Institute for Public Policy Research

EVERYTHING EVERYWHERE, ALL AT ONCE

THE NEED FOR A FOUR NATIONS APPROACH TO ACCELERATE WIND DEPLOYMENT IN THE UK

Joshua Emden and
David Hawkey

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SUMMARY

The UK is a world leader in wind deployment and has some of the most ambitious future wind capacity targets in the world, aiming for clean power by 2030. This will require 27GW of onshore wind and 43–50GW of offshore wind by 2030 (NESO 2024). This huge investment in decarbonising the energy system is positioned as the cornerstone of industrial strategies across the UK and devolved governments. In addition, initiatives like the new UK government's 'British Jobs Bonus' demonstrate widespread political commitments to ensure that green growth is synonymous with the creation of high-quality, high-value jobs, in installing, operating and manufacturing renewables in the UK.

Reaching a clean power system by 2030 is achievable but, in the words of the National Energy System Operator (NESO), it is "at the limit of what is feasible" (NESO 2024). A major coordinated effort to accelerate the construction of renewable generators and upgrade the grid is required, with the public and private sectors working together to identify and resolve blockages and barriers ahead of time.

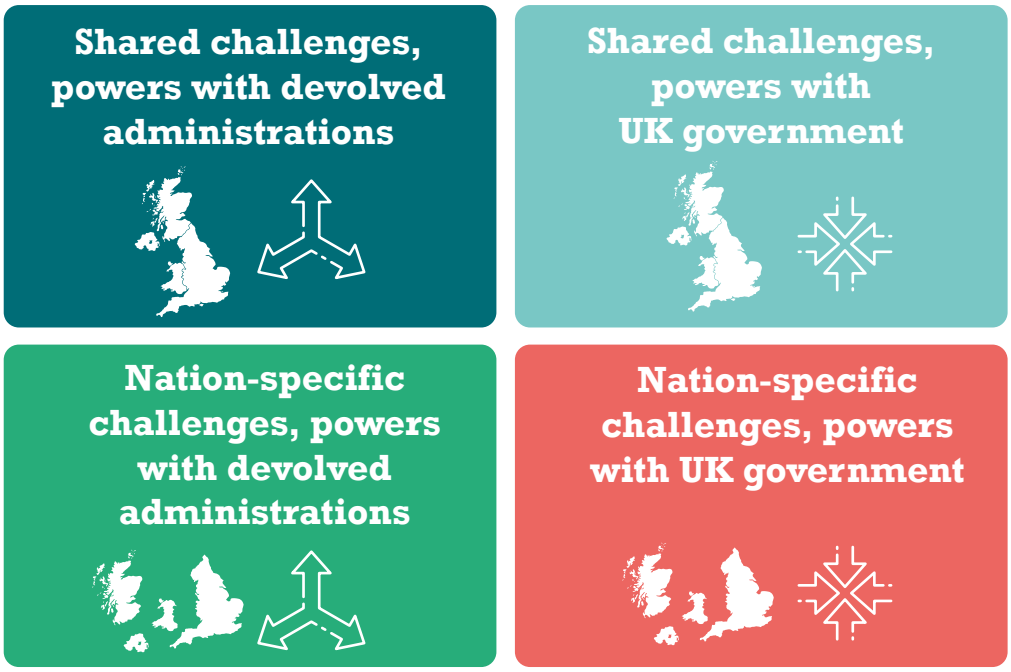
Significant coordination within the public sector will also be critical, with the devolved governments playing a major role, particularly through their planning and consenting responsibilities and their objectives in climate and industrial policy. Over 95 per cent of the pipeline of onshore wind projects needed to reach the 2030 target is located in the devolved jurisdictions, as well as around a third of offshore projects. This is a challenge that crosses borders and needs devolved and reserved powers to all pull in the same direction.

Coordination across the governments of the UK is crucial because a wind project's journey from conception to completion will interact with a complex range of stakeholders, laws, policy and frameworks that straddle devolved and reserved powers.

In this report, we explore existing interactions between various devolved and reserved powers, which an energy developer will need to navigate to bring a project to completion, before establishing a framework to understand where barriers to delivering a coordinated approach lie, and who has responsibility for them (see figure S1).

FIGURE S1

Framework for understanding wind deployment challenges and powers



Source: IPPR

Looking first at shared challenges, from interviews with stakeholders we conducted for this research, common themes emerge around:

- **a lack of capacity within all tiers of government** involved in the consenting process for wind projects, which slows project delivery and hampers the pipeline potential
- **the combined skills challenges** of attracting workers from other sectors, training new workers, upskilling the existing workforce in sufficient quantity to meet demand and providing guarantees that workers, whether retraining or moving into the sector, can expect decent, well-paid and secure employment
- **a lack of port and grid infrastructure**, which is a barrier to developers progressing projects in the pipeline
- **a lack of manufacturing capacity** – capacity depends on factors outlined above, such as the availability of skills and sufficient port infrastructure, but also, crucially, on clear policy direction coordinated between the UK government and all four UK nations.

In this report we also assess the barriers that are specific to each devolved administration and whether the powers to address them are devolved or reserved (or require a combination of both). In particular, the individual planning regimes in each devolved administration all pose their own specific challenges to wind (and indeed solar) deployment. In addition, there are barriers that are specific to one or two nations, which the UK government needs to resolve.

To address these challenges, we make a series of recommendations for each devolved government as well as recommendations that the UK government should take forward in partnership with each UK nation. However, above all else, our core recommendations relate to the need for collaboration and involve the devolved administrations and the UK government working closely together.

Fortunately, all indications are that the new UK government and the devolved governments have made a good start and every UK nation has its own targets that recognise the opportunity to drive new jobs and investment into its national economy. Working relationships are also close and productive at both administrative and political levels.

This is a positive base from which to now extend and embed collaboration across both reserved issues such as grid infrastructure, revenue support, ports and supply-chain infrastructure and devolved issues like planning and skills. Practically, this could include the following.

- **Establishing a joint commitment to the shared project of transforming energy systems across the UK through clear targets and actions.** Governments of the UK should collaborate to align renewable energy targets, which should be embedded in the national UK government's forthcoming plan for clean power by 2030. This plan will shape a wide range of decisions, including reprioritisation of the transmission connections queue (NESO 2024), and so will have material impacts on where and when renewable projects are developed.
- **Ensuring a four-nations approach is baked in to all efforts to coordinate policy and delivery.** This should span political engagement (for example by refreshing the net zero interministerial group and reviewing its terms of reference to ensure it is mission-aligned) and mechanisms to coordinate across UK government departments (the Department for Energy Security and Net Zero [DESNZ], the Ministry of Housing, Communities and Local Government [MHCLG], the Mission Control for Clean Power and the Treasury) as well as other institutions (NESO, the energy regulator Ofgem and so on). A four-nations approach should encompass consultation early in the policy development process and address resourcing issues, given the high levels of wind deployment relative to population (and population-indexed budgets) in the devolved jurisdictions.
- **Transparent monitoring of progress to clean power.** As well as outcomes across the UK, the framework for wind deployment should set out clearly the respective roles of each government of the UK and the wider group of institutions (NESO, Ofgem and so on), building accountability for delivery of the actions of each.
- **Clearly defined roles for the devolved governments** in the rapidly evolving landscape of energy institutions, including GB Energy and NESO. This could include consideration of observer status, board positions or even, in the case of GB Energy, ownership stakes.

1. POLITICAL CONTEXT

The UK is a global leader in wind deployment. It is the second largest installer of offshore wind and, despite the previous UK government's de facto ban of onshore wind in 2015, it is still the eighth largest deployer of onshore wind.

