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Great British Energy:

From pledge to reality

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Public First Report commissioned by RenewableUK, July 2024

Acknowledgements

We thank RenewableUK for their financial support of this project and the industry expertise they and their members provided during the course of the research. We also thank the wider stakeholders that engaged with the research project and shared their views with us. Thank you also to contributions and support to the author from the wider Public First team. The recommendations in this report are those of the author. Cover page image: Zhang Fengsheng, Unsplash, accessed July 2024.

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July 2024

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Executive Summary

Labour has an incredibly ambitious target to reach clean power by 2030. Under this pledge, the Party went into the election campaign promising a new state-backed energy company, Great British Energy, inspired by similar publicly-owned companies in France, Norway, Sweden and Germany. GB Energy is far from the only policy Labour has to accelerate clean energy, but as the campaign emphasised and the public endorsed, it will play a central part.

Every state-owned company is different, with the UK market different again. While Labour has been clear on the ambitions of GBE, clarity on exactly how GBE will work in practice is vital. The private sector needs to be able to plan, especially if they are to partner with GBE. Bringing clarity, quickly is vital, uncertainty can slow investment. In government, with much to do to reach Clean Power 2030, GBE cannot not be seen as the fix for all the issues in energy policy, distracting from much needed reforms elsewhere.

This report sets out the actions government will need to take to establish GB Energy, and how to build an organisation that can deliver while maintaining both business and public support.

GB Energy's mission is deployment and returns

GB Energy should be an operationally independent company. State-owned companies in other countries are clear, government and politics don't interfere with their day-to-day decisions. Emphasising this early is important to ensure that politicians and civil servants don't see GBE as the silver bullet to the transition.

GB Energy needs a focused mission. While Labour has spelled out three activities: deploying established technology, incentivising emerging technology, and increasing community ownership, a central goal can bind these together. This goal should marry both business needs and political ones.

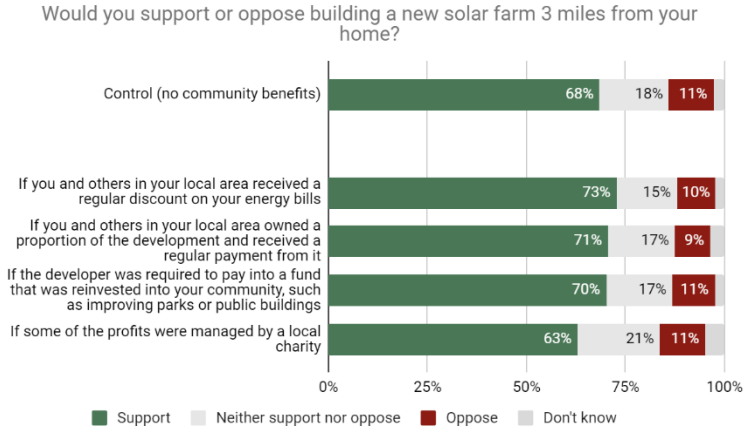
Political need: The public wants to see change, fast. Our polling found, **over half of the public prefer renewable energy developments in their local area to be built as fast as possible even if it means more disruption,** than favour slower development with less disruption.

Business need: The speed of the transition provides clear investment opportunity. Alongside crowding in private capital, GBE can be an additional vehicle through which the state benefits from the transition, returning a profit to the Exchequer.

Mission: *rapidly increase the pace and scale of renewable deployment, whilst ensuring stable revenues.*

GB Energy will need to be established at pace and, at least initially, it will have limited capital. That forces choices. The majority of GBE's **initial investments should be focused on onshore wind, solar, and tidal energy.** There are several reasons these technologies are suitable initially:

- Onshore wind and solar are further off track according to the Climate Change Committee. Planning law and grid reform can address some of this, but applied well, additional capital from GBE could widen the scope of viable deployment locations.
- **Onshore technologies are built faster** than offshore and bring quick, stable revenues.
- Being an independent business means **GBE cannot receive beneficial treatment from government**. If GBE is going to be a competitor it must be on a level playing field.
- GBE's involvement with onshore projects could increase community support for those projects, reducing development risk. This soft power is seen in examples abroad, notably Germany. According to our polling **a publicly owned company could be seen as a more trusted body to run community consultation**.

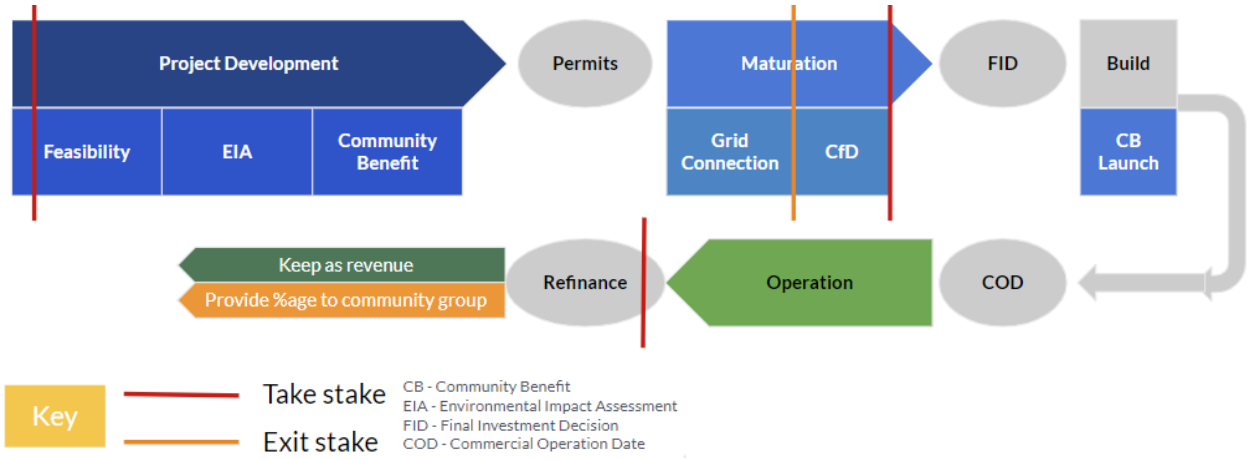


Source: Survey by Public First. BASE: Randomly assigned except control seen by all respondents.

Initially GBE will take minority equity stakes in clean infrastructure and pursue joint ventures with the private sector, allowing it to focus on crowding in while developing its expertise and growing its capital base. The timing of investment is important to maintain a level playing field. GBE should invest:

- At the development stage to minimise risk, divesting before the Contracts for Difference auction to avoid concerns of 'double subsidy'.
- At Final Investment Decision, to bring on a partner who can lead community consultation, materially affecting risk profiles of onshore projects.
- At refinancing, helping developers to recycle capital.

GBE's biggest value add is to minimise the development risk of projects and community support as they're built, whilst also providing a refinancing option. Equity stakes taken elsewhere can balance its portfolio but may not be as additional.



While onshore and tidal could be GBE's initial portfolio, it should have the ambition to **grow and diversify its portfolio to accelerate other technologies**, so that it can continue making profit and expanding low-carbon generation. Taking stakes in other homegrown technologies, such as floating offshore wind may not increase deployment speed, but could allow GBE to balance its portfolio. Similarly a role in emerging green infrastructure like hydrogen or carbon capture would be costly but could lead to returns as these technologies expand over the next decade. A clear industrial strategy is likely to deploy these technologies faster than the addition of capital alone.

As other state-owned companies have done this should also see GBE move from minority stakes, to majority, to potentially developing its own projects. As an independent company this growth will be for GBE to decide, within the confines of the mission government sets it.

GB Energy will work in partnership with existing private developers

Private capital is ready to invest in onshore renewables at pace, if regulations like planning change, so the key question from developers is "*how is Great British Energy going to be additional?*". They worry about a state company crowding out the private sector, instead of unlocking new developments.

The scale of investment required to meet the challenge of clean power by 2030 is vast. There is plenty of space for GB Energy's £5bn without displacing private investment. While having a degree of state co-investment, as other countries do, is one of the ways the UK can benefit from the transition, alongside private investment and job creation.

GBE can also do things to help crowd in more private investment. It can do this through:

- **Focus on locations where potential returns aren't yet high enough for private interest,** for example incentivising development where grid constraints or surrounding

infrastructure are prohibitive, in keeping with the Strategic Spatial Plan. This could also explore the use of government land as the Welsh Public Generator will.

- **Taking on the burden of permitting and community consultation**, for example leading community consultation where appropriate, or helping siting of tidal stream.
- **Returning and managing a proportion of ownership to communities,** providing them an ongoing dividend, further incentivising community support, and reducing potential friction. Public support increases for both solar and onshore wind (to 71% and 68% respectively) if communities are offered partial ownership.
- **Recycling capital from existing projects**, allowing private investors to deploy their investments into new projects and expand the provision of renewable energy.

The Civil Service will need to build a unique organisation at pace

Over a third of the public think the biggest concern for GBE is that it will be negatively impacted by political parties. Political risks don't just hurt political parties. Policy churn is damaging to investment, previous state-backed organisations like the Green Investment Bank were sold off as priorities changed. Beyond its tightly focused mission, to reduce the risk of GBE being constantly reformed or refocused, or sold, GBE can:

- **Explore shared ownership with the governments of Scotland, Wales and Northern Ireland**. This is to allow all parts of the UK to benefit (Barnett appropriate). This is overwhelmingly supported by the public, 78% think it should represent all nations. Like the rest of GBE this should be insulated from party politics. This could be, for example, in the form of non-voting shares. This would provide a bulwark to its sell-off.

Building GBE at speed will be a challenge. However, it is vital if communities are to see the benefits of new developments by the end of the parliament. To achieve this Labour will need to:

- **Issue a commitment, from the Prime Minister, to establish GB Energy and begin operating within 12 months**. This communication should set out the principles established above, and is vital to incentivise government machinery to move at speed. This would be backed up by a legislative commitment in the King's Speech.
- **Set GBE up in interim form, with powerful internal advocates** (interim CEO and Board).
- **Consider seeding GBE in the UK Infrastructure Bank (UKIB)**, whilst legislation is in progress. The UKIB issued its first investment just seven months after the initial policy paper proposing it, though its first equity investment was longer. This will be important to the quick release of Local Power Plan financing. UKIB already has the salary bands to attract talent and has staff with knowledge of onshore energy.
- **Be sponsored by HMT and DESNZ.** GBE's principle relationship with the state will be returning profits to the Exchequer and therefore financial, but will have key insights on the progress of clean infrastructure deployment.

