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BRIEFING PAPER JUNE 2020

BANKING ON THE FUTURE

THE CASE FOR A GREEN INFRASTRUCTURE BANK

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Summary

Decisions that the UK government takes now on how to support the economy after the COVID-19 pandemic will define its shape and size for years to come. Infrastructure investment will be the cornerstone of efforts to stimulate the economy as it has a high multiplier effect in terms of generating domestic output and growth. However, there are significant barriers to investment in the UK infrastructure that is required for the transition to a net zero and resilient economy. This is exacerbated both by the current pandemic and by the uncertain outlook for public investment after the UK loses access to the European Investment Bank. **Efficient mobilisation of capital investment for infrastructure is being undermined by high levels of uncertainty.**

The UK already has a well-established set of institutions to determine infrastructure investment needs and to ensure that infrastructure projects are delivered to budget but which are being undermined by the current uncertain environment. However, **there is a need for an institution which can bridge the gap between policy and investment, and between top-down finance and bottom-up projects.** This gap will become even more acute as the UK embarks on deep decarbonisation of the economy by 2050. For this, an agile market-maker will be needed which has the expertise to link finance to projects in emerging technological sectors and build a sophisticated understanding of risk and return for new infrastructure investment. **A Green Infrastructure Bank could mobilise private capital quickly whilst simultaneously adapting its approach in real time to mitigate new risks arising from technological innovation.**

A new mission-driven Green Investment Bank could support the UK government in providing a short to medium-term stimulus to the economy which meets wider goals such as increasing income by creating jobs, boosting long-term productivity, levelling up the economy and increasing resilience. **By establishing a Green Infrastructure Bank the government will ensure that the public spending decisions we take today will break down the barriers to investing in the infrastructure of the future.**



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Context

As the UK looks to stimulate its economy post COVID-19, a key goal should be catalysing a significant increase in infrastructure spending. As well as being a central element of the government's industrial strategy¹, infrastructure spending creates significant demand for domestic jobs, and has a high multiplier effect². The most efficient way to deliver these investments in a timely manner is through a dynamic institution which can both swiftly mobilise capital and manage the risks associated with the technology and infrastructure requirements of the future, in order to fulfill the UK's statutory commitments to achieve a net zero economy by 2050³. This is also an opportunity to replace the funding from the European Investment Bank with a dedicated British institution – as has been recommended by the National Infrastructure Commission.

The UK has evolved a well-crafted institutional architecture to oversee infrastructure investment. Government sets the policy framework. The National Infrastructure Commission advises on long-term infrastructure challenges and needs. The Climate Change Committee advises on carbon budgets, which in turn inform decisions about infrastructure investment. The Infrastructure & Projects Authority ensures infrastructure is delivered efficiently and effectively, and improves performance over time. In some sectors economic regulators ensure that the delivery is efficient and may also control the prices consumers pay. Delivery is done by private firms or public bodies, operating under a range of financial models.

This jigsaw has one significant piece missing – we do not have an institution that bridges the gap between policy recommendations and their financial implications. Currently we do not see a steady flow of capital to the longer-term infrastructure required for the climate transition, and no public institution has a focus on ensuring that capital is issued with a full understanding of the risks and opportunities of the transition to net zero. This gap will become more significant as infrastructure becomes increasingly digitalised, decarbonised and subject to demand-side management. Category distinctions such as those between residential energy efficiency investments, electricity generation and vehicle fueling, will be increasingly challenged by disruptive business models⁴. A dedicated institution would be able to better connect projects with finance whilst developing the efficient pricing of risk for these projects, thereby expanding the universe of potential investors.

The gap that we have identified could be filled by a **Green Infrastructure Bank with a clear mandate to support the net-zero and resilient transition.**

¹ See <https://www.gov.uk/government/topical-events/the-uks-industrial-strategy>

² Allan, J., Donovan, C., Ekins, P., Gambhir, A., Hepburn, C., Robins, N., Reay, D., Shuckburgh E., and Zenghelis, D. (2020). A net-zero emissions economic recovery from COVID-19. Smith School Working Paper 20-01.

³ See <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

⁴ Mabey, N and Dimsdale, T (2016). **Faster, Smarter, Safer, Cleaner: Making Britain's Infrastructure Systems Fit for the Future**



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The rationale for a Green Infrastructure Bank

In order to achieve the fifth carbon budget the UK needs to invest approximately £22bn per year in new infrastructure, of which £2.2bn is expected to be public investment⁵. Currently the UK's ongoing infrastructure investment needs are not being met. Clean energy investment in the UK has been falling dramatically from around £23.5 bn in 2015 to just over £7.1 bn in 2019⁶. Yet the National Infrastructure Assessment has indicated that UK energy demand could increase between 9-26% by 2030⁷, while over the same period up to 40 GW of older power stations will come offline. To address this gap substantial investment in UK power is needed. These figures do not include non-energy costs such as the UK's investment needs for maximising biodiversity, or the anticipated cost of large-scale carbon sequestration⁸.

A Green Infrastructure Bank would help the UK to meet the current shortfall in infrastructure investment and to secure a framework for long term financing amid the current economic uncertainty⁹. Such a mission-driven institution is necessary because of the specific challenges associated with the infrastructure investment and private finance mobilisation that is required for the UK to both increase productivity and meet its climate goals¹⁰. As well as helping to stimulate infrastructure investment at a time when this is critical, a government-backed, mission-driven infrastructure bank could also tackle the structural barriers suppressing investment in sustainable infrastructure investment by acting as a market-maker.

Principal barriers to low-carbon infrastructure investment include:

- > **Scale and Front-Loaded Finance:** upfront investment in efficiency and a renewable energy system is needed to displace lower ongoing fossil fuel purchases.
- > **Managing Risk:** low-carbon investment has higher political, technology, novelty and policy risks. Investors' perceptions amplify the risk of low carbon investments and downplay the risk of high-carbon investments.
- > **Integration:** regulatory reforms are needed to integrate low-carbon and climate resilience into ongoing infrastructure investment in cities and industrial clusters.

These barriers to low-carbon investment are exacerbated by the pandemic, which has disrupted an estimated £6.5bn of UK infrastructure projects¹¹. This investment hiatus has the potential to damage future UK productivity and long-term growth. On current trends the UK will not be able to meet its fourth and fifth carbon budgets¹², and increased investment in sustainable infrastructure could remedy this. In addition, the UK's National Infrastructure Strategy is yet to be published¹³; without this, investors lack confidence.

⁵ Committee on Climate Change (2017). **The infrastructure needs of a low-carbon economy prepared for climate change.**

⁶ BENF (2020). **Clean Energy Investment Trends 2019.**

⁷ National Infrastructure Commission (2018). **National Infrastructure Assessment**

⁸ Aldersgate (2018). **Towards a New Normal. Increasing investments in the UK's green infrastructure**

⁹ See <https://www.nic.org.uk/news/armitt-decisions-now-can-help-on-long-road-of-healing-economy/>

¹⁰ LSE Growth Commission (2020). **Delivering Strong and Sustainable Growth in the UK: A special decade for innovation and investment**

¹¹ See <https://www.ft.com/content/7b3a4c0f-ac9e-4968-9c52-b2ea0f03946b>

¹² Ward, B (2018). **New projections confirm Clean Growth Strategy cannot currently achieve Carbon Budgets**

¹³ National Infrastructure Commission (2020). **Statement on reported delay to National Infrastructure Strategy**



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The level of uncertainty surrounding the COVID-19 pandemic is compounded by the UK ceasing to have access to EU funding mechanisms¹⁴. Previously some of the UK's infrastructure investment needs were met in the UK by the European Investment Bank, Connecting Europe Facility and European Structural and Investment Fund¹⁵. Between 2012 and 2016 the EIB lent the UK €31.3bn, of which 47% was for infrastructure. In 2016 EIB investment in the UK was EUR 6.9bn, falling to EUR 0.78bn in 2019¹⁶.

The infrastructure investment challenge is not unique to the UK, but the UK is at risk of being the only G7 country to not have a national public finance institution as part of its toolkit. The UK's major partners and competitors are all scaling up their national Development Financing Institutions (DFIs), e.g. Europe's EIB, Germany's KfW, France's Agence Française de Développement, the U.S. International Development Finance Corporation, China Development Bank, and Japan International Cooperation Agency.

Investment in the infrastructure technologies of the future is key to promoting the UK's long-term economic productivity. Investment in clean technologies will expand rapidly in the coming decade. Mobilising finance to emerging technologies at an early stage could not only secure domestic access but could also establish UK industries as leaders in high growth export markets¹⁷.

As well as positioning the UK as a market leader and placing it on track for the net-zero transition, setting up a new institution would support other four key goals of public spending aims in the recovery:

- > It would increase income by creating a significant numbers of jobs in the short term, and the opportunity to upskill the workforce in the longer term;
- > It would support levelling-up regional inequalities;
- > It would improve longer-term economic productivity;
- > It would deliver long-term value, including by boosting resilience, and so would make any debt incurred more sustainable.

The UK government could choose to support infrastructure investment through a dedicated institution, rather than by using ad hoc financial instruments and funding. A new institution would offer five main advantages over the more limited alternatives, by:

- > Acting as a mission-driven institution with a mandate to maximise public goods
- > Continuing to drive innovation in an evolving technological setting
- > Promoting investor confidence through tangible evidence of government support for infrastructure investments
- > Supporting the levelling up agenda by ensuring all regions benefit from the green transition and inclusive growth, whilst supporting the creation of new sustainable jobs, and contributing to the just transition.

¹⁴ See <https://www.e3g.org/library/investing-in-the-future-uk-replace-eu-funding-for-low-carbon-infrastructure>

¹⁵ Ibid

¹⁶ See <http://www.eib.org/projects/regions/european-union/united-kingdom/>

¹⁷ Mabey, N and Dimsdale, T (2016). **Faster, Smarter, Safer, Cleaner: Making Britain's Infrastructure Systems Fit for the Future**



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- > Ensuring that the private investment is leveraged into the economy at the scale and speed required to get on track to net-zero.

Balance sheet treatment and options for capitalization

A new institution could be wholly funded by public money – this need not have a lasting impact on public debt. As well as providing the targeted economic benefits outlined above, this institution would provide further clarity and transparency to the UK's finances, as the bank's loans would be matched by high quality infrastructure assets. The treatment of the bank's assets in national income accounts would be another matter, but the precedent of public-sector banks post-2008 suggests that the bank need not form part of public sector debt¹⁸. Treating the capitalization of a new public institution in a similar fashion would be equally permissible under international accounting standards and would mean that public balance sheets would not be negatively affected.

An alternative option would be to seek external capital, either by inviting additional minority shareholders from the private sector or by creating a Citizen's Bank backed by new green savings schemes (e.g. green ISAs)¹⁹. An additional option would be to create a fund within the bank in which sovereign wealth fund as well as institutional investors could invest. Blended options could crowd in external capital looking for a stable and predictable policy environment for projects and for government-backed returns. They could reduce the potential burden on public borrowing while simultaneously increasing the attractiveness of investing in UK infrastructure.

In addition a new bank could provide an opportunity to consolidate existing funding instruments across government which are relevant to investment in low-carbon infrastructure, such as the UK Guarantee Scheme, the Pensions Infrastructure Platform and the Charging Investment Infrastructure Fund for EV charging, placing them all within a single coherent institution²⁰.

A more comprehensive study based on a full estimation of the UK's needs together with the preferred funding model would be needed to identify the level of capitalization required. For this institution to be self-sufficient it is important to ensure that it can have borrowing powers in the medium term.

¹⁸ Mazzucato, M, Macfarlane, L, (2017). **Patient strategic finance: opportunities for state investment banks in the UK**. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2017-05)

¹⁹ Mabey, N. (2017). **Global Britain Needs a Green Infrastructure Bank**

²⁰ Clutton- Brock, P and Dutton, J. (2018). **Investing in the future: How can the UK replace EU funding for low carbon infrastructure**. E3G



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How the UK Infrastructure Bank will deliver the goals

As a mission-driven institution, a new Green Infrastructure Bank would deliver both direct and indirect benefits within the infrastructure ecosystem. The functions of the institution should be aligned with the required infrastructure of the future, including new housing/buildings, energy efficiency retrofits, distributed energy systems, electrical efficiency and “green” infrastructure such as forests and natural flood defence²¹. They could include:

- > A **green banking facility** able to offer bespoke financial instruments to address the specific requirements of low-carbon resilient infrastructure. For example: de-risking, aggregation of projects, issuing green bonds to invest in climate resilience. The banking facility could be complemented by the creation of a Sovereign Climate Fund that would be able to tap into deep pools of finance such as sovereign wealth and other institutional investors which are looking for a stable and predictable policy environment and, with government-guaranteed project finance returns, this could be an important element to attract international investors to help build national infrastructure.
- > A **project development facility/ team** to engage with local authorities as well as with the private sector to support the development of a pipeline of bankable projects that have both a mitigation and adaptation focus. This team could also support the development of demonstration projects, which will be particularly important in rapidly evolving technology environment as disruptive technologies are reshaping traditional business models into more integrated ones. The team’s role may also involve dialogue with regulators and other market participants to help smooth the way for the adoption of new technology.
- > An **observatory tracking financial flows** in real-time to quantify investment at the national and regional level, and identify shortfalls in investment and barriers to levelling up. This would complement the role of the National Infrastructure Commission but take a financial perspective. The observatory function could be also work as a repository of knowledge to understand the wider benefits of investment beyond emission reductions, e.g. green infrastructure, demand systems, health, activity air pollution reduction, NHS costs, etc. This integrated approach to co-benefits could build knowledge and skills among project financiers and developers that would support increased productivity of infrastructure investments.
- > **Development of future markets by supporting technological innovation.** This function would include both a push and a pull. The pull would be delivered by convening purchasers for new technologies – including both public procurement and major purchasers in the private sector – and conducting research to identify new markets for green solutions such as sustainable construction, artificial intelligence and data analysis and services. The push would come from offering finance to support these projects. Other support could include promoting new government policies such as an Innovation Fund.
- > **Provision of strategic advice to the government²² (complementing the Committee on Climate Change and the National Infrastructure Commission),** on what the current barriers to green investment are, what policy tools to address them, and

²¹ Mabey, N and Dimsdale, T (2016) **Faster, Smarter, Safer, Cleaner: Making Britain’s Infrastructure Systems Fit for the Future**

²² LSE Growth Commission (2017). **UK Growth A New Chapter.**



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when these tools could be withdrawn due to no longer being needed. This advice would be based on the expertise developed through the experience of engaging with local and regional governments to increase visibility on infrastructure planning. Experience suggests that having a small unit with an advisory role can be critical in the early stages of the infrastructure investment cycle.²³

- > **An international investment arm** which can work directly with countries to leverage in major funding to clean sectors²⁴. This would be welcomed by businesses as clean energy markets is a major growth opportunity in the market and could strengthen existing UK efforts to support green market development overseas (UK ICF, UK PACT, GFI, UK-China). As well as commercial benefits, this is important for national security as the UK's climate security is contingent on other countries making the transition to a zero carbon economy.

Roadmap for implementation

- > **A decision in principle, or a scoping review to report in late summer, could be announced at the fiscal event in July** as part of the government's response to the 2019 consultation on a new National Infrastructure Strategy.
- > **A final decision to create a new institution could then be announced in the Comprehensive Spending Review/Autumn budget in 2020**, and a team appointed to lead the detailed design and implementation work over the course of 2021. However, the institution could start operation as a "Shadow Bank" over the course of 2021 – this approach was taken the UK Green Investment Bank.
- > **A UK pledge on large-scale capitalization of the bank for climate projects could be made around the COP26 conference in late 2021** together with the announcement of a new Chief Executive for the institution, and the first "official" deal could be done in 2022.

²³ Ibid

²⁴ The UK Green Investment Bank had a £200m international arm funded from the ICF to invest in India and Africa
<https://www.businessgreen.com/news/2401179/green-investment-bank-to-go-global-with-gbp200m-climate-finance-pilot>



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About E3G and its work in this field

E3G is an independent climate change think tank operating to accelerate the global transition to a low carbon economy. E3G are the independent experts on climate diplomacy and energy policy. Our senior leadership has a combined 75 years of experience advising Government, business and NGOs and a wealth of insight into what climate change means for societies.

E3G's has extensive experience of advising key policymakers on the design of new green public finance institutions in different jurisdictions – in the **UK, South Africa, Colombia** and **Mexico**. Our experience suggests that proactively tailoring the design of a new institution at an early stage can help deliver targeted goals. In fact, **a key learning from E3G's experience is that successful institutional design begins with an assessment what is required to solve the problems faced, rather than what is achievable within the existing institutional and funding landscape.**

This approach guides but is also reflected throughout the process of designing and establishing a new institution, and this process and the national dialogue it creates are critical to locking ambition into the institution's mandate and architecture. **During the climate transition new barriers and challenges to progress will arise as the economy changes and as new technologies emerge. It is critical to hardwire the ability to evolve and adapt into the institution's design.**

E3G has developed a framework which captures these key learnings and maps out the procedural steps required to set up a Green Financial Institution. Most recently, E3G has used this experience to advise on the design of the **London Future Finance Facility**. This new institutional concept builds on established models but addresses London's goals by uniquely combining innovation with market-making, reflecting local needs and the local institutional landscape. E3G is also using its framework to advise European Investment Bank (EIB) shareholders on the EIB's transition to become a Climate Bank.

E3G, June 2020