At the beginning of November 2024, the National Energy System Operator (NESO) set out its view that achieving clean power by 2030 is a huge but deliverable challenge (NESO 2024). It requires a pace of onshore wind deployment double what has been achieved historically, to reach 27GW by 2030, up from today's 15.5GW (RenewableUK 2024a). Offshore wind will need to grow from its current 15GW (RenewableUK 2024a) to reach 43–50GW (depending on the extent of other clean power technologies). This implies the annual rate of installation accelerating by 3.6 to 4.5 times recent levels (NESO 2024). The new UK government has already shown signs it understands this challenge. It has not only lifted the 2015 ban on onshore wind in England, but in the latest Contracts for Difference (CfD) auction it also increased the overall budget for contracts. As a result, with a record number of projects receiving a CfD, the latest round was a step in the right direction (DESNZ 2024a). But as NESO (2024) notes, the upward trajectory will need to be maintained, and quickly, with the next two CfD allocation rounds (in 2025 and 2026) critical to ensuring offshore construction begins soon enough to deliver by 2030.

At the same time, while greater ambition from the UK government in reserved areas is essential, as we will show in this report, the capacity growth needed for 2030 and beyond is distributed across the UK, meaning the effective exercising of devolved powers across Scotland, Wales and Northern Ireland will also be crucial, as will UK government action in England. Getting this right means both addressing the unique challenges that the devolved jurisdictions face and solving the many challenges shared between them.

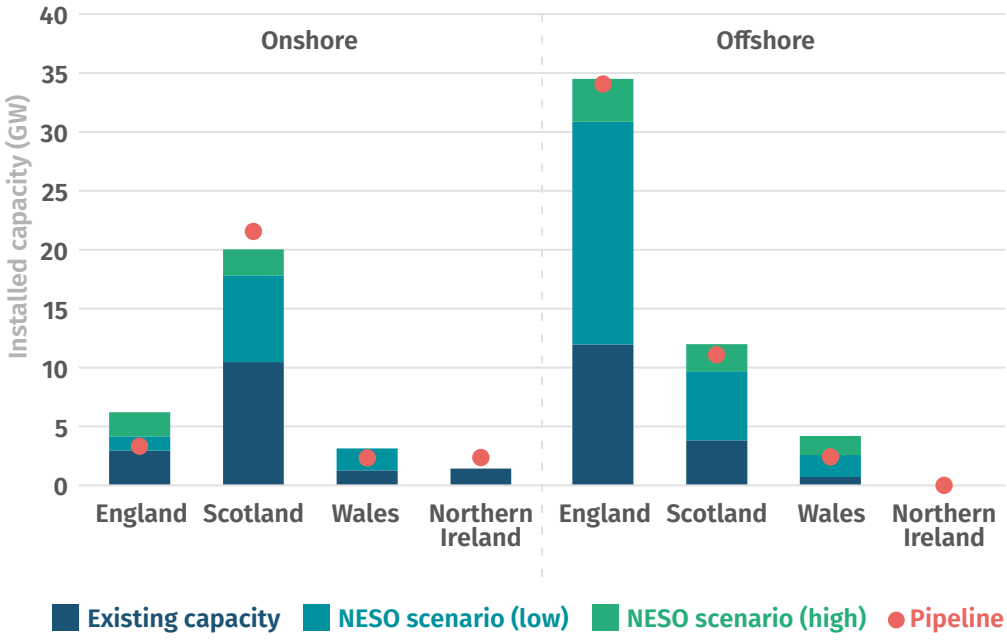
2. PROJECTED CONTRIBUTION FROM ENGLAND, SCOTLAND, WALES AND NORTHERN IRELAND

A significant proportion of the existing pipeline of wind projects that will contribute to the 2030 energy targets is located in the devolved jurisdictions. As figure 2.1 shows, onshore wind projects in the devolved jurisdictions account for 75–85 per cent of capacity needed for the UK's Clean Power 2030 target and over 95 per cent of the identified UK-wide pipeline. For offshore wind, devolved areas account for around 30 per cent of the target and a similar proportion of the pipeline.

FIGURE 2.1

NESO's estimates for onshore wind to deliver Clean Power 2030 across the UK are close to the current pipeline of projects

Estimated 2030 capacity



Source: Authors' analysis of NESO 2024 and RenewableUK 2024b
Note: 'Pipeline' estimate does not account for potential project attrition.

Population shares under the Barnett formula broadly determine the fiscal resources available to each devolved government. Relative to their population share, and hence to their resources, 2030 deployment will be much higher in the

devolved jurisdictions than in England. By 2030, deployment of onshore wind in England will, on NESO's (2024) scenarios, reach at most about 0.1GW per million people, while Scotland will host around 3.3–3.7GW and Wales 1.0GW. Northern Ireland already has around 0.9GW per million people. While the lion's share of offshore wind is due to develop off the coast of England, this will reach 0.5–0.6GW per million people, while in Wales it will reach 0.8–1.3GW and in Scotland 1.8–2.2GW.

DELIVERING THE PIPELINE OF PROJECTS ACROSS THE UK

Figure 2.1 suggests that projects in the pipeline due for completion by 2030 are broadly adequate to deliver NESO's Clean Power 2030 scenarios. But there are some caveats to this overall picture that the UK and devolved governments will need to take into account.

First, while the pipeline of onshore projects due for delivery in 2030 exceeds NESO's scenarios in Scotland, it falls slightly short in England and Wales. NESO's scenarios are not set in stone, but given they reflect a balance of factors, including network capacity, they are a valuable guide to where new projects may need to be added to the pipeline.

Second, while much of the pipeline needed to deliver for 2030 has already received planning permission, achieving the clean power mission will require additional projects to successfully navigate planning/consenting processes, discussed in more detail below.

Third, the vast majority of projects in the offshore wind pipeline to 2030 use fixed seabed foundations, with only around 1–1.5GW of floating projects expecting to deliver by 2030. NESO's scenarios do not identify a specific contribution from floating wind, but the UK Labour party, ahead of the general election, put forward a target of 5GW by 2030 (Labour 2024).

Fourth, in practice it is unlikely that the final capacity installed will reflect the capacity proposed in the pipelines for onshore and offshore wind. For example, separate analyses of the Scottish pipeline have previously estimated a 30–40 per cent 'attrition rate' for projects in Scotland – the amount of capacity that ends up being lost from a project – because either some projects will not go ahead or the original size of the project will shrink (Scottish government 2020; BVG Associates 2023). This may be due to factors such as:

- more challenging sea depths than anticipated
- planning consent not being granted
- commercial challenges emerging over the development period undermining viability.

Fifth, NESO's (2024) advice is clear that 2030 should be viewed as a milestone on a longer-term electricity system trajectory. While scenarios for the precise wind capacity needed in each nation differ, even the most ambitious estimates should not be regarded as an upper limit. Because electrification of heat and transport will continue to drive demand through the 2030s, the risk of overbuilding renewable capacity is low. In addition, geographical diversity is beneficial to keeping the electricity system in balance as weather patterns move across the UK (Regen 2022). Ensuring regulatory, policy and planning frameworks create an environment conducive to expanding and accelerating the pipeline will both counter the potential effects of attrition, and support wider decarbonisation post 2030. Ensuring the right environment is in place will, as we discuss below, necessitate close coordination across devolved and reserved policy areas.

