Climate change governance and environmental justice

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When the UK Climate Change Act entered into force in 2008, the UK Government was charged with setting legal targets to reduce the emission of greenhouse gases by at least 80%, compared to a 1990 baseline, by the year 2050. Although at the time this target was seen as ambitious, it soon became clear that it would require revision to allow the UK to meet its global climate change pledges, as well as to improve the UK's performance at the national level. In its 2019 Net Zero report (p17) the Climate Change Committee recommended that rather than setting "a 97% target that leaves a small residual amount of emissions", it would be more appropriate to set a net zero target. Section 1 of the Climate Change Act was subsequently amended in 2019 to reflect a reduction of greenhouse emissions based on achieving a net zero target by 2050.

Setting a net zero target

Such a target can be achieved through a combination of the removal of existing greenhouse gases (GHGs) in the atmosphere together with a reduction of overall emissions. A net zero target is not the complete elimination of all greenhouse gases. Instead, the ultimate logic of the net zero approach is to achieve a balance between the production and removal of greenhouse gases in the atmosphere. This will be primarily achieved through various measures instituted by national governments coupled with ambitious initiatives in the private sector and wider societal changes.

One possible criticism of the net zero calculation is the reliance on technological change to deliver either emissions reductions (as with the switch to electric mobility) or to remove GHGs (for example though carbon capture and storage). Because such technology transitions take time, initial progress to the target is slow and considerable faith is placed on the capacity of future technological change to deliver decarbonisation. These technology transitions will require a variety of cross sectoral measures relating to energy generation, storage, consumption and efficiency. Moreover, a net zero target also assumes that the removal of greenhouse gases will not only be achieved through investment in technology but also by the contribution of natural carbon sinks such as forests and oceans.

In order to reach the 2050 target, the 2008 Climate Change Act put into place a trajectory for achieving climate neutrality in the form of carbon budgets whereby the Secretary of State has a duty to set an emission target every five years for each budgetary period.[1] This accommodates a gradual reduction of GHGs, recognising the point made above that some measures require time to deliver the desired reductions in carbon. Thus far, five carbon budgets have been set and the sixth carbon budget is currently being prepared. Despite the initial success in reaching the targets set in the first two budgets and being on track to meet the target set in the third budget by 2023, the UK is not on a trajectory to meet the targets set in the fourth and fifth budgets. The 3rd carbon budget (2018 to 2022) prescribed a target of 37% reduction by 2020 while the 4th carbon budget (2028 to 2032) prescribes target of 51% reduction by 2025.

Net zero policy initiatives and questions of environmental justice

If we examine the variety of sources of greenhouse gas emissions across a range of sectors, it becomes clear that there is a limit to what government can do to mandate emissions-reducing activity. Some of the most common measures that governments have put in place include the setting of emission standards and targets as well as banning

[1] Climate Change Act 2008, s (4)

certain activities or product regulation as illustrated by the phasing out of the sale of new petrol and diesel cars. Alongside such regulatory initiatives, there is room for soft law mechanisms such as partnering in voluntary schemes with private companies to reduce GHG generation, providing public information on low carbon alternatives and investing in research and development on low carbon technologies. However, technology transitions, such as the shift to electric vehicles, and their success in meeting emissions targets will require wider societal buy-in. Furthermore, these changes will have different impacts on various social groups, generating significant environmental justice implications.

Taking as an example the policy of banning the sale of new diesel and petrol cars, this ban was initially planned for 2040 but then moved forward to 2030.[2] However, the policy will permit the continuing "sale of hybrid cars and vans that can drive a significant distance with no carbon coming out of the tailpipe until 2035".[3] Assuming the continuing growth in the proportion of electricity provided from renewable sources, the switch to electric mobility offers obvious benefits in terms of reducing GHG emissions but, as electric vehicles remain relatively expensive, it passes the cost of the technology transition to the consumer (either directly for domestic transport or indirectly for commercial vehicles).

Aside from the cost of electric vehicles there are also infrastructure and energy costs, as well as further costs in the handling of end-of-life batteries which may be reflected in the overall price. Finally, we know from earlier technology transitions that consumers may lose rather than gain from such shifts. In 2008, in the European market, diesel technology was promoted as a lower carbon technology and consumers duly invested in new diesel cars only to find that concerns about urban air quality and tail pipe emissions saw the market for used diesel vehicles stall. There remains a possibility that this pattern could be replicated in relation to electric vehicles given competition from other low emission transportation technologies such as hydrogen and synthetic fuel-based systems.

Although 2030 has been chosen as the start date for the ban, as that date approaches one might expect that sales of internal combustion engine cars will fall as consumers become reluctant to invest in soon-to-be redundant technology. On the other hand, consumers may not wish to switch too early while electric vehicle technology, e.g. in terms of range and speed of re-charging, continues to improve. Nonetheless sales of electric vehicles may increase rapidly in the late 2020s creating issues of manufacturing capacity. For less wealthy consumers, who will buy vehicles from used car markets, the shift to electric vehicles may take more time. Prior to that shift, these consumers may face higher maintenance and fuel costs (as demand for petrol/diesel falls). Meanwhile such drivers of older vehicles are already facing higher motoring expenses in the form of charges to drive older vehicles in ultra-low emission zones in urban conurbations where many such consumers live and work.

Often when we focus on decarbonisation we fix on questions of sustainable production (such as energy generation) but the electric mobility illustration shows that patterns of sustainable consumption may be no less crucial. We depend on individuals' behavioural change, though such change is not cost free and will create impacts likely to generate concerns about environmental justice. So, for example, the move to net zero carbon may require significant re-investment in domestic heating, cooling and insulation systems at a time when, in England at least, the average fuel poverty gap is widening.

Environmental justice challenges

This presents Government with some considerable challenges. One immediate question is how far Government is able to develop policy which will incorporate environmental justice considerations. This has not always been the case as an example from solar power can illustrate. The take-up of domestic solar energy systems was encouraged through financial incentives, particularly through Feed in Tariffs (FiTs) which offered attractive payments for the surplus electricity produced by solar panels, when fed back into the grid. This form of subsidy was broadly more generous than other mechanisms such as the Renewable Heat Incentive, creating some feeling of unfairness. The FiTs system was withdrawn in 2019 as costs of solar investment fell and volumes of feed-in to the grid grew, but there is no doubt that early investors gained more as tariffs fell over time and early FiTs promised long-term and index-linked returns. Research into initial investments in domestic solar power systems found relatively few installations in poorer areas with a disproportionate level of investment in wealthier locations, which indicates that environmental injustices can be compounded.

A second challenge relates to mechanisms to engineer change. In late 2020, the UK Climate Change Committee suggested a 20% cut in meat and dairy by 2030, rising to 35% (for meat only) by 2050. In April 2021, when the UK Government accelerated some of its targets to reduce GHGs, the Business Secretary announced that he might turn to a vegan diet to help combat climate change. The formal position taken by Government, however, was that 'anti-meat' regulation would not be introduced. This is an understandable position from a government with distinctly libertarian instincts and the restrictions placed on everyday freedoms during the pandemic may have heightened these instincts in political circles.

[2] HM Government: Ten Point Plan for a Green Industrial Revolution: Building back better, supporting green jobs, and accelerating our path to net zero, November 2020, p. 14, https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution

[3] Ibid p. 14.

The problem is whether in the face of a climate emergency it is really enough to shrink the role of government and put trust in autonomy in the hope that people do the right things. It seems odd to put so much emphasis on the targets yet provide such a sketchy roadmap as to how we might reach them. Moreover, the setting of top down targets risks a lack of buy-in or even a democratic deficit, given the sizable changes that the targets imply and their potential disproportionate impact on certain groups. This is not to decry target-setting but rather to point to the necessity for inclusive and participative decision-making on how these targets can be met.

Finally, it is worth remembering that climate change is an environmental justice issue both globally and locally. At a global level it is a cruel irony that may countries that have made much lower contributions to GHG emissions will suffer most under its impacts. At the Copenhagen Climate Change Conference in 2009, developed countries pledged $100 billion per year by 2020 to help developing nations adapt to the impacts of climate change. Unfortunately, accounting mechanisms to assess this were never put in place but it appears not to have been met even with the most generous metrics. So, in financing domestic transitions, this global commitment should not be lost.

In terms of domestic victims of climate impacts – such as those flooded out of homes or overtaken by sea level rise – whose ruinous situation is not of their making, the appeal must be for communal engagement with climate change mitigation and adaptation to the greater benefit of all. It would be great if we were able to trust voluntary individual action but the reality is that immediate and dependable legal mechanisms are needed to promote climate change mitigation and adaptation. Setting targets should not be mistaken for action representing, as it does, the easiest possible form of political intervention. Devising governance solutions to deliver those targets in a manner which is conscious and respectful of environmental justice is a much more exacting test of political leadership.

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