

Tyndall Centre for Climate Change Research
Pariser Building
School of MACE
University of Manchester
M13 9PL

Corresponding author:
c.w.jones@manchester.ac.uk
07811121847
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All-Party Parliamentary Group on the Green New Deal
7-14 Great Dover Street,
London,
SE1 4YR

Call for Evidence: Reset Inquiry

The [Tyndall Centre](#) for Climate Change Research is an internationally recognised climate-change research group, bringing together natural scientists, economists, engineers and social scientists to develop sustainable responses to climate change. Founded in 2000 as the first interdisciplinary research centre on climate change, Tyndall now includes researchers based in four UK universities, headquartered at the University of East Anglia.

This submission is by researchers at the University of Manchester ([Tyndall Manchester](#)). All the views expressed in this submission of evidence are attributed to the named authors and do not necessarily reflect those of researchers within the wider Tyndall Centre or the University of Manchester.

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Yours Faithfully,



Dr Christopher Jones

Tyndall Manchester
The University of Manchester

Evidence submission:
All-Party Parliamentary Group on the Green New Deal

Authors:
Christopher Jones, Claire Hoolohan, Maria Sharmina,
and Timothy Brauhnoltz-Speight

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Part One: Lessons from Covid-19

1. What policy measures or initiatives were introduced in response to Covid-19 that we should look to replicate for the long-term?

To enable sufficient social distancing in town centres, cities such as Manchester (e.g. Stevenson Square road closure) and Newcastle-upon-Tyne (enhanced pedestrianisation of Grey Street) have introduced measures to increase the proportion of urban space allocated to walking and cycling. This has allowed for hospitality businesses on these streets to expand their outdoor trade and gives more space for active travel modes on these streets. This is primarily to enable safe opening of urban spaces during the Covid-19 pandemic, but reducing vehicle access through these areas also reduces local air pollution for residents and - if it promotes active travel in and around the city - will support transport decarbonisation. CO₂ emissions from road transport has been largely static in the last decade - increasing by 2% between 2010 and 2018 while overall UK territorial emissions have reduced [1]. **The re-examination of urban space in this way offers a unique opportunity to accelerate and extend the aims of 'Decarbonising Transport; setting the challenge', DfT (2020)**

2. What were the benefits (including any unexpected benefits) of some of the policy measures implemented in response to Covid-19 that we should look to secure for the long-term, and how could this be done?

Two surveys conducted by the Centre for Climate Change and Social Transformations (CAST) in May 2020 (~2,000 participants) report substantial changes in sustainability related routines [2]. These changes include a number of sustainability benefits. The responses show;

- many people have found the experience of working from home to be beneficial, allowing space for (low-carbon) creative hobbies and exercise, with no need for a commute.
- food waste is reported to have decreased, due to more time for planning, less spontaneity, and more frugal food practices (e.g. preserving, freezing). Some people also report healthier eating habits (fewer meals out, fewer takeouts).
- changes to peak energy demand with the removal of typical work/school schedules. This has the effect of spreading electricity demand, with a similar dynamic reported for traffic.

The results for shopping practices are more mixed. Many respondents report shopping locally to support local businesses and reduce exposure to Covid-19 by avoiding high footfall supermarkets, but others report a higher dependency on supermarkets through trying to minimise exposure by minimising trips.

3. What existing weaknesses in UK society and economy made the response to Covid-19 more difficult, and how might these be addressed to improve life in the UK and reduce the risk of future crises?

Survey conducted by the Centre for Climate Change and Social Transformations (CAST) in May 2020 [2] showed respondents identifying **low access to green spaces in urban areas** (and corresponding overcrowding in these spaces) as a significant issue. This highlights weaknesses in the access urban dwellers have to green space - and its associated physical and mental wellbeing benefits - currently in the UK.

4. What has the pandemic revealed about how we make decisions in the UK, and how well it enables us to respond to complex challenges?