3. COORDINATION AS A JOINT CHALLENGE

One of the main reasons a coordinated approach between the devolved administrations is so important is because a wind project's journey from conception to completion will interact with a range of stakeholders, laws, policy and frameworks within both the devolved administrations and the UK government.

In this chapter, we set out the existing interactions between various devolved and reserved powers, which an energy developer will need to navigate to bring a project to completion. We then suggest a framework to understand how a coordinated energy strategy could identify where barriers exist and who has responsibility for them.

NAVIGATING BETWEEN DEVOLVED AND RESERVED POWERS

As table 3.1 shows, bringing a wind project from conception to completion requires working with both the devolved administrations and the UK government.

TABLE 3.1

Different stages of a wind project for each UK nation

Stage of wind project	Scotland	Wales	Northern Ireland	England
Leasing (offshore wind only)	Led by Crown Estate Scotland; also requires developers to have a 'Supply Chain Development Statement' in place.	Leasing through The Crown Estate.	In 2023, the Department for the Economy and The Crown Estate published a statement of intent to commit to leasing in the future.	Leasing through The Crown Estate.
Development	Developers require confidence in the long-term pipeline of CfDs and the availability of local infrastructure (eg grid connections, port infrastructure and supply chains). Most of these considerations will require close collaboration with the devolved administrations.			
Consenting	Local planning authorities manage projects under 50 megawatts (MW). The Scottish government's Energy Consents Unit handles projects over 50MW. Planning guidelines recognise the need for renewables and place weight on their contribution to climate and energy targets.	Local planning authorities handle onshore wind projects under 10MW (and soon under 50MW). Welsh ministers must approve projects above this threshold. For offshore wind, projects between 1MW and 350MW require Welsh government approval, over which consenting sits with the UK government and the secretary of state for energy security and net zero. For onshore wind, presumption is in favour of pre-assessed areas for wind development.	Projects under 30MW require approval from local planning authorities. Projects over 30MW require approval from the Northern Irish department for infrastructure. Onshore wind farms are only permitted if there is no "unacceptable impact".	Offshore projects require secretary of state approval through the Nationally Significant Infrastructure Project (NSIP) regime. Onshore wind projects currently need planning permission from the local planning authority regardless of size, although the government has recently committed to consulting on bringing large onshore wind projects into the NSIP regime.
CfD auction	Arranged and administrated by the UK government.		Energy policy is fully devolved (apart from nuclear energy) but must consider impact on the UK electricity market. Northern Ireland does not currently have any CfD support for its renewable energy projects, although it is currently consulting over the development of one.	Arranged and administered by the UK government.

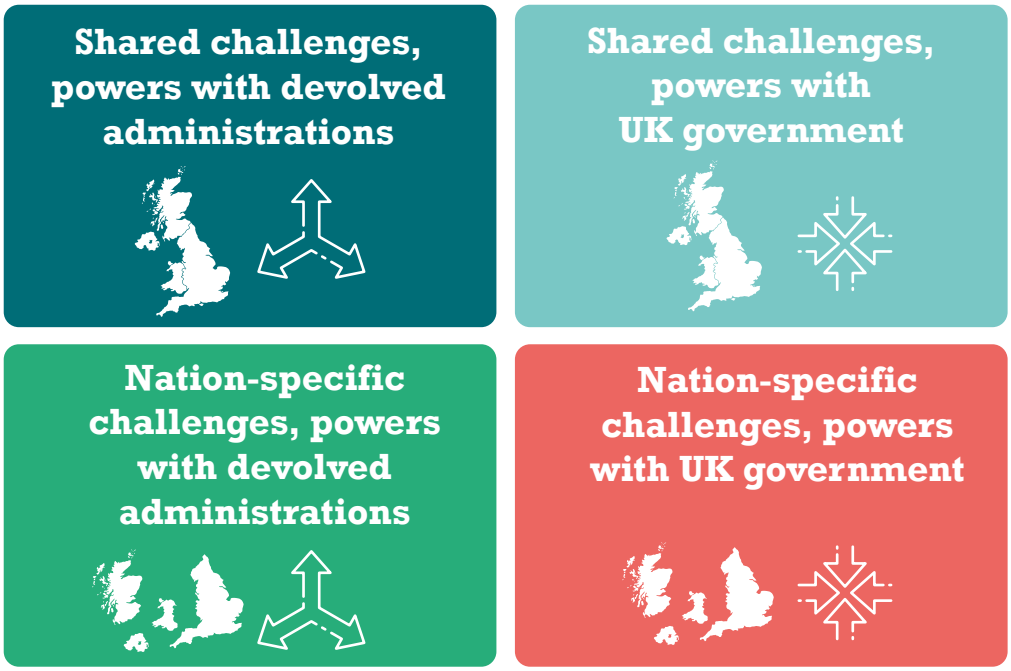
Sources: Crown Estate Scotland 2023; DfE 2023, 2024a; Renewable Energy World 2023; MHCLG 2024; and Rankl 2024

SETTING OUT A FRAMEWORK FOR RESOLVING BARRIERS

For a coordinated energy strategy between all four nations of the UK to be realised, it is critical to understand where specific bottlenecks exist in the journey set out above and who is responsible for resolving them. To this end, in chapters 4–7, we deploy the framework presented in figure 3.1 to determine the barriers to deployment that all governments in the UK share, as well as the barriers within each individual devolved administration.

FIGURE 3.1

Framework for understanding wind deployment challenges and powers



Source: IPPR

In practice, we recognise that there will always be some overlap in responsibilities. For example, powers to increase capacity within local planning authorities and train up local workforces sit with the devolved administrations. However, the UK government sets the overall budget for these activities. Conversely, the regulation of electricity networks is exercised at UK government level, but devolved planning powers shape the geographical development of these networks and their local impacts. While the following chapters set out where bottlenecks are found across different tiers of government, in chapter 8 we recognise the overarching importance of and need for closer collaboration and cooperation between all four nations of the UK.

4. SHARED CHALLENGES

In this chapter, we assess shared challenges within the devolved administrations' influence, and those that require UK government intervention.

SHARED CHALLENGES, WITHIN DEVOLVED GOVERNMENT INFLUENCE

Lack of capacity across the planning system, which slows down consenting

Planning systems for renewable energy across the UK include many people and organisations, including the UK and devolved governments, statutory nature conservation bodies[1] – government bodies that review the environmental impact of planning applications for wind projects – planning inspectorates and local authorities. Across all administrations, stakeholders identified limited capacity as a major bottleneck in the consenting process for wind projects. This is a challenge that is apparent both in the devolved jurisdictions and at a UK level. Many stakeholders also reported that public sector workers being attracted to the private sector, often due to better pay, further exacerbates the capacity challenge.

RECOMMENDATION WITHIN THE DEVOLVED ADMINISTRATIONS' POWERS THAT REQUIRES UK GOVERNMENT FUNDING AND COORDINATION

- Increase funding to every devolved administration as part of a recruitment drive, coordinated with the devolved administrations, to increase staffing capacity within the UK Planning Inspectorate, devolved government departments, statutory nature conservation bodies and local planning authorities.