Theme	Task	Organisation	2024	2025	2026
Pre-set up	Instruction letter from KS, RR, EM to perm secs	Labour			
	Initial planning and scoping in Civil service	DESNZ/HMT			
	External / advisory GB Energy Commission established	DESNZ			
	GB Energy Shadow Board / Working Group	X-CAB/HMT/DESNZ			
Appointments	Chair	GBE			
	Permanent CEO	GBE			
	Active Board	GBE			
	Board sub committees	GBE			
Strategic planning	Policy statement on design (framework document)	DESNZ			
	Initial Business case to Major Projects Review Group / HMT	DESNZ			
	Formally established and operations begin	GBE			
	Appoint board, advisory council	GBE			
	Publication of GB Energy's first five-year strategy	GBE			
Legislation	Primary Legislation to establish GBE	DESNZ			
Planning arrangements	Outline business case	DESNZ			
	Full business case	DESNZ/HMT			
	Gate review	DESNZ			
Shareholder / Bank relationship	Shareholder framework document	GBE			
	Permanent accounting officer	GBE			
	Accounting officer letter	GBE			
	Budget allocation and spending delegation letter	HMT			
	Financial Framework agreed	HMT			
Appointments	Chair	GBE			
	Permanent CEO	GBE			
	Active Board	GBE			
	Board sub committees	GBE			
Initial Actions	Locational Strategy and consultation	GBE			
	Local Power Plans Grants	GBE			
	First investment	GBE			
	First re-grant / community ownership	GBE			
	Procurement support for grid supplies	GBE			

Dark orange represents the implementation of the policy; light orange represents where policies require continued efforts to sustain.

Foreword

Dan McGrail, Chief Executive, RenewableUK

As soon as Labour announced their intention to create Great British Energy at their conference in 2021 they fired a starting gun on extensive conversation in the energy sector about what the organisation might look like, what it might seek to achieve and Its implications for the market.

Now that we have a Labour government, it's time for us to put some real clarity behind Great British Energy, and as the trade association for clean energy, there's a number of reasons why we're keen to do that.

First, we respect that the establishment of Great British Energy will be a key part of Labour's agenda. It's right that we share reflections from our commercial expertise to try and ensure it's a success. It's been a pleasure working with Public First to bring in experience from a wide range of stakeholders beyond our membership too. They've outlined a vision of Great British Energy we believe could add value to the UK, and a company our members could partner with.

In clarifying the potential future of Great British Energy, we've clarified the continued importance of the private sector in delivering the government's clean energy ambitions. In addition to being able to deliver the necessary tens, if not hundreds of billions of pounds of investment required to achieve Labour's ambitions, clean energy companies have a strong record of delivering clean energy projects on time, at low cost for billpayers, whilst creating jobs and working with communities. It's critical for net zero that our focus continues to be on unlocking private investment by addressing the barriers to development, and ensuring Great British Energy doesn't disrupt or distort this market, now or in the future. We've set out a framework which ensures Great British Energy doesn't act as a headwind to private investment.

And in understanding what Great British Energy will do, we can be clear about the shared ambitions between the sector and government which will require reforms to other institutions and policy frameworks. To maximise industrial investment, our focus needs to be on the British Jobs Bonus, the offshore wind Industrial Growth Plan, unlocking investment in ports and the UK's approach to innovation. Great British Energy will not be replacing sector-wide commitments to the natural environment through its own programmes, be the only company supporting the transfer of workers from other energy sectors, or be the only company investing in communities.

Now is the time to move from vision to action. I hope this report helps the government to do that.

Chapter 1: Introduction

The Labour Party announced plans for a publicly-owned clean energy generation company at its Party Conference in September 2022. Called Great British Energy (GBE), it would be headquartered in Scotland and intended to invest in low-carbon energy. GB Energy formed a central plank of the party's election campaign and its delivery is now central to its public mandate as a government.

Creating a new energy company, based solely on low-carbon generation, is demanding. GBE will be built in a country where the political system has been sceptical of the state's role and where fiscal governance disincentivises public assets. But as Public First said of Labour's plans for 2030 clean power, it is *not impossible* and could benefit the economy and climate.

There has been little external engagement on the detail of what GBE would do, how, and what is required of government to make that happen. This is due to two challenges:

- **State owned energy companies are diverse**. EDF, Vattenfall, Equinor, or Ørsted all have different origins, asset bases and strategies. Some are listed, some are private (table 1). What unites them is that while they are state-backed, they are run as businesses.
- **GBE as planned has tensions government will need to negotiate**. It is both a de-risking tool for new technology, and aiming to deploy proven ones. It will compete with the private sector and work with it to deliver business goals. It is a national company but its early delivery will be through local, community energy schemes.

Table 1 - GB Energy will follow a different path to other European state-owned companies

Name	Shares	Founded	Assets	Activities
EDF	France, 100%	1945	£331 bn	An electricity company, wholly owned by the French state, operating across generation, distribution, trading and retail. It also has arms designing, constructing and running power plants. Active across tech, nuclear, hydro, wind, solar, biomass, geothermal and fossil fuels, it was recently re-nationalised after a spell of public-private ownership. Its UK arm was formed in 2002, and covers generation and supply including the management of eight nuclear power plants and the construction for Hinkley C and Sizewell C.
Vattenfall	Sweden, 100%	1909	£43 bn	Originally built on hydroelectricity, and heat networks, Vattenfall expanded to nuclear in the 70s, as well as fossil fuels. It principally operates in Sweden, Denmark, Netherlands and Germany with a growing presence in the UK notably in offshore

				wind and heat networks. It has a sizable renewable portfolio including wind farms and battery projects across the UK.
Equinor	Norway, 67%	1972	£118 bn	Founded as Statoil for Norway to take advantage of oil opportunities in the North Sea, expanding into other aspects of the petrochemical industry including pipelines and fuel stations, also operating significant hydro assets. It operates many oil and gas fields globally, including within UK waters. It runs a small renewable portfolio, with stakes in offshore farms in Scotland, Poland and recently Dogger Bank.
Ørsted	Denmark, 50.1%	1972	£32 bn	Founded to manage Denmark's oil and gas resources in the North Sea as DONG energy. It expanded into electricity at the turn of the millennium, taking stakes in existing companies. Alongside COP15 in Copenhagen, DONG announced a pivot to renewables, taking stakes in offshore wind projects. It changed name to Ørsted in 2017 to reflect its fossil fuel phase out. Now operates renewable resources across Europe, East Coast US and Taiwan, including the world's largest - Hornsea 1 and 2.

Labour's plans for the parliamentary term include a range of policies to help the private sector accelerate the clean energy, for example amending planning regulations, accelerating grid connections, and reducing political risk through an industrial strategy. Clarity will inform what GBE won't do, so that government can focus on vital reforms elsewhere in the system.

Getting the set-up of GBE right can significantly improve backing from business. RenewableUK, the industry body for UK renewables, commissioned Public First to understand how to do that.

Our report is in three parts. We start with GBE's mission and remit (Chapter 2). We then turn to the actions it could take, especially over the next parliament (Chapter 3), and finally look at how the civil service can build GBE (Chapters 4 & 5). This is accompanied by deep public polling to unpick the potential political challenges government might face with GBE.

Methodology - this report is the collation of a body of research that includes:

- A broad literature review across energy, finance and political economy.
- 20 Expert interviews across the energy sector.
- A series of roundtable discussions with renewable energy companies.
- A 4,000-person, nationally representative poll of GB adults.
- Insights from Public First's wide range of recent focus groups.

Chapter 2: A focused mission

Any organisation, public or not, needs an objective. Too many priorities bring internal conflict, increase trade-offs and reduce the resources available to address each. This is especially true for new organisations that need to build expertise and create organisational norms. It is even more true for a state-backed organisation that must spend taxpayer money effectively.

Chapter 2 sets out what Labour hopes GB Energy will achieve, what those beyond the party would like to see, and how these aspirations can be reconciled and rationalised.

Labour's rationale for GBE is clear

In December 2023 Labour's climate mission was renamed to become Switch on Great British Energy. There is a reason behind this: in our polling the public are overwhelmingly supportive of a public energy generation company. [1] **Two thirds of the public back the creation of GBE. This is connected in part to strong concern for climate targets**, and a concern that they won't be hit. Half of respondents (50%) think climate is one of the most pressing issues at the moment but less than one-third (29%) believe the UK government will reach net zero emissions by 2050. Despite this, 63% of respondents still support the plan to reach net zero emissions.

Labour plans to endow GBE with £8.3 billion, of which £3.3 billion is reserved for the Local Power Plan (LPP). GBE will have three main functions. It will:

1. De-risk novel energy technology e.g., tidal.
2. Deploy established technologies, faster, e.g., wind and solar.
3. Scale up community energy through the local power plan to 8GW by 2030.

Beyond deployment, Labour pointed to other countries' publicly-owned champions arguing the British state and its residents could have benefitted more from the rollout of renewables, for example through community or public ownership, or greater proportions of the supply chain in the UK. Reaching the 2030 goal won't just mean secure, low-carbon power, but bring with it greater returns to the British state.

> [GB Energy is the] *"best way to ensure that the British people can derive the benefits from the power that we create on our own shores"*. Labour Party, September 2022

[1] We tested whether there was a difference in support between government-owned and publicly-owned and saw no change.

In 2023, Labour also suggested GBE could support the development of energy transmission. This included coordinating and procuring the electricity grid supply chain alongside transmission operators (TOs), as well as potentially competing with TOs.

Labour has promised a significant list of actions for GB Energy, with an open promise to review and expand actions as the organisation grows. Yet this ambitious list has not prevented others from projecting further priorities onto GB Energy. The first column of table 2 sets out the long list of what commentators want GBE to solve. Public First then compared this list to a broader literature review, analysing where else the political system could address these problems.

Table 2: Desires for what GB Energy can achieve are often best dealt with elsewhere in the system.

Problem	Department for Energy Security	Ofgem	Future Systems Operator	Arm's Length Body	UK Infra Bank / Nat. Wealth Fund	GB Energy (potential)
UK is over exposed to global energy prices	X		X			
Industrial energy prices are higher than competitors	X	X	X			
Energy prices are set by the price of (global) gas	X	X	X			
The UK hasn't sufficiently benefited from the transition	X				X	X
Commercialisation of technologies including energy often takes place overseas					X	X
Building new nuclear in the UK is slow & costly	X			X (GBN)		
The UK's energy import dependency is growing	X	X	X	X	X	X
UK is off track in tech delivery (EVs, Heat Pumps)	X	X			X	
Transmission & distribution build out is too slow		X ⚡	X			X
Inadequate business models for hydrogen	⚡				X	
Energy tech isn't manufactured in the UK	⚡				X	
Grid level energy storage is off track	X	X	X		X	
Major electrification programmes offtrack	⚡	⚡				
Community energy schemes aren't scalable					X	X
Skills provision / labour supply is insufficient	⚡			⚡ (GJDG)	X	
Decommissioning old assets takes too long	X	X	X	X (NSTA)		
Falling use and increased cost of thermal generation	X	X				X

NB; 'problems' come from a variety of sources identified in the literature review including think tanks, academic papers, and business asks.

