

# Institution of Civil Engineers response to the Treasury Committee call for evidence: Decarbonisation and green finance

August 2020

## Overview

The Covid-19 pandemic has had an unprecedented impact on the UK's economy. At the same time, the recovery represents a once-in-a-generation opportunity to recalibrate the economy around greener growth. Infrastructure is a key enabler for achieving a range of economic, social and environmental goals and should therefore feature prominently in the UK's response to Covid-19. This submission recommends that the government's economic response to Covid-19 should focus on the 2050 net-zero emissions target by:

- delivering a plan for transitioning the UK's economic infrastructure networks to net zero to ensure that new infrastructure investment, as part of a Covid-19 stimulus package, aligns with the 2050 target
- reforming the use of HM Treasury's Green Book so infrastructure investment is focused on achieving net-zero outcomes
- digitalising infrastructure so existing assets can be operated more flexibly in response to changing conditions post-Covid and so new infrastructure assets can be delivered more efficiently and achieve cost and carbon savings
- establishing a UK Investment Bank, with a sustainability mandate, to drive investment in net-zero-aligned infrastructure and to crowd-in private finance
- accelerating the roll-out of both full-fibre and 5G communications infrastructure, and greater active travel (cycling and walking) provision.

In this submission, we have chosen to answer four (2, 3, 4 and 5) of the Committee's questions.



## Should the Treasury be directly funding Green infrastructure as part of its Coronavirus spending package?

Public investment in well-designed and delivered infrastructure is needed to help rebuild the UK and deliver a stronger, cleaner and more resilient economy. Recently published ICE policy work<sup>1</sup> strongly supports the Committee on Climate Change's recommendations for the government to seize the opportunity to turn the Covid-19 crisis into a defining moment in the fight against climate change.<sup>2</sup>

The stimulatory effect of infrastructure investment is well established<sup>3</sup> and recent research by the Oxford Smith School of Enterprise and the Environment found that investment in green stimulus policies had numerous advantages over more traditional stimulus policies.<sup>4</sup> In fact, analysis conducted by Oxera found that the Office for National Statistics estimates of multipliers by infrastructure sector range between 1.5 and 2.7. This means that for each £1 spent on infrastructure, there would be an additional £1.50–£2.70 of demand due to multiplier effects.<sup>5</sup> The Treasury should therefore be investing in green infrastructure because it can create jobs, deliver high short-term returns per pound spent and lead to long-term cost savings and environmental benefits, by comparison with traditional fiscal stimulus.<sup>6</sup>

However, to ensure investment in green infrastructure contributes to the net-zero target, the government must make some complex policy choices. The Treasury's current Net Zero Review is expected to go some way to helping to answer some of the funding and financing questions in this context.<sup>7</sup> But there remain key policy choices associated with the infrastructure sector that need to be made as part of the government's plan for achieving net zero. These include:<sup>8</sup>

- **identifying the balance of the UK's future energy mix**, including the role of the hydrogen, nuclear, bioenergy and other emerging energy technologies
- **deciding on pathways to decarbonising transport**, including the electrification of transport networks and shifting to cleaner transport modes

<sup>1</sup> ICE (2020) [State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target](#); ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#); ICE (2020) [Infrastructure as a Stimulus – Laying the Foundations for the New Normal](#)

<sup>2</sup> Committee on Climate Change (2020) [Reducing UK Emissions: 2020 Progress Report to Parliament](#)

<sup>3</sup> IMF (2014) [World Economic Outlook: Legacies, Clouds, Uncertainties](#)

<sup>4</sup> Hepburn, C., et al. (2020) [Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?](#), Oxford Review of Economic Policy 36(S1)

<sup>5</sup> ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

<sup>6</sup> Hepburn, C., et al. (2020) [Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?](#), Oxford Review of Economic Policy 36(S1)

<sup>7</sup> HMT (2020) [Net Zero Review: Terms of Reference](#)

<sup>8</sup> ICE (2020) A Plan for Transitioning Infrastructure to Net Zero: The Policy Choices

- **establishing a robust strategy for decarbonising heat**, including the retrofit of buildings for hydrogen, electrification, energy efficiency and insulation
- **reducing emissions from harder-to-abate sectors**, including the deployment of carbon capture and storage and negative emissions technologies.

The government has still not put forward a coherent plan covering these policy choices, which is inhibiting action from industry to get on and deliver the transformational changes required to achieve net zero. In response, ICE is calling for a net-zero infrastructure plan to be delivered as part of the forthcoming National Infrastructure Strategy.<sup>9</sup> This will help to ensure that investments in green infrastructure as part of a coronavirus spending package align with and promote the achievement of net zero by 2050.

