STONEHAVEN

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A New Energy and Industrial Revolution:

Making GB Energy a Success

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Foreword

Britain stands on the brink of a new energy and industrial revolution. The Government's emerging 2030-2050 energy plans and policies are at the heart of its plans to grow the UK economy; cheap, abundant clean energy is a missing ingredient for many key UK industries. In turn, an effective UK energy policy that boosts energy security and manufacturing industries (e.g. clean steel), is implicitly linked to any UK industrial strategy. At the same time, this revolution will require a transformation in how we produce, transport and consume energy at a pace and scale not seen since the discovery of North Sea gas. Achieving it will require public support and political legitimacy. A way forward that builds consent, gives people a greater stake in our power system and ensures that the returns of investment support consumers and boost the economy.

The Government's decision to launch Great British Energy (GBE) – a publicly owned company that will own, develop, operate and invest in clean power projects – can create the vehicle for change. It has the potential to transform not just the energy system, but how the UK supports broader economic activity from R&D to manufacturing. As a concept, GBE is supported by voters. But making GBE successful will be a difficult balancing act, requiring expectation management on what can be achieved in the short term, while championing the most salient long-term benefits.

Voters want to see results and change in this parliament. If GBE's success is narrowly defined around consumer bills – an argument that has been at the forefront of the Government's case for GBE to date – it risks failing. While the cost of energy will remain a key issue, GBE will find it difficult to cut costs immediately. Managing voter expectations therefore will be critical. Alternatively, if GBE is recognised as playing a vital role in boosting Britain's energy security and independence, supporting much needed UK-based clean energy infrastructure, industry and supply chains, it will meet voters expectations and has the potential to succeed.

This paper is the second commissioned by Project Tempo on the UK's energy system. It provides practical, informed recommendations that can help the Government make GBE a success. It highlights the need for a strategic approach that balances the Government's values and ambitions with realism. It offers guidance on how GBE can meet its goals while gaining the necessary public trust and support.

As we accelerate the journey towards a new energy system, we should not shy away from the challenges ahead. Enacting the recommendations in this report can help ensure that GBE becomes a lasting force for good: delivering cleaner energy, skilled jobs, and greater energy independence, while building a consensus for change.

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Executive Summary

The Government has set an ambitious mission of achieving a clean power system by 2030. A previous Stonehaven paper, commissioned by Project Tempo, tackled the question of how to achieve this goal from a national system planning perspective, putting forward novel ideas on accelerating approvals for projects through the consenting process to reach capacity required for 2030.[1] The recommendation for Government, to task the National Energy System Operator (NESO) with developing a delivery plan for 2030, was subsequently adopted. This paper builds on *Healing A Fragmented State* and outlines key recommendations for Great British Energy (GBE) – the publicly owned energy company which the Government pledged to set up as one of its 'first steps'.[2]

While recent work on GBE has focused largely on ideal policy models for the company,[3] this paper uses Stonehaven's proprietary Multi-level Regression with Poststratification ('MRP') analysis and economic modelling to show what would make GBE both a policy and political success in this parliamentary term. It evaluates GBE's announced aims and functions while considering public opinion, economic and fiscal reality, and necessary trade-offs. These will be important considerations in building public consent for greater future public investment, by Governments of any party, and ensuring a future for GBE beyond this political cycle.

One of the central recommendations is to champion GBE's potential to build clean industrial and energy security, while not overpromising and underdelivering on what it can achieve in the immediate term. The Government is particularly at risk of overpromising on the issue of consumer bills, which was core to Labour's case for GBE during the election campaign. As we set out in this report, while it is possible for GBE to reduce bills in the longer term, it will be challenging for GBE to have a significant impact on bills during this parliament. There is, therefore, a danger that measuring its success exclusively in terms of cost cutting will fracture public support and undermine the long-term case for GBE.

This paper sets out policy and positioning recommendations to support the delivery of GBE and help avoid this risk. From a positioning point of view, the Government needs to focus on the broad spectrum of benefits that can be delivered: building domestic clean supply chains and energy security, while managing expectations around its impact on costs in the short term.

From a policy perspective, the paper sets out recommendations that build on the five announced functions of GBE to deliver on this positioning. It argues that the supply chain function should be at the core of GBE, with state-owned clean energy projects working to support British clean industries through Power Purchase Agreements (PPAs) that bypass the wholesale market, alongside forward procurement of critical grid components. These recommendations aim to ensure that GBE delivers tangible benefits within five years that align with public expectations, while also contributing to the 2030 clean power goal. Through strategic investments, clear partnerships, and realistic messaging, the Government can set GBE up for success over the next five years, laying a strong foundation for its continuing impact and public support.

Function 1

Project investment and ownership

Current intention:

— Work with industry, the National Wealth Fund (NWF) and other parts of the public sector to invest in domestic clean energy supply chains, boosting energy security and creating skilled jobs.

Recommendation:

— Set up Power Purchase Agreements (PPAs) with domestic clean manufacturing industries to lower their energy costs and build supply chains for both nascent and more mature clean energy technologies.

— Assess the market need and potential wins of developing an Advanced Market Commitment (AMC) to procure project and grid components that unlock expansion of networks and reduce supply chain risks for energy storage, wind and solar.

— Use non-financial commitments within bespoke AMCs to ensure as much onshore supply chain as possible.

Function 2

Project investment and ownership

Current intention:

— Invest in and own clean power generation assets – particularly in less developed technologies such as floating offshore wind, green hydrogen and tidal energy.

— Engage with private investors, wider markets, and public investment bodies like the NWF to provide clarity and drive further investment.

Recommendation:

— Invest and take majority equity stakes in semi-mature and mature technologies that can be operational and deliver returns by the end of this parliament and bring down bills over the long term.

Function 3

Project development

Current intention:

— Collaborate with The Crown Estate (TCE) to enhance offshore wind technology and promote floating wind, hydrogen, carbon capture, and tidal energy.

— Lower risks for developers in future TCE seabed leases to speed up project development.

— Invest in ports and clean energy supply chains.

— Invest in all four nations, working particularly with TCE Scotland and headquartering in Scotland.

Recommendation:

— Make use of TCE's borrowing powers to support GBE investments.

— Bundle Contracts for Difference (CfDs) on Crown Estate territory with planning and grid connection agreements to speed up construction.

— Explore making TCE leases to projects with majority GBE stakes free of charge.

Function 4

Great British Nuclear

Current intention:

— Explore how Great British Nuclear and GBE can best work together, including aligning functions.

Recommendation:

— Absorb GB Nuclear but allow it to retain operational independence with the same responsibilities, internal structures and appointments as currently.

— Rapidly permit the construction of SMRs and AMRs at industrial sites around the UK.

Function 5

Local Power Plan

Current intention:

— Collaborate with Local and Combined Authorities and Community Energy Groups to develop up to 8GW of small and medium-scale renewable energy projects.

— Offer commercial, technical, and planning support to build local energy infrastructure and generate jobs.

— Align efforts with existing public sector advisory functions, funding, and finance organisations in the local energy sector.

— Support local authorities to develop Local Area Energy Plans (LAEPs).