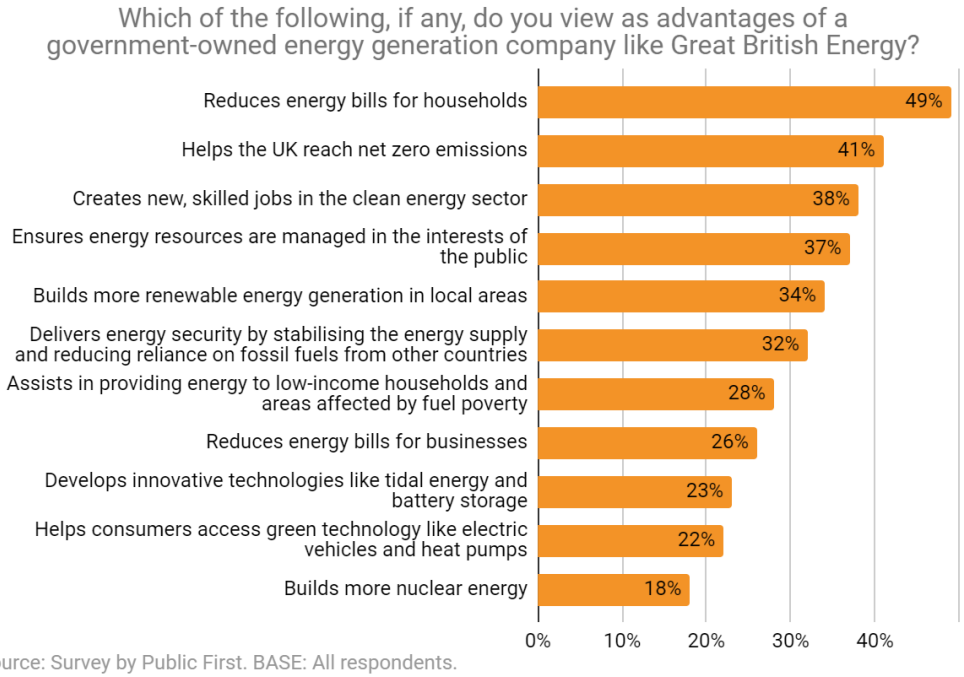
⚡ = recommended in Mission Zero, GBN = Great British Nuclear, GJDG = Green Jobs Delivery Group, NSTA = North Sea Transition Authority.

GBE's success requires focus

Even with a clear mission, 17 objectives (table 2) across energy generation, supply, retail and demand cannot be met by a single entity. A clear purpose is not just important for a well-functioning organisation, it is also important politically. Labour needs to set the terms on which GB Energy is assessed. If opponents can point to esoteric goals, unachieved, it will drive calls to dissolve GBE before actual objectives are met. Policy churn is the leading critique of UK policy by business. The UK needs a durable organisation, not one sold off after 2030.

The public also shows a similar spread of desires. Whilst reducing energy bills garners the most support (49%), building more renewable generation, managing them in the interests of the public, creating jobs and helping net zero all receive strong support (Figure 1).

Figure 1 - the public's desires for GB Energy mirror their wider goals from the net zero transition



Source: Survey by Public First. BASE: All respondents.

We need a process to rationalise this range of asks and bring clarity to GB Energy's role. This is to bring focus to a nascent company, clarity to the conversation with the public, and ensure we don't distract from reform elsewhere in policy. We can filter by a clear business and political goal.

<u>Business goal – an independent company, making returns</u>

Many commentators have overlooked a fundamental aspect of Labour's policy. GBE is a public ***company.*** A public company is different from a public entity, like an arm's length body. There is a

reason Labour pointed to comparator companies abroad, like Vattenfall or Equinor. These are operationally independent from government. With the possible exception of EDF in France during the energy crisis, the examples given do not deliver policy objectives, and government does not shape boardroom decisions.

A state-backed company can take a longer time horizon to earn revenues if instructed to by government as a majority shareholder. They tend to also deliver a public good or bring something additional to the market. We see similarities with, for example, the Crown Estate, which both returns revenue to the Treasury and pursues investment for national benefit. But companies cannot be a repository for all the things that are not delivered by the current system. A profit motive would rule out, for example, GBE taking on decommissioning end-of-life fossil fuel assets.

We hear a similar message in Public First focus groups. While the public shows a huge desire for government to make tangible change after years of stagnation, they also don't understand why the state can't force the private sector to make that change, rather than have to do it itself.

Further, being a profit-making energy company rules out GB Energy being a vehicle to address endemic economic challenges. Commercialising new tech or developing a skilled workforce are recurring UK productivity problems. They are acute in energy because of the pace of net zero expectations, but their recurrence elsewhere suggests the drivers are not sector-specific.

This financial stability is vital as a public-backed company. The state has a duty to safeguard taxpayer's money. Treasury as a shareholder will need its investment to be used effectively.

GBE's goal should be to **make a profit from the increased deployment of low-carbon energy in the UK**. What happens to those profits we explore below (Chapter 4).

Political goal – deploying renewable technology at pace and scale

The second filter is political. GBE will be an independent company, run as a business (Chapter 4), its day-to-day operations will not be interrupted by politics or politicians. But it is an organisation established to help achieve a wider political objective, 2030 Clean Power. This political origin may open it up to attack from opponents, over waste, failure, or even the behaviours and practices of it staff. Financial sustainability, through its business goal, can head off this political risk. Future governments can increase GBE's capital endowment if it is an investment that pays off. However, no government will want to throw good money after bad.

The Labour government needs to define the terms that GBE is assessed on and that should be speed. While there might be oppositional political pressure to make profit quickly, speed here is in deployment. GBE needs to be delivering additional generation in the next parliament.

Deployment is also a public priority. Of all the policies we tested, increasing **the roll-out of wind and solar (33%) was the second most important action to voters** after energy efficiency.

Business Goal	Deliver stable profits to the exchequer and British people
Political Goal	Increase the speed and scale of renewable deployment

We can then use these goals to help assess whether proposed objectives are better delivered elsewhere in the energy system. Applying these clear political and business goals to the list of problems in Table 2, brings focus and four potential challenges GBE could address:

- The risk of the state or voters not benefitting sufficiently from the transition.
- Growing energy import dependence.
- Community energy schemes aren't scalable.
- Transmission infrastructure build-out is too slow.

BOX 1 - The risk of lower bills

GBE potentially reducing bills chimes with the public, who see it as the top advantage of GBE. The form GB Energy is likely to take and its initial capital make meeting the goal of significant bill reductions challenging. Commonwealth suggests that a national energy champion could take £21 billion off bills if it bought assets but ran them at the marginal cost of generation, i.e., no profit.[1]

Bill reductions in the next parliament could come through, for example the rebalancing of levies from electricity to gas, or to some individuals retrofitting their homes. However, even these are at the mercy of fluctuations in the cost of borrowing, and the price of gas. The Local Power Plan, through its grants and loans, can reduce bills directly for the low-income households that receive them through for example rooftop solar. An alternative would be for GBE to provide a direct rebate to consumers as a negative policy cost on bills, but given the size of its endowment, spread across the whole population this would be negligible.

The risk for government is that a promise of lower bills, much of which is outside GBE's control, opens up an easy attack line from political opponents (and possibly a reason to scrap), harming the currently high public support for GBE.

Focus can narrow GBE's initial tech choices

Government plans for clean power by 2030 bring ambitious targets for low-carbon tech (table 3). GBE aims to accelerate the deployment of those technologies. But which ones? Labour had promised action in three categories: community, existing and emerging. GBE's involvement

should a) deliver a return and b) mean more things get built, faster. The public is unsurprisingly not united about the technicalities of where GB Energy puts its efforts across these three goals - new tech, emerging tech and community ownership all receiving even levels of support. There is however an interesting age split - younger voters (18-34) are much more likely to support the local goal than older voters (over 55) by 38 to 23%

For each category we assess the potential opportunities in the next parliament.

Community Energy

Access to finance is a recurring barrier to community projects. Often this is a problem of scale. Lawrence Weston, a recent successful community energy project, for example, is one 4.2MW turbine, and therefore below institutional investors' ticket size.[2]

Labour's Local Power Plan (LPP), as envisaged, emphasises the party's interest in supporting community energy projects. GB Energy plans to distribute £3.3bn of grants (and some loans) over the next parliament, predominantly to low-income households. GB Energy may also offer time and resource as technical advisors to communities in establishing and financing projects. Predominantly this is aimed at small scale projects, for example rooftop solar, and GB Energy is not expected to make a return on these funds. This will bridge a financing gap in small-ticket projects currently unattractive to the private sector and too small for, say, the UKIB.

There is a significant opportunity for a state-owned company in increasing support for renewable projects. Communities need to buy into projects which are located near them. We also need to locate projects near people as they create the electricity demand. Community buy-in is critical to accelerating onshore technologies. Government already provides guidance for developers to pursue individual community benefits or run community benefit funds. An alternative approach is community ownership.

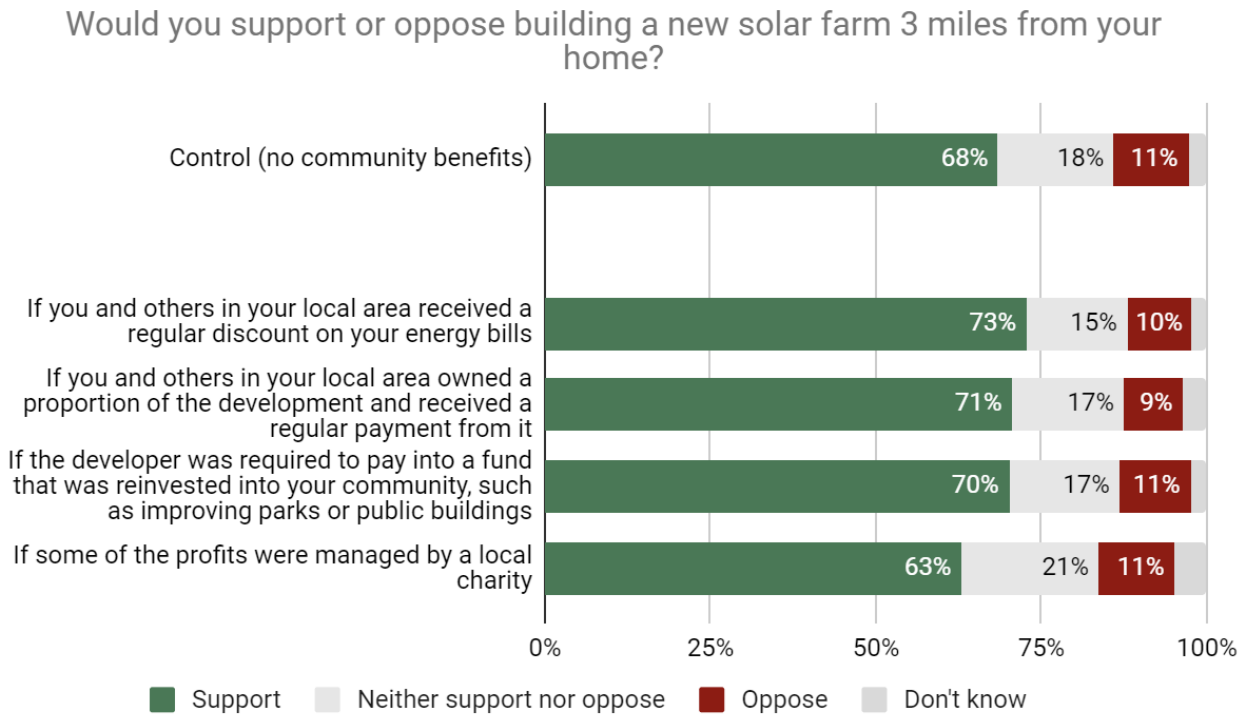
GB Energy through the LPP will be building expertise in community projects and ownership. These skills could help underpin later activities as it grows, in planning for larger scale generation and securing community buy-in and ownership. This could make a material difference to support. New polling for this report backs up many recent surveys from Public First. Roughly **two-thirds of respondents would support plans to build a new solar farm (68%) or a new onshore wind farm (63%), within three miles of their home**. But respondents who were offered partial ownership of the development that they would receive **regular payments from that development increased**