Difficulty attracting the right skills in the right quantities

In addition to specific challenges with boosting public sector capacity to speed up the consenting process, there is also a broader need to attract and retain the right skills within industry, and all devolved administrations have some powers to influence this. As IPPR has previously highlighted, there are fundamental issues within the UK skills system, which are common across the devolved administrations (Emden and Murphy 2019; Emden et al 2020). These include the following:

- **Lack of funding for adult retraining and apprenticeships.** By 2024/25, spending on adult education and apprenticeships will have fallen by 25 per cent compared to 2010/11 (Sibieta et al 2022).
- **Length of retraining.** Retraining for workers already in employment can be prohibitively time-consuming and/or costly, particularly for workers hired as contractors who would have to shoulder the cost themselves.
- **Lack of a pipeline for skills.** Certain roles such as electrical engineers are in short supply, meaning there is high competition between many sectors

1 These are Natural England, Natural Resources Wales, NatureScot, and both the joint nature conservation committee (JNCC) and the Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland. The role of each will depend on whether the project is onshore, inshore or offshore.

but little incentive for in-house training in case the worker then moves to another company. Training for many of these highly skilled roles can also take a long time and requires synchronising policy to support the development of both project pipelines and training within higher educational institutions in anticipation of these projects being built. Without this joint approach, the industry faces a lag between supply and demand of skilled workers. Severe shortages in trainers and teachers in further education colleges, which the Association of Colleges has called the worst staffing crisis in two decades (AoC 2022a), compound this problem. This is particularly severe for construction and engineering curricula in England, with a recent survey finding that two-thirds of construction curricula and 60 per cent of engineering curricula had reported both recent and persistent (defined as more than three months) staff vacancies (AoC 2022b).

RECOMMENDATIONS WITHIN THE DEVOLVED ADMINISTRATIONS' POWERS THAT REQUIRE UK GOVERNMENT FUNDING AND COORDINATION

- Work with existing initiatives within the devolved administrations to ensure skills for wind manufacturing, installation, maintenance and repair are included within local college curricula and vocational training courses.
- Work with the devolved administrations to deliver a comprehensive workforce plan for the offshore wind sector, which sets out the skills needed and the support and training that each UK nation will provide to support training and retraining and guarantee decent jobs.

Citizen engagement in renewable energy projects and grid upgrades

Stakeholders we spoke to, particularly those in Wales and Northern Ireland, cited how local concerns over the development of renewable energy projects and grid infrastructure, often related to visual impact, can sometimes stymie planning approval. To address this, in Wales, the voluntary framework for developers to set out community benefits can help to encourage local support, as well as the newly created development company, Trydan Gwyrdd Cymru, which aims to deliver public benefit for renewable energy projects (Welsh government 2024a).

LEARNING FROM WALES THAT CAN BE APPLIED TO ALL UK JURISDICTIONS

- Follow Wales' lead with development company, Trydan Gwyrdd Cymru, which could develop private partnerships where local government and communities take a stake (that is, not just private finance initiatives of the past because the state also takes a share of the profits).

In addition, recent public opinion data suggests that the devolved administrations may be acting over-cautiously. In the most recent Public Attitudes Tracker from DESNZ, when asked how happy or unhappy respondents would be if an onshore wind farm was built in their area, Welsh and Northern Irish respondents were among the least oppositional, with only 12 and 9 per cent respectively responding that they would be fairly or very unhappy. Indeed, Welsh respondents in particular were the most actively supportive of any UK nation, with 49 per cent saying they would be fairly or very happy (DESNZ 2024b).

While this does not mean that local residents' concerns should be ignored, this polling does suggest that closer citizens' engagement, for example through citizens' juries, could help to cut through any political resistance or hesitance and either reveal more favourable public support than expected, or help to address, alleviate and make the positive case for wind and grid upgrades in people's local area.

RECOMMENDATION WITHIN THE DEVOLVED ADMINISTRATIONS' POWERS THAT REQUIRES UK GOVERNMENT FUNDING AND COORDINATION

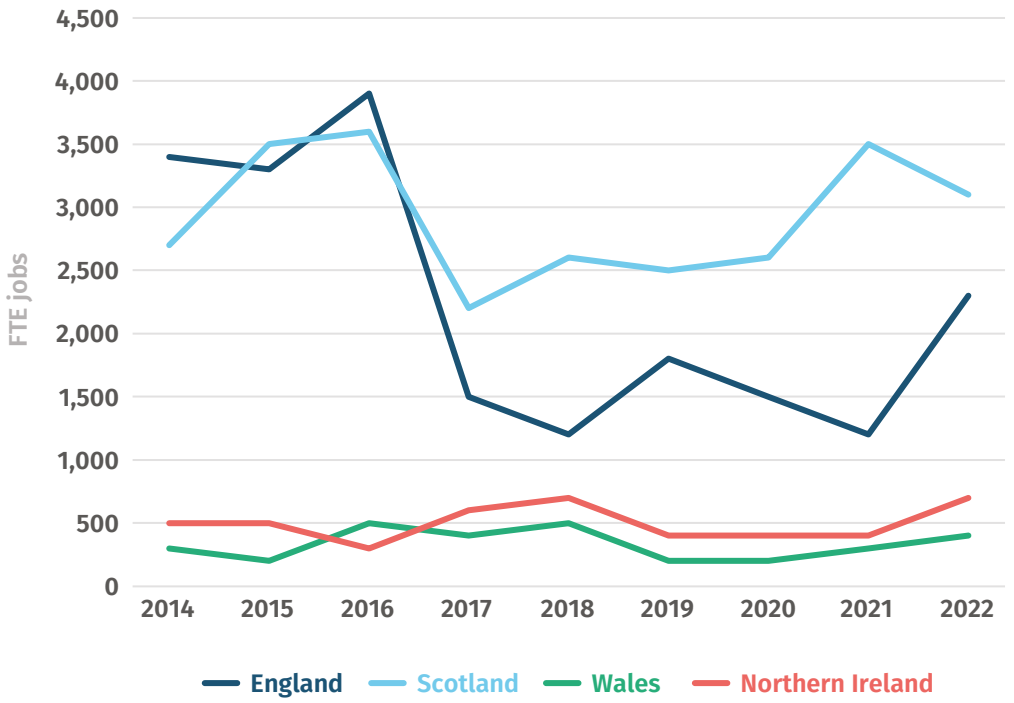
- Introduce citizens' juries that include diverse voices, to provide local perspective on political debates over new developments and grid upgrades.

SHARED CHALLENGES, WITHIN UK GOVERNMENT INFLUENCE

If the UK government is to deliver its ambition for green growth to create good-quality jobs and a boom for local economies, a coordinated industrial strategy between all four UK nations is essential. Indeed, historical examples show how a lack of coordinated industrial strategy within Westminster can hurt individual UK nations. As figure 4.1 shows, shortly after the onshore ban was introduced in 2015, jobs in the industry plummeted in England and Scotland and, were it not for a supportive planning environment in Scotland, even more jobs could have been lost.

FIGURE 4.1

The withdrawal of subsidies for onshore wind across the UK damaged the industry



Source: ONS 2024

Encouragingly, a degree of collaboration and coordination is already starting to take place. For example, there is a great deal of overlap between the UK government's recent *Industrial Strategy* green paper and the Scottish government's recent *Green Industrial Strategy* (DBT 2024; Scottish government 2024a), as well as recent announcements from both governments to say that they will collaborate over the delivery of GB Energy (DESNZ and Scottish government 2024).

Nevertheless, stakeholders we interviewed noted the considerable need for more anticipatory investment into port infrastructure, grid networks and local manufacturing supply chains to facilitate the substantial pipeline of wind projects, all of which fall under the UK government's responsibility but are often the cause of many bottlenecks to renewable energy plans within the devolved administrations. It will therefore be essential to deliver a green industrial strategy that coordinates between and collaborates with all four UK nations.