## Are there any green related policies that the Treasury should change or commence due to the Coronavirus in order to facilitate the transition to meeting Net Zero?

In July 2020, ICE published its annual major policy report, *State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target*.<sup>10</sup> The report makes a series of recommendations on the policy interventions that will be required for the UK's infrastructure systems to transition to a net-zero footing. As the report was developed in the context of Covid-19, it focuses heavily on how the UK should recalibrate its approach and rebuild the economy around the achievement of the 2050 net-zero target. Many of the report's recommendations link directly to green-related policies within the Treasury portfolio.

A key recommendation of *State of the Nation 2020* is for the government to develop an integrated plan for transitioning the UK's economic infrastructure networks to a net-zero footing. As previously outlined, ICE believes the net-zero infrastructure plan should form a central component of the government's forthcoming National Infrastructure Strategy and should address both existing infrastructure (much of which will still be in service in 2050) and new infrastructure.<sup>11</sup> This is especially important as the government considers a major new programme of infrastructure investment as part of a Covid-19 spending package.

Public procurement is a primary lever by which the government can pursue its strategic objectives. To help guide the government's investment in green infrastructure, *State of the Nation 2020* also

<sup>9</sup> ICE (2020) [A Plan for Transitioning Infrastructure to Net Zero: The Policy Choices](#)

<sup>10</sup> ICE (2020) [State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target](#)

<sup>11</sup> ICE (2019) [What Should be in the National Infrastructure Strategy?](#); ICE (2020) [State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target](#)

calls for reform of HM Treasury's Green Book to better reflect the net-zero target in infrastructure project appraisals and assessments.<sup>12</sup>

More broadly, ICE would like to see public procurement and funding models become more intelligent and outcomes-based, so that communities and businesses get the infrastructure that will deliver the greatest social, economic and environmental benefits. One way to achieve this would be to move from project-by-project bespoke procurement to programmes based on delivery outcomes.<sup>13</sup> Further recommendations for how the procurement and delivery of infrastructure could be improved are set out in a recently published White Paper by ICE and the Infrastructure Client Group.<sup>14</sup>

The uncertainty around the impacts of Covid-19 on the UK's infrastructure systems highlights the importance of digitalising new and existing infrastructure assets. The digitalisation of infrastructure networks can offer 'in operation' improvements (e.g. lower carbon emissions or better air quality) through more efficient management of infrastructure assets. An additional benefit from digitalisation is that data produced from the use of an infrastructure asset can help to inform future design, potentially delivering cost and carbon savings in the longer term.<sup>15</sup>

## In which ways will the new economy post-Coronavirus allow the Government to change the way it finances meeting the Net Zero Target?

Our recent White Paper on the future of the UK's infrastructure networks after Covid-19 found that the crisis has not changed the fundamental challenges that face the UK in the long term, including population growth and meeting the 2050 net-zero target and the UN Sustainable Development Goals.<sup>16</sup>

*State of the Nation 2020* found that, for the most part, the funding and financing mechanisms required to support infrastructure's transition to net zero already exist. The key will be adapting and iterating existing mechanisms so they can be deployed where appropriate and are tailored to the government's Covid-19 recovery and net-zero objectives. In particular, *State of the Nation 2020* builds on ICE's previous policy analysis<sup>17</sup> and recommends Contracts for Difference and the Regulated Asset Base model should continue to be used, where appropriate, to unlock the market

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<sup>12</sup> Ibid

<sup>13</sup> ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

<sup>14</sup> Ibid

<sup>15</sup> ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

<sup>16</sup> Ibid

<sup>17</sup> ICE (2018) [State of the Nation 2018: Infrastructure Investment](#); ICE (2019) [Response to Infrastructure Finance Review](#)

for net-zero technologies.<sup>18</sup> Rapidly decarbonising energy to facilitate the transition to net zero will continue to be important in the post-Covid-19 economy.

Another policy intervention recommended in *State of the Nation 2020* is the establishment of a UK Investment Bank, with a sustainability mandate to invest in net-zero-aligned infrastructure and crowd-in private finance. A potential first role for the bank could be to support the post-pandemic economic recovery through investment in green infrastructure projects that demonstrate good value (i.e. socio-economic, environmental or regional development benefit) beyond more narrowly defined capital considerations.

