INFRASTRUCTURE BANK

STRATEGY UPDATE:

Private sector investments

September 2023

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About this update:

Our first Strategic Plan set out our view of the market and where we expected to see opportunities to invest over the next five to eight years. It remains the basis of our approach. Our shareholder, HM Treasury, has now issued a statutory Statement of Strategic Priorities, confirming and updating the Bank's role in delivering the government's policy agenda. This strategy update responds to the Statement of Strategic Priorities, sets out more detail about our approach and the areas we see opportunities to solve problems in the next 12-24 months.

All our private investments must deliver on our triple bottom line:

Deliver against one or both of our strategic objectives

Generate a financial return to ensure we are an enduring institution

Be additional to the market, crowding-in significant private capital over time

Foreword

Our mission is to partner with the private sector and local government to increase infrastructure investment in pursuit of two strategic objectives. The spirit of our mandate is to deploy public money to solve infrastructure financing problems the private markets cannot solve on their own. Our mandate makes us unique.

Our investments are designed to amplify Government policy and to solve financing problems that emerge as policy is delivered. Unlike a central government grant pot or a private sector long-only fund, we will not determine where and how much we will invest in specific areas. We do not want to pre-commit capital to an area that could have been financed by the private market. Nor will we outstay our welcome in areas which are ready for private finance.

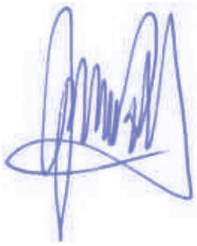
For our private investments, we have £18 billion of notional financial capacity, and an economic risk capital budget of £4.5 billion to work within.

We remain committed to investing across the infrastructure landscape. Our Banking origination teams are organised around our Strategic Plan to proactively shape transactions and engage with the market looking for problems we can solve by deploying our financial resources. We encourage any eligible project to contact us.

This strategy update sets out the seven areas where we see opportunities to tackle problems by deploying our finance in the next 12-24 months. These are: short duration energy storage, hydrogen, carbon capture, usage and storage (CCUS), EV charging, zero emission buses, heat networks and the port infrastructure for floating offshore wind.

Alongside this update, we are publishing documents detailing our current view of the markets in these seven areas and the products we can offer to unlock them.

These views will change as market conditions change. Like the markets in which we operate, our flexible approach enables us to capitalise on opportunities and solve problems at pace.



John Flint
CEO, UK Infrastructure Bank

Our approach

We invest across the infrastructure landscape, focusing primarily on economic infrastructure in five priority sectors: clean energy, transport, digital, water and waste. Our scope also includes nature-based solutions and critical supply chains.

We invest in these sectors in pursuit of two strategic objectives:

- to help tackle climate change, particularly meeting the government's net zero emissions target by 2050
- to support regional and local economic growth

Our sector-based approach mirrors Government's Net Zero Strategy. Most of our sectors have strong benefits on our regional growth objective, for example:

- the CCUS projects being delivered by 2030 are based in four clusters in the North East and North West of England, the Humber and North East Scotland, where they will safeguard thousands of existing jobs and create new opportunities;
- the ports best placed to support the UK's floating offshore wind ambitions are spread across the UK, initially in Wales and Scotland. Investment in these ports will create high-quality jobs.
- our finance for full fibre broadband has increased capacity in a stretched market and has been targeted to accelerate roll-out in areas with current poor broadband connectivity. This will lessen digital inequalities and support Government's mission to level up, by delivering nationwide gigabit capable broadband by 2030.

In addition, the Bank can invest in mining, refining and recycling critical minerals vital to the net zero transition, or semiconductor manufacturing, where we can support government's ambition to grow areas of UK strength or reduce the carbon intensity of manufacturing.

Given the scale of investment and the nature of the projects required this decade, we expect financing challenges to emerge. Markets may provide less investment than required to meet our objectives if investors cannot see returns on investment. Many of these projects will be long-term and complex and include significant uncertainty, especially around construction projects or when working with new or emerging technologies.

Our limited financial capacity needs to be additional: we will not deploy public funds where they are not needed. We scale our investments to best crowd-in private capital, including reducing our commitment if private sector appetite increases.

We have a strategic view of where our risk capital will be deployed across our priority sectors in the long-term. In our first two years, our private transactions have largely been split between clean energy and digital.

In line with our strategic plan, clean energy will, over time, become the largest sector in our portfolio, reflecting its importance to the UK's net zero and energy security ambitions. We expect the remainder of our portfolio will be more heavily weighted towards transport and digital. Both sectors are crucial to linking people and places and spreading opportunity more equally.

Market conditions mean water and waste are likely to be our smallest sectors. Water companies generally have strong access to low-cost capital under the Regulated Asset Base (RAB) model. We do not yet see the scale of opportunities in the waste sector, though this may change when government policies on packaging (extended producer responsibility), consistent collections and recycling (deposit return scheme) are implemented.

We do not pre-determine where, when, and how much we will invest below the sector level because we cannot predict if and where financing challenges will arise.

We never seek to commit our limited capital to projects that could have been financed by the private market. Our flexibility principle means we keep our activities under constant review, adapting our approach and focus as necessary to deliver.

Depending on their position on the technology s-curve, the market and government play different roles in driving investment. We work in partnership with both the market and government to successfully deliver our mission.