RECOMMENDATIONS FOR THE UK GOVERNMENT AND DEVOLVED ADMINISTRATIONS

- Deliver a comprehensive green industrial strategy that ensures coordination with and collaboration between all four UK nations.
- Through the joint energy acceleration strategy, work with the Scottish government to clarify how UK government public investment can be aligned with the Scottish Green Industrial Strategy.

Inadequacy of port infrastructure and vessel access

Retrofitting ports and securing installation vessels are the prerequisites for large-size offshore wind manufacturing sites. However, the timeline for investing in port infrastructure does not synchronise well with wind deployment. Upgrading port infrastructure and developing manufacturing facilities can take three to four years and previous IPPR research highlights how there will soon be a shortage of vessels that can transport the newest (and largest) turbines (Gasperin and Emden 2024).

By contrast, wind developers who win Contracts for Difference (CfD) will often want short-term leases that only last long enough to deploy their projects. The win/lose nature of the contracts also means developers tend not to work with ports until they have secured a CfD, at which point they tend to gravitate towards ports that already have appropriate infrastructure (Pick 2023). This habit harms the business case for investment in offshore wind in Wales in particular, where port infrastructure inhibits investment in future projects.

RECOMMENDATIONS FOR THE UK GOVERNMENT

- Develop a national offshore wind vessel fleet, which developers can hire to generate income and speed up delivery.
- Introduce capital grants and a long-term support mechanism for port infrastructure upgrades.

Electricity grid capacity

The electricity grid requires significant physical upgrades. For example, a project can take up to 15 years from conception to operation in Wales in large part due to a lack of grid connectivity (NICW 2023). In Northern Ireland, some industry estimates suggest that wind developers are facing a 'constraint crisis', where they are unable to generate 25 per cent of the time due to a physical lack of grid capacity to take all the electricity that wind farms produce.

This lack of anticipatory investment creates a negative feedback loop whereby a lack of grid infrastructure is discouraging the offshore industry from developing new projects and in turn the National Grid is disincentivised to upgrade the grid due to a lack of demand (Welsh affairs committee 2022). This is a particularly acute problem in Wales (especially in mid-Wales) and Northern Ireland where the lack of existing infrastructure means these nations will need to make more anticipatory investments compared to England and Scotland in order to compete for CfDs and unlock opportunities. In the meantime, in Northern Ireland, the business case for wind power is currently suffering from the fact that Scotland already has CfDs and better connectivity and therefore exports cheap, surplus electricity through the Moyle interconnector.

Investment in grid capacity is also challenging in the current environment where Ofgem has a responsibility to minimise the impact of new investment on consumer bills, while private ownership of the grid requires a substantial rate of return for shareholders (Pick 2023). While the introduction of the Accelerated Strategic Transmission Investment (ASTI) framework, which identifies priority grid infrastructure upgrades, is welcome (Ofgem 2023), in tandem Ofgem also needs to take a longer-term view on the impact of upgrading networks on energy bills, while also taking a stricter approach to permissible profits within RIIO (Revenue = Incentives + Innovation + Outputs) regulations.

RECOMMENDATIONS FOR THE UK GOVERNMENT

- Set out a UK-wide communications campaign alongside the devolved administrations to make the positive case for new projects and grid upgrades and why they are needed.
- Accelerate the rollout of Accelerated Strategic Transmission Investment (ASTI) grid upgrade projects, working closely with the devolved administrations on devolved areas such as planning.

Domestic manufacturing

Despite being a global leader in wind installation, the UK has had much less success in developing local supply chains (Gasperin and Emden 2024). For example, previous IPPR research shows how the UK could have created approximately 98,000 more jobs in the UK if it had built up its manufacturing base to match the importance that employment in wind manufacturing represents to the Danish economy (Emden and Murphy 2023).

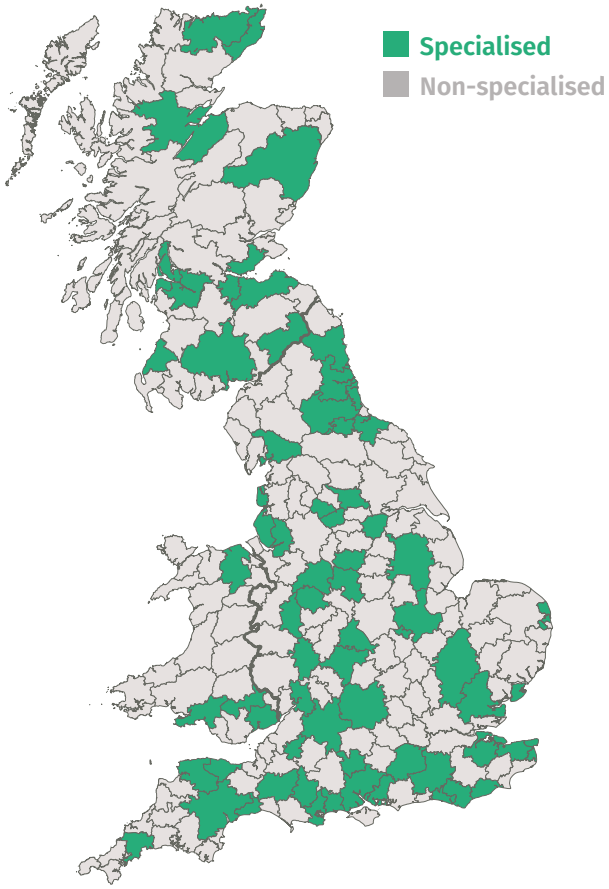
Beyond employment, previous research from IPPR also shows how demand for wind turbine components will be so high globally that developing a domestic manufacturing base will be critical to avoiding supply-chain shortages – not even China will be able to supply the global market. However, in every major component of the wind supply chain – nacelles, blades, towers, foundations, cables – the UK does not appear among the top three European nations in terms of manufacturing capacity (Gasperin and Emden 2024).

IPPR analysis further demonstrates how the mixed picture for domestic manufacturing plays out across England, Scotland and Wales and shows why a green industrial strategy that coordinates between each UK nation is so important (Narayanan et al 2024). For example, several coastal regions in Scotland and some areas in south Wales such as Port Talbot have a relatively strong comparative advantage in green manufacturing relative to other regions in Great Britain (see figure 4.2).

FIGURE 4.2

There are pockets of south Wales and north Wales with a regional comparative advantage in green manufacturing

Travel-to-work areas with regional comparative advantage in green manufacturing



Source: Narayanan et al 2024

Indeed, in Scotland this 'green manufacturing' primarily relates to wind manufacturing and the Scottish government has made developing domestic wind supply chains a key priority, estimating that offshore wind supply chains could support between 10,000 and 50,000 jobs. In its most recent seabed leasing round, The Crown Estate Scotland required Scotwind bidders to commit to Supply Chain Development Strategies, setting out the scale of their anticipated spend on procurement from Scottish, UK, European and other international suppliers. The Scottish government's Green Industrial Strategy also plans to invest "up to" £500 million in offshore wind supply chains over five years and capture first-mover advantages on floating offshore wind (Scottish government 2024a).