[2] A group of residents running a local co-operative successfully raised £4m over a six year project timeline, in finance for a wholly community owned turbine. Ambition Community Energy, Powering Progress in Lawrence Weston, [accessed 10.04.2024]

their support to 71% for a new solar farm and 68% for a new onshore wind farm. This polls marginally better than asking developers to pay into a community benefit fund.

Opportunity 2025-30: increasing community buy-in of onshore technologies through novel ownership models.

Figure 2: The British public is supportive of renewable energy technologies near their homes. Support increases when respondents are offered regular benefits from the project..



Source: Survey by Public First. BASE: Randomly assigned except control seen by all respondents.

Established Technologies

Table 3 shows how under previous government targets the rollout of mature technologies is off target. GBE cannot make a material difference in every area, both because of its resources and because the barriers to increased deployment are not necessarily (public) capital-related.

Table 3: Labour's targets require a significant increase in low-carbon energy deployment

Tech	Current capacity	Previous Target	Status (CCC)[3]	Labour Target
Offshore Wind	14GW	50GW	Slightly off track	55GW
FLOW	78MW	5GW	N/A	5GW
Solar	16GW	70GW (2035)	Significantly off track	50GW
Onshore Wind	14GW	None	Slightly off track	35GW
Nuclear	6.5GW	N/A	Slightly off track	N/A
Green Hydrogen	5MW	5GW	N/A	10GW
Tidal	10MW	N/A	N/A	No specific target

Source: Department for Energy Security and Net Zero, Labour, CCC, others

- **Offshore wind** is a capital intensive technology, with costs rising in recent years.[4] The failure of government to respond to this resulted in a failure to secure new projects in the Contracts for Difference (CfD) Auction Round 5. Even with a slightly higher strike price, the current size of the CfD pot risks seeing further under-delivery relative to the size of the pipeline in Auction Round 6.[5] While investment from GBE may not accelerate deployment it would not displace private capital given the significant size of the existing market. It may be a helpful part of portfolio balancing in the future. However, investments should not distract from other vital ways to grow the offshore wind sector through a CfD process with the right market parameters, better port facilities, and faster grid connections.

- **Onshore technologies, wind and solar** are further offtrack. The rollout of these technologies is held back by restrictive planning laws (including, in some cases, community opposition) and grid connections. While Labour say that they will act swiftly to address this, restrictive laws have meant a sector under-capacity for several years, additional capital early in the next parliament alongside regulatory change could accelerate the closing of this gap. This is also applicable to **co-located short duration storage**.

- **Nuclear,** and the UK's delays in building it, is being addressed through Great British Nuclear (GBN). GBN already has a role in unpicking constraints on nuclear for example financing,

[3] CCC, Progress in reducing emissions: 2023 report to parliament, June 2023

[4] Guardian, UK subsidies for offshore windfarms likely to increase amid rising costs, 10 Nov 2023

[5] RenewableUK, Clean energy budget increase is welcome, but could go further, 6 March 2024

workforce and siting. The increased capital requirements sought due to, for example, delays at Hinkley are in the form of debts and loan guarantees, in other words from financial organisations not a public company.[6]

- **Transmission**. The electricity grid needs to double by 2035 according to the CCC. Building the transmission network infrastructure for the more ambitious 2030 Labour date requires action across all aspects of transmission infrastructure. In previous work for RenewableUK, Public First set out what those actions look like. Beyond significant policy change, there is also a potential need to support procurement of the grid supply chain, something Labour committed to in September 2023.[7]

  Given public support for pylons tends to be lower than for generation technology, we tested whether this opportunity would impact GBE's public reputation. The majority of the public supports GBE helping build more pylons (56%, with 17% strongly supporting) or at the very least, are not opposed to it, with 26% responding neutrally.

  Interviewees also pointed to an opportunity for a single organisation responsible for construction and management of the offshore energy grid, rather than individual developers - though at significant capital cost.

- **Gas power plants.** Some existing gas power plants may be required beyond 2030 as reserve power for exceptional periods. Given the high-cost of maintaining power plants it has been suggested the state should take a role. However, this neither meets GBE's business goal – the cost of thermal generation post-2030 will be high - nor its political goal. The public wants to see Labour pushing investment in clean power, not fossil fuels.

Opportunity 2025-30: expanding wind and solar onshore to make up for recent slow progress, with potential options in transmission infrastructure.

<u>Emerging technologies</u>

As Figure 3 (below) shows, there are already several public organisations trying to fix market failures in technology development, all of which can benefit energy tech. Most UK public institutions operate at the early stage, encouraging research and development. The expansion of UKRI and Innovate UK, for example, has provided significant R&D funding to the energy sector, alongside the business guidance and support of the Catapults. While UKIB is newer it is rapidly

[6] Power Technology, France seeks loan guarantees over Hinkley Point C, 1 Feb 2024

[7] Public First, Hit the Ground Running, October 2023

expanding its lending to supply chain projects that underpin the expansion of new technologies, for example the Port of Tyne or Cornish Lithium. Labour's plan for NWF has promised similar for a range of sectors.

The gaps in the UK are in pulling through new technology, for example by providing certainty of future profits like CfDs did for offshore wind, and deploying that technology at pace and scale. Of those technologies Labour has mentioned three, floating offshore wind (FLOW), tidal stream and small modular nuclear reactors (SMRs) in relation to GBE, and green hydrogen in its 2030 target.

- **FLOW**. Public First interviews with the sector pointed to the fact that FLOW will be market-ready in the next parliament. Its principal constraints are not capital, but in its supply chain, for example, the development of port infrastructure, manufacturing capability or connected procurement.[8] The sector was supportive of Labour's explicit aim to support FLOW's development, especially through the NWF and an activist industrial policy. More test and demonstration facilities for example could be supportive. However, it is (currently) expensive. GBE's investment could make more impact elsewhere, though, it may be involved either as its capital grows, or to balance its portfolio, earlier.

- **Tidal stream** is a more selective technology. The average project is cheaper and more restricted in terms of siting than other technologies. There is a potential role for GBE capital to steer this novel technology through the development stage. While tidal has a viable role in UK energy, and with the UK a specialised innovator of its underlying technologies, the total market size will be small, implying a state-backed organisation with focus on tidal could have significant push-through potential.[9]

- **SMRs** are unlikely to be deployed at pace in the next parliament. Central to their rollout is a consistent and durable plan to support advanced nuclear. GBN is running competitions to advance SMRs in the UK, which need concluding and a follow-up strategy. SMRs are extremely capital intensive, GBE's involvement in the next parliament will not accelerate their development. GBE can't be seen as the fix for nuclear that distracts policymaking.

- **Green Hydrogen** was not raised by interviewees as part of this research. The major barrier to green hydrogen production in the UK is the provision of adequate business models, planning policy and unclear end-demand. Business models need to support deployment first and foremost, in order to catalyse future cost reductions.[10] Beyond energy generation, the priority uses for green hydrogen are to replace grey hydrogen. Government's National

[8] RenewableUK et al, Floating Offshore Wind Taskforce: Industry Roadmap 2040, March 2023

[9] LSE, Seizing sustainable growth opportunities from tidal stream energy in the UK, June 2023

[10] RenewableUK, Demystifying the Hydrogen Business Model for Electrolysis, Nov 2023

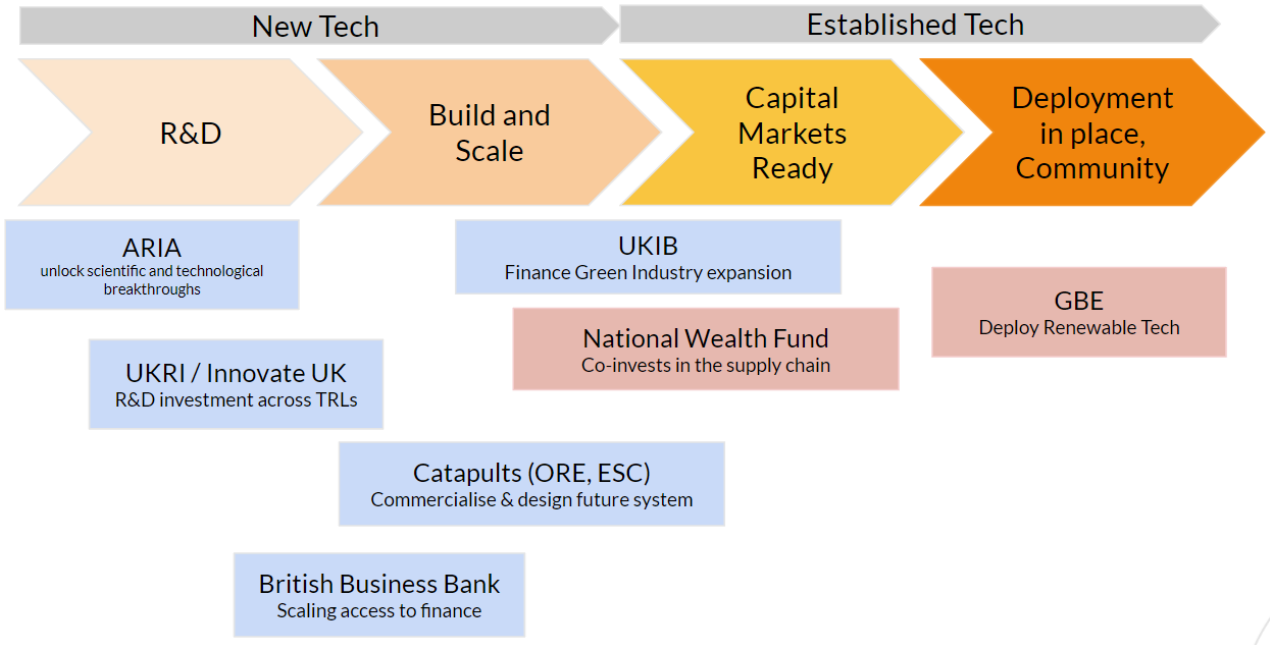
Wealth Fund has promised action on green hydrogen which can help prepare it for potential future investments from GBE.