Much of everyday life is routinised and contingent on shared social and material systems (e.g. work schedules, commuting culture, urban infrastructure). Options to live differently, whether to avoid exposure to a virus, or to live low-carbon lifestyles, is limited by these social and material systems, such that for most people, most of the time, 'decisions' about how to live their lives are made subconsciously/by default. This restricts change. **For transformational change to occur there is a need for systemic changes that support low-carbon lifestyles.**

Covid-19 has created a rare moment of change when these routines can be upended. Survey conducted by the Centre for Climate Change and Social Transformations (CAST) in May 2020 show that for respondents there have been significant changes in their relationships to food, waste, travel and consumption [2]. This shows that significant change in routines towards more sustainable behaviours, but **without appropriate infrastructure, incentives and norms to support new low carbon routines, reversion to pre-existing habits is a risk.**

Part Two: Resetting UK Society after Covid-19

1. What should be the primary aims of a post-Covid economy, and how should progress against those aims be measured?

Tyndall Manchester analysis of national and [sub-national carbon budgets](#) in the UK shows that, if reflecting the equity principles of the UN Paris Agreement, the UK and its sub-regions have a highly constrained carbon budget (measure of the CO₂ that can be emitted to achieve a given climate target) [3-5]. Any further delays in accelerating decarbonisation (from ~4% per annum current trend to >10% per annum) risks Paris Agreement compliant carbon budgets being exceeded before the end of this decade. If accelerated CO₂ emissions reductions are not a primary aim of the post-Covid-19 recovery the opportunity for the UK and its sub-national areas to fulfil their fair contribution to the Paris Agreement will be lost. As noted by the Committee on Climate Change current policy is insufficient to meet existing interim carbon targets [6], and new research [5] strongly suggests these near term targets themselves should be significantly tightened.

Measuring progress on the goal of making a fair contribution to the Paris Agreement should consider the total emissions of CO₂ over coming decades (carbon budget) as opposed to focusing on the long term target of 2050. Carbon budgets are a feature of the UK Climate Change Act, but more can be done to encourage such an approach at the sectoral and local level in the UK to ensure decision making at all levels emphasises near term as well as long term carbon reductions. The Setting City Area Targets and Trajectories for Emission Reduction (SCATTER) project sets out an approach for basing local climate change policy in the context of carbon budgets and measuring progress against Department of Business Energy and Industrial Strategy local statistics already being used in [Greater Manchester](#).

2. What shape should government stimulus packages have if they are to deliver an economy that is greener and fairer, and what should they include?

As noted in response to Q1 (above), an equitable contribution to well below 2C is not possible without a redoubling of effort on near term decarbonisation - with or without Covid-19. In particular as we observe that the bulk of emissions savings since 2012 have been through strong progress in the power sector, while decarbonising space and water heating in buildings and transport emissions have seen minimal progress. The key near term solutions for building and transport sectors (e.g. building retrofit and public transit decarbonisation and expansion) require upfront capital investment. This has to happen at some point if the UK is to meet its climate change targets [7], and it maybe that doing so as part of a stimulus will also produce economic benefits [8]. For example while some questions on decarbonisation remain open, such as whether hydrogen or electric heat

pump for heating is preferable, all decarbonisation routes for heating entail a widespread building retrofit programme. ‘No regret’ actions such as this can and should be undertaken immediately.

We have worked with leading UK city regions (Leeds, Greater Manchester, West Midlands and Sheffield) to quantify their equitable contribution to the goals of the Paris Agreement and have supported workshops and policy development in these contexts. Local authority and industry collaborations in these areas show promise for innovative decarbonisation strategies, but there are constraints in autonomy to finance and implement strategies that allow ongoing regional innovation. It has been noted by participants at a number of workshops on local decarbonisation that while funding is typically available for first-of-a-kind pilot projects, funding to adopting innovative practices already proven is challenging. We see a strong case for stimulus funding to be allocated to well considered yet bold and innovative local strategies that accelerate decarbonisation.

We also engage with a number of local authorities outside of the Core Cities group, who are also being increasingly called upon to implement ambitious decarbonisation strategies - from government and their own constituents. The issues in areas with more distributed populations and different economic contexts compared to leading cities are often distinct and typically less well understood (e.g. in comparing suitable initiatives in Derbyshire compared to neighbouring Manchester and Sheffield). Often there is reduced capability to develop decarbonisation strategies and a more proactive, centralised support hub bringing in expertise from academia and industry (which large cities obtain through their partnership initiatives) could be a valuable measure to ensure these areas do not miss out on decarbonisation opportunities through the stimulus.