LEARNING FROM SCOTLAND THAT CAN BE APPLIED TO ALL UK JURISDICTIONS

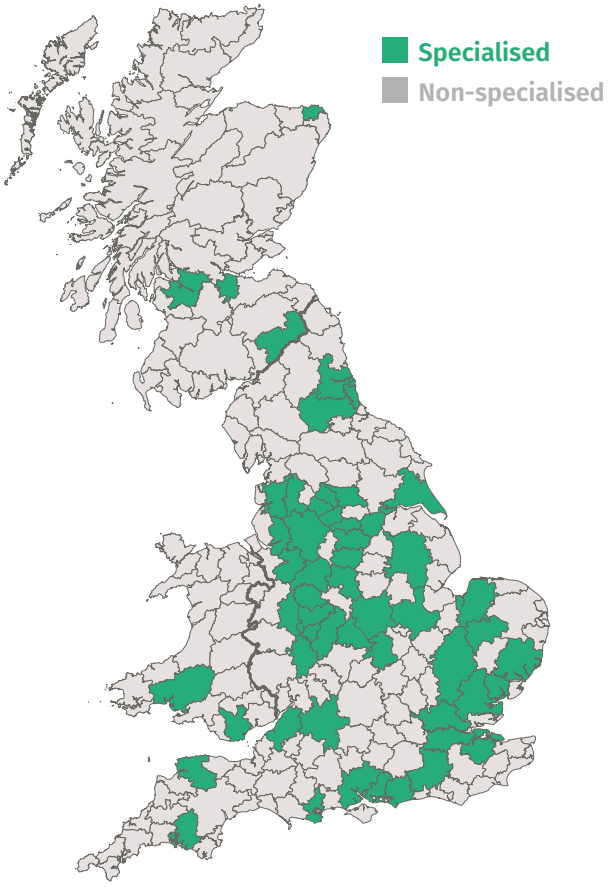
- Follow Scotland's lead and require Supply Chain Development Statements from wind developers to give certainty of future demand to manufacturers and in turn increase the proportion of wind projects using local content.

Additionally, IPPR analysis shows there are pockets of south Wales and central and eastern Scotland with a high potential to adapt their manufacturing capabilities relatively quickly specifically to support wind manufacturing (see figure 4.3).

FIGURE 4.3

There are relatively few areas in Wales with manufacturing capabilities that could quickly adapt to support a domestic wind supply chain apart from Llanelli and Cardiff

Travel-to-work areas in the top quartile for employment in industries similar to wind manufacturing



Source: Narayanan et al 2024

However, while commitments from the Scottish government are promising, the amount of investment it can directly mobilise through its own budgets and the Scottish National Investment Bank is limited. There are clear benefits to be gained through the utilisation of the UK government's capacity and coordinated investment between both governments – as demonstrated in recent collaboration to secure new investment in the Sumitomo cable facility in northern Scotland.

> ***"The UK and Scottish Government efforts to mitigate emissions are mutually dependent on one another. The policy, regulatory, and investment decisions made have implications for one another and the emissions produced in reserved and devolved sectors impact the two territorial targets. Coordination and cooperation by the UK and Scottish Governments will be required to succeed in reducing emissions."***
>
> Scottish Fiscal Commission 2024

Furthermore, beyond south Wales, there is a relative absence of either existing wind manufacturing sites or existing businesses in Wales that could adapt their facilities quickly. Without UK government support and coordination to establish a manufacturing base in Wales, there is a serious risk that projects either do not proceed or rely heavily on overseas supply chains, resulting in lost opportunities for local job creation and diminished economic benefits for local communities.

With this challenge in mind, we welcome the UK government's proposals to take forward the Clean Industry Bonus (formerly Sustainable Industry Rewards) to 'top up' CfD contracts for offshore wind developers that invest in sustainable, domestic supply chains (DESNZ 2024c). The next step will be to apply these kinds of bonuses to all renewable technologies and clarify how they will align with the British Jobs Bonus to ensure investment in local supply chains translates into the creation of good-quality jobs.

RECOMMENDATIONS FOR THE UK GOVERNMENT

- Introduce capital grants for investment in domestic wind manufacturing.
- Expand Contracts for Difference (CfD) bonuses to all renewable technologies and clarify the role the British Jobs Bonus will play as part of domestic supply-chain investment to deliver high-quality local jobs.

5. WALES

RENEWABLE ENERGY TARGETS IN WALES

The Welsh government has a target for renewable electricity generation to reach the equivalent of 70 per cent of electricity demand in Wales by 2030, and to reach 100 per cent by 2035. It also has a target of at least 1.5GW of renewable energy to be locally owned by 2035 (Welsh government 2023a).

According to industry estimates, the current pipeline for wind projects in Wales to deliver by 2035 is around 9GW, which, with no attrition, would take Wales approximately 95 per cent of the way towards its renewable electricity consumption targets[2] (RenewableUK Cymru 2023). However, according to industry estimates, if the UK government were to accelerate plans for projects in the Celtic Sea, between England and Wales the two nations could deliver approximately 12GW of additional offshore wind capacity beyond 2035.

PROGRESS BEING MADE TOWARDS TARGETS

The Welsh government's approach to energy policy attempts to balance ambitious deployment of renewable generation with a commitment to ensuring new developments benefit local communities and preserve the local environment (CCC 2023). In 2021, the Welsh government introduced a new national development framework, *Future Wales*, which has helped encourage and restore some confidence in renewable energy project applications, including onshore wind, while attempting to balance and minimise impact on the environment (Welsh government 2021; RenewableUK Cymru 2023).

In addition, the Welsh government has set out voluntary best practice guidance for ensuring local communities are engaged, involved and directly benefit from renewable energy project applications. For example, the guidance suggests that developers submit a Collaborative Benefits Report alongside their main planning application, setting out the ways in which local communities may benefit, such as offering partial shared ownership of a project (Welsh government 2022a).

Along a similar theme, earlier this year the Welsh government introduced its state-owned development company, Trydan Gwyrdd Cymru (Welsh government 2024a). This organisation will have responsibility for developing potential sites for renewable projects – particularly onshore wind – (for example by conducting all impact assessments and securing planning permission) and could then look to sell these projects on to private developers (for example through taking a minority equity stake in projects). The proceeds of these arrangements could then be reinvested back into the community.

Finally, in 2025, the Welsh government's new Infrastructure (Wales) Act 2024 is expected to come fully into force to streamline the consenting process for infrastructure projects, including onshore and offshore wind developments, by introducing a 'one-stop shop' approach whereby projects seeking consent and approval only have to make one application (Welsh government 2023b). The recent announcement to delegate decision-making on all renewable energy schemes up

2 Based on 27.5 terawatt hours (TWh) produced, meeting a projected 29TWh of demand by 2035 (acknowledging that this demand figure may be an underestimate).

to 50MW to planning inspectors rather than a minister is intended to cut waiting times by up to three months until the new Act comes into force. Industry has welcomed the move. And it demonstrates the Welsh government's commitment to speeding up consenting.

CHALLENGES SPECIFIC TO WALES, WITHIN THE DEVOLVED ADMINISTRATION'S INFLUENCE

Despite progress being made, there are several areas where the Welsh government could go further, using the existing devolved powers at its disposal. We discuss these below.

Lack of a high-level energy strategy

During a renewable energy deep-dive exercise in 2022, the Welsh government committed to introducing a national energy plan by the end of this year (Welsh government 2022b). The National Infrastructure Commission for Wales supported this recommendation in October 2023 (NICW 2023; Welsh government 2024b). Despite setting out ambitious targets for renewable electricity generation and consumption, there have been no accompanying energy strategies or action plans that set out how these targets might be delivered, for example by addressing some of the key policy issues that we discuss below and communicating the importance of renewable development and accompanying grid infrastructure to the public.

RECOMMENDATION FOR THE WELSH GOVERNMENT

- Set out a clear Welsh Renewables Strategy with explicit minimum capacity targets for solar, onshore wind and offshore wind to establish market confidence.