For infrastructure investment to be an effective stimulus, it needs to be targeted at the right projects and be delivered in the timeframes required. Examples of approaches that would be effective include accelerating the roll-out of both full-fibre and 5G communications infrastructure, and greater active travel (cycling and walking) infrastructure provision.<sup>19</sup> These infrastructure investments can be delivered immediately, provide short-term stimulatory benefits and will also fulfil long-term priorities (e.g. support a shift to more flexible working arrangements).

## Are there outcomes from the Coronavirus that will enable the Treasury and HMRC to meet the Net Zero target more easily?

The Office for Budget Responsibility has forecast that unemployment in the UK will peak at 12%, with a 12% fall in GDP, in 2020.<sup>20</sup> But the economic impact of Covid-19 is not necessarily being felt evenly. For example, while hundreds of thousands more people have registered for unemployment benefits in England since the beginning of the lockdown, the majority of these registrations have been made in northern areas rather than in the south.<sup>21</sup> KPMG analysis of Office for National Statistics growth forecasts for 2020 also highlights that the economies in the West Midlands and East of England are likely to suffer the greatest contractions, at 10%, with London being the least impacted region, at 7%.<sup>22</sup>

ICE believes the government's 'levelling up' agenda continues to be vitally important in the context of the economic recovery from Covid-19 and for the delivery of green jobs.<sup>23</sup> There is a real opportunity to overcome regional inequalities and build new green-economy skills and workforces through transforming infrastructure for net zero.<sup>24</sup> Infrastructure investment is a major contributor to economic growth. It creates income opportunities and generates jobs, both directly through

<sup>18</sup> ICE (2020) [State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target](#)

<sup>19</sup> ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

<sup>20</sup> Office for Budget Responsibility (July 2020) [Coronavirus Analysis](#)

<sup>21</sup> Centre for Cities (2020) [What Does the Covid-19 Crisis Mean for the Economies of British Cities and Large Towns?](#)

<sup>22</sup> KPMG (2020) [Chief Economist's Note: Levelling-Up and COVID-19](#)

<sup>23</sup> ICE (2020) ['Levelling Up' and the Role of Infrastructure: ICE Discussion Paper](#)

<sup>24</sup> ICE (2020) [State of the Nation 2020: Infrastructure and the 2050 Net-Zero Target](#)

construction and maintenance, and indirectly through wider supply-chain benefits that support economic activity across the country in the short to medium term.<sup>25</sup>

Past studies on the impact of infrastructure investment have found that for every 1,000 jobs which the construction sector gains directly through increased infrastructure spending, a further 2,053 jobs are added to the rest of the economy as indirect or induced effects.<sup>26</sup> The economic impacts of Covid-19, resulting in high levels of unemployment and longer-term structural shifts in the labour market, could offer the impetus to reskill and retrain workers for a new, greener economy. This could help to stimulate the economic recovery by providing green jobs and driving the government's 'levelling up' agenda in the longer term.

While Covid-19 is changing our society, the lasting impacts of the pandemic on how we use and interact with infrastructure systems remain uncertain.<sup>27</sup> Polling suggests that only 9% of people want everything to go back to how it was before the pandemic.<sup>28</sup> The growth in travel is predicted to slow and virtual interactions for work and play are predicted to remain widespread post-pandemic.<sup>29</sup> These changes will likely shape the nature of investment in transport and telecommunications going forward in a way that is more aligned with net zero.

ICE and the Infrastructure Client Group's White Paper explains that in the short term there will be an appetite among certain segments of the workforce for continued remote working and living. This could help facilitate the transition to net zero. Investments geared at accelerating the roll-out of both full-fibre and 5G communications infrastructure will be fundamental to ensuring that the conditions for remote working can be optimised. The benefits of active travel were also laid bare during the lockdown and hence the White Paper identifies the need to improve infrastructure provision for cycling, walking and running to continue this trend in the long term.<sup>30</sup>

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<sup>25</sup> International Labour Organization (2010) [Infrastructure, Poverty Reduction and Jobs](#)

<sup>26</sup> Centre for Economics and Business Research and Civil Engineering Contractors Association (2013) [Securing our Economy: The Case for Infrastructure](#)

<sup>27</sup> ICE (2020) [The Use of Infrastructure Systems – Insights into the New Normal](#)

<sup>28</sup> RSA (2020) [Finding the Road to Renewal](#)

<sup>29</sup> Automobile Association (2020) [Life After Lockdown](#); ICE (2020) [The Use of Infrastructure Systems – Insights into the New Normal](#)

<sup>30</sup> ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

## About ICE

Established in 1818 and with over 95,000 members worldwide, the Institution of Civil Engineers exists to deliver insights on infrastructure for societal benefit, using the professional engineering knowledge of our global membership.

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