Recommendation:

— Invest in existing and future LAEPs, guided by the national 2030 clean power plan recommended in Stonehaven's Healing a Fragmented State, to integrate existing public sector advisory functions.

Positioning GBE: Security vs. Consumer Cost:

01

“Great British Energy stems from a simple idea: that the British people should have a right to own and benefit from our natural resources... that these resources belong to all of us and should be harnessed for the common good.”

GBE Founding Statement, July 2024

GBE is underpinned by a popular belief in the value of public ownership, and the role it can play in catalysing and unlocking benefits of the energy transition, as demonstrated by other state-owned energy companies across Europe.

Objectives have been clearly set out:[4]

— Make Britain a 'clean energy superpower' with zero-carbon electricity by 2030

— Build and drive investment in domestic supply chains

— Boost energy independence by reducing reliance on foreign energy sources

— Create skilled jobs in the renewable energy industry and wider supply chain

— Support and save billpayers money by insulating the UK from future energy shocks

However, what these look like in reality and how success is truly defined is still to be determined. There has been a tendency to focus on short-term delivery and cost – in particular the fifth objective above. But as we will set out, focusing on bill reduction risks setting GBE up to fail in the short term, threatening the long-term future of the organisation.

Managing expectations: maintaining support in the short-term to realise long-term benefits

The Government has committed £8.3bn capitalisation to GBE over the current parliament. This capitalisation will put GBE on a sound initial footing and deliver progress on some key aims within five years, if utilised intelligently across its five announced functions. However, when it comes to consumer bill reduction, there are four main issues that stand in the way of GBE delivering on this in the short term (this parliament).

— **Limited capitalisation and the risk of bill subsidies:** Amid an energy crisis in 2022, France was able to cap energy bill rises at 4% for a year and force state-owned EDF, which produces 70% of French electricity, to sell power to suppliers at lower wholesale prices to protect French consumers from price spikes. If GBE is to become a national energy champion with the operational capacity and financial returns to similarly support billpayers, then £8.3bn capitalisation will not be enough. The TUC has estimated that £114.1- £153bn public investment would be needed over 15 years to create a company on the scale of EDF.[5] At the same time, however, it is questionable whether such capitalisation should be used to fund bill support how France has. Indeed, despite its size, EDF has struggled to recover from these pricing measures while it pays for its own infrastructure upgrades.[6]

— **The reality of the wholesale market:** Renewable energy assets are becoming cheaper to operate than fossil fuels. Despite this, the marginal price of electricity on the wholesale market is still largely set by natural gas, leaving UK energy prices exposed to future external shocks. The Government has been clear that fossil fuels will still play a role in Britain's energy mix for 'decades to come'. Therefore it is unclear how, regardless of the amount of new renewable projects delivered in this parliament, they will meaningfully affect wholesale market prices by 2029. The Government could decide to split the wholesale market to allow renewable energy prices to be set separately, however this was ruled out earlier in the year via the Review of Electricity Markets Arrangements (REMA) consultation. A GBE retail arm setting its own prices is another option to manage cost of living concerns, but Labour has made no indication that it will create such a body. Given the scale of generation capacity needed for 2030 it is unlikely to expend financial and administrative capital on a retail option in this parliament.[7]

— **Infrastructure needs:** Meeting its 2030 power sector decarbonisation target will require the Government to support a monumental buildout of both generation assets and National Grid transmission infrastructure. Under the current system, levies to pay for subsidies such as the Contracts for Difference (CfD) scheme, the most recent budget for which the Government increased by 50% to £1.5bn, will be added to consumer bills. The Government could introduce measures to offset the impact of these increases on poorer households, such as shifting them onto general taxation, bringing in a 'social tariff', or instituting a National Energy Guarantee, but it has made no indication that such measures would fit into its fiscal plans.

— **Buildout rates:** Even if GBE's initial projects could affect the wholesale market price of electricity, as we show below, it currently takes over 10 years for wind and solar farms to come online due to planning, construction and grid connection issues. While the Government has promised to tackle these barriers, the results may not be seen immediately.

Over the long term, GBE has the potential to ease the burden on consumers by increasing the proportion of clean projects to dilute the influence of gas in the wholesale market, provide revenue streams that fund bill support, or both. In the short term, however, it is critical that success for GBE is not linked primarily to energy bill reduction. Ofgem's recent 10% price cap rise, which takes into account wholesale prices and other costs, should be a warning.[8] To retain a coalition of support, consumer and voter expectations need to be managed, and emphasis placed on the broad and long-term benefits of the creation of GBE.

Success, as we set out below, needs to centre what GBE can deliver in the next five years meet public expectations: boosting Britain's industrial and energy security.

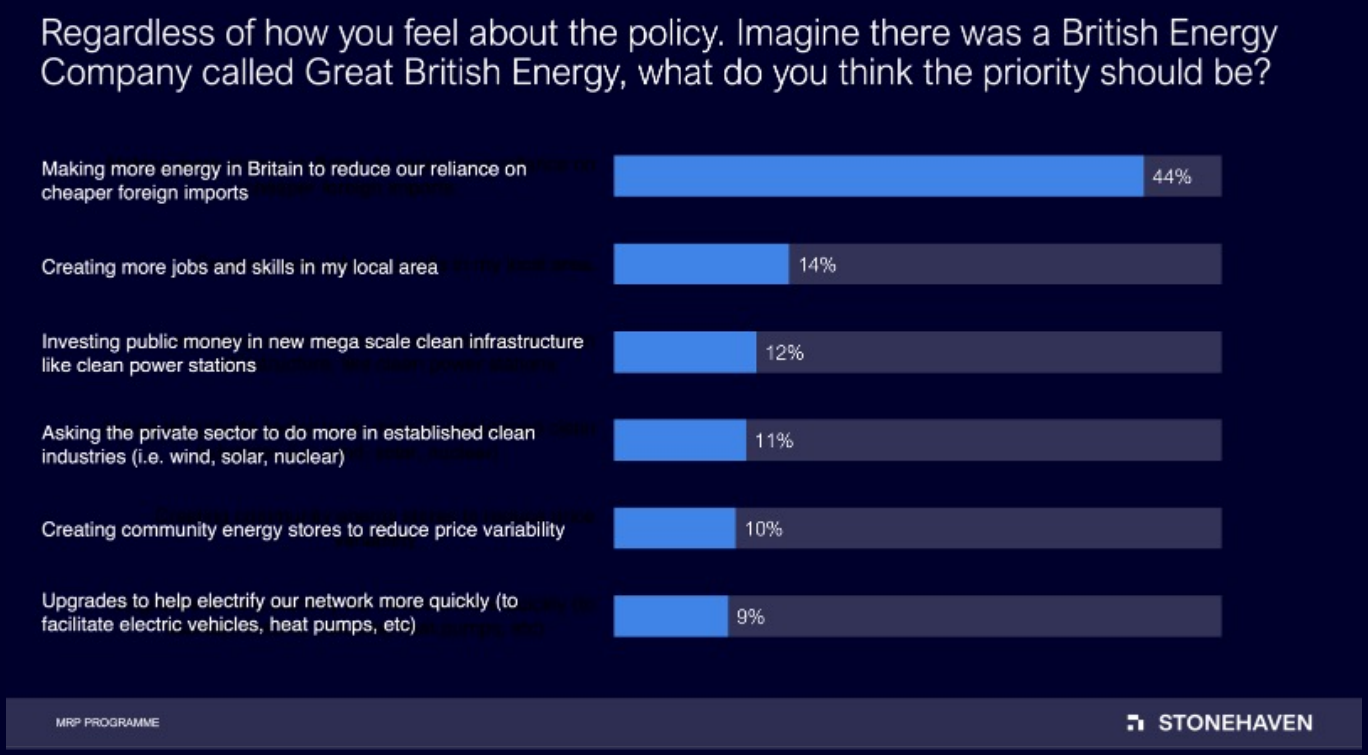
Security over consumer cost: building support for GBE