Lack of clarity in planning policy

While the Infrastructure (Wales) Act 2024 attempts to streamline the consenting process, current planning policies can be open to interpretation and can often appear contradictory, in part shaped by local resistance to development in rural parts of Wales, which becomes reflected in planning frameworks. Specific inconsistencies within planning policy are discussed below.

- **There is a lack of national policy statements.** A relative lack of national policy statements that could provide consistency and clarity to decision-makers instead means that planning policies are more open to interpretation and can result in guidance that appears to contradict itself. For example, the *Future Wales* national development framework instructs planning authorities to give "significant weight" to renewable energy project applications but also requires all large-scale wind projects, solar farms and grid infrastructure upgrades to have minimal visual impact on local communities, in an effort to reflect local resistance to wind and grid developments (Welsh government 2021).
- **Pre-assessed areas for onshore wind do not align with site suitability.** In an effort to encourage onshore wind development, the Welsh government has mapped out 'pre-assessed areas' to try to speed up planning approval for potential onshore wind projects. However, according to some industry stakeholders, large parts of these areas are not currently technically suitable locations for onshore wind or have no grid connections.
- **There is a blanket approach to development on peatland, agricultural land and biodiverse sites.** Current planning and land-use policies conflict with the Welsh government's renewable energy ambitions. This impacts decision-making and undermines the dual opportunity to develop renewable energy

projects and attract private investment into managing habitats, restoring areas and enhancing biodiversity. For example, the current blanket approach to objecting to development on peatland on the basis of chapter 6 of *Planning Policy Wales* on distinctive and natural places (Welsh government 2024c), without considering peat quality and depth, threatens most of the Welsh wind portfolio, including Trydan Gwyrdd Cymru projects. It also hampers the opportunity to reverse the carbon leakage of degraded peatland. This role could be particularly important for peatland, as the climate change committee (CCC 2023) has assessed that the rate of peatland restoration in Wales is too slow, despite a recent increase in ambition.

RECOMMENDATIONS FOR THE WELSH GOVERNMENT

- Introduce policy statements through the incoming Infrastructure Consent regime to support decision-making.
- Clarify planning guidelines to presume in favour of onshore wind projects that fall outside of pre-assessed areas.
- Update Welsh planning policy to presume in favour of development on degraded land, conditional on developers contributing to its restoration.

CHALLENGES SPECIFIC TO WALES, WITHIN THE UK GOVERNMENT'S INFLUENCE

Issues with airport radar systems

Stakeholders we interviewed noted concerns over the risk that applications for onshore wind farms would be rejected due to potential interference with airport radar systems. Indeed, this objection was raised this year against a project in Pembrokeshire, although it may subsequently receive approval (Sinclair 2024). One potential solution would be to upgrade radar systems with 'wind farm-compliant technology', but the approval for funding these upgrades sits with the Civil Aviation Authority, housed in the Department for Transport. In the meantime, developers face long-term unknown costs associated with mitigating their wind farms in relation to radars and lighting. While the issue is being resolved in Scotland, there remains a lack of engagement between Wales and the UK government in this area.

RECOMMENDATION FOR WALES, POWERS RESERVED WITH THE UK GOVERNMENT

- The UK government should work with the Civil Aviation Authority to ensure wind-compliant radar becomes the standard upgrade.

6. SCOTLAND

RENEWABLE ENERGY TARGETS IN SCOTLAND

The Scottish government's current ambitions for wind are to increase onshore capacity to 20GW, and offshore capacity to 8–11GW, both by 2030 (Scottish government 2023a). By comparison, NESO's (2024) scenarios envisage a similar level of onshore wind (18–20GW) and a slightly higher range for offshore wind (10–12GW) by 2030. The Scottish government's level of ambition is set out in its draft Energy Strategy and Just Transition Plan (Scottish government 2023a), which is due to be finalised shortly.

PROGRESS BEING MADE TOWARDS TARGETS

In total, 63 per cent of the UK's onshore wind capacity is located in Scotland.[3] In part this reflects the relatively high potential across Scotland's disproportionate share of the UK's land and sea. But it also reflects the Scottish government's choice to use devolved powers to support renewables. Policy support for onshore wind has grown over the past decade, despite the previous UK government's policy stance against the technology (across both devolved and reserved matters).

Planning is central to the Scottish government's positive impact on renewables. The fourth and latest iteration of Scotland's National Planning Framework (NPF4) combines several planning functions, establishing support for onshore wind across planning policy, spatial strategy and national priorities (Scottish government 2024b).

NPF4 sets out a clear list of issues that developers are expected to consider, helping them understand which projects are worth working on through the pre-planning phase and what issues they will need to mitigate. The framework also acknowledges that renewables may have significant landscape and visual impacts, and that these subjective issues, which in the past have prevented projects going ahead, will generally not be grounds for refusal where impacts are local or appropriate design mitigation has been applied. It also places significant weight on meeting climate and renewable energy targets, tipping decisions in favour of renewable development (Collar 2024; McGovern 2024). In addition, industry stakeholders have praised the Scottish government's openness to improving planning guidance, for example by clarifying the meaning of expressions such as 'maximising economic net-gain'.

Just as reserved powers over radar have affected wind developments in the devolved jurisdictions, distinctive reserved issues have impacted wind deployment in Scotland. The Eskdalemuir seismic monitoring station in the Scottish Borders forms part of the UK's obligations under the Comprehensive Nuclear-Test-Ban Treaty. The Ministry of Defence sets limits to wind farm development in the area to prevent excessive seismic noise compromising the array's function. With those limits reached, the Scottish government, working with industry, identified scope to revise the limits in light of real-world data from operational wind farms (Scottish government 2022). The newly formed UK government Onshore Wind Industry Taskforce, which is intended to collaborate with Scottish government, provides a forum through which this and other issues can be considered (DESNZ 2024e).

3 Authors' analysis of DESNZ (2024d).

LEARNING FROM SCOTLAND THAT CAN BE APPLIED TO ALL UK JURISDICTIONS

- Follow Scotland's lead on the fourth National Planning Framework (NPF4), with clear policy statements and planning guidelines that recognise the need for wind development in order to deliver climate goals and support decision-making.

Offshore wind in Scotland has reached a smaller share of total UK capacity, at just over 20 per cent (ibid). In part this is a reflection of the timing of seabed leasing and the devolution of The Crown Estate in 2017, with the new Crown Estate Scotland's first leasing round (Scotwind) launching in 2022. In the run-up to its launch, Scotwind was anticipated to result in around 10GW of offshore wind (Scottish government 2020). Developers bidding for leases, however, proposed a total of 28GW (Crown Estate Scotland 2022). While the Scotwind auction raised around £750 million for the Scottish government, it has nonetheless attracted controversy, with some analysts estimating that far more could have been raised with an alternative pricing strategy (Dalzell 2023).

CHALLENGES SPECIFIC TO SCOTLAND, WITHIN THE DEVOLVED ADMINISTRATION'S INFLUENCE

While planning policies in Scotland are favourable to renewables, challenges in delivery remain. The planning workforce is increasingly strained by downward pressure on its capacity and upward pressure on the demands of the planning system, with the latter including the Scottish government's commitment to reduce the time it takes for large renewable projects to receive consenting decisions to under 12 months (or 24 months if there is a public inquiry) (Scottish government 2023b).

In common with the rest of the UK, the public side of the planning system in Scotland has to compete with the private sector for skilled and experienced professionals, and do this in the context of squeezed budgets (Scottish government 2024c). The ability of planning systems, both onshore and marine, to reach timely and robust decisions and ensure the impacts of renewables development are appropriately managed, is therefore a key risk to any attempt to accelerate the pace of deployment in Scotland. Similarly, faster deployment of onshore wind will require Police Scotland to manage a higher number of "abnormal loads" to manage the impact on the road network of transporting large wind components (BVG Associates 2024).

