climate change

Scotland's centre of expertise connecting climate change research and policy

Monthly Report on Policy Developments - Energy and Climate Change
May 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[1] 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

Global Apollo Programme for carbon free energy launched

The London School of Economics this week launched the Global Apollo Programme to Combat Climate Change. The programme aims to establish a major publicly-funded research initiative, on a similar scale to the 1960s US Apollo Programme. It hopes to attract around 0.02% of global GDP (around US$15bn per year) to develop renewables, smart grids and energy storage, with the ultimate objective of making zero-carbon baseload electricity cheaper than coal within 10 years. The Programme has received the support of a number of high profile proponents and is expected to be on the agenda at the G7 meeting on June 7th. However, some commentators have raised questions about the programme's ability to displace existing fossil fuels and its exclusion of carbon capture and storage, nuclear energy and energy efficiency technologies.

Fossil fuels subsidised by US$10m per minute: IMF

The International Monetary Fund has revealed that more than US$5 trillion is spent annually on subsidising the fossil fuel industry. An IMF report calculates this cost by considering energy supply costs, as well as costs to people and the environment, including climate change, the health effects of air pollution, traffic road congestion, traffic accidents and road damage. According to the report, these costs are borne primarily by local populations. The report's authors have argued that reforming energy prices to reflect their true costs can 'help national governments achieve their goals not only for the environment but also for inclusive growth and sound public finances'.

Market mechanisms essential for global decarbonisation: World Bank, energy companies

The World Bank's special envoy for climate change, Rachel Kyte, has stated that carbon pricing will be an essential element to managing 'an orderly transition to low-carbon growth and resilient development'. Speaking at a carbon market conference in Barcelona this month, Kyte affirmed that market mechanisms, such as carbon taxes and emissions trading schemes, will be key to mobilising a global response on a big-enough scale to meet international ambitions for climate change mitigation. Kyte's statement follows the release of a World Bank report, which finds that the value of

[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.

emissions carbon pricing schemes grew to US$50 billion globally in April 2015. According to the report, 39 nations and 23 subnational jurisdictions are now pricing carbon, accounting for 12% of the world's emissions.

Six major European energy companies have also thrown their weight behind calls for carbon pricing this month. In a letter to the Financial Times, the companies' chief executives requested the United Nations' help in holding 'direct dialogue with the UN and willing governments" about developing a scheme to charge those who produce carbon emissions.

Business leaders call for long term targets for low carbon growth

The World Energy Council has called for governments to reach a clear new agreement on greenhouse gas emissions in Paris this December. The Council, which represents major energy companies from around the world, has identified global policy uncertainty as one of the biggest obstacles to gaining the $48-53 trillion of investment needed to address climate challenges. The Council has called on leaders to establish 'stable economic and policy platforms in order to boost investment and establish clear, consistent goals' to guide low carbon development.

The message for clear policy commitment and engagement with industry was echoed by business leaders attending the Business and Climate Summit in Paris this month. The Summit which was attended by 1,000 business leaders, including CEOs from some of the world's largest companies, identified a willingness amongst the private sector to work with governments to address climate change. CDP's CEO, Paul Simpson stated during the summit that "The vast majority of companies want to see a managed transition to a low-carbon future and not costly, last-minute regulation or climate chaos".

Finance

Fossil fuel divestment campaign gains momentum

Norway's finance committee has agreed to divest all coal-focussed investments from the country's US$900bn sovereign wealth fund. It is expected that the sovereign wealth fund will sell its stakes in firms that generate more than 30% of their output or revenues from coal-related activities. This will affect £5.8-£6.5bn worth of investments.

Insurance company AXA also stated in May that it will remove around £355m worth of investment in companies 'most exposed to coal-related activities'. The University of Edinburgh has signalled that it intends to divest from three of the world's biggest fossil fuel producers within the next six months.

Renewable Energy

Industry heralds record UK investment in wind power

The wind industry is on track to power 1 in 10 homes in 2015, according to the industry body RenewableUK. According to RenewableUK's analysis, wind energy capacity grew by a quarter between 2011-2012, while onshore capacity approval has risen by 50% to a record level.

Tesla releases pioneering energy storage unit

US company Tesla this month released a wall mounted energy storage unit, which has been praised by some critics as a breakthrough in overcoming problems associated with the intermittency of renewable energy sources.

Report assesses the costs and carbon emissions of wind power

ClimateXChange this week published a report which reviews a range of academic estimates of the life cycle costs and emissions of wind energy. The report is intended to inform policymakers about the ability of onshore and offshore wind to provide a cost-effective supply of low carbon energy.

Climate Science

Sea levels rise as Antarctic glaciers disintegrating at an alarming rate

A NASA study has revealed that the last intact section of one of Antarctica's ice shelves is likely to disintegrate completely by 2020. The research found that two main tributary glaciers of the Larsen B Ice Shelf have thinned by between 65 and 72 feet (20 to 22 meters) in recent years. A separate report published in the journal *Science* has revealed a "a remarkable rate of acceleration" in ice loss since 2009. A separate study published in *Nature Climate Change* has found that global sea levels are rising faster than previously thought, having accelerated over recent years. The study links this trend primarily to the loss of ice from Greenland and West Antarctic ice sheets.

England's record breaking temperatures made 13 times more likely by climate change

2014 was England's hottest year since records began. A new study published in the journal *Environmental Research Letters* has found with 90% confidence that human impacts on the earth's climate increased the chances of these temperatures 13-fold.

Climate change is altering the distribution of Arctic fish species

Arctic marine ecosystems are warming at twice the global average. According to a new study, this warming is already having an impact on the distribution patterns of Arctic fish species, including a poleward expansion of large migratory fish such as cod and haddock.

Publications

Nicholas Stern - *Why Are We Waiting?: The Logic, Urgency, and Promise of Tackling Climate Change*

Influential economist, Nicholas Stern has this month released a book which attempts to explain why, despite the potential benefits, it has been so difficult to tackle climate change effectively to date. Stern argues in this book that the risks and costs of climate change are worse than estimated in the landmark "Stern Review "in 2006 - and far worse than implied by standard economic models.