- **Long Duration Storage** has been overlooked in policymaking and requires significant finance, over long time periods. But this creates two challenges for GBE. The first as with other technologies is that its initial capital is likely insufficient. The second is the perception that GBE is the fix for general neglect in policy. GBE involvement will not make up the lack of a committed strategic reserve, explicit targets for energy storage or clarity on business models.[11] Again this does not prevent GBE exploring later, but it's not a priority.

- **Carbon Capture, Utilisation and Storage (CCUS).** In the campaign Labour pointed to GBE exploring CCUS investments. CCUS already stands to gain from the previous government's policy plans (such as the £20bn investment plan) as well as Labour's promises through the NWF and British Jobs Bonus to accelerate deployment. While GBE could further support this in order to receive a future return, the entry costs are significant and the pay-off times expected well in the future.

Opportunity 2025-30: siting and development of small-scale tidal stream projects.

Figure 3 - there are already several public organisations to support the development of technology, or their supply chain, few are helping to deploy them.



[11] House of Lords, Long-duration energy storage: get on with it, 13 March 2024

This leaves GBE basing its initial portfolio, i.e., action and investment decisions in the next parliament, on three main technologies - onshore wind, solar and tidal. Transmission may also play a role, particularly if it emerges as more of a necessity. Nascent organisations can only do a few things well**.** A narrow focus is important:

- More technologies require more staff and expertise. Community energy and onshore technologies overlap significantly, and the challenges of siting and developing tidal stream have overlaps with siting and permitting wind, solar and transmission.
- A politically robust GBE needs stable revenues, this requires some safe bets i.e., wind and solar, though recognising GBE will be taking on development risk. Chapter 3 goes into how this development risk can be ameliorated by a public organisation specifically.

We put this selection in a series of interviews to the private energy sector. Existing players are keen to see a step change in deployment, and recognise that onshore technologies are further behind. They were particularly interested in how partnership with the state can help address the development risk of onshore projects - notably in permitting and community consent. Their primary concern was that additional state financing in small markets will increase the cost of capital, and crowd out. There are two strategies to mitigate this:

- Ensure GBE is bringing additionality that attracts private capital alongside.
- Pursue a diversified portfolio beyond the first five years.

Additionality can come through locations

Government's efforts to reform planning laws will make it easier to build onshore technologies in England, and can accelerate private finance. Onshore wind and solar are restricted to areas where the wind speed or solar radiation is strong enough to produce sufficient generation, but investable opportunities are also held back by other issues. As referenced above, the private sector is concerned about many challenges to onshore tech: the ease of permitting, including environmental impact assessments; grid connections and transmission infrastructure, and difficulties in transporting turbines to sites through road and freight transport.

One way to bring additionality is for GBE to target locations which would currently be risky investments for the private sector, using GBE's capital to increase their attractiveness. GB Energy could have a role in **supporting partners in projects with higher levels of development risk**. Here a lower cost of capital could help overcome slightly higher project costs.

A priority action for GBE and DESNZ should be to commission a study on which locations its role could add the most value. Criteria should relate to its mission, i.e. accelerating deployment but delivering revenues. They could include:

1. **Sufficient wind speed or solar radiation** to accommodate scale e.g., up to 10MW, and co-location with storage, to ensure a more integrated and cheaper energy system.[12]
2. **Close to populations** to bring community energy and to lead consent and engagement.
3. Certain **socio-economic criteria**, for example above average energy costs, or below average household income. **58% of respondents in our survey agree that GBE should ensure the poorest communities benefit the most** from its activities. These would be areas where GBE was focused on providing community benefits.
4. Avoids significant conflicts with biodiversity e.g., SSI/AONB or special cultural interest.
5. Areas with **high grid costs or low capacity infrastructure** (within the strategic spatial plan). This would effectively be iterating the Strategic Spatial Energy Plan to carve out areas which may be less attractive to existing developers. This could focus on areas with ambitious Local Area Energy Plans, creating a further incentive for their development.

A note of caution, and of clarity: developers will need to be closely involved in this process to ensure the criteria result in developable and investable products. Similarly, despite being a state-funded business GBE will be operationally independent. **It will not receive beneficial treatment in relation to planning or grid connections**, but is seeking to work at the margins where those constraints are disincentivising existing players.

GBE would have three options on how it would advertise its partnership with the private sector.

1. **Country-wide:** GBE will operate anywhere in the UK that meets those criteria, providing it can find a partner.
2. **Open areas**: GBE will prioritise particular geographic areas, of a given scale (e.g., region or local authority), but be open to where those sites are within them. This would mean uncertainty in exactly where GBE will act, but allows for the private sector to have a bigger role in selecting and directing sites within those areas.
3. **Site-specific:** GBE will only work in targeted and identified sites. This has the advantage of certainty, and potentially reducing competition with the private sector, but reduces the number of opportunities to act and could slow rollout.

Building further on the LPP, GBE should also **be open to calls from communities** interested in hosting larger scale projects, particularly ones it has already worked with. Government may also

[12] RenewableUK, Making the most of renewables: the role of onshore co-location in accelerating an integrated energy system, April 2024

want to look at releasing its own land for new generation as the Welsh Government is planning with its public developer. This must not impact level-playing field concerns.

Interviewees didn't express a specific preference, but leant towards options that provided them the greatest flexibility. Particularly given GBE will be at most a junior partner over the next five years, and a new player, the less prescriptive options are more viable. While these criteria look similar to the exercise the Welsh Government recently ran, this is not about defining areas for renewable development generally, but instead for GBE specifically and where it can be additional to the current market. [13]

GBE's initial portfolio is the basis of a growth strategy

Bigger and better

What GB Energy does in the next parliament will not remain static. Initial technology choices are intended to grow GBE's capital and accelerate deployment. This will allow it in the future to take on more risk, more technologies and a bigger role should it be successful. Figure 4 sets out where that growth might lead.

With a higher capital level, GBE can expand into more capital-intensive technologies such as offshore wind and FLOW. Similarly, a stronger financial picture could allow GBE to become a buyer of first resort for new technologies as they mature. Finally, GBE, like other countries' national champions, may eventually expand to other markets. Developing expertise in, for example, tidal power will be crucial to supporting other countries to decarbonise – with strong tidal currents in countries like France, Canada, Indonesia and the USA.

The same principle applies to the level of investment. GBE is promised as an energy generation company, but energy generators are not built overnight. Take Ørsted in Denmark. The differences are important: Ørsted began life in oil and gas and therefore had profit-making asset base. But there are lessons in its approach to building an ultimately exclusive renewable portfolio. Ørsted began by taking minority stakes in renewable projects, then majority stakes, before running its own projects.[14] Similarly, EnBW's UK arm is currently only running joint ventures with its partner BP, whilst it grows and establishes itself in a new market.[15] It is reasonable for the government to maintain a commitment to the aim of becoming a generator whilst acting like an investor initially.

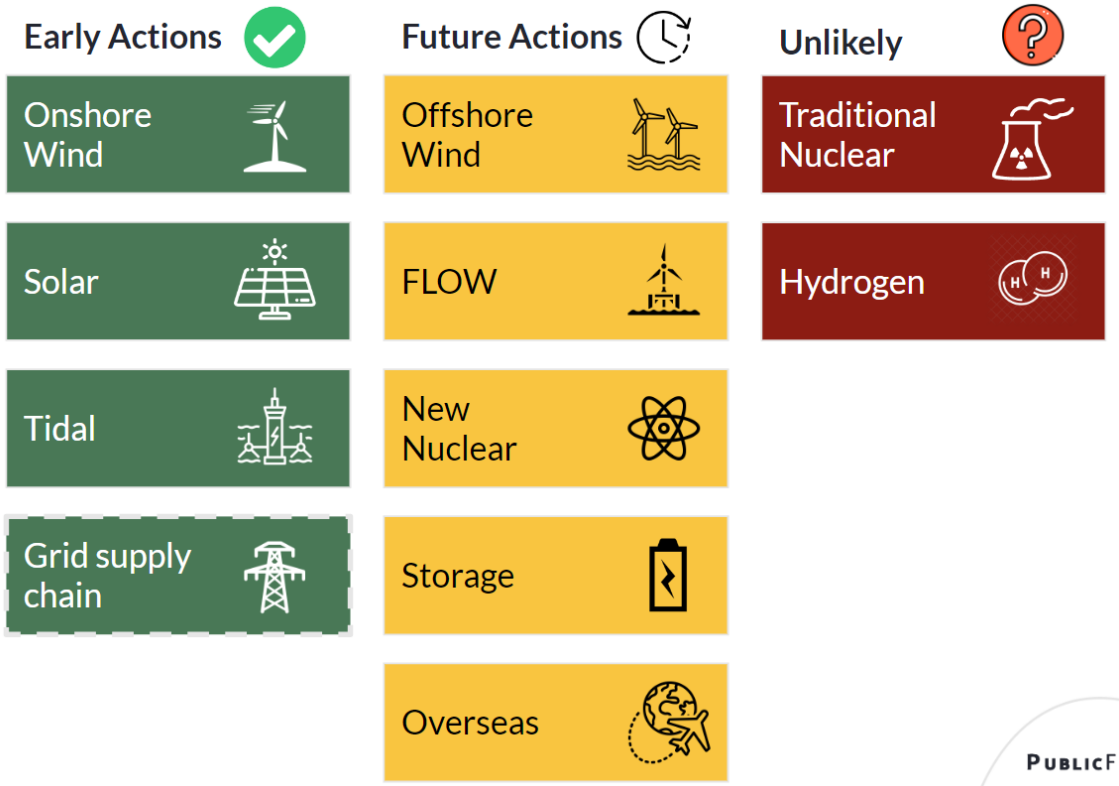
Welsh Government, Priority areas of wind and solar energy, 12 July 2019

[14]Ørsted, our green energy transformation, [accessed 10.04.2024]

[15]EnBW, BP and EnBW to jointly develop offshore wind farms in the UK, 8 Feb 2021

While in the current parliament GBE will likely focus on minority stakes or being a minority partner in joint ventures, GBE could grow to take majority stakes and eventually deliver projects itself. This could eventually extend, as other state companies do, to operating beyond UK borders. A note of caution, **moving from minority to majority stakes would have implications for HM Treasury and how they view the asset and therefore the procurement rules they set for GBE. This will need to be considered in GBE's set up**.