The Scottish government has collaborated with industry to address such issues in onshore wind through a "sector deal" (Scottish government 2023b). This process has set in train initiatives to improve the pace and efficiency of the development process, including standardisation of environmental impact reports, industry collaboration to promote supply-chain opportunities and commitments to make community benefits packages more robust.

The sector deal also identifies a number of issues for the public sector to address, which relate to both reserved and devolved powers. These include the interaction between wind farms and aviation (paralleling similar issues in Wales, described above) and the policy vision for onshore wind after 2030, neither of which the Scottish government can resolve alone. They will require collaboration with the UK government.

Delays in strategies and frameworks

Over the past decade, Scottish government policy frameworks relating to renewables deployment have often been delayed. This continues to be an issue, with the Energy Strategy and Just Transition Plan so far being in draft status for 23 months, and the second National Marine Plan (NMP2), which will update Scottish policy underpinning licensing decisions, similarly delayed.

In practice, these delays are not currently holding up renewables development. For example, interviewees credit the Scottish government with a pragmatic approach to offshore licensing, using the existing policy framework to make decisions rather than introducing delays while the new policies are developed.

However, delays to these policy frameworks can translate into uncertainty and risk for developers. For example, the development of offshore wind may require investment to enhance ecological networks to offset damage that windfarms cause ('compensation' measures). Given the number of offshore developments, the Scottish government at a collective level may most effectively manage them. Delays in policy frameworks here leave developers uncertain whether they need to pursue their own compensation projects or can rely on plan-level projects. Planning frameworks, both onshore and offshore, refer to climate and energy targets. Demonstrating the case for allowing a particular development to go ahead, particularly if it has negative impacts, which are to be balanced against its contribution to meeting targets, depends on the level and timing of those targets and the extent to which other developments are likely to collectively deliver.

Of course, offshore wind developers are well able to handle these risks and uncertainties. The issue is not so much that delays in Scottish policy threaten the ultimate viability of offshore projects, but that they introduce potential hesitancy on the part of developers, while clean power requires acceleration.

In addition, clarity on the relationship and interdependencies between Scottish and UK government policies and strategies would help close down uncertainties that developers face. One specific example is the use of Marine Recovery Funds (MRFs) – collective pots into which developers would pay to fund ecological compensation measures. While the UK government's Energy Act 2023 enabled these, they are yet to be implemented, and as yet how MRFs will operate and interact across the devolved jurisdictions is unclear. Industry stakeholders cite this as an issue where delays are holding back development.

RECOMMENDATIONS FOR THE SCOTTISH GOVERNMENT

- Finalise the Energy Strategy and Just Transition Plan. As part of that, ensure targets are ambitious enough for deployment in Scotland to play a full role in achieving the clean power mission. This should include mapping out the interactions between UK and Scottish policies and a commitment to refreshing this mapping as policies develop.
- Ensure rapid completion of the National Marine Plan 2 (NMP2) and refresh the Sectoral Marine Plan for renewable energy. This should include policy alignment with other parts of the UK where appropriate and prioritise opportunities for plan-level strategic compensation to deal with the impact on habitats.
- Continue work on making sure the planning and consenting systems are fit for purpose, including ensuring they are adequately resourced – both financially and with a strategy to ensure the pool of trained planners working in the public sector is large enough to manage the demands arising from renewable energy acceleration.

7. NORTHERN IRELAND

RENEWABLE ENERGY TARGETS IN NORTHERN IRELAND

The Climate Change Act (Northern Ireland) 2022 establishes a renewable electricity consumption target of 80 per cent by 2030, an increase from the 70 per cent originally set out in the Energy Strategy for Northern Ireland in 2021 (Northern Ireland executive 2021). In addition, the government in Northern Ireland is developing an Offshore Renewable Energy Action Plan, which will set a target to develop 1GW of offshore wind capacity from 2030 (DfE 2022).

On the other hand, the wind industry estimates that the pipeline for wind projects in Northern Ireland could bring the total as high as 2.4GW onshore and 3.2GW offshore, suggesting Northern Ireland has the potential to go much further in ambition than the targets it currently proposes.

PROGRESS BEING MADE TOWARDS TARGETS

To meet Northern Ireland's targets, the Department for the Economy published its latest Energy Strategy Action Plan in March 2024, which made numerous commitments, including establishing delivery partners to increase onshore wind deployment and conducting environmental and habitat impact assessments in the Northern Ireland Marine Area to set the stage for seabed leasing for offshore wind projects (DfE 2024b).

In addition, in 2023, the Department for the Economy and The Crown Estate published a joint statement of intent to commit to carry out leasing for offshore wind in Northern Ireland in future, although none has yet taken place (DfE 2023). Industry stakeholders also note that if this does not happen by 2025, it is very unlikely that any projects will be operational in Northern Ireland by 2030 (Kenny 2023).

However, as we discuss below, many challenges remain to attract investment and deliver on the substantial pipeline of potential projects.

CHALLENGES SPECIFIC TO NORTHERN IRELAND, WITHIN THE DEVOLVED ADMINISTRATION'S INFLUENCE

Challenges in working through the planning system are not unique to Northern Ireland. However, industry stakeholders have expressed concern over considerations within a recent review of regional strategic planning policy. In particular, they have cited how (RenewableNI 2023):

- the planning guidelines do not give sufficient weight in favour of wind developments
- only allowing solar farms to be built on developed land will severely restrict the capacity that can be deployed
- spatial energy planning could actually slow down projects as it will require all local authorities to update their development plans
- more severe restrictions on how far from domestic buildings onshore wind turbines can be located could exclude as much as 98 per cent of land in Northern Ireland.

RECOMMENDATIONS FOR THE NORTHERN IRELAND EXECUTIVE

- Restore original setback requirements and remove the 10x restriction, which limits how far from domestic buildings onshore wind turbines can be located.
- Work with local communities to deliver solar farms beyond just developed land.

CHALLENGES SPECIFIC TO NORTHERN IRELAND, WITHIN THE UK GOVERNMENT'S INFLUENCE

In theory, energy policy in Northern Ireland is fully devolved (apart from nuclear energy), meaning the Northern Irish government has responsibility for setting out its own policy initiatives to support the development of renewable energy. In practice, however, the Northern Irish grid is connected to and integrated with Great Britain and the island of Ireland as a participant in the Single Electricity Market and must therefore consider the impacts its energy policies have on its neighbours (Northern Ireland affairs committee 2017).

Consequently, Northern Irish energy policy has historically closely followed the UK government's plans (Northern Ireland affairs committee 2017). However, more recently there are two examples where the UK government's energy policy and Northern Irish energy policy have diverged and closer collaboration between the two governments is required to resolve the issues.

Post-Brexit regulatory divergence

Since Brexit, regulatory divergence has harmed Northern Irish renewable generators in three main ways. First, as of January 2021, the EU no longer recognises Renewable Energy Guarantee of Origin (REGO) certificates[4] in Northern Ireland and, as of April 2023, the UK no longer recognises the equivalent EU scheme (Bryt Energy 2023). The reason for a lack of recognition appears to be an administrative omission within the *Windsor Framework* (HM Government 2023). However, the result is that many power purchasing agreements between Northern Irish renewable developers and businesses in the Republic of Ireland have been put on hold as they are not able to demonstrate the origin of the electricity produced and consumed. According