GBE is popular in theory. Stonehaven research shows that over 58% of the public support its creation compared to 11% opposed, with a majority in favour across all age groups. Yet, while the cost of energy and reduction in energy bills are critical components of support, when asked about what GBE should do specifically, there are other important factors for voters.

Reshoring energy production to reduce reliance on cheaper foreign imports is central (see Figure 1 below). This is followed by 'creating more jobs and skills in my local area' and investing public money in large-scale clean infrastructure. These figures show that investing and building in Britain to support key clean industries and boost energy security can play a significant role as strategic priorities for GBE.

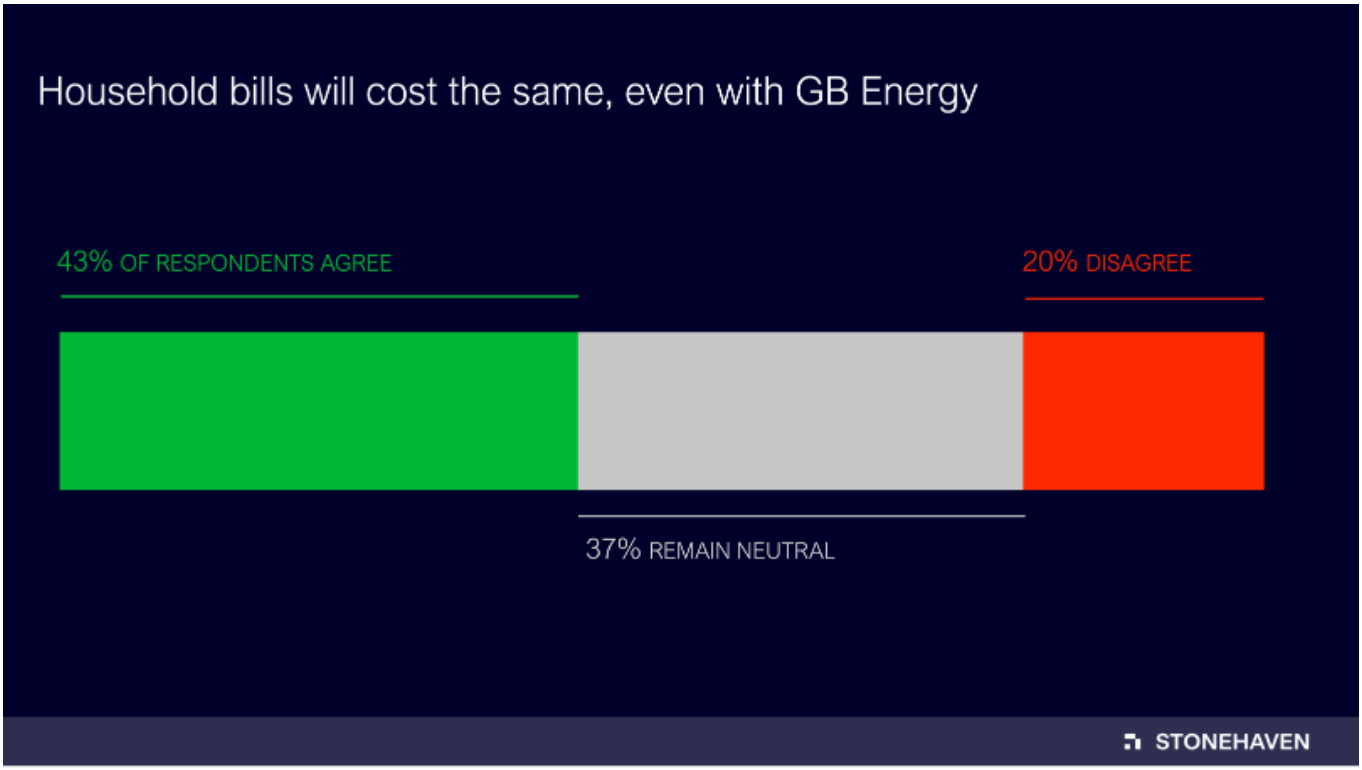
GBE therefore has an important role in embodying the idea that Britain should have control over, and an economic stake in, its clean energy resource base. This is a principle the Government recognises but has not taken full advantage of as it seeks to define what success means for GBE.

Figure 1: Source - Stonehaven Compass Research, MRP adjusted



Futhermore, claims about GBE's ability to keep bills low may also be unnecessary because the public do not believe it can do so (even if they may want it to). Figure 2 shows that 43% of the public believe GBE will make no difference to household energy bills, with 37% unsure.

Figure 2: Source - Stonehaven Compass Research



This demonstrates a fascinating dynamic: that voters recognise that GBE may well not reduce energy bills, but they still want to see GBE happen. This creates opportunities for GBE to secure political support outside of immediate household bill reduction. Early promises about bills may not be forgotten by voters, but they may be forgiven if the Government can start to manage expectations better and show it can deliver a positive vision around energy security and building in Britain. As we show below, this not just critical politically but also to the future of the UK economy.

This will of course require robust policy. The functions of GBE should be arranged to ensure delivery against these main aims, while attempting to ease cost burdens on consumers where possible. All five functions the Government has sketched for GBE, appropriately performed, will be important to this task, namely: (1) to invest in, own and operate clean energy assets; (2) support project pre-development on The Crown Estate and Crown Estate Scotland; (3) fund local clean power projects; (4) work with public investment bodies to build domestic supply chains; and (5) integrate Great British Nuclear.[9]

Yet, to meet to demands of GBE's new positioning, the domestic supply chain function should be at the core of its activity. While the other functions remain crucial in their own right for boosting energy security and bringing down bills over the long term, they should be placed at the service of Britain's clean industries.