8. What kind of businesses we need to deliver a fair and green economy, and how should they be owned and run?

To deliver a green and resilient economy, a diversity of business models in the energy sector should be encouraged. For example, the development of local smart energy businesses for a net-zero climate target requires the ‘4Ds’ of decarbonisation, digitalisation, decentralisation and democratisation (<https://www.energyrev.org.uk/>). To this end, Government policies need to clarify governance structures for integrating new ‘smart’ technologies for automation into the sector [9]; to incentivise a disclosure regime for both privately-owned and non-privately owned organisations to ensure the sharing of data and best practice in relation to innovative business models [10]; and to support alternative investment criteria acknowledging the social and environmental value of local business models, going beyond just economic value propositions [11].

The community energy sector (along with community land and housing) has shown that locally-based and democratically-organised groups can deliver hard infrastructure projects, and finance them highly efficiently [11]. Key principles of these organisations have been

one-member-one-vote governance structures (whether formal cooperatives or others), giving e.g. members with different size shareholdings equal voting power; ownership of key assets, giving the membership real decision-making power; and a non-profit-distributing orientation that focus the enterprise on wider social and environmental objectives. Community energy projects contribute both to decarbonising the UK, and to local social and economic regeneration. Policy can maximise the benefits from community ownership of energy (and in other sectors) through providing technical support to help compensate for inequalities in skills and resources between different localities, as has been done by Regen in the South West of England and Community Energy Scotland in Scotland [12]; and through ensuring energy regulation promotes smaller actors' access to new markets and systems, such as data for smart energy systems discussed in the previous paragraph [13].

9. What should the priorities of national, devolved, local and city government be for ending inequalities and decarbonisation in the UK?

The community energy sector has collectively accumulated decades of experience in promoting and funding domestic energy efficiency retrofit. Participants in our recent research concluded that 'pay as you save' business models can stimulate domestic decarbonisation among wealthier households. However, to effectively reach households in fuel poverty, whose need for retrofit is the greatest, a long-term (perhaps 20 years) programme of grant funding is essential [13].

10. Looking forward, what changes to democracy and decision making in the UK might deliver better social and environmental outcomes?

Policy responses to socio-environmental problems must consider the varied social, geographical and governance context. Overlooking context-specific challenges can lead to "one size fits all" solutions that are unlikely to succeed. Designing context-specific solutions to environmental problems flexible enough to adapt as conditions and circumstances change may be complex and challenging for policymakers, but it offers a more sustainable pathway than the "one size fits all" approach often adopted today [14]

Stakeholder engagement (including with different citizen groups) is key to develop appropriate policies that recognise the varied social, political and geographic context of everyday life in the UK. Participation enables policy making to incorporate social and justice implications alongside technical responses, and to avoid the common prioritisation of financial concerns that can stifle innovation [15]. However, to gain the full value from participation, initiatives must reach out to citizens and groups who do not usually participate in formal public life. This will require a range of approaches and actors, and will take time and specialised knowledge of the groups concerned. Community and other third

sector organisations can play a role here, alongside others such as local authorities and other public agencies [14].

In addition, good decision-making requires reflexivity to manage complexity and uncertainty, as well as awareness of the extent to which policy- and decision-making within one area can impact other areas can help to mitigate and manage unintended consequences of those decisions. For example, recognising the overlaps between energy, food and water systems [16] and actors therein, or the interconnection between low-carbon lifestyles, work-life schedules, and urban planning [2]. To support a step-change in sustainability, governance must find space for continuous and transdisciplinary reflection.

12. What opportunities are presented by the UK co-hosting COP26 in 2021 and/or the G7 presidency and how should these be used?

Globally there is a diminishing window of opportunity to keep global mean temperature change (a key measure of climate related risks) to 'well below 2°C' [17]. Future climate change outcomes will be largely determined by cumulative emissions CO₂ emissions in the coming decades [17]. Covid-19 distribution to sources of CO₂ emissions, the reduction expected for 2020 may lead to a reduction in annual emissions of ~4.2%, depending on lockdown conditions in various countries [18]. This would take global annual emissions roughly to where they were in 2017 (such has been the year on year growth in emissions over this period). Historically similar events (such as the 2008/9 financial crash) highlight the potential for a strong rebound in emissions following 'shock' driven changes in emissions. **The UK should take a leading role in showing how accelerated decarbonisation can be central to post-Covid economic strategies to realise the potential benefits of the unique confluence of post-Covid recovery and hosting COP26.**

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