Figure 4: GBE will be focused on its actions in the next parliament, growing its portfolio and risk appetite over time.

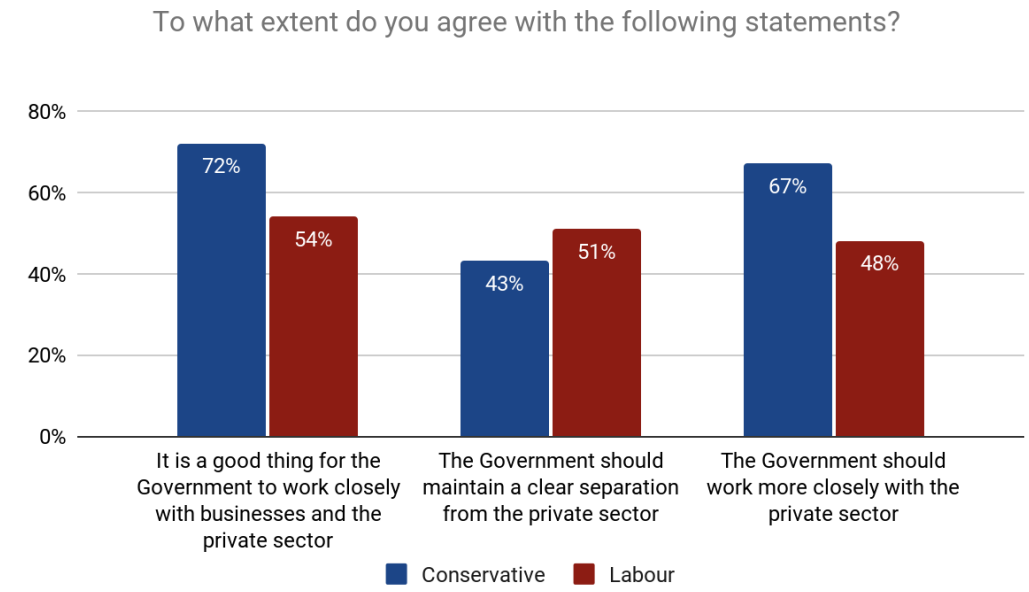


Chapter 3: Achieving the mission

Chapter 2 set out *the what* - what GB Energy is looking to achieve and what energy technologies might help it do so. Chapter 3 is about *the how*: what actions taken by a publicly-owned company will allow it to achieve that mission and to accelerate the deployment of its initial portfolio.

The *how* is important. Some of the investments above will mean playing alongside the private sector. Each of the publicly-owned companies highlighted in Chapter 1 compete and collaborate with the private sector, both domestically and abroad. This is also something the public backs - **a majority of 2019 Labour and Conservative voters think it is a good thing for government bodies to work closely with the private sector** (figure 5). But to maintain the public and industry's backing, GBE will still need to focus on the actions it takes around those early investments ensuring it is additional and therefore crowding in private capital.

Figure 5: 2019 Labour and Conservative voters back public-private partnerships.



Source: Survey by Public First. BASE: All respondents.

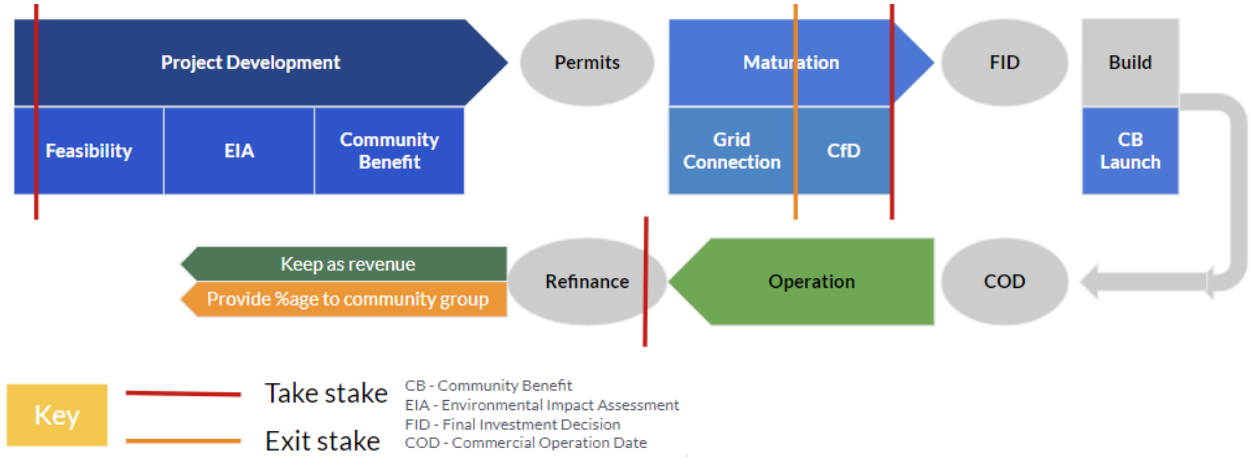
Investing equity in practice

When GBE knows its proposed technologies and locations for the current parliament, it can begin to look at how it invests in those. GB Energy's growth plan will mean building expertise to eventually develop its own projects, but to make a return in the process. This suggests **GB Energy investing equity, becoming a partner in projects**. This is not opening up projects to politics or government, GB Energy will be operationally independent.

No business we spoke to was against GBE being a project partner; many work with state-backed businesses already. The timing of when GBE takes equity stakes does matter for additionality, as does their size. Businesses don't own 100% of projects for 100% of their lifecycle, there are several opportunities to collaborate.

Following Chapter 2, in its first five years GBE will likely focus on minority stakes and joint ventures, something backed by industry. However, this will need to be clearly communicated with the public. There is some level of perceived risk with public-private partnerships: **53% of respondents think they give private companies too much control over public services. Furthermore, 48% of respondents think public-private partnerships lead to the government acting in the interest of businesses** compared to 35% who think they lead to private companies acting in the interests of the public. Figure 6 shows several points of intervention in the life cycle of renewable projects.

Figure 6: GBE's value add is to minimise the development risk of projects and community support as they're built.



Project Development

Interviewees were most interested in GBE's role in development. The UK builds infrastructure much slower than its peers. This is especially true in the pre-construction phase of building, of which planning is a major part.[16] The development stage is therefore one of the riskiest in the UK, even more so for onshore renewable technologies where community consultation and sometimes opposition can stall projects. In all of the conversations underpinning this report, it is development that business was most interested in the state's role.

[16] Boston Consulting Group, Reshaping British Infrastructure: Global Lessons to Improve Project Delivery, 7 February 2024

Where GBE is invested in projects it **could lead on engagement both with the Local Authority and communities**. While there should be no legal difference between GBE engaging with local government and a private company, our research found that abroad - notably in Germany - the soft power of a state-backed organisation, and connection between national and local government priorities leads to smoother delivery. GBE's involvement could reduce the likelihood of challenge as projects are more associated with a public good rather than private profit. This resonates with the UK public, **44% of respondents agreed that public-private partnerships make it easier for businesses by speeding up regulatory processes**.

Respondents were also **more likely to prefer renewable energy developments in their local area to be built as fast as possible even if it means more disruption (47%)** than they were to favour slower development with minimal disruption (43%).

Building on its locational strategy, one of GB Energy's top internal priorities will be growing permitting expertise. Given this is one of the more resource-intensive aspects of development, there is a clear value-add of an organisation with lower revenue pressures, taking on this responsibility. For onshore projects in particular, the community relationship is vital. In a separate project recently on energy infrastructure, Public First heard from local communities who would question *why* particular sites were chosen, and often assumed it is only to maximise profits.

For tidal the role will be slightly different. Community consent is a lower priority issue given they are offshore (though will require grid connections). Tidal generation is restricted to a finite number of UK sites. Fewer sites and new technology has made siting, in particular environmental impact assessments, a risk for tidal stream projects that GBE could mitigate.[17] **GB Energy will need to work with the Crown Estate and Crown Estate Scotland on siting and surveys of tidal**.

To be eligible for a CfD, new generation projects can't receive another government subsidy.[18] Businesses we spoke to were concerned that GBE's involvement could be perceived as a get-around of this rule. In order, at least initially, to avoid perceptions of bias GBE should look to exit its stake prior to CfD.

This should be kept under review, with **DESNZ and HMT clarifying rules around subsidy**. If GBE becomes a self-sustaining organisation and ultimately a project developer, it will want to access the CfD scheme, as other foreign owned public energy companies do.

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[17] Coles et al, a review of the UK and British channel islands practical tidal stream energy resource, Proceedings of the royal society, 3 Nov 2023

[18] HM Government, Contracts for Difference for Low Carbon Electricity Generation, July 2023

Post-CfD

Following the CfD auction there are two further opportunities for GBE to take stakes. As Figure 5 shows this could be at Final Investment Decision. Often Joint Ventures are set at this stage as they divide the capital expenditure, bringing in additional partners to mitigate project risk. This is beneficial to GBE as it grows its market position and partners with established operators. JVs are the norm for many renewable projects, Dogger Bank the UK's largest offshore wind farm is between SSE and Equinor, Wind2 and Octopus in onshore wind or Enso and Cero in solar.

GBE can also provide a re-financing option for existing generation assets, helping developers recycle capital to new developments. This is a similar model to the Green Investment Bank's support for offshore wind.[19] This could also extend to repowering of those sites to increase asset lifespans and improve efficiency.

With stakes in running projects, GBE would have three options:

1. **Sell the stake for an immediate cash injection.**
2. **Hold on to the stake for ongoing revenue**. Others have argued that GBE as a publicly owned company could accept a lower level of profit in an attempt to reduce the energy prices.[20] This may be challenging as GB Energy looks to become financially sustainable.
3. **Re-grant some or all of the stake to the local community**. GBE has a stated aim to accelerate community energy ownership. In Germany for example, RWE provides micro-projects back to communities who receive an ongoing dividend. This would help maximise the expertise or partners GBE built through the LPP. As our polling shows it will also increase support for projects from the outset.

   GBE could administer this stake on behalf of the community, or provide it to a social partner to manage. The easiest options is likely split ownership or shared revenue, here the community owns a discrete part of the asset, but takes no role in its operations. Though GBE could offer support here, providing the technical assistance to community groups and allowing them to participate as a joint venture.

   A barrier to community ownership is financial expertise. Very small structures can be challenging if for example the revenue is barely equal to the cost of administration. One option would be for GB Energy to manage the shares, with a community board deciding how and where funds are distributed. Where communities are set up, they may wish to

[19] IPPR, Making Markets: the City's role in industrial strategy, 20 Feb 2024

[20] Commonwealth, A wholesale transformation: Evaluating Proposals for Energy Market Reform, March 2023

run the scheme themselves. **The Local Power Plan grants and loans could help equip communities with shared companies and skills in running them, for GBE to build on later**.

BOX - RWE & Bedburg City

A project established between RWE and the municipal government in 2015. Bedburg city provided €50m investment as part of a project to develop 20+ turbines. With the project in operation social partners now operate 95 MW of the total built wind capacity. Business was supportive of the partnership as the City's involvement led to material improvements in the speed and efficiency of the consenting process.

Absorbing Great British Nuclear is complicated

GBE's capital will unlikely make a dent in the rollout of nuclear technology. Great British Nuclear is responsible for accelerating the delivery of nuclear. Currently in interim form, GBN is principally co-funding in the development stage. It has recently acquired land for two nuclear sites and is providing a local point of contact and running community engagement.[21] GBN may make equity investments, or do its own developments in new nuclear, but these are down the line. There is a skills and expertise overlap here with GBE's value-add in other tech.

The difference is that GBN is administering government expenditure, not developing its own portfolio. Shifting GBN under GBE would have implications for how nuclear funding is administered. It would mean for example significantly expanding GBE's capital, and government directing how that funding is used, undermining its independence. GBN will have a more active and interventionist role, this could clash with GBE's operational independence.

GBN is also running other processes, more divergent from GBE's mission, for example a competition on SMR technologies. Interviewees throughout this research pointed to the time and resources taken to get GBN to this stage. There was concern that reconfiguring GBN would only further delay the UK's nuclear ambitions.

There are areas GBN can improve. We heard concerns over its focus on SMRs at the expense of other technologies, and its lack of formalised business plan (which has affected recruitment).

[21] HM Government, Great British Nuclear to buy two Hitachi sites for nuclear development, 7 March 2024

GBN will have an important role in expanding the UK's nuclear fleet and the two organisations may work closely together formally or informally in the future.

The options are:

- **GBE does not absorb GBN**. GBN is not operationally independent. A close connection to government could give the perception that GBE is a vehicle to address wider policy problems, like we see in nuclear. It would also bring complications regarding funding. GBN is still developing, disrupting this could slow down its efforts.
- **GBN is rebranded, becoming part of GBE group**. This would create legal separation between GBE and GBN, like we see in many private energy businesses working on multiple parts of the energy system. This would address complications over nuclear funding and GBE's capital level, with GBN's functions largely unchanged. It would have the benefit of both providing an impetus to 'tidy up' the areas GBN can improve, and place the organisation within a shared endeavour of Labour's 2030 target.

The grid supply chain needs coordination

GB Energy is not intended to be a Transmission Operator, this would legally conflict with being an energy generator. Labour has announced that GBE may have a role in supporting procurement of the grid supply chain. There are concerns from the sector about the timing of these activities and when they could have a material impact by, i.e., beyond Labour's 2030 target. However, in our previous research for RenewableUK, Public First found that coordinating the procurement of supplies, particularly efforts to standardise technologies would be beneficial, as would public underwriting any large-scale purchases from the existing TOs. Baringa for DESNZ also suggested that "*network operators could collaborate on standardisation and to aggregate demand*". [22]

This follows the model of TenneT, a Dutch publicly owned TO, which has seen benefits from a similar process. In Germany, TenneT works with other TOs to align technical standards and a long-term pipeline. This incentivises manufacturing though consistent demand and products.

While GBE has been considered as the home for this, it could equally sit in another organisation, for example Labour's NWF which is more focused on the broad supply chain for the transition. This would look more like the Norwegian example of Petoro. Petoro manages the Norwegian state's direct financial interest in oil and gas, investing significant amounts in underlying infrastructure such as pipelines. It has a close relationship with Equinor to coordinate that infrastructure

[22] Baringa/DESNZ, UK renewables deployment supply chain readiness study, April 2024

investment. GBE and the NWF could have a similar relationship. National Grid is also exploring other ways to tackle this issue, through regulatory reform to enable TO collaboration.

Other interviewees pointed to GBE's role in the offshore grid. This is a key constraint highlighted in recent work for DESNZ.[23] Capital is likely to be an issue here given the high costs, however there remains a clear need for a single organisation to coordinate individual projects, developers and their connection. GBE (or the NWF) could help to derisk and enable that shared infrastructure. Having a state backed company involved here could also provide an incentive for the UK to push for greater engagement on the North Seas Energy Cooperation, run by the European Commission.

Conclusions

GBE will be a significantly sized organisation, encompassing two primary functions and a subsidiary in its first parliament.

- **The Local Power Plan**: distributing grants and loans for small scale community generation
- **Energy generation**: equity investing in onshore generating technologies, and tidal carrying particular expertise in planning, permitting and relationship management.

It should not absorb GBN which may distract both organisations and undermine perceptions of GBE. Additionally, while grid supply will not be a core function of GBE it may become so if other avenues to rectify procurement don't work.

[23] Ibid

Chapter 4: Building the company

To achieve its objective of accelerating the build out of low-carbon energy, GBE is going to have to be built at speed. This is complicated by the multiple functions GBE will have. Chapter 4 sets out how the government can use precedent from the Green Investment Bank and UK Infrastructure Bank (UKIB) to build an effective organisation, fast. It also explores some of the tricky aspects that will need to be tackled, notably the financial framework and governance structure.

New organisations take time, which GBE doesn't have

UKIB, similar to GBE, is an independent organisation but set-up to meet a political goal. While its mission is to improve regional growth and progress towards net zero, it had a political goal of showing that the, then Johnson-led, government was spending money in the right places, quickly. However, unlike its forerunner the Green Investment Bank, the UKIB would be grounded in legislation to ensure it was robust. This competition between pace and durability required an interim organisation, whilst legislation was being developed. From the initial policy document setting out the need for UKIB in November 2020, to making its first investment in June 2021 took seven months. However, equity investing (a harder area to recruit for) took longer, with its first investment in August 2023 in Cornish Lithium.

GBE will be in a similar position. Part of the LPP requires grants out the door for microgeneration in communities in year one. The 2030 Clean Power Target requires a very real increase in deployment every year of the parliament. This likely means following the UKIB set-up process, rather than the GIB. UKIB had fewer governance arrangements in place at establishment, and preceded its legislation. Other stages such as interim CEO are skipped, moving straight to permanent roles. [24]

Learning from the UKIB experience as well as other major government projects like Homes England, crucial is a **clear and early articulation from the Prime Minister and Chancellor over GBE's outcomes and strategy**. This sets the goal and parameters for Civil Servants to work toward. Our interviews also pointed to tighter missions and clearer objectives making time-sucking trade-offs easier to manage.

However, the processes to set-up even an interim organisation can be slow and cumbersome:

[24] National Audit Office, The Creation of the UK Infrastructure Bank, July 2022

- The UKIB benefitted from **powerful internal advocates** with an advisory board, chair and interim CEO in place well before set-up to fight for the bank's interests, vital for GBE.
- The UKIB benefited from **HMT as a sponsor body**, a first for the UK government, which gave a direct line to capital and economic policy. Without this sponsorship GB Energy could struggle. Capitalisation was a point of contention between internal stakeholders in establishing the UKIB. GBE's endowment was in Labour's manifesto and therefore should not be an issue.
- **Hiring is a competitive and slow process**. Pay agreements for non-civil servants, senior public sector executives, require negotiation and sign-off with the shareholder (Treasury). Many GBE employees will come from the private sector and could have long notice periods. The overlap of expertise in GBE and for example UKIB, CCC or DESNZ also could create competition between public institutions for skilled personnel.

The UKIB has already been through the process of hiring people, and establishing its remuneration framework. One option therefore could be to **seed GBE within UKIB**. This has the advantage of drawing on UKIB's existing expertise in onshore technologies. UKIB has a minimum ticket size of £25m for debt and equities, and £100m for debt guarantees.[25] Given the intended scale of the Local Power Plan, this will need to be addressed to allow the interim GBE to get smaller sums out of the door. UKIB and GBE also differ over objectives. UKIB must work explicitly in the public interest, whereas GBE will be focusing on deployment and returns.

GBE needs to be near its partners and its future staff

While GBE could be seeded in the UKIB (based in Leeds), in the medium term it will be headquartered in Scotland. GBE will be competing for talent, and partnering with companies across the renewables supply chain. There are other more political factors that a future government want to consider, for example the current prevalence of oil and gas jobs in that city, but as this report has stressed business viability is crucial to GBE's success. Proximity to the supply chain, especially in the technologies GBE will be concentrating in, as well as the world of finance is therefore vital. Table 4, shows the top five Scottish locations with the highest business density, this does not include those businesses immediately outside the city limits.

[25] UK Infrastructure Bank, Strategic Plan, [accessed 11.04.2024]

Table 4: Edinburgh, Glasgow and Aberdeen have the highest density of relevant renewable supply chain businesses in their city limits.

	Total (all tech)	Onshore	Tidal
Aberdeen	62	19	6
Dundee	8	0	1
Edinburgh	105	74	12
Glasgow	83	61	22
Stirling	8	8	1

Source: RenewableUK Supply Chain Map, Author's calculations

Shared ownership can increase GBE's capital and durability

GB Energy's initial investment will make the state, through UK Government Investments, the sole shareholder. Other state-owned companies have a broader variety of shareholders. Exploring this provides two opportunities: growing GBE's capital base, while making it less reliant on central government finance, and bringing on board shareholders with a broader range of expertise and perspectives.

To ensure a stable organisation GBE could diversify its shareholders within the public sector. GBE is a national champion, intended to benefit the whole country. Some publicly owned generation companies, for example EnBW, have a blend of state and municipal shareholders. Applying this to GBE would suggest as well as Westminster, through UK Government Investments, **Scottish, Welsh and Northern Irish governments could also hold shares** (likely weighted by the Barnett formula). The public is adamant that GBE should represent all nations in the UK and ensure they benefit equally**. 78% of the public said they agree with this statement, 43% of which said they strongly agree with it**.

Interviewees were supportive of this providing it didn't provide an opening to 'play politics' with GBE. Given this it may be the devolved governments have non-voting shares to prevent deadlock should there be a variety of political parties in power with differing views. There may be further options when GB Energy is financially sustainable to widen shareholders to include Combined Authorities or community groups.

	State	Local	Other
VATTENFALL EDF	100%	0	0
Ørsted	50.1%	0	49.9% private
equinor	67%	0	33% private
EnBW	46.75%	46.75%	Mix private, community
Labour	~90%	~10% to Sco, NI, Wales (Barnett weighted)	0% private but with potential community

To increase GBE's capital base it could issue green bonds. To issue bonds, GBE, like the UKIB, will need **the ability to borrow on international capital markets**. GBE will benefit from having the state as the ultimate guarantor and therefore the UK's credit rating, raising its borrowing potential. Green bonds carry the same profile and no significant pricing difference as standard bonds, but in keeping with central government's green gilt financing framework, the proceeds would be going exclusively to green projects and therefore accord a label which could drive interest from a wider range of investors.[26] GBE's ability to borrow will come down to the market's assessments of its future profitability to net income, a rough estimate would be 30% of initial equity, in GBE's case £1.5bn.[27]

As well as a profit-making business plan, this diversity of options for increasing GBE's capital base could limit any political risk by minimising the need to ask government for more capital in the future, unless of course a future government saw that as a profitable investment.

[26] Goldman Sachs Asset Management, understanding green bonds, 13 Feb 2024

[27] Of the remaining £5bn, the LPP is not expected to make returns.

A proportion of profits will be returned to the Exchequer

GB Energy is a company set on making a profitable return. What happens with that profit is where a public company will differ from the private sector. There are differing models for how GBE rewards its public shareholders - either the Exchequer or National governments. In the UK the Crown Estate returns 100% of net profits, i.e., after investment etc, to central government. In Germany EnBW returns 31% to its state.

This level will be a key contention in the establishment of GBE. Its financial framework will need to set out a reasonable level.

- GBE can't be seen as a cash cow by government and overly drained of financial resource, before it has become sustainable or that would prevent it from growth.
- The percentage should be low enough to encourage GBE to have a long-time horizon.
- The percentage of net profit will need to be lower if GBE is (re)granting stakes or ownership directly to communities, as this is also 'returning value to taxpayers'.

A clear financing framework, potentially built on government's existing green gilts framework, may help instil confidence that GBE proceeds aren't being 'milked' whilst also connecting it to the wider value the public expect. Although HMT is often allergic to ringfencing, such a framework does at least guarantee an increased level of investment in green outcomes.

Governance structure

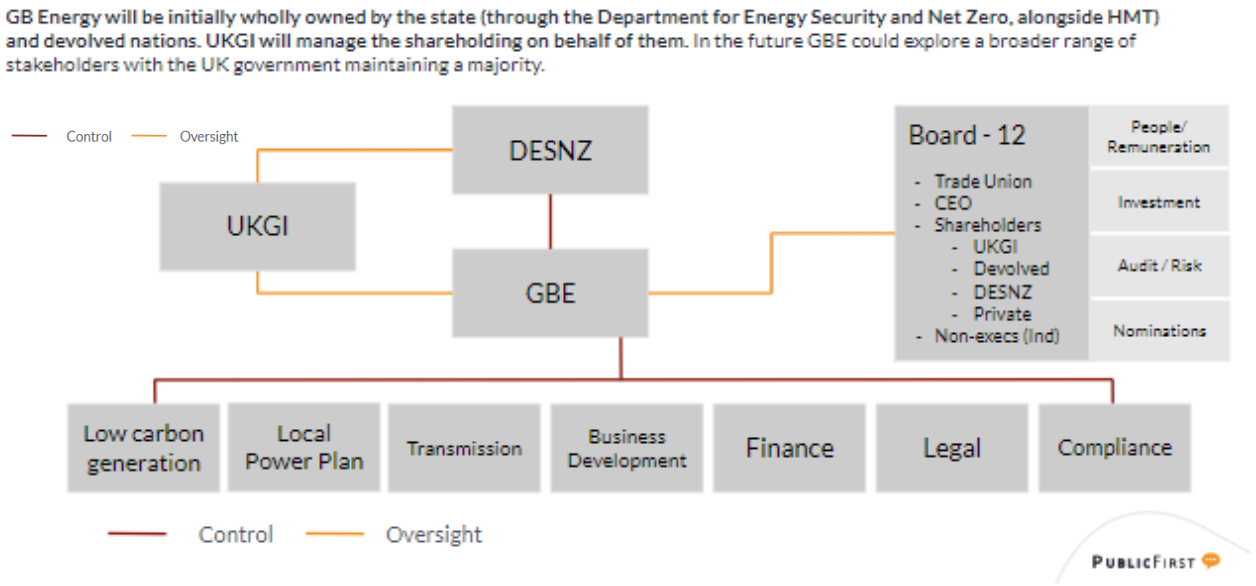
Earning the trust and confidence of investors and project partners requires operational independence. That means that whilst politicians, through that initial mission and objectives, set the boundaries that GBE operates in, it is down to the organisation and those within it to run the day-to-day activities to reach that mission. One of the advantages of the UKIB process, particularly with its interim independent Chair and CEO, was respect from the market. Another important aspect is for GBE to operate according to the UK Corporate governance code (though it may not be legally bound).

This operational independence does not preclude an ongoing relationship with the state. **HMT and DESNZ will share the role of GBE's sponsor department and answer for its affairs in parliament**. This requires GBE to provide quarterly updates on financial health, performance and business development. Both these departments, as ultimate guarantors, will also be consulted on, though not decisionmakers of, corporate strategy. Given GBE's principle relationship with the state will be financial i.e., returning funds to the exchequer, HMT may be the lead department.

HMT, and potentially DESNZ, will also be represented through their presence as shareholders on the board (Figure 7). This model is more similar to UKIB/GIB than foreign state-owned entities. This is in part because EDF or Vattenfall are group organisations, running numerous divergent businesses. Vattenfall for example being entirely state-owned has an elected board of industry experts and government advisors.

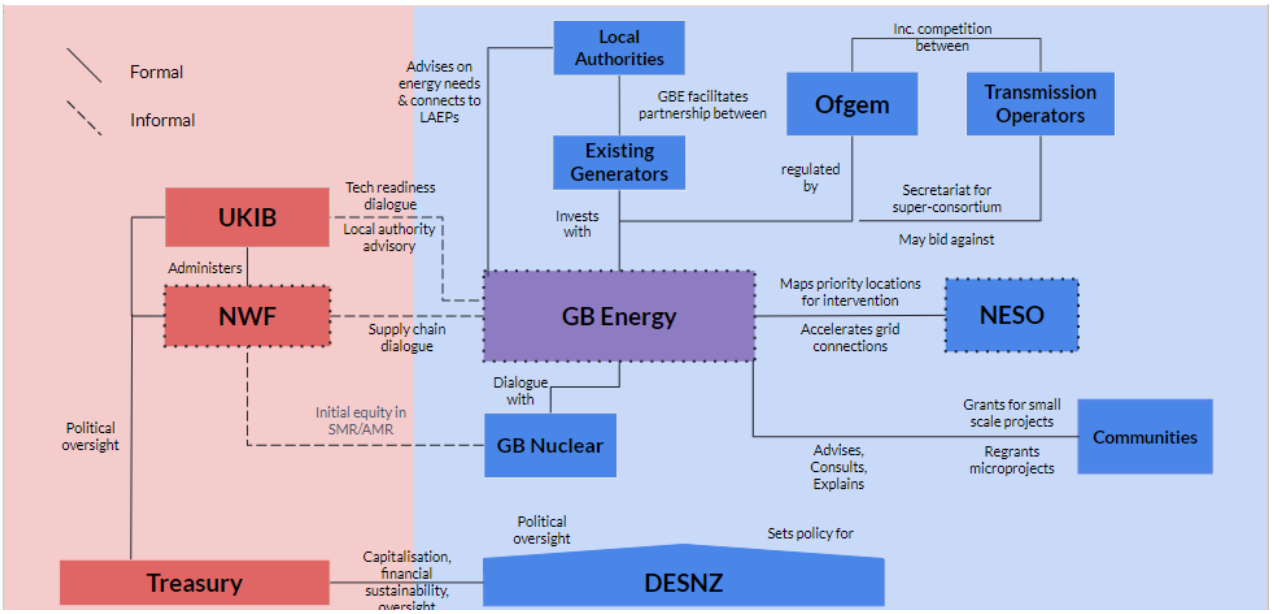
The shareholders, along with others both private and public, will be able to comment on strategy where it affects their potential returns. One option Labour may want to consider in the mould of other publicly-owned companies is to **provide worker representation on the board of GBE,** something other organisations have called for. Though there is a debate about whether this is the workers at GBE itself (white-collar professionals), or an advocate for broader energy sector workers, for example Prospect, Unite or GMB unions.

Figure 7: GB Energy's governance structure will be similar to the UKIB but with a broader board.



The actions set out in Chapter 3 will also mean establishing a variety of formal and informal relationships between GB Energy and the other actors in the sector. Many of these, such as its regulatory oversight, should be put in its founding legislation. Other relationships, for example its informal dialogue with the NWF on supply chain or technology development could later be established as a Memorandum of Understanding. Figure 8 sets out the range of relationships GBE will need to build, both formal and informal.

Figure 8: GBE will need to work with the energy system not just finance



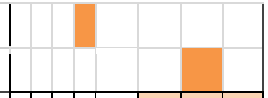
Chapter 5: Timeline

Even with a focused mission, narrower list of objectives, and a tighter business plan - GBE will be doing a lot. The timeline to achieve that is also extremely ambitious. Table 6 sets out the required actions over the first year of government, this is accelerated even beyond what was achieved by the UKIB.

The Labour government needs an early commitment to establish GB Energy and begin operating within 12 months, set from the top, followed by commitment to the underpinning legislation in the King's Speech. This communication should set out the principles established above. There is a potential political benefit even in this statement. 62% of respondents said they support the creation of GBE at the start of our survey while 66% said they support it at the end, possibly suggesting the more information people have about GBE, the more likely they are to support it.

Table 6: There is an awful lot to do, quickly.

Theme	Task	Organisation	2024	2025	2026
Pre-set up	Instruction letter from KS, RR, EM to perm secs	Labour			
	Initial planning and scoping in Civil service	DESNZ/HMT			
	External / advisory GB Energy Commission established	DESNZ			
	GB Energy Shadow Board / Working Group	X-CAB/HMT/DESNZ			
Appointments	Chair	GBE			
	Permanent CEO	GBE			
	Active Board	GBE			
	Board sub committees	GBE			
Strategic planning	Policy statement on design (framework document)	DESNZ			
	Initial Business case to Major Projects Review Group / HMT	DESNZ			
	Formally established and operations begin	GBE			

	Appoint board, advisory council	GBE	
	Publication of GB Energy's first five-year strategy	GBE	
Legislation	Primary Legislation to establish GBE	DESNZ	
Planning arrangements	Outline business case	DESNZ	
	Full business case	DESNZ/HMT	
	Gate review	DESNZ	
Shareholder / Bank relationship	Shareholder framework document	GBE	
	Permanent accounting officer	GBE	
	Accounting officer letter	GBE	
	Budget allocation and spending delegation letter	HMT	
	Financial Framework agreed	HMT	
Appointments	Chair	GBE	
	Permanent CEO	GBE	
	Active Board	GBE	
	Board sub committees	GBE	
Initial Actions	Locational Strategy and consultation	GBE	
	Local Power Plans Grants	GBE	
	First investment	GBE	
	First re-grant / community ownership	GBE	
	Procurement support for grid supplies	GBE	

Dark orange represents the implementation of the policy; light orange represents where policies require continued efforts to sustain.