Supply Chain

02

Bolstering UK Plc: balancing cost, speed and public opinion

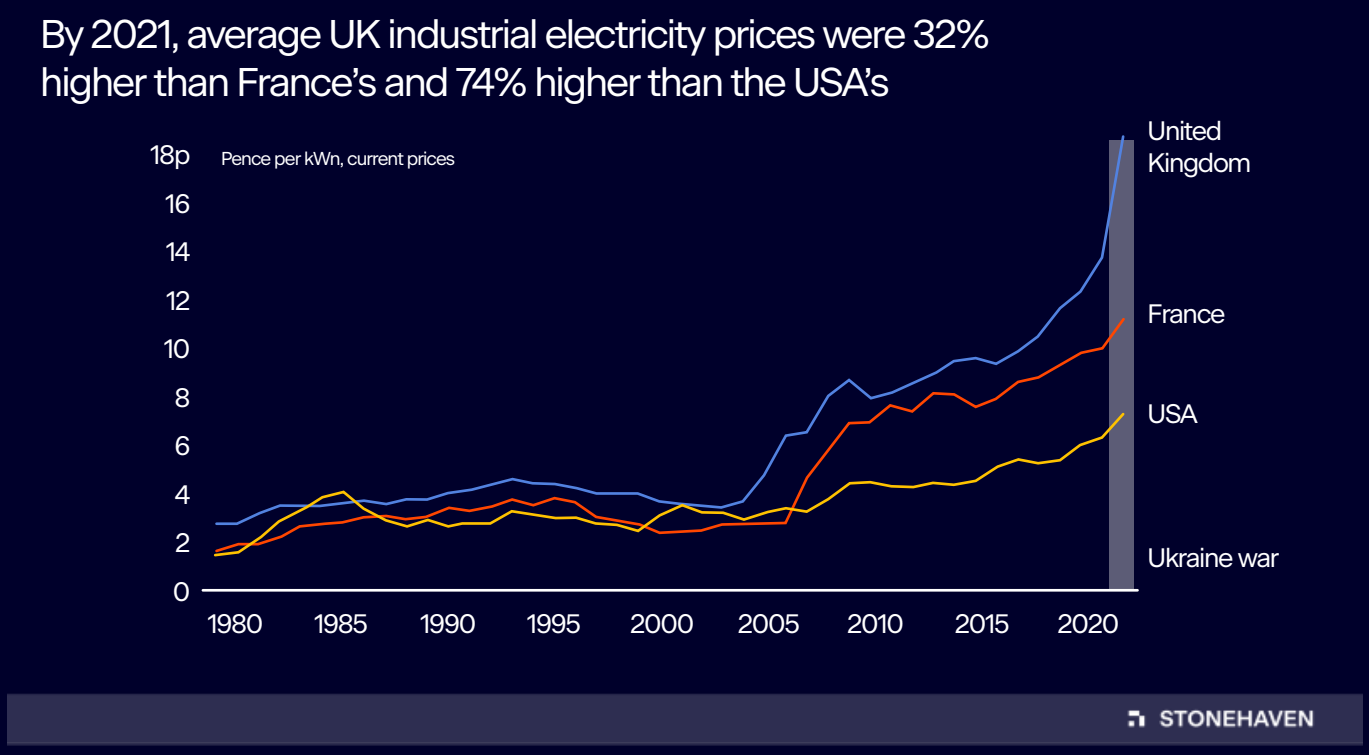
A striking fact about Britain's clean energy transition is that despite having the second largest offshore wind sector by capacity, not one of the top 15 wind turbine manufacturers is based in Britain.[10] This figure is emblematic of key problems of industrial and energy security, which, according to Stonehaven data, GBE will need to overcome to show that it is delivering on the priorities of the British people (Figure 1).

The lesson of the Inflation Reduction Act (IRA) in the USA is that it is possible to act quickly to build up domestic supply chains for renewable energy. Yet Labour's economic agenda has been dubbed 'Bidenomics without the money'.[11] GBE's supply chain policies and investments, therefore, will need to be targeted at what will most effectively deliver its goals. At the same time, to move at speed, the Government will need to manage expectations around what is possible, and where cheaper imports of equipment will still be needed.

The challenge facing British industry

A core reason why clean industry finds the UK less attractive is our relative cost of energy.

Figure 3: Source - UK Foundations[12]



This is driven in large part by our over-reliance on gas. The UK's glut of cheap gas from the North Sea during the late 20th century prompted the construction of a large fleet of gas-powered power plants. The UK became a net importer of natural gas during the early 2000s, but these power plants still overwhelmingly set the wholesale price.[13]

While GBE does not have the scale of financing to reduce bills for the entire public, it does have scale sufficient to reduce bills for key industries around the UK. In the following sections, we explain how.

Power Purchase Agreements (PPAs)

Our key recommendation here is that while GBE should invest in and own clean energy projects (see Section 3 for our technology recommendations), these should be first used to support the wider UK green economy through Power Purchase Agreements (PPAs) with strategically important sectors. With UK energy costs being a prohibitive barrier to rapid green industrialisation, such direct PPAs would allow industries to bypass the wholesale market and its exposure to international fossil fuel market prices. This will help turbocharge British industry by reducing energy costs, creating jobs and building secure supply chains.

Above all, this means incentivising the building of domestic supply chains for mature clean energy technologies where there is high demand for the product and proven jobs potential, allowing Britain to reap more of the economic benefits of its clean power capacity. Bespoke PPAs, set at lower level than the wholesale price, should be offered to manufacturers of clean technologies and materials that will boost industry and jobs in areas such as steel, lithium batteries, solar panels and wind turbine parts. GBE can also play a role here in supporting supply chains for more early-stage technologies where the UK can have a first mover advantage, though it should be careful to coordinate with the National Wealth Fund (NWF) which has been set up to derisk nascent clean technology.

This is not to say that GBE should only sell to industrial buyers of PPAs, though this should be its main focus initially. GBE could also investigate signing PPAs with suppliers who can guarantee that in agreeing a GBE PPA they will provide lower bills for consumers. PPAs can also be agreed with supermarkets, in so doing making it easier for them to reduce food prices, a key concern of ordinary people when it comes to the cost of living.

What is an Advanced Market Commitment?

To balance cost, speed and public opinion, GBE should also play a role in the procurement of supply chain and grid enhancement, as set out in our 2030 paper. Ensuring there are sufficient, affordable supply chains, and the human resource capable to build the technologies at the scales necessary is a key obstacle to reaching the 2030 target. Last year's CfD round, Allocation Round 5, saw no bids for offshore wind. This has partly been attributed to the methodology underpinning the estimations of costs that informed the administrative strike price (ASP), the maximum clearing price in an auction that developers can receive for a specific technology. Considered too low, it caused concerns around project profitability, as inflation had increased financing and material costs. This demonstrates the vulnerability of leaving individual generators or projects to procure their own components.

Supply chains, therefore, need to have a level of forward investor confidence to mobilise. We propose that GBE's primary procurement strategy should be to make an Advanced Market Commitment (AMC) for generation and grid parts to provide both a strong signal to manufacturers and reduce developer risk. AMCs were successfully used during the UK vaccine rollout and involve a commitment to subsidise the future purchase of a product that is not yet available.[14] They work by shifting the burden of managing supply chain risk from the individual developers to the state, which benefits from lower borrowing costs than the private sector, and incentivises private manufacturers to invest in R&D.

How AMCs can work for GBE

GBE can use AMCs to leverage economies of scale to procure components and assets more cost effectively than individual bidders. The specification of project scale and technology in NESO's 2030 clean power plan can inform a forward-looking procurement strategy that guarantees availability of components, avoiding the challenges of sourcing components on an ad hoc basis. These components can be sold to winning bidders of CfD or grid auctions at cost price, accounting for inflation and storage costs. While the components can be derived from NESO's 2030 clean power plan, it is of course unrealistic to expect GBE to procure everything. The selection of components for mass procurement must also represent value for money. GBE's procurement strategy should be guided by the principles of maximising economies of scale and minimising the risk of stranded assets. To this end, selection criteria should prioritise components that represent the most significant supply chain constraints across the electricity system and are least vulnerable to obsolescence.

The potential benefits of AMCs for GBE are several and include:

— **Risk sharing.** AMCs have typically seen success in developing vaccines, where the order is set at a specific volume and price. In this context, it takes the risk off the developer to procure at price and at small scale, particularly at a time where competition for

parts is likely to outstrip the capability of local and international supply chains, but it does not wholly transfer the risk to GBE either. Unlike grant funding, the supplier must produce to GBE's predetermined requirements, or the Government will not pay.

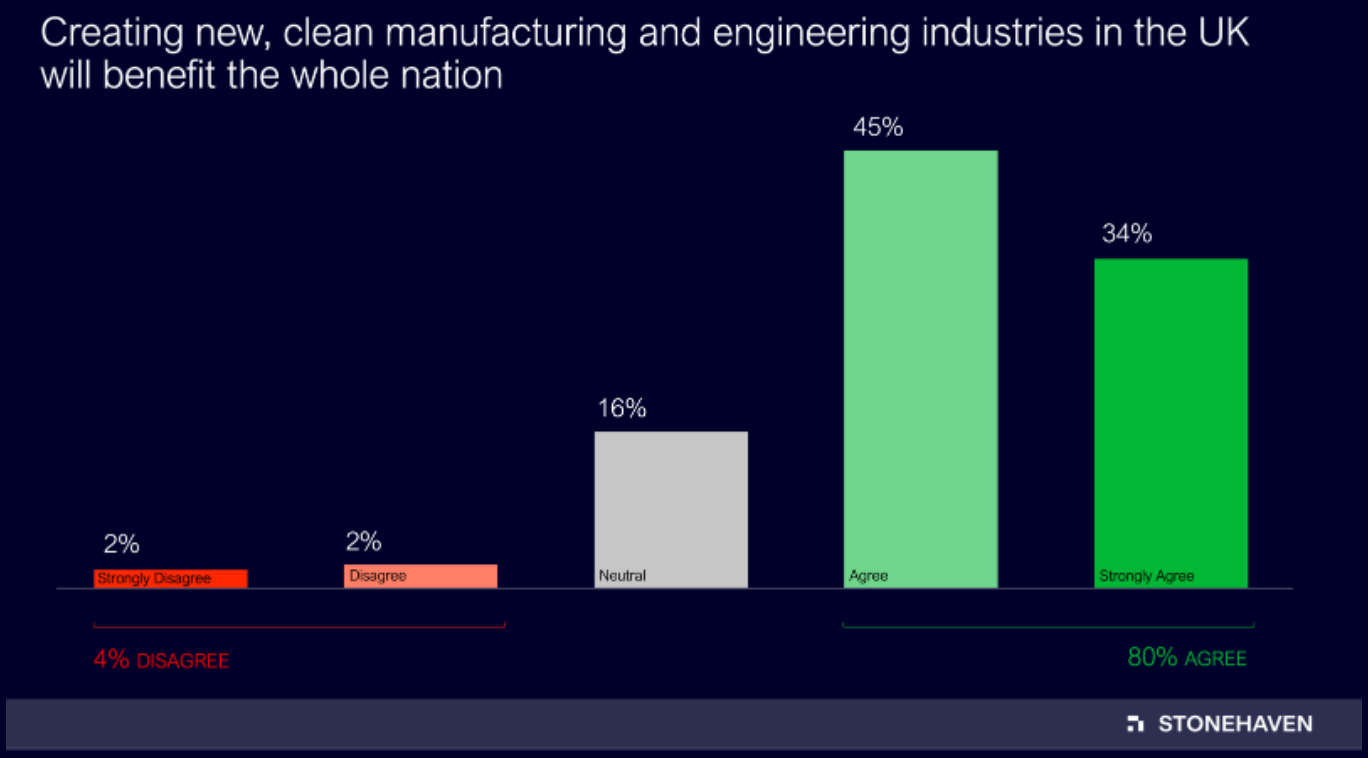
— **Manufacturing certainty.** A successful AMC would see the public pay less for a considerable part of the energy transition as parts are produced at scale consistently, on different terms to the de facto CfD approach that generates peaks and troughs in prices and delivery timelines. A really successful AMC could also see GBE influencing non-financial commitments within an AMC, such as producing parts with a lower carbon intensity.

— **Centralised procurement.** Procurement strategy should focus on the components that are subject to cross-industry demand. Centralised procurement of these components can enable pooling replacement assets and can help minimise the risk of unsellable components. There is significant competition between offshore wind, onshore wind, solar PV and transmission and distribution over the components they have in common.[15] This includes competition between offshore wind and offshore grids over HVDC export cables, converter stations, and heavy-lift and cable vessels. Moreover, increasing lead times for securing transformers and switchgear are the most significant supply chain constraints for onshore wind and solar PV, which are competing, as well as electricity networks and industrial consumers.

— **UK comparative advantage and integration with the NWF.** Such parts represent sectors wherein the UK has particular strengths, including the manufacture of converters, transformers and cables. Through an AMC, GBE can procure from British companies, including those who benefit from the National Wealth Fund (NWF) or a GBE PPA, improving returns to public capital. This will create jobs in the UK where previous governments have failed to make meaningful steps forward. By providing both the capital through the NWF, and bolstering demand through GBE, British manufacturers will have a more resilient environment in which they can grow and hire new talent.

Overall, facilitating the growth of UK manufacturing will strengthen GBE's political capital, given the public support for clean manufacturing and engineering industries (see Figure 4).

Figure 4: Source - Stonehaven Compass Research - MRP adjusted



Project investment and ownership

03

Technology choice: balancing politics, cost and system need

One of GBE's primary functions is to own and operate clean energy assets as well as to invest. This will be imperative to support the PPA recommendation outlined in the previous section, creating the cut-price power to be sold to industry. During the first term, the technologies GBE chooses to invest in are critical to its success in gaining public trust. GBE will need to invest its capital wisely to show it has made progress on key aims.

NESO's 2030 clean power plan, as proposed in Healing a Fragmented State, should be a starting point to guide these investments, and clean power technologies at mid-to-high levels of maturity should be prioritised as the most scalable and profitable.

The Government intends GBE to be a strategic investor into early-stage, often expensive, technologies such as tidal energy, green hydrogen, and floating offshore wind. These are technologies for which private sector investment has been slower to come forward and the UK could have first mover advantage in building supply chains.

While we do not deny these opportunities exist, by not supporting more mature technologies GBE risks missing out on benefits outlined in previous sections. The argument that investing in mature technologies would 'crowd out' private investment often overlooks the role of the state through the Renewables Obligation (RO) and Contracts for Difference (CfD) regimes in subsidising renewables build-out over the past two decades, support which has often flowed to state-owned European companies. It therefore misses the Government's rationale for GBE which we have argued should be emphasised: 'that the British people should have a right to own and benefit from our natural resources'. Investing only where the private sector will not socialises the risk of the clean energy transition while privatising the profits, the very scenario which GBE was set up to avoid.

Most importantly, however, the recommendations for GBE in this paper focus primarily on its capacity to boost clean supply chains through PPAs with key manufacturing industries and setting up AMCs for critical grid supply chain components. It would therefore not be competing with the private sector in the wholesale market with suppliers, but rather bypassing it completely.

To create the cheap energy to sell to industry at cut price, GBE will have to invest in and own mature clean technologies that are already proven and profitable at scale. This also has the added advantage of helping the Government achieve its 2030 clean power goal.

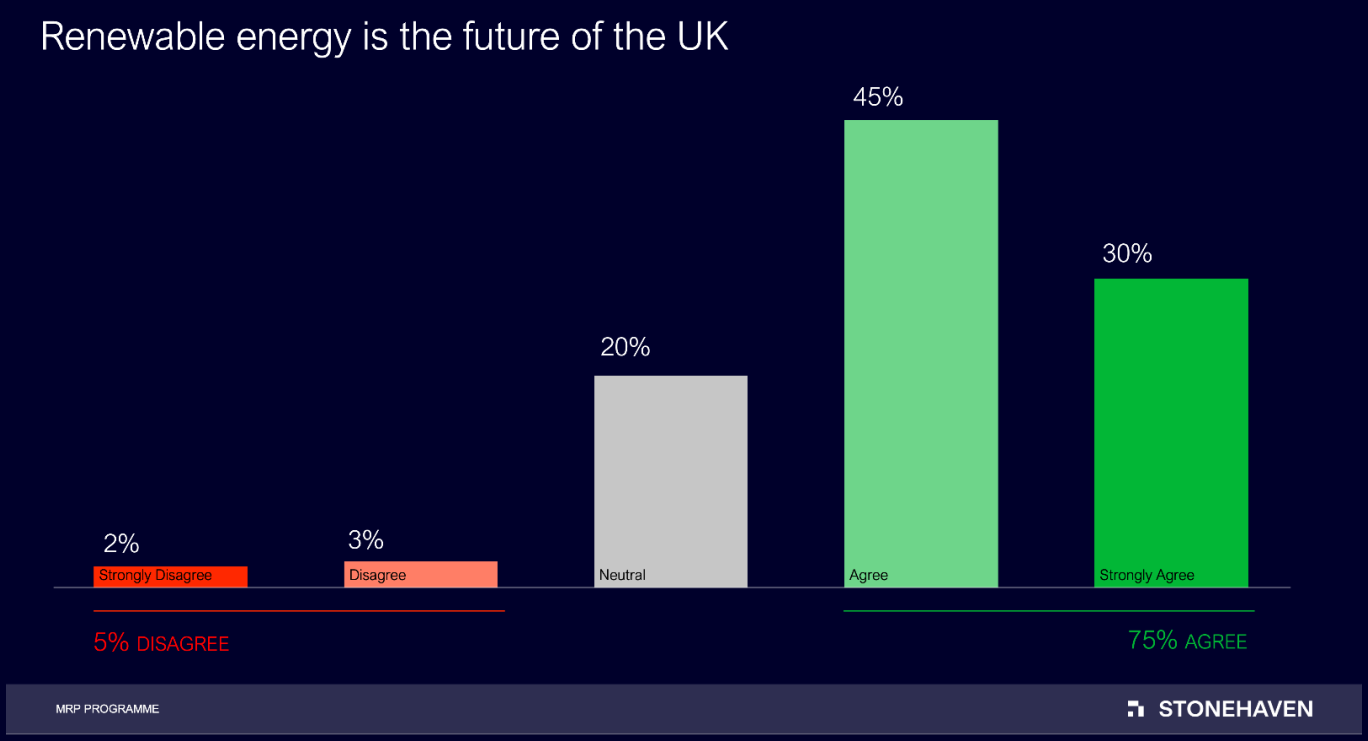
Stonehaven modelling in our 2030 paper showed the UK could use the following mix of technologies for its clean power target:

Technology	Need by 2030
Offshore Wind	25GW
Onshore wind	10GW
Solar	20GW
Energy Storage	4GW
Transmission capacity to hook up new generation	~500km of onshore capacity and ~2000km of subsea cables.

Source: Stonehaven Economic Analysis (methodology available on request)

Mature renewable technologies are popular (Figure 5), and taking a strong position on these will further GBE's political support.

Figure 5: Source - Stonehaven Compass Research - MRP adjusted





Project Development

04

The need for speed: partnering with The Crown Estate

The Crown Estate (TCE) is a public corporation with a diverse real estate portfolio encompassing land and seabed across the British Isles. It plays a central role in developing clean energy projects on these assets.

TCE's proposed partnership with GBE will see it establish a new sub-body, 'Great British Energy: The Crown Estate', which will set strategy and investment plans and be committed to bringing forward 20-30GW of new offshore wind seabed licences by 2030.

The investment capabilities of TCE, soon to be boosted by the Government's separate plans to grant it borrowing powers,[16] should be directed towards technologies suggested for GBE's own capital pot in the previous section. Just as importantly, however, its development capabilities need to be harnessed to enable such projects to be built at pace, which the Government has so far only hinted at. Speed of building is key to ensuring the benefits of GBE are felt by 2030, a tall order given it takes on average 12 years for wind farms to become operational (see Figure 6).

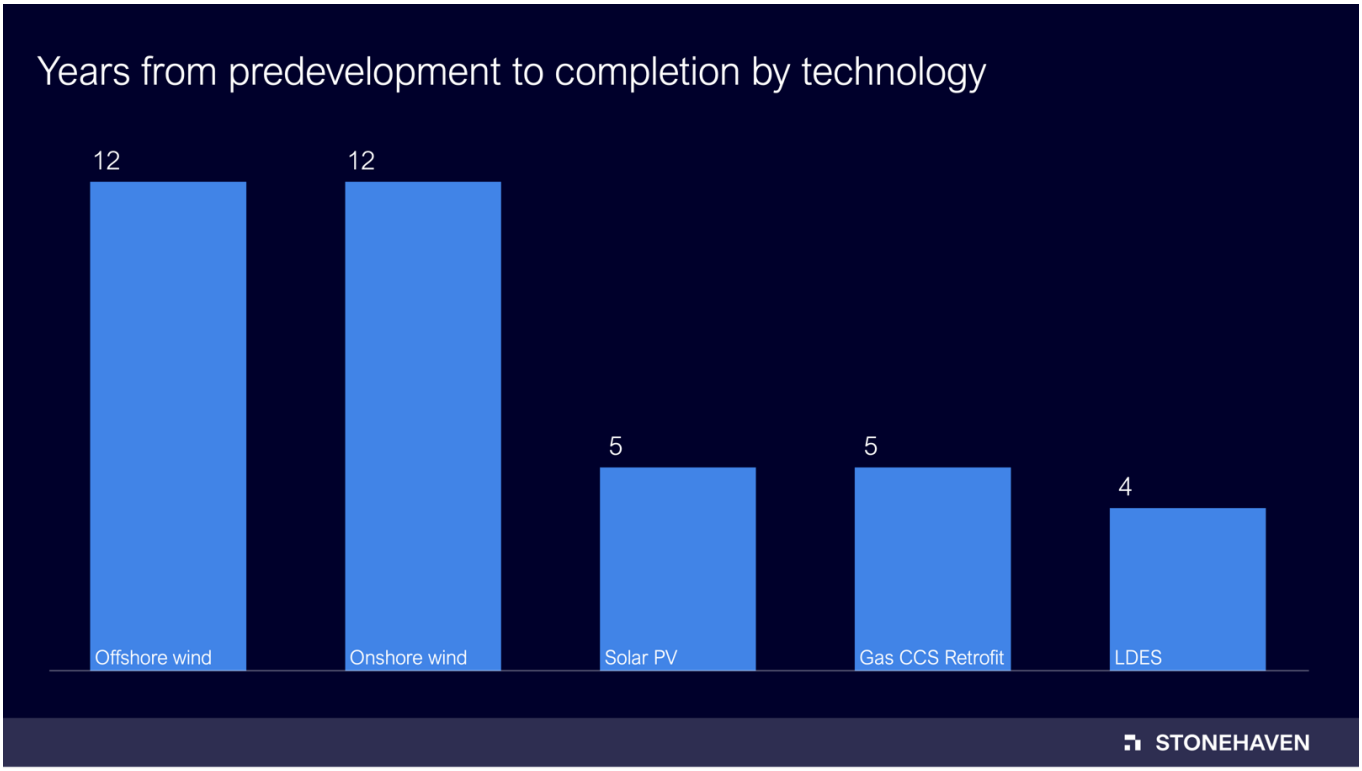
TCE has undertaken site selection and derisking surveys for recent CfD rounds and therefore has existing expertise in this area. Experts have pointed out that TCE has previously been risk averse and slow to complete its developmental work, and that the target of 20-30GW of new seabed licences was already set by TCE before this partnership.[17]

These issues raise serious challenges for GBE and they will need to be averted if the partnership is to be successful. To do so, GBE could push TCE to offer a set target of its land each year for licences that it will be bound to meet. It could also explore placing a price ceiling on these licences to attract development.

Our main recommendation, however, is that any CfD contract for projects on land owned by TCE should be bundled with an automatic planning consent and grid connection agreement, as has been successfully trialled in Denmark, which will rapidly improve development-to-operation timeframes. These should also include an equity stake for Great British Energy: The Crown Estate, ensuring a recycling of capital from the CfD scheme that has escaped governments of the past 14 years.

Finally, TCE should explore a radical step: namely, that any leases granted to majority GBE equity projects are also granted free of charge, in a bundle alongside pre-arranged planning and connection agreements. We believe this could turbocharge buildout and industrial growth by reducing the operational costs of state energy projects.

Figure 6: Source - Stonehaven Paper, Healing a Fragmented State



Great British Nuclear

05

Despite the several benefits of nuclear power...the country has not built a new nuclear power station in nearly **30 years**.



Reclaiming Britain's nuclear heritage

Britain has a proud legacy of leadership in nuclear energy, having created the world's first civic nuclear programme and commercial nuclear plant at Calder Hall in the 1950s. Nuclear power still accounts for over 10% of the UK's electricity mix. Despite the several benefits of nuclear power, including providing reliable base load power to address the intermittency of weather-based renewables, creating jobs, and supporting local economies[18], the country has not built a new nuclear power station in nearly 30 years. Furthermore, eight of the UK's nine operational stations will be decommissioned within four years.

New nuclear faces several challenges in Britain, in particular outdated planning and environmental regulations that create delays and unnecessary costs. The one plant currently under construction in Britain, Hinkley Point C, is the most expensive to be built this century. While regulatory reforms to National Policy Statements for nuclear energy will be the main avenue for overcoming cost barriers to new nuclear, GBE can play a key role by integrating and backing GB Nuclear, the public sector body created by the previous Government to develop a long-term nuclear programme and support delivery of 24GW of power by 2050.

The case for integration

There are three reasons for integrating GB Nuclear into GBE:

1. **Unified Energy Strategy:** Absorbing GB Nuclear into GBE will contribute to a cohesive national energy strategy, bringing all publicly owned energy assets under one umbrella and guiding mind to ensure they work together. It will also allow GBE to generate political capital from nuclear projects, which are often popular in the communities in which they are based.
2. **Brand Recognition and Public Trust:** GBE can leverage its platform to enhance the brand recognition of GB Nuclear, which has struggled to establish a name for itself. By aligning GB Nuclear with GBE's agenda, efforts can be made to bolster public trust in nuclear energy as a safe, secure, and essential component of the UK's energy future. GBE's established reputation and public support will lend credibility to GB Nuclear's projects and initiatives, helping bring online a strategically important fleet of new reactors for the country.
3. **Support for Supply Chains:** GBE's focus on building domestic supply chains can complement GB Nuclear's efforts in nuclear technology. This synergy will ensure that investments in nuclear projects also stimulate local economies, create jobs, and reduce dependency on imports.

A clear steer to help industry

One of the key advantages of nuclear power is its flexibility in siting but also – for particular models, especially Advanced Modular Reactors (AMRs) – its ability to generate high grade heat for use in industry. As part of an overall mission to drive forward new clean industries, GB Nuclear should look to rapidly permit the construction of SMRs and AMRs at industrial sites around the UK. These reactors could provide low carbon power and heat to businesses nearby – potentially on a private wire to radically cut costs. As GBE's capital portfolio matures, it could play a significantly greater role in nuclear financing, much as the Government is already doing with Sizewell C.

Local Power Plan

06

What is the LPP?

Finally, the Government has allocated £1bn of the £8.3bn pot for GBE to the Local Power Plan (LPP), rowing back on a previous commitment to £3.3bn.[19] £600m of this will be allocated as funding for local authorities, while a further £400m in low-interest loans will be provided for communities. The aim is to ensure local communities have a stake in the clean energy transition, create skilled jobs, and to reduce pressure on the transmission grid, thereby saving money on costly grid upgrades.

Our modelling (methodology available on request) suggests local clean energy projects have more potential to support billpayers in the short term than the large-scale infrastructure investments described above. For example, installing 50kW of rooftop solar on a typical primary or secondary school would save the school £8000 per year in 2025 prices. Installing 350kW on a typical hospital would save £60,000 per year in 2025 prices. While savings will decline over time assuming that electricity prices fall, we find that the payback period for the installation costs across all types of buildings is around 7 years.

The Government has said the LPP will 'provide funding and support to Local and Combined Authorities and Community Energy Groups' to roll out 8GW of small and medium-scale clean energy projects using established technologies and encouraging shared ownership models. It will also provide commercial, technical and project-planning assistance to enhance local capabilities to build a pipeline of local energy projects, with the Government indicating that Local Area Energy Plans (LAEPs) could be central to this. But how this and the LPP's relationship with existing public sector advisory, planning and investment bodies will work is unclear. The Government has said the LPP will integrate these functions but without spelling out why, or how this will work in relation to other critical moving parts such as the Clean Power 2030 plan. While acknowledging the LPP may not form a major part of GBE given the funding rollback, below we outline one way this could work, building on the Government's LAEP suggestion.

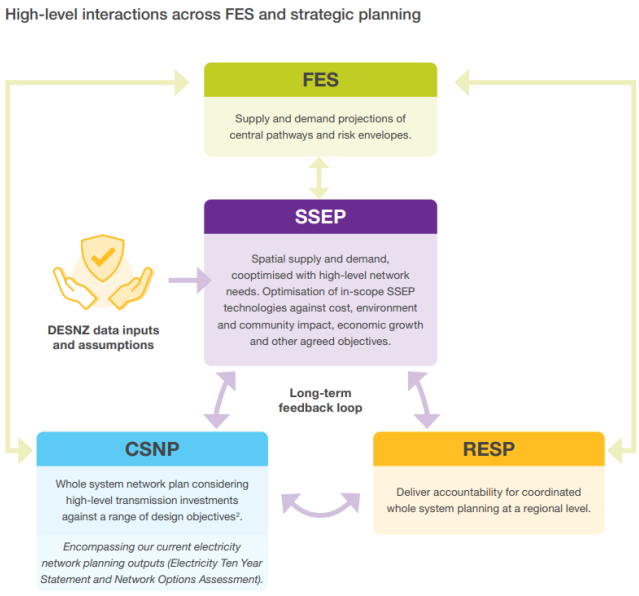
NEP, LAEPs and the LPP: what should GBE do?

As set out in Healing a Fragmented State, responsibility for delivery of the UK's clean power future is currently fragmented across several different public agencies and planning bodies. When speed is of the essence, stitching these together into a coherent whole should not be the focus of the current parliament. Instead, Government should meld tools already in play into a single National Energy Plan (NEP). Developed by the National Energy System Operator (NESO) and informed by its Future Energy Scenarios (FES) modelling, which charts technology pathways to net zero, the NEP will decide not only where clean infrastructure should be built, but also interventions to secure public buy-in for this infrastructure.

In line with several of the recommendations contained within the NEP proposal, the Government recently wrote to the system operator formally commissioning it to produce practical advice on how to achieve clean power by 2030. This will include generation and demand mixes, transmission requirements (including interconnection), and a locational view of the most opportune areas for rapid infrastructure development.[20]

How locally driven energy projects fit into this picture, though, remains unclear. In particular, Local Area Energy Planning (LAEP) pioneered by the government-founded independent research and tech organisation, Energy Systems Catapult, is well underway across the country and its relationship to GBE and the 2030 plan will need to be considered carefully.[21]

Figure 7: Planning structures, Future Energy Scenarios 2024



LAEP was created to help inform and support local authorities, distribution network operators (DNOs), business and communities to create low-cost pathways to clean residential power and transport. Under the national plan, LAEPs should continue to be led at the devolved level, though local authorities should be incentivised to ensure alignment with the national plan, as well as Government targets for heat pump and electric vehicle rollout – household-level technologies that enable consumers to reap the lower costs of clean energy.

It is here that GBE can add value, integrating LAEPs with the LPP, and providing funding for authorities to implement their plans. GBE will need to be more prescriptive to ensure the small funding pot is not spread too thinly: local authorities should not only be required to put together LAEPs as a condition of LPP funding, but also be evaluated according to their alignment with the national plan and national smart technology targets.

Alongside this, GBE should investigate setting up an LPP Taskforce made up of local government representatives, energy industry stakeholders, and policy experts to share knowledge and learning in the creation of LAEPs to enable broad-based delivery over the longer term. A first round of funding should be distributed as soon as possible in 2025 to those authorities with LAEPs already, evaluated by a designated LPP team within GBE, with an evaluation after 18 months by the Taskforce. Following this evaluation, the Taskforce should collate best practice in pilot schemes, with a second round of funding allocated competitively again in 2027, with priority granted to those authorities who did not receive funding in the first round.

This may read as a request to introduce another competitive funding scheme, however the resources and capacity required for implementation should be eased by way of integration into existing efforts around LAEPs. In addition, funding LAEPs is a route into setting standards of best practice through localised interventionist investments, enabling GBE to become a local, as well as national, champion.

Conclusion

07

The Government's ambitious mission to achieve a clean power system by 2030 has set the stage for GBE to play a pivotal role in transforming the UK's energy and industrial landscape. This paper has outlined our recommendations for GBE's first parliamentary term, focusing on its political priorities and strategies to balance key goals within current fiscal constraints.

GBE aims to make Britain a 'clean energy superpower', drive investment in domestic supply chains, boost energy independence, create skilled jobs, and support billpayers. Despite strong public support for GBE, the company faces significant challenges. While there is enthusiasm for building industrial and energy security, public belief in the ability of GBE to reduce household energy bills in the short term is low and demonstrates the rhetoric of Government politicians is not cutting through. In this respect, it must manage expectations carefully to avoid overpromising and underdelivering.

To navigate these challenges and trade-offs, GBE should focus on immediate priorities such as boosting domestic supply chains and enhancing energy independence, making intelligent use of the five functions sketched in its Founding Statement. Messaging around bills must focus on importance of reducing industrial energy costs, and the benefits of local, smart energy systems, not consumer savings in the current Parliament. This is why the central recommendation of this paper is that GBE use its limited capitalisation to focus on entering into new energy agreements with industry. By focusing on clear, achievable goals and fostering strong partnerships, GBE can lay the groundwork for a sustainable and secure energy future.



About Project Tempo and Stonehaven

Project Tempo is an independent not for profit. The organisation is non-partisan and is focused on finding ways to square growth, productivity and decarbonisation within a nation's political and economic realities. We understand there are no one-size-fits-all solutions. Our focus is on tailored ideas that align with national priorities and work for people. Our ethos is to dispassionately pursue what works. By embracing the nuances of the political economy, we deliver pro-growth, pro-worker, pro-climate solutions benefiting all of society

Stonehaven is an international firm that is home to some of the best in strategic consultancy, data and insight, policy, advocacy, sustainability, public affairs, digital and creative communications specialists in the business.

It's this diversity of thought expertise that enables us to find unique, fresh solutions to some of the world's most complex business and brand problems.

Endnotes

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2 What is Great British Energy and what does it mean for me? - GOV.UK (www.gov.uk)

3 Recommendations range from a narrow focus on supporting local energy, derisking early-stage technologies, and winding down gas distribution, to more maximalist visions of creating a new system planner or a heavily capitalised public generator-retailor. In the latter camp see The Greatest Generation: How Public Power Can Deliver Net Zero Faster, Fairer and Cheaper | Report | Common Wealth (common-wealth.org); Public Power: turning it into reality | TUC; The role of the state in the GB energy market | Nesta. In the former see Assessing the case for public ownership in the energy sector (era.ac.uk); GB Energy as a vehicle to coordinate the energy transition and clean up heating – heat-policy (richardlowes.com); GB Energy and the nationalized industry no one ever talks about (substack.com).

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