

CBI informal submission to the NIA2 Baseline Report [Call for Evidence](#)

The CBI welcomes the opportunity to help shape the next National Infrastructure Assessment. We have welcomed the opportunities to engage with the Commission ahead of this call for evidence and look forward to continuing to input in the months ahead. The feedback below is a summary of our members' key thoughts on the Baseline Report, consisting of our latest engagement with key member groups and drawing on established CBI policy positions.

Do the nine challenges identified by the Commission cover the most pressing issues that economic infrastructure will face over the next 30 years?

The CBI welcomes the NIC's ambition to transform and future proof the UK's infrastructure. Climate resilience, the transition to low carbon heat, alongside biodiversity and making use of new digital technology are all key areas for the NIA2 to consider. Biodiversity in particular is a key and new policy area, which is why the CBI has created a lead on this brief to support businesses do more in this space.

NIA2 should recognise the critical role of private capital in tackling the 9 challenges

However, deciding how to fund and finance UK infrastructure is another key challenge our country faces. Following the pandemic, the need for more private capital in UK infrastructure investment has only increased considering the strain on public finances. Alongside focusing on digitalisation, skills and (re)training, use of long-term funding needs to be established and the government needs to unlock private sector capital if it wishes to stay true to its promise of delivering a "UK infrastructure revolution".

The current cost-of-living crisis has only put extra pressure on HM Treasury as they look to support consumers. The question of "who pays" is relevant not only for such living/energy crises, but also broadly for the net zero transition and even improvements to connectivity. Whilst the creation of a new UK Infrastructure Bank is a positive step, its resources and level of capitalisation means its role is limited. Against this backdrop, business believes that private capital therefore has an ever more pivotal role to play, and that the government should no longer be the only procurer of infrastructure, but a market maker and enabler for investment.

Feedback from CBI members also suggests that the availability of private capital for infrastructure generally remains high. However, there is difficulty in attracting the mid to the long-term attention of lenders. As the [CBI's Investing in Infrastructure Paper](#) laid out, this is due to a number of factors including current regulatory frameworks, political uncertainty about the delivery of project and a lack of clarity around the National Infrastructure Pipeline and uncertainty about funding models which is the focus of this paper.

What are the main opportunities in terms of governance, policy, regulation and market mechanisms that may help solve any of the Commission's nine challenges for the Next Assessment?

Action is needed to tackle the fragmented governance structures in UK infrastructure

The current governance structures in the UK infrastructure market can lead to a disconnect between the relevant sponsoring government agency or regulator and the views of the NIC. This disconnect has been identified as a reason for the perceived slow development of new models for investment in areas such as interconnectors, Direct Procurement for Customers in water, onshore transmission, electric vehicle charging strategy and market-based proposals for rail. As the CBI has previously argued, at a local level, the fragmented nature of infrastructure funding and responsibility has also held back delivery.

Businesses have also identified the NIC as a very important body, providing strategic direction on infrastructure delivery. However, businesses note that the NIC is not independent, limiting its ability to hold the government to account on infrastructure delivery. To drive faster more radical improvements across UK infrastructure the CBI therefore believes the NIC needs greater independence.

Government should lay out clearer market mechanisms to boost investment in the green technologies which can be at the heart of the energy transition

Feedback from CBI members suggests that the availability of private capital for infrastructure and particularly green technologies generally remains high. However, there is difficulty in attracting the mid to the long-term attention of lenders. As the CBI's Investing in Infrastructure Paper laid out, this is due to a number of factors including current regulatory frameworks, political uncertainty about the delivery of project and a lack of clarity around the National Infrastructure Pipeline and uncertainty about funding models.

In particular, more clarity around Hydrogen and Carbon Capture Usage Storage business models, as well as Net Zero Hydrogen Fund, are key to scaling up the UK's hydrogen and CCUS markets. To support this, the CBI believes that the government should:

- Prioritise the Hydrogen Business Models and UK Low Carbon Hydrogen Standards consultation outcomes to enable business investment, e.g. CfD auction with a variable cost for hydrogen production and a fixed payment to cover the CAPEX cost.
- Allocate the £240m Net Zero Hydrogen Fund, with a view to increasing funding as part of the £1bn Net Zero Innovation Portfolio into further hydrogen testing programmes and demonstration projects involving production, storage and distribution.
- Deliver proposed business models, including the Industrial Carbon Capture contracts, the CCS Transport & Storage Regulatory Investment Model and the Dispatchable Power Agreement, to enable final investment decisions by the end of Q2-2022.

Multi-year funding was confirmed at SR20 for the CCS Infrastructure Fund and businesses now want clarity on how these funds will be allocated across transport & storage, industrial carbon capture and dispatchable power.

Sensible and tailored regulation can be a catalyst for further investment in UK infrastructure

Government and regulators should use their unique positions as market makers to create the necessary environment to unlock private investment. As a minimum, all regulators should prioritise innovation, net zero and investment as part of their core remits, by setting out new, transformational terms of reference. This will ensure regulator priorities are better aligned with government policy, as set out in the Plan for Growth. This should include a responsibility to contribute to reaching the UK's net-zero target and placing greater emphasis on measures of quality of outcomes and sustainability over the long term, rather than short-term price competitiveness. Equally, economic regulators should expand their toolkit beyond price controls. The use of price controls can lead to underinvestment and may not deliver price stability for consumers in the longer term. To deliver the transformative investment required, regulators must explore better alternatives in achieving desired long-term infrastructure needs.

To attract the investment necessary to provide the UK with the infrastructure it requires, the UK should retain the key regulatory policy principles that have helped to facilitate the existing investment in regulated utilities over the past 30 years. Independent regulators should be making evidence-based decisions, at arm's length from short-term political considerations. Equally, they ought to ensure that decisions are then subject to a proportionate but robust merits-based appeals regime.

The toolkit of economic regulators should encourage long-term investment that translates into long-term returns for private investors. The water sector is an example of where price controls catalysed the process of removing inefficiencies in the early years of privatisation and showed tangible benefits to both firms and consumers. Typically, price controls are set every 5 years, which means they are unlikely to reflect the major investment needs of the sector in the long-term.

Over the coming year, the CBI will be conducting new work exploring how our proposed Office for Future Regulation could help support some of these objectives and we would welcome further dialogue with the Commission on this in the months ahead.

Steps are needed to improve the delivery of the projects in the National Infrastructure and Construction Pipeline

A current lack of clarity in the government's National Infrastructure and Construction Pipeline is damaging to investor confidence and fails to give the construction market the time it needs to prepare for the delivery of major schemes.

Business is clear that early visibility of public sector opportunities drives better outcomes through market preparedness and ability to deliver, but this visibility should also be matched by upfront and open dialogue with suppliers during the design of projects. Close collaboration throughout the life of a project is also essential to ensuring that pragmatic and purpose driven approaches to delivery are embraced by all collaborators.

The IPA and Cabinet Office are already working on initiatives to drive improvements across the infrastructure and construction space, such as the Project Routemap, Construction Playbook, and the Government Project Delivery Framework. Yet embedding best practice takes time and the NIC can play a vital role by ensuring these examples of guidance, policy, and best practice are adopted on all projects.

Steps should also be taken to make the Pipeline a more useful tool for investors to crowd in the investment we have identified as being needed above. In practice, this means that, as a minimum, it should outline which infrastructure projects it is seeking private finance for, and the private finance delivery model that will be utilised in each case.

Digital transformation of infrastructure - the Commission will consider how the digital transformation of infrastructure could deliver higher quality, lower cost, infrastructure services.

Using digital technology in AEC industry can lead to more effective infrastructure operation

CBI members from the AEC industry stresses that Building Information Modelling (BIM) and Digital Twin are crucial to digital transformation in the sector and to operating more efficient infrastructure. Digital twins giving multi-dimensional views into how an asset is designed and how it's performing, including occupant behaviour, use patterns, space utilisation, and traffic patterns. Business values that a digital twin offers a means to test "what-if" scenarios, including the impact of design changes, weather disruptions, and security events. It also collects substantial data under one environment. Furthermore, BIM represents a holistic process of creating and managing information for a built asset. Based on an intelligent model and enabled by a cloud platform, BIM integrates structured, multi-disciplinary data to produce a digital representation of an asset across its lifecycle, from planning and design to construction and operations.

Government can help businesses overcome barriers to technology adoption

Moreover, the possibilities of wireless connectivity, including 5G, should lie at the heart of government policymaking, from net zero to levelling up. Wireless connectivity will underpin widespread adoption of cutting-edge technologies by 2030 from autonomous transport to digitised manufacturing. However, businesses face a range of barriers to technology adoption, from understanding the benefits and return on investment to skills.

To harness the transformational potential of future networks, as well as focusing on consumer networks, the Wireless Infrastructure Strategy must address how industry can embed wireless connectivity into their business models to deliver on government's wider high growth, high investment economic strategy. The government should consider setting an ambition and specific milestones for an even adoption of digital, data and technology across industry. Setting a clear direction for government policy will help provide the clarity and certainty needed to unlock business investment in these technologies. Finally, businesses require a regulatory framework to enable a stable investment environment to ensure there is consistency across digital, data and technology. It will be key to take a strategic approach to digital regulation and invest in the institutions needed to deliver it.

Heat transition and energy efficiency – barriers/solutions to converting the existing gas grid to hydrogen, installing heat pumps in different types of properties, or rolling out low carbon heat networks?

The government can use its ability to provide catalytic public investment in spend allocations for energy efficiency upgrades in homes and public sector buildings

The government should make energy efficiency and heat a national infrastructure priority by providing a comprehensive long-term package of funding to make our buildings more energy efficient and to move away from fossil fuel heating solutions. Part of this package must include the government fulfilling commitments in the Conservative Manifesto to spend the £9.2bn allocated, including:

- £2.35bn for the Homes Upgrade Grant
- £3.8bn to 2030, of which £1bn by 2025 to support those low income and fuel poor households through the Social Housing Decarbonisation Fund
- £2.9bn for the Public Sector Decarbonisation scheme

Furthermore, the government needs to support private investment from all ‘able to pay’ homeowners and landlords to make energy efficiency improvements and heat pump installations by:

- Establishing a new streamlined grant scheme for all households, with £3.6bn tapering support from 2025, to support home energy efficiency improvements
- Providing up to £4.76bn, including the current £100m Clean Heat Grant proposal, to support investment needed for heat pumps in existing homes. This could be through a scheme that also offers energy efficiency measures or as a larger Clean Heat Grant.

The government should also announce the creation of a National Delivery Body tasked with leading the transition to zero carbon heat, as recommended by the CBI’s Heat Commission¹. This must provide clearer regulatory and fiscal incentives for improving energy efficiency and a shift to low carbon forms of heating. Alongside scaling up the new Clean Heat Grant Scheme and backstop regulations which prevent sales or rentals that do not meet defined efficiency standards by a certain date.

Networks for hydrogen and carbon capture and storage - what barriers exist to the long-term growth of the hydrogen sector beyond 2030, and how can they be overcome? What are the main barriers to delivering the carbon capture and storage networks required to support the transition to a net zero economy?

Business needs a clear pathway of financial support to develop the nascent low carbon hydrogen and carbon capture use and storage (CCUS) market

The development of a thriving UK hydrogen market will not only bring economy-wide decarbonisation opportunities but will have wider economic and social benefits. As outlined in CBI’s [‘Seize the Moment’](#), the UK hydrogen market could generate up to £8bn from electrolyser manufacturing exports and support up to up to 15,000 direct jobs in 2030. For CCUS, the government’s Net Zero Strategy outlines up to 50,000 direct and indirect jobs because of scaling up the UK’s CCUS capacity. Furthermore, prosperous hydrogen and

¹ CBI and University of Birmingham, Net-zero: The Road to Low-Carbon Heat, July 2020

CCUS markets will support the transition of jobs and expertise from traditional sectors, such as oil and gas. The North Sea Transition Deal estimates that up to 40,000 direct and indirect jobs could be retained from the oil and gas sector through the energy transition, with a significant proportion of these in the hydrogen and CCUS sectors. However, in order to unlock this potential, the private sector needs the detailed policy and financial support. The UK cannot miss this opportunity and risk losing investments as other countries make ambitious steps to unlock this potential.

Business not only needs a business model that provides revenue certainty, but also clarity on the frequency that contracts will be awarded. Owing to the fact that low carbon hydrogen remains a nascent market, it is expected that early projects will be of smaller scale with high production costs – this is true for both CCS and electrolytic-enabled production. The CBI recommends that government considers providing revenue support contracts for a minimum length of 15 years to provide long-term revenue certainty for investors, this should be reviewed and amended as the size of the demand market becomes more certain.

Meanwhile, the government has increased its CCUS ambition, committing to delivering four CCUS clusters and capturing 20-30 MtCO₂ across the economy per year by 2030. The Cluster Sequencing process has demonstrated the private sectors appetite to invest in the UK's growing CCUS market by providing certainty for the delivery of the first two CCUS clusters. To unlock further private investment, the government should now demonstrate its commitment to the continuation of the sequencing process with clarity on future phases and tracks.

Levelling up – what are the long-term investment needs, including the role of new technologies, as part of a strategic multimodal transport plan?

Transport investment for both levelling up and decarbonisation

Providing long-term funding to decarbonise UK transport systems, including for public transport and developing a UK electric vehicle market, should be a priority for the government. Similarly, the government should use public investment to stimulate private sector investment and R&D into technologies to decarbonise heavier modes of transport such as freight, aviation and maritime.

Shared mobility can be improved once we better understand how and where passengers travel

Greater use of shared mobility can play a key role in not only reducing emissions, but also tackling congestion and parking shortages, particularly within urban centres. This can be due to increasing accessibility to bikes, commuters choosing to use their own car less often, or in some cases individuals even deciding not to own a private vehicle at all. And more recently, the emergence of app-based hiring and booking models, as well as travel planning apps, have promoted the use of shared journeys.

Feedback from business suggests that one of the challenges to greater use of shared mobility options is the quality and availability of transport data. Too often this means it is not easy or convenient for commuters to find shared mobility options, and more generally awareness of existing provision is low. This lack of data also impedes local and regional policy makers from understanding how shared mobility options interact with other local transport infrastructure and prevents Mobility as a Service providers from knowing where to invest. Without open access to more transport data for all parties, the benefits offered by shared mobility are unlikely to be fully realised.

Greater focus on rail freight

In light of the critical role that freight will play in delivering not just our commitment to decarbonise but also more efficient and resilient supply chains, the CBI is concerned that government investments planned are too heavily focused on reducing journey times for passengers, and insufficiently focused on enhancing capacity across the rail network. It is also vital that this system is capable of adapting to meet changes in demand. The CBI expects that both passenger demand for rail services as well as freight demand will continue to grow, although this growth is unlikely to be even across passenger and freight. Equally, driving a modal shift away from road vehicles in favour of rail vehicles or coastal shipping will ensure that the freight sector is more resilient to future supply chain challenges.

Investment into transport must be more joined-up if the government is serious about decarbonisation and levelling up

To support a more comprehensive and reflective cost-benefit analysis for transport, and more broadly infrastructure projects, HMT should adopt a programmatic approach to its Green Book going forward. HMT should adopt a more structured regular update cycle, with periodic developments based on feedback from government and industry partners. Particular focus should be paid to light touch changes, including the latest value calculations, regularly updated links to guidance and accompanying materials, and assured templates and checklists that remain fit for use.

The CBI believes that the rail sector is a key enabler of the UK economy and has a fundamental role to play in the delivery of the government's core objectives of levelling up and decarbonisation by 2050. The rail sector's vast opportunities to contribute to economic growth, levelling up, and connectivity are also best realised through a strong partnership between the private and public sector.

By laying out a clear pipeline of infrastructure improvements and planned investments, the government will not only be able to attract private sector infrastructure investors to invest in rail projects, thus making them more cost-effective for the taxpayer, but it will also allow private companies operating in the rail supply chain to make investments in new factories, creating jobs and opportunities for areas of the country the government wishes to see benefit from the levelling up agenda. One firm in CBI membership which manufactures parts for the railway and holds contracts with Network Rail, said that their ability to plan an ambitious growth strategy here in the UK is hampered by the lack of certainty around infrastructure investments and major projects. The government should take steps to end this uncertainty and provide clarity on the infrastructure projects it will be taking forward and when.

Developing greener bus networks should also be a priority and, government should look to implement recommendations from the CBI's [Greener Miles](#) report and:

- Increase levels of capital support for purchasing Zero Emission Buses (ZEBs) and related infrastructure in future rounds of government funding
- Support a private leasing market for ZEBs at pace and scale, through the National Infrastructure Bank, underwriting some of the early risks in this market, with a view to crowding in private finance longer term
- Reform Bus Service Operators Grant in a way that incentivises private operators to transition to ZEBs
- Ensure the successful delivery of Local Bus Service Improvement Plans

Drive modal shift through promoting active travel

Questions remain about how the Active Travel Strategy will be integrated with other transport policies and plans, and how the needs of other road users, for both business and commuting, will be considered. Good consultation should involve engagement with the public, businesses and transport operators to ensure investments are not disconnected and temporary. This should be driven by local authorities as they draw up Local Cycling and Walking Infrastructure Plans (LCWIPs).

These plans should also consider how active travel routes can be better integrated with public transport networks, to make active travel options a more viable option as part of longer or more complex commutes. As key transport interchanges, there is a role here too for rail and bus stations, for example by providing better cycle storage facilities on trains and at stations, or clearer maps telling passengers how far destinations are by foot. Business should engage with local government to help shape wider spatial plans as well as the future of new infrastructure for active travel that will be used by staff.

Delivering on a more flexible passenger-centric vision for the railways can accelerate modal shift

As the railway seeks to recover in the aftermath of the COVID-19 pandemic, the CBI believes that there is a great opportunity to reform the entire structure of the fares system, making it simpler, easier, and more effective for travellers, and helping to ensure that more travellers choose the railway as a lower carbon, cost-effective mode of travel. Following the publication of the Williams-Shapps Plan for Rail, government should now work closely with operators in the development of the new Passenger Service Contracts to support innovation and delivery, appropriately balancing risk and reward and incentivising operators for freight users and passengers.

- Deliver on commitments to roll-out digital and flexible ticketing as soon as possible.
- Consult with rail operators, the wider supply chain and investment community on the formation of the 30-year strategy for rail.
- Continue to prioritise central government funding for rail electrification programmes, as well as the development of hydrogen and other alternative fuel trains for track where electrification will not be economical.

The CBI appreciates the chance to feed into the Commission's Second National Infrastructure Assessment. Although this informal submission provides relatively high-level ideas and suggestions, the CBI would welcome further opportunities to engage with the Commission on shaping the NIA2 and other future work.

CBI Policy Unit, March 2022

Please contact Kate Martincova (katerina.martincova@cbi.org.uk) for further information.