How we work with the market

We proactively engage the market, shape transactions and search for problems we can use our risk capital to solve. We want to work with ambitious project sponsors who can initiate, develop and promote the projects in which we will invest. We are not designed to bring projects to market ourselves. Our unique position makes us different to other market actors:

- we are not here to compete with the private market, and we will not outstay our welcome in sectors that can attract sufficient private capital;
- given our size, we are often able to act faster and secure approval more quickly than co-investors, where required;
- our risk appetite is different because we are focused on achieving strategic policy objectives as well as delivering a positive financial return;
- we assess each deal on a case-by-case basis, working to identify the financing structure that best fits a deal's needs and supports our mission;
- as a government-backed policy bank, our presence in a deal can help instil confidence in potential investors.

How we work with government

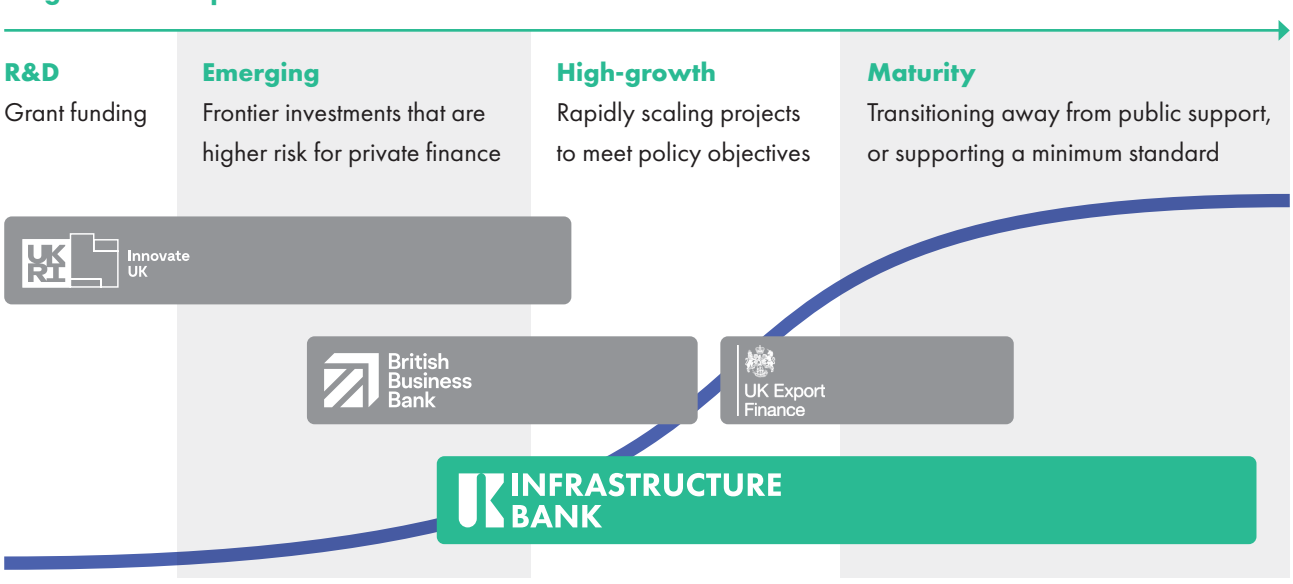
We work closely with government and the devolved administrations to ensure our finance effectively amplifies government policy by:

- helping to shape the design and delivery of policies, grants, revenue and wider support schemes;
- better coordinating financial support, integrating our finance into policy;
- delivering better value for money, by co-designing blended finance approaches alongside government grants;
- sharing intelligence on barriers to investment.

We work collaboratively with other public sector financing institutions, including the British Business Bank (BBB), UK Export Finance, The Scottish National Investment Bank and the Development Bank of Wales.

We will support frontier technologies at a later stage than UK Research and Innovation (UKRI) and Innovate UK. Our private sector function will typically invest directly in large infrastructure projects in our five priority sectors, whereas the BBB focuses on improving access to finance for small and medium enterprises throughout their growth journey. Where a potential investment is in scope of other public finance institutions, we will ensure any investment is complementary. We will refer relevant opportunities where we cannot support an investment.

Public sector investment landscape



Complementary infrastructure expertise

NATIONAL INFRASTRUCTURE COMMISSION

Infrastructure and Projects Authority

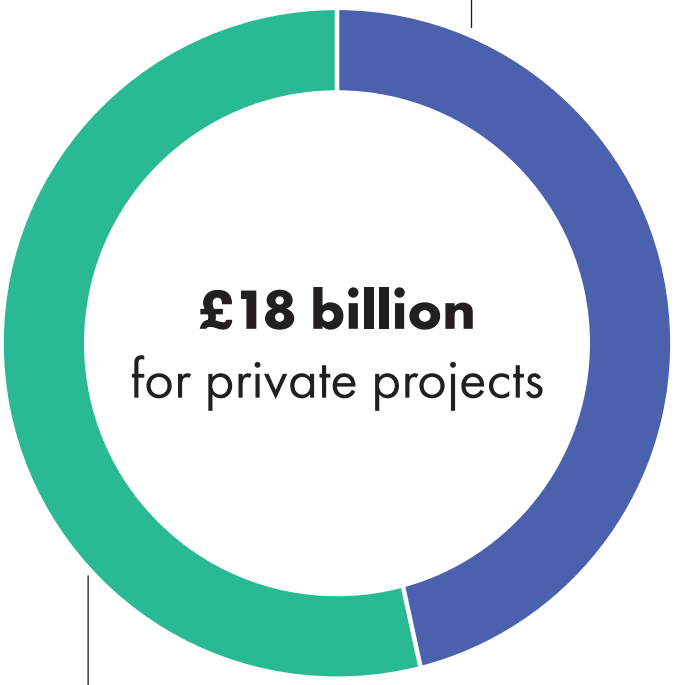
Homes England

Scottish and Welsh finance institutions

Banc

The Scottish National Investment Bank

Our products



We offer corporate and project finance and invest across the capital structure, including debt, equity and guarantees.

