

15th October 2014

Owen Paterson's speech to the GWPF - the CCC's response

The front page of the [Sunday Telegraph](#) this week suggested that we should 'rip up the Climate Change Act'. The Telegraph, [Daily Mail](#) and others have included a [preview](#) of arguments that former Environment Secretary Owen Paterson will put to the Global Warming Policy Foundation this Wednesday. In this note we examine the claims that were made and the solution proposed. The Climate Change Act requires that we assess any new evidence in order to advise the Government and Parliament should there be any changes required in their actions. We are also required to involve the public in our considerations.

In every case we assess serious comments in the light of the evidence and the actions being taken by the Government. We have therefore looked at the information presented by the Daily Telegraph and Daily Mail and our scientific assessment strongly rejects the claims.

Claim 1: There has been no temperature increase for 18 years

Earth's average surface temperature has indeed risen since 1996. Even using 1998 as a starting point, which was an unusually warm year due to a strong El Niño, the rate of warming has been around [0.04°C per decade](#). While this is lower than the 0.11°C warming per decade for the total period since 1950, the warming has not stopped.

Short-term, unpredicted fluctuations in temperature are to be expected, and scientists typically use longer periods (30 years or more) to identify robust climate trends. As a result, this temporary slowdown has not yet been long enough for scientists to lower their [projections](#) of climate change to 2100 and beyond.

STATUS: Rejected. Temperatures are still increasing on the timescales relevant for identifying long-term climate change risks, which determine the need to reduce emissions.

Claim 2: The UK is uniquely committed to cutting carbon

[GLOBE](#) identify almost 500 climate laws in 66 countries. Denmark, Finland (at least 80% by 2050) and Mexico have all passed their own [climate acts](#) with legally-binding emissions targets. California and other US states have legislated emissions targets. France's Bill (including a 75% reduction by 2050) is currently passing through the French Parliament.

More broadly the design of the UK Climate Change Act is seen as [world-leading](#), with many more countries seeking to emulate its approach in future. This reflects that the response to climate change will be most effective and lowest cost where policy can create an environment of certainty and transparency. That is what the Act does. It maintains the flexibility to meet emissions targets in whatever way proves best, but it makes a legal commitment to action that sets a clear direction for business.

STATUS: Rejected. Many countries are legally committed to cutting carbon and the UK's legislative approach is generally seen as world-leading.

Claim 3: The lights will go out because of decarbonisation

There is no fundamental conflict between decarbonising and keeping the lights on. Keeping the lights on depends on having enough *capacity* available to meet demand at all times; decarbonisation depends on the bulk of *generation* coming from low-carbon sources. There are challenges relating to increased penetration of intermittent technologies on the grid, but these [can be met](#) given an appropriate response.

[CCC](#), [DECC](#), [academia](#) and many [others](#) have published many scenarios that decarbonise while maintaining system security. DECC have also introduced a capacity market to ensure sufficient capacity at all times – the first phase of that scheme qualified far more capacity than needed to keep the lights on (over 60GW compared to a 51GW requirement).

STATUS: Rejected. Building low-carbon capacity can help to keep the lights on, supported by capacity incentivised through the capacity market.

Claim 4: We will have to close down virtually our whole economy to decarbonize

The consistent finding of analyses from before the [Stern Review](#) and [onwards](#) has been that the economy can be decarbonised at a cost well below its expected growth rate. CCC [estimate](#) a cost of acting of up to 1-2% of GDP by 2050, by when our GDP is expected to have more than doubled (according to the [Office for Budget Responsibility](#)). Put another way, by 2050, if we act to reduce emissions we will still be more than twice as rich as we are today – hardly closing down the economy.

If we don't act then costs could be even higher – either from the costs of unmitigated climate change or from paying international carbon prices. For example, CCC [estimated](#) a net saving from following carbon budgets of around £100 billion in present value terms under central carbon price assumptions.

This is not to deny the possibility in principle of competitiveness risks to certain energy-intensive sectors with a high degree of international trade. But [our assessment](#) has been that there has been no significant industry relocation to date as a result of low-carbon policies, and there is no reason to expect this in future given policies in place to compensate industry and limit competitiveness risks.

STATUS: Rejected. We can fully decarbonise while still growing the economy, based on technologies that are known about today and have been proven to work

Claim 5: The UK's targets are unachievable – the scale of investment required is so great that the 2050 target cannot be achieved

We have set out, in CCC scenarios ([2010 4th Budget Advice](#) and [2013 Review of 4th Budget](#)), a route to UK decarbonisation. We do not say that this is the only way to achieve targets, but it clearly is important that we should be able to set out a practical way forward.

In broad terms, this requires continuing to invest in renewables (including wind) at roughly the current rate, a nuclear programme as planned for the 2020s, possibly supported by CCS depending on technology progress. There is a cost attached to such a programme, but it is important that this is not overstated – an average dual-fuel household will see around a £10 increase each year in [energy bills](#) until the mid-2020s, after which the impact of low-carbon policies on bills is expected to fall.

At the same time there are opportunities to save money from some of the energy efficiency measures required by UK low-carbon targets, including in our buildings. Maintaining recent levels of improvement in vehicle carbon efficiency (which ultimately will require a shift to alternative fuel sources like electric), will also help keep us on track to future targets.

STATUS: Rejected. The rate of change needs to increase, but change is possible, and we know broadly what is needed.

Proposed solution: Scrap the targets from the Climate Change Act and focus on shale gas, CHP, small nuclear reactors and demand management

The 2050 target for emission reduction, within the Climate Change Act, is set consistent with achievable UK action as a contribution to global emission abatement consistent with the formally agreed UN objective to limit warming to 2°C.

For the UK, carbon budgets have then been set to reflect the cost-effective path to the 2050 target.

The Climate Change Act already has a process for reviewing its targets when circumstances change. In relation to the fourth carbon budget, covering the period 2023-27, we have just been through a detailed review and the Government has concluded – consistent with our advice - that the existing targets should not be changed.

Mr Paterson suggests that four particular options should be prioritised – shale gas, combined heat and power (CHP), small modular nuclear reactors and demand management.

The Act does not prescribe a particular way forward in terms of the technologies to meet the targets. Achieving our multiple objectives of decarbonisation, system security and low costs for consumers will need a portfolio of solutions, so some at least of the suggested options are likely to have a role. Ultimately, we would expect the mix to depend on costs and how the technologies progress: unabated gas capacity continuing to be important, but moving to a back-up role; shale gas possibly having a role (though all indications are that supply will be less than UK demand for gas, even as we decarbonise); energy efficiency to reduce our energy needs; and demand-side response also acting to make those needs easier to meet. Modular reactors would not be an option we could identify now as an option to rely on – there are large uncertainties over price and public acceptability, but they might have a role in future if those issues are positively resolved.

All in all, the choice of technologies is a complex challenge for a complex system and the solutions are not simple. The Government has begun to make the necessary changes, with notable steps forward in introducing markets for low-carbon generation and for capacity to provide security.

STATUS: Clear case to retain targets; open on options for achieving targets.

If Mr Paterson further elaborates his recommendations, beyond the press reports, we will look at this carefully, consider further his evidence and should his concerns suggest we should recommend changes to the Government, we will respond as necessary.