cancellation of a £1 billion competition for carbon capture and storage (CCS). The fund was intended to support two full-scale CCS projects, which were in their early development stages. Shell, which was leading one of the schemes, confirmed it [would not go ahead without government backing](#), while the second project is now highly unlikely to proceed.

[Industry, researchers and analysts](#) have expressed surprise at the timing of the unexpected announcement ahead of the COP21 meeting. Jim Watson, Director of the UK Energy Research Centre questioned the compatibility of the move with the Government's plans to use gas as a 'bridge' to a low carbon future. According to Geoffrey Maitland, Professor of Energy Engineering at Imperial College London, a rapid increase in gas-fired power stations will reduce CO<sup>2</sup> emissions by up to 50%, but will still need CCS in order to meet the UK'S statutory emissions targets. Prof. Stuart Haszeldine, Director of Scottish Carbon Capture & Storage, claimed that large-scale pilot projects were essential to establishing CCS in the UK. He also questioned the Government's reliance on nuclear power to deliver our future electricity needs, stating that 'if new nuclear cannot be delivered at scale and on time, the UK runs the future risk of becoming a distressed buyer of rapidly built gas power plant, which locks in UK carbon emissions for the next 40 years'. Jenifer Baxter, Head of Energy and Environment at the Institution of Mechanical Engineers, [expressed similar concern](#), stating "without CCS technology this will mean we are locking ourselves in to relying on unabated fossil fuel power for generations to come". The Committee on Climate Change identified support for the development of CCS as a priority in its [Fifth Carbon Budget](#).

### **Energy Company Obligation to be replaced**

Chancellor George Osborn announced that the [Energy Company Obligation will be replaced](#) by a "cheaper domestic energy efficiency scheme" intended to save 24 million households an average of £30 a year on their energy bills. The scheme, which requires energy firms to fund energy efficiency upgrades for fuel poor and hard to treat households, will be replaced from April 2017. The new scheme is intended to upgrade the energy efficiency of over 200,000 homes per year, saving those homes up to £300 off their annual energy bill, according to the Chancellor. The [Energy Bill](#)

[Revolution campaign](#), said the budget for the new scheme represented a sharp reduction in the amount being spent on energy efficiency, from £1.3bn in 2013 to under £650m. Peter Smith, from fuel poverty charity [National Energy Action](#) claimed that the move 'could lead to the NHS having to spend in excess of £22bn to treat cold-related illnesses over the next 15 years'. Julie Hirigoyen, the UK Green Building Council's chief executive, claimed that the move sees the Government '[going backwards on one of the most cost-effective opportunities](#)' to reduce greenhouse gas emissions. Osborne has also announced a plan to save £700m in subsidies by reforming the Renewable Heat Incentive. The details of this reform are yet to be released.

### **DECC reduces UK renewable energy projections**

The Department of Energy and Climate Change (DECC) has reduced its [forecast](#) for new renewable energy generation in the UK by more than a third over the next decade. Analysis by Carbon Brief shows that [DECC has raised its forecasts for new-build gas](#) and interconnector capacity, while also scaling back expectations for new nuclear and carbon capture and storage (CCS). The forecast coincides with a downgrading of the UK's energy policy rating from the U.N.-accredited World Energy Council. The World Energy Council has downgraded Britain to an AAB rating, from AAA, in its annual "[energy trilemma index](#)", which ranks countries' energy and climate policies based on the issues of energy security, equity and sustainability. The study's authors have cited the removal of renewable energy subsidies as damaging to the UK's reputation as an attractive renewable energy market, calling for more [transparency and predictability](#) in electricity policy.

A [paper by the Grantham Research Institute](#) claimed that the UK's energy tax regime is providing a '[perverse incentive](#)' for businesses to prefer high-carbon content fuels over decarbonised electricity.

## **International Energy Policy**

### **European Commission releases State of the Energy Union report**

The EC released the first [State of the Energy Union report](#), 9 months after the adoption of the Energy Union Framework. The Commission has committed to report annually on the state of the [Energy Union](#) in order to address the key issues and steer the policy debate. Alongside the report, the Commission has released the second list of [Projects of Common Interest](#), which sets out 195 infrastructure projects considered as urgently needed to meet energy policy targets and objectives. The list of priority projects - entitled to accelerated planning permission and some EU money - includes a first grid link between Belgium and Britain, as well as power and gas links between Ireland and Britain. Greenpeace has criticised the Commission's assessment of policies under the union as lacking in ambition on renewable energy. The European Environmental Bureau has similarly [criticised a lack of progress](#) on energy efficiency, renewables and climate protection. The UK Energy Research Council has [provided analysis](#) of the challenges the Energy Union faces.

### **IEA: Renewable energy accounted for half of new power plants in 2014**

Renewable energy accounted for almost half of all new power plants in 2014, representing a "clear sign that an energy transition is underway", according to the International Energy Agency (IEA).

Green energy is now the second-largest generator of electricity in the world, after coal, and is set to overtake the dirtiest fossil fuel in the early 2030s, said the IEA's World Energy Outlook 2015 report.

Sixteen energy and clean tech firms have pledged to remove regulatory, financial, and technical barriers to [support a 'near doubling' renewable energy](#) capacity globally by 2025.

### **OECD agrees to restrict fossil fuel subsidies**

The 34 countries that form the Organisation of Economic Cooperation and Development (OECD) agreed to [restrict subsidies](#) used to export technology for coal-fired power plants. The deal to end export credits for inefficient coal plant technology will take effect from Jan. 1, 2017, with a review in 2019 that could allow the deal to be strengthened.

A new report by the Overseas Development Institute this month found the UK to be the only G7 nation to significantly increase fossil fuel subsidies. [According to the report](#), the UK currently subsidises fossil fuels with £6billion a year – nearly twice as much as renewables.

### **Climate Impacts and adaptation**

#### **Global average surface temperatures rise set to pass 1° C**

The [Met office has reported](#) that the global surface temperature for 2015 are set to reach 1° C above pre-industrial levels. While this will not be the case for every future year, it is likely to become the norm over the coming decades. The [Guardian](#) covered the story, and included a report from the [World Meteorological Organisation](#) that shows 2015 is set to be the hottest on record, with the 2011-15 likely to be the hottest five-year period on record.

#### **UK'S 2013/14 floods were made 7 times more likely by climate change: Met Office**

The [Carbon Brief](#) has reported Met Office research on the 2013/14 severe winter storms in England and Wales. While natural climate cycles are likely to be responsible for the unusual number of storms, the intensity of the rainfall has been linked to climate change. The model suggests that if the same sequence had happened on a planet that wasn't warming, the chance of seeing such heavy rain would be seven times lower. The 'hint' is strongest for events with extreme heavy rain over a ten day period, but further research is needed to confirm statistical significance.

The Joseph Rowntree Foundation has published an [evidence review](#) of community resilience to climate change, accompanied by [four case studies](#) that illustrate local level action designed to improve resilience to some aspect of climate change, such as flooding.

#### **Climate 'tipping points' may activate at less than 2°C of warming**

A [European research project](#) investigated 'tipping points' that would confirm the evidence for climate change in settled regional climates. Examples include the melting of permafrost or massive unexpected plankton blooms. It concludes that a significant number – 18 out of 37 examples



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modelled – might kick in below the so-called 'safe-limit' of 2°C, with a likelihood of causing abrupt regional change.

**Children disproportionately vulnerable to climate change: UNICEF**

[UNICEF has published a report](#) ahead of the COP21 analysing how children will bear the brunt of a changing climate. It highlights the large number of children living in poverty in flood and drought prone areas, and their vulnerability to significant events.