Most infrastructure deals are bespoke. Our investment approach is designed to be flexible and leverage our ability to invest across the capital structure. We assess each deal on a case-by-case basis to identify the financing structure that best fits a deal's needs and supports our mission.

We will often invest on terms in line with other investors. Where necessary, we can provide **concessional finance** – this includes:

- taking on risks that other investors are unwilling, or not yet willing, to take in a way that encourages the development of markets.
- offering preferential terms, including on price and tenor

The UK's subsidy control rules prohibit us from providing concessional finance to projects that can fulfil their financing needs through commercial lending.

Our indicative minimum ticket size is £25 million across all products.

Debt

We can provide debt across the capital structure.

Equity

We are a late-stage equity funder, with our focus being on higher technology readiness levels (TRLs 7-9), from late-stage development to construction or commercialisation. We may invest at an earlier stage for exceptional opportunities.

Early development funding is typically financed by project sponsors or government grant programmes (Innovate UK or UKRI), but there is less capital available for successful commercialisation. We offer:

- **Direct equity** into a corporate entity or special purpose vehicle alongside a project developer.
- **Co-investments** alongside other investors focused on early-stage investments. We will risk-share with the market, sharing due diligence and drawing on third party expertise to facilitate transactions that otherwise would not take place.
- **Fund investments** outsourcing management of our capital to qualified third party managers who have access to markets we do not.

Guarantees

Our guarantees are backed by HM Treasury via the Sovereign Infrastructure Guarantee (SIG). It allows our guaranteed loans/bonds to receive a sovereign-equivalent credit rating and regulatory capital treatment (under CRR and Solvency II). Moody's have provided a Sector Comment stating this arrangement allows beneficiaries to view our guarantee as sovereign equivalent. More details are available here.

We assess guarantees on a case-by-case basis. We expect our guarantee products to be most effective in large transactions where there is a lack of liquidity.

We offer:

- **Financial guarantees** – bonds and loan guarantees to attract institutional investors. Inflation-linked guarantees, likely to be used in regulated sectors where the revenues are also inflation-linked (e.g. OFTOs).
- **Credit enhancement guarantees and first loss guarantees** – both enhance the credit rating of investments or a portfolio of individual loans, giving confidence to senior investors. These products could support government's Solvency UK reforms by providing credit support in a way which allows insurers or pension funds to invest in line with their regulatory requirements.
- In time, we also hope to offer **performance guarantees** – such as construction bonds to protect against the performance of construction companies on infrastructure projects.

We do not provide revenue guarantees.

Our focus

We want to lead the market in tackling infrastructure finance challenges. We remain committed to investing across our mandate, where we are needed to solve financing problems. We encourage any eligible project to contact us.

In addition, we have identified seven areas where we see opportunities to tackle problems by deploying our finance in the next 12-24 months. These areas – and the problems we want to address – are framed below. All can deliver on our triple bottom line and are significant parts of government's ambition for the net zero transition and support local growth.

Alongside this update, we are publishing documents setting out examples of how we will use our financial products to solve problems in each of these areas. Our approach will adapt as market conditions change in these dynamic areas.

Short duration energy storage

Government's ambition is to decarbonise power by 2035. Storage technologies will play a crucial role in this, helping to balance a highly renewable electricity system and increase energy security. National Grid forecast that up to 29 GW of storage could be needed by 2030 and up to 51 GW by 2050 – compared to around 5 GW today.

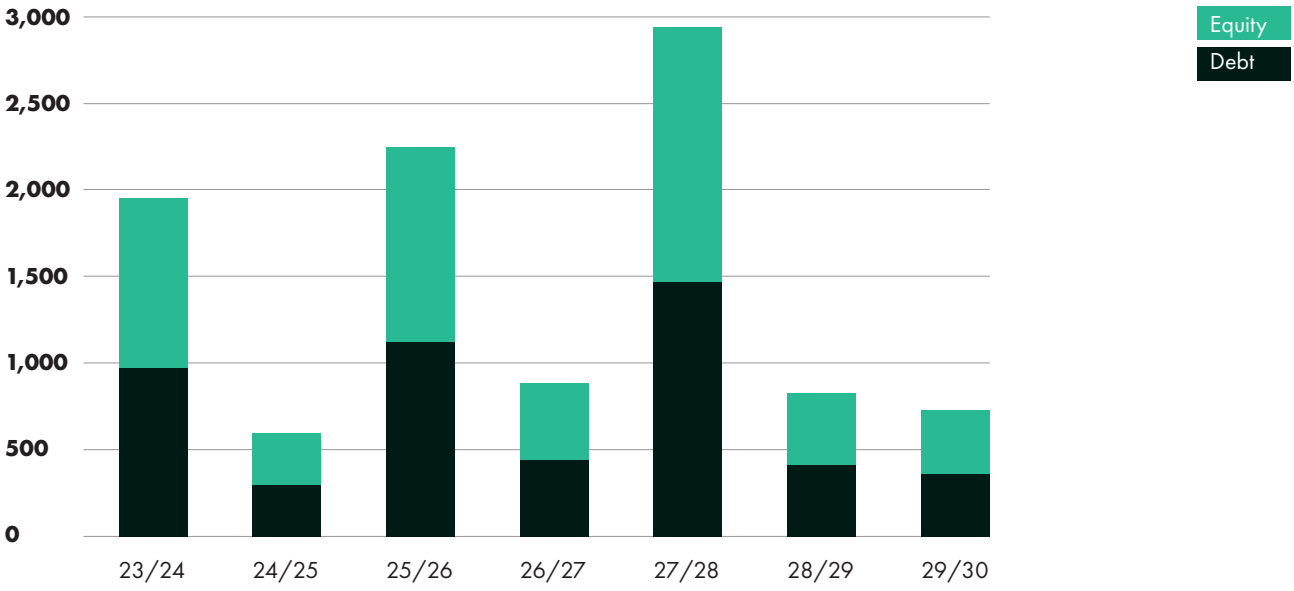
In the near term, we see the greatest opportunities to solve problems in short duration battery energy storage systems (BESS). These projects have greater revenue risks than most renewable generation projects. The complexity and uncertainty in the revenue stack means there is still only a limited number of commercial banks that have lent to UK BESS projects. Existing projects have been supported by equity investment, and a small pool of commercial banks providing debt finance. The volume and size of BESS projects in the pipeline is accelerating and without new lenders being encouraged into the market, there is likely to be a slowdown in delivery.

We want to create a sustainable model for debt finance, widening the pool of commercial lenders. Alongside senior debt and guarantees, we also offer a mezzanine loan product aiming to provide credit enhancement to senior lenders, increasing the pool of capital willing to lend in this area. We have already announced a series of investments to support new and innovative financing models for BESS.

Longer duration energy storage (LDES) is also important to supporting the net zero transition by responding to volatility in supply and demand over multiple days or weeks. We have a role in reducing barriers to investment in LDES and we are engaging directly with projects across a range of technologies. We expect government to publish a consultation on a policy framework to reduce barriers to LDES, as we explore ways to help first-of-a-kind projects reach a final investment decision.

You can read more about our approach to short duration energy storage here.

Estimated private financing need, short duration energy storage (£m)



Data note: Estimates based on the capital required to fund all short duration battery storage projects that have either received consent or are awaiting consent, assuming all projects awaiting consent receive it. Debt/equity split assumption based on experience with similar deals.

Carbon capture, usage and storage (CCUS)

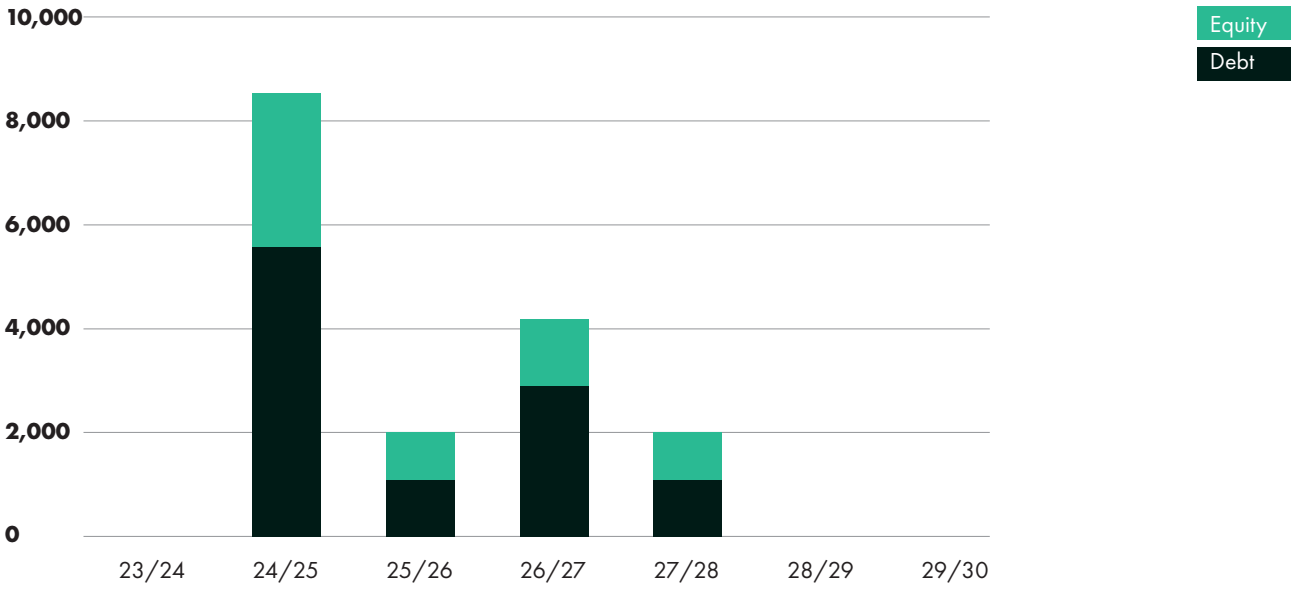
Government's ambition is to deliver four CCUS clusters by 2030. The first two – HyNet in North West England and the East Coast Cluster in Teesside – will be operational by the mid-2020s. Two more clusters – Acorn in North East Scotland and Viking in Humber will be delivered by 2030. Together, these projects put the UK on track to deliver government's ambition to capture 20-30 million tonnes of CO_2 each year by 2030, as well as safeguarding and creating thousands of jobs in the UK's industrial heartlands.

CCUS is a new market in the UK and government support is critical to unlocking investment. Around £8-10 billion of private investment is needed to deliver the first two clusters. While there is market appetite to invest, there are three potential problems we feel we can help address. In the construction phase, projects can face delivery risks – particularly cost overruns and delays. Once operational, there can be initial performance risks, such as technology underperformance or unexpected maintenance costs. Projects may also face coordination risks at the interface between projects. While many of these risks are addressed by government business models, some residual risks can lead to a temporary reduction in revenue that can reduce appetite to invest.

We want to help create solutions to address these problems, working closely with government. We have identified senior debt, our senior debt guarantee and credit enhancement to senior lenders as three products we think can help. We can use these products in combination, where appropriate, to support financing of CCUS Track-1 and help accelerate the next phase of projects.

You can read more about our approach to CCUS here.

Estimated private financing need, Track-1 and 2 CCUS clusters (£m)



Data note: UKIB estimates based on the capital required to fund known projects under CCUS Cluster Sequencing Track-1 and 2. Capture projects and T&S projects are included for Track-1, T&S project estimates are included for Track-2 and capture projects are estimates based on public information. Figures relate to the timing of capital commitment to projects, rather than being deployed.

Electric vehicle charging infrastructure

Government has mandated that sales of new petrol and diesel cars and vans should end by 2035, to decarbonise road transport. Surface transport was responsible for 19% of the UK's total domestic greenhouse gas emissions in 2020. A significant acceleration in the rate of electric vehicle (EV) uptake in the UK is required to achieve net zero.

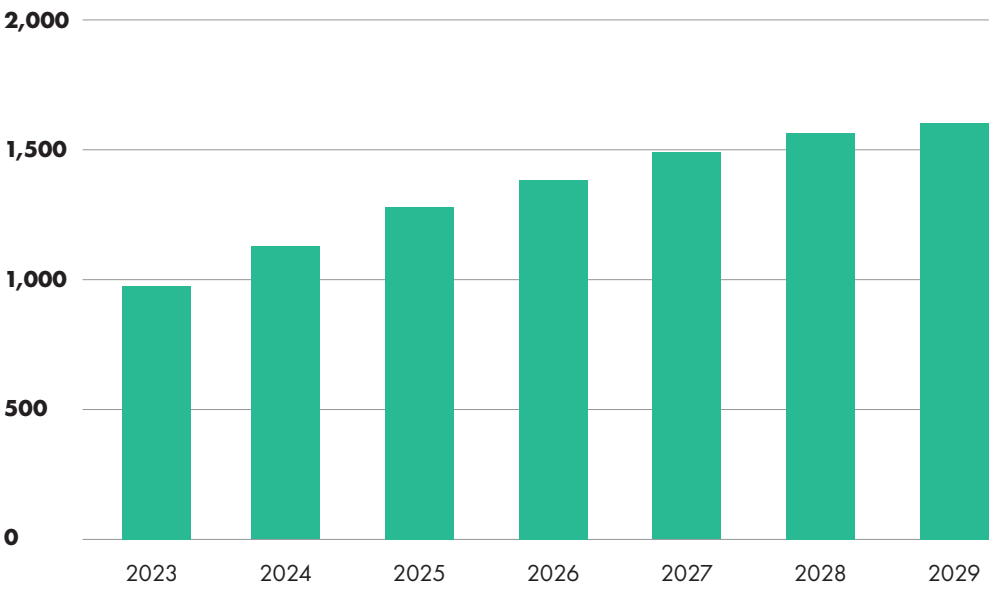
To support the adoption of EVs, accessible and affordable public charging infrastructure (destination, en route and on-street) is required to ensure communities in all areas of the UK are included in the EV transition. There are currently around 45,000 public chargers in the UK, and it is forecast that 300,000 public chargers will be required by 2030.

The rollout of charging infrastructure is falling behind EV ownership because a critical number of EVs are required to support a successful EV charging market. The uncertain take-up of EVs means charge point operators are having to roll out infrastructure in advance of demand and with a limited understanding of consumer behaviour. It is not always commercially viable to install charging points in rural areas, or those with lower EV take-up. Significant capital injections are challenging because the market is still relatively nascent and, beyond the larger charge point operators, is fragmented with many small and medium-sized operators.

We want to address these barriers and increase the depth of private capital available for EV charging infrastructure. We want to support equity markets for scaling-up charge point operators, increasing the supply of capital and encouraging competition and innovation. We also want to accelerate the scale-up of EV charging by opening debt markets to provide access to a deeper pool of cheaper capital. We will also work with local authorities and government to help grant funding stretch further.

You can read more about our approach to EV charging here.

Estimated investment need (£m)



Data note: BloombergNEF forecast on UK EV charging investment. This is an overall investment requirement, without an assumption on the split between public and private finance.

Heat networks

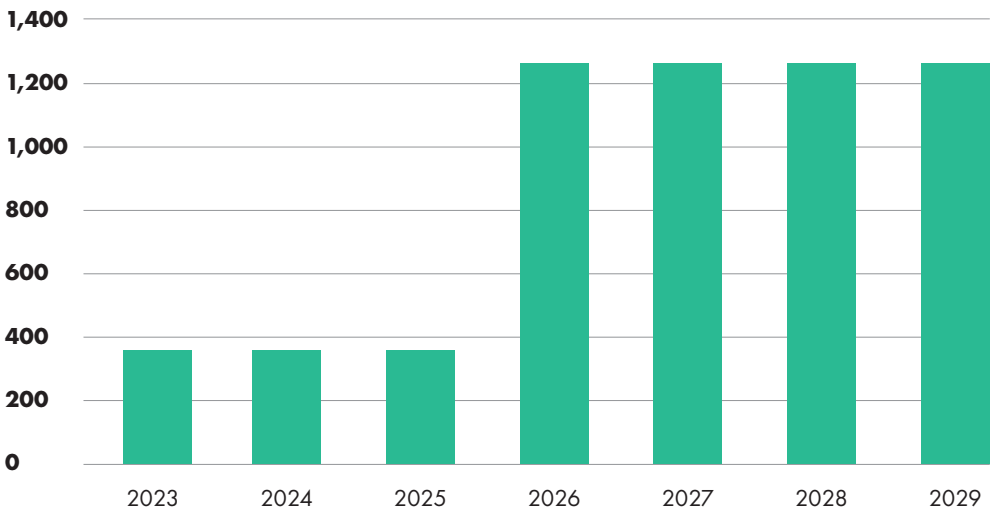
The UK Government's ambition is for the proportion of heat provided by heat networks to grow from 3% today to 20% by 2050, reducing emissions from buildings and supporting local growth. Heat in buildings is the second highest source of UK emissions. The Department for Energy Security and Net Zero (DESNZ) estimate that increasing heat network capacity from 14 Terawatt-hours (TWh) in 2020 to 80 TWh in 2050, in line with UK government's net zero commitments, will require at least £60-80 billion of investment. Investment in heat networks can stimulate investment in skills, creating between 20,000 and 35,000 new jobs.

We think we can help address problems with revenue risk, interim policy risk and challenging project economics. Heat networks face significant revenue risks, particularly around the proportion of consumers that will connect. Securing large 'anchor' off-takers can be challenging and upfront connection costs can deter customers. Some revenue risks will be addressed by upcoming policy and regulation, including heat network zoning, expected in 2025.[1] Ahead of this regulatory framework coming in, some policy risk remains. These problems, combined with the impact of gas prices, make the project economics of heat networks challenging. The market remains dependent on grant funding to be viable for commercial investors.

We will help to scale-up heat networks across the country, particularly supporting zonal scale projects where our finance can increase project size and the number of expected connections. We are exploring whether a connection charge facility reducing upfront connection charges could bring customers onto networks more quickly and whether we can bridge the finance gap currently caused by challenging project economics. To address the lack of commercial bank finance during the construction and ramp-up phase of heat networks, we are considering piloting project guarantees or lending that are cancelled or repaid when a project hits financial ratios that make it bankable. We are deepening our existing collaboration with DESNZ on the Green Heat Network Fund. We will engage with the market further to test the appetite for and effectiveness of these potential solutions.

You can read more about our approach to heat networks here.

Estimated investment need (£m)



Data note: Based off the published assumption that hitting the heat network deployment profile set out in the Net Zero strategy will cost £60 billion (lower end of the at least £60-£80 billion range), distributed over time based on rollout targets outlined in the Net Zero strategy.

1 The situation differs in Scotland, where powers to regulate heat networks have already been introduced and local councils are being required to identify potential zones.

Green hydrogen

Government ambition is to deliver up to 10GW of low carbon hydrogen production capacity by 2030, with at least half coming from electrolysis (green hydrogen). By 2025, the goal is to have up to 1GW of electrolysis (green hydrogen) and 1GW of CCUS-enabled (blue) hydrogen in operation or construction. Green hydrogen plays a key role in meeting net zero by reducing carbon emissions from hard to electrify sectors and can support regional growth, supporting up to 12,000 jobs by 2030.

We are open to supporting projects across the hydrogen value chain, but our initial focus is on supporting the production of green hydrogen because we think it is the most effective way to solve problems in this nascent market.

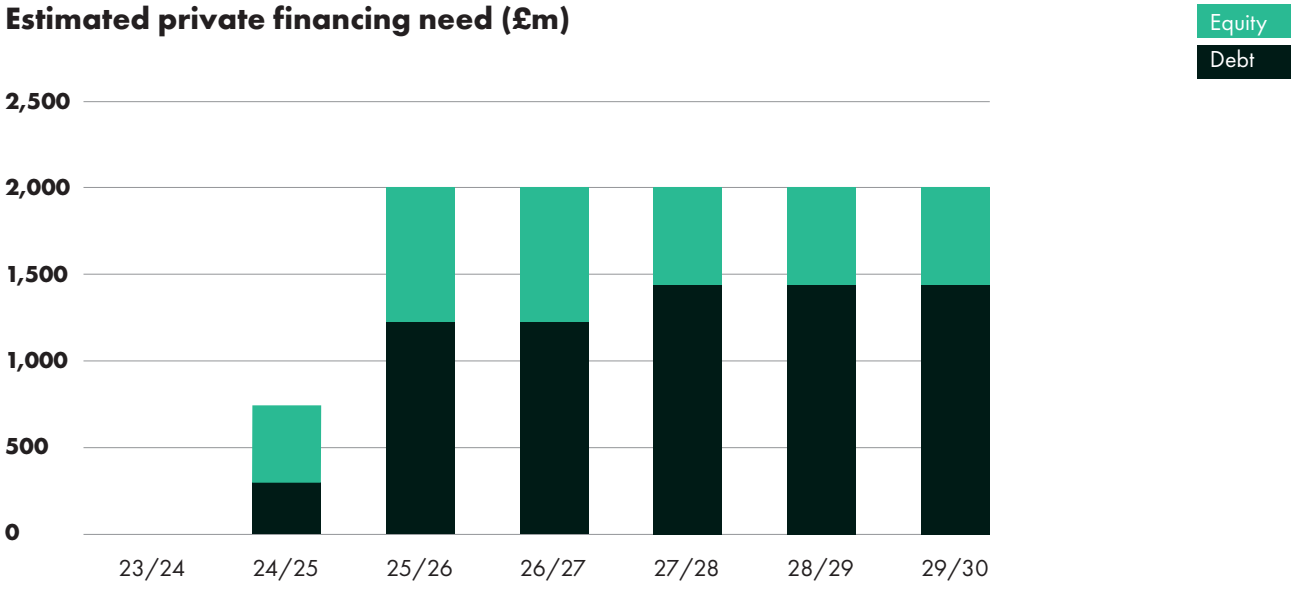
Green hydrogen production is central to government strategy and where funding is currently concentrated. Significant investment will be required in the next 12 months to unlock green hydrogen production at scale. We estimate around £800 million of private investment will be needed for the first projects to deliver up to 250MW of green hydrogen production capacity. Around £1.5-2 billion of private investment will be required to deliver 750MW of capacity in 2025. The process to deliver this capacity is expected to launch later this year.

Equity has flowed into early hydrogen projects but, despite business models addressing many of the risks, there could be challenges raising debt. Early demand for hydrogen is expected to be limited, meaning projects can face less revenue certainty. Investors could face demand risk as early use cases for hydrogen will be limited. Unexpected problems in the construction phase could result in cost overruns and delays. Once operational, projects may face initial performance risks such as unexpected maintenance costs. There are limited contracts and products available in the market to address these risks. The risk of counterparties being unable to meet their contractual obligations will vary across projects and can reduce investor appetite to provide debt.

We will help lead the market in tackling these problems and opening up debt financing for green hydrogen projects.

You can read more about our approach to green hydrogen here.

Estimated private financing need (£m)



Data note: UKIB estimates based on the capital required to finance projects benefitting from Net Zero Hydrogen Fund (NZHF) HAR1 over the initial years. From 2025/26, estimates, relate to the amount required to meet capacity targets alongside HAR2 and expected future annual allocation rounds.

Port infrastructure for floating offshore wind

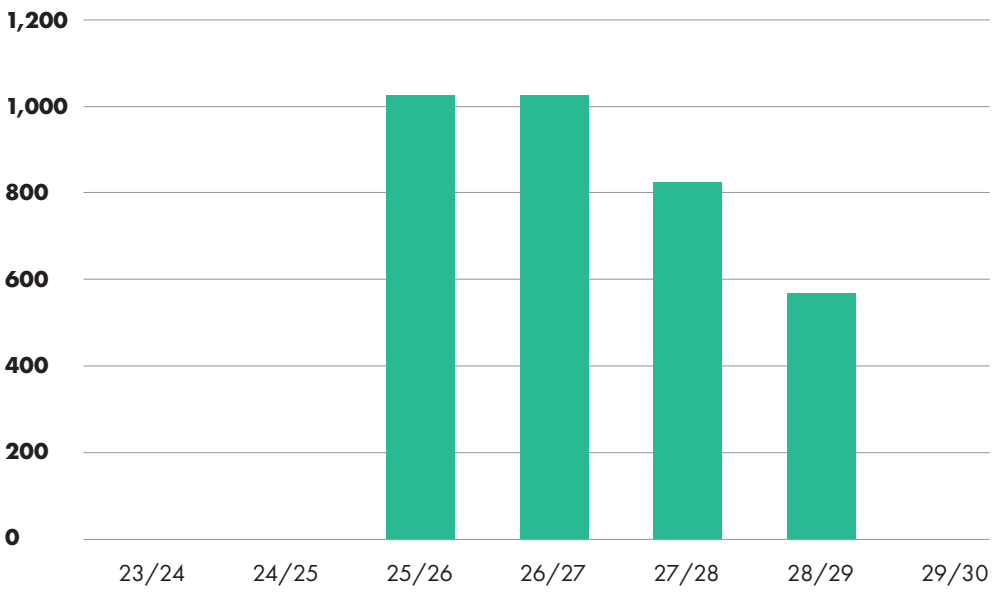
Government's ambition to deploy 50 GW of offshore wind, including 5 GW of floating offshore wind (FLOW) by 2030, will require significant enabling infrastructure in UK ports. Industry research suggests up to 11 ports, each requiring upwards of £500 million of investment, will need to be transformed to enable floating offshore wind deployment. Ports play an important role in regional growth, creating skilled jobs and manufacturing facilities, often in areas of higher deprivation.

Ports (particularly trust ports) can face barriers attracting investment due to their unique financing structures. The key financing barrier we think we can help to address is the lack of visibility ports have over utilisation of their infrastructure at the point of investment, which makes it challenging to forecast revenues. Capacity needs to be developed in advance of confirmed need, with certainty over which projects will receive Contracts for Difference coming relatively late. There is also limited visibility of medium or long-term market demand for FLOW beyond 2030. With port facilities being most heavily utilised during construction, this creates uncertainty about the ability to generate sufficient and stable revenue to service debt and/or provide an appropriate return on investment in the longer-term.

Where investment is required ahead of committed need, we can offer equity if we are confident in the underlying demand. We are open to discussions around equity co-investment with port owners or project developers where, for example, we could be a minority co-investor in a Special Purpose Vehicle (SPV) or development company. We can offer debt where there are sufficiently firm commitments in place for use of a facility. This is more likely where there are wider use cases beyond FLOW, for example, bottom-fixed offshore wind.

You can read more about our approach to port infrastructure for floating offshore wind here.

Estimated profile of investment requirements (£m)



Data note: Estimates based on the total capital expected to be required to fund the port infrastructure required to deploy 5GW of FLOW by 2030, according to capex estimates set out by the Floating Offshore Wind Taskforce and internal high-level estimates on phasing (Industry Roadmap 2040, March 2023) This profile does not pre-judge future policy that may look beyond 2030.

Zero emission buses

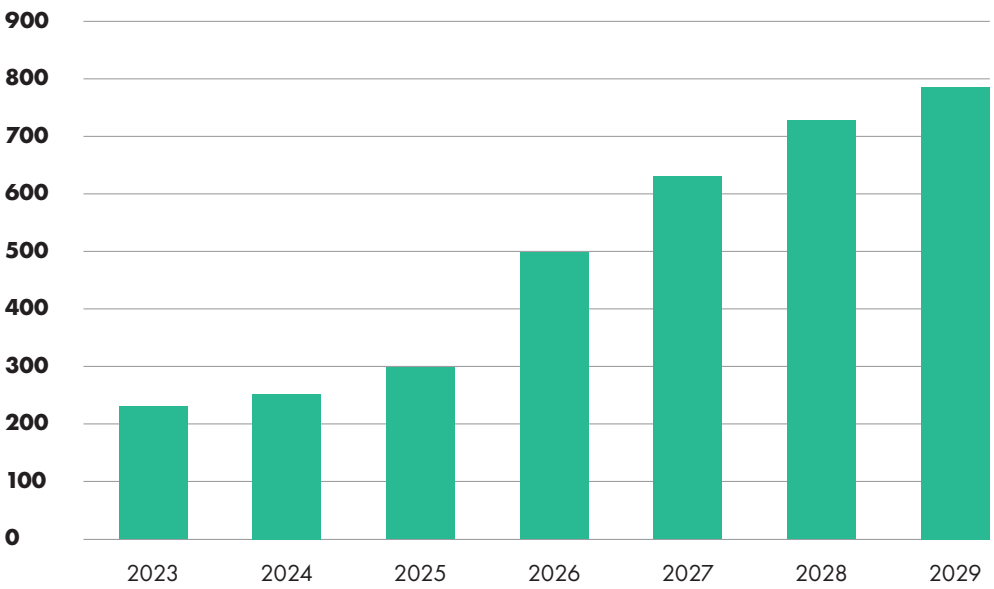
Most of the UK's 36,500 buses are diesel powered vehicles. Transitioning to zero emission buses (ZEBs) is an important step in decarbonising public transport, will help to modernise bus fleets across the country, and improve air quality, particularly in urban areas. The transition to ZEBs currently consists of small orders, mostly on operator balance sheets, with many supported by government grant funding.

ZEBs face cost, fleet management and financing barriers. While the cost differential is expected to decrease over time, upfront costs of ZEBs remain significantly higher than diesel buses and the industry is not generating orders large enough to bring down costs. Changes to fleet management practices are also a problem for operators, with uncertainty around asset lives, changing ownership models and depot charging. With limited third-party financing and leasing models, the rollout of new ZEBs has to date been restricted by operators' balance sheet capacity, or by operators waiting for grant support.

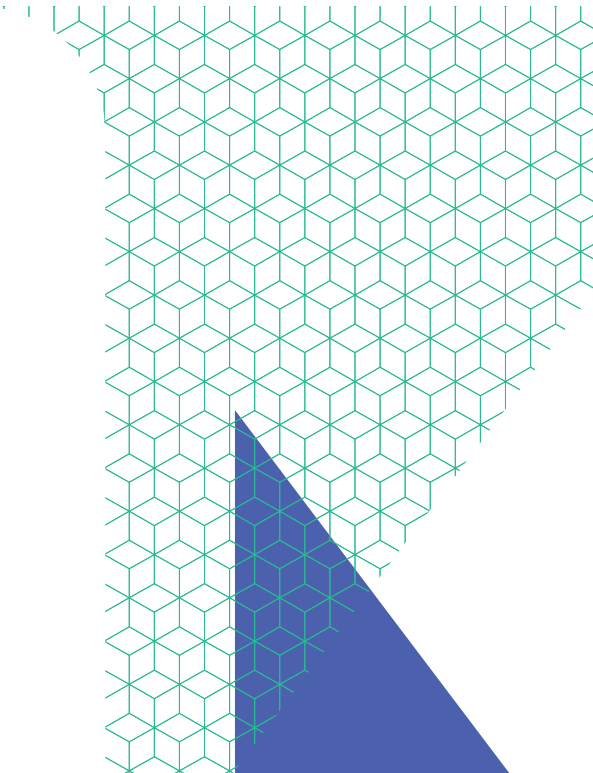
In the short-term, we will focus on accelerating the rollout of battery and hydrogen fuel cell ZEBs. We want to help de-risk leasing models to make them more affordable and attractive (particularly for SME operators) and consider how we can deploy long-term capital to help bring down the total cost of ownership. We are also working with government and local authorities to integrate our finance into grant applications.

You can read more about our approach to zero emission buses here.

Estimated private financing need (£m)



Data note: Financing need based on BloombergNEF estimates on demand for battery powered ZEBs multiplied by an assumed £450,000 vehicle cost (internal estimate based on our experience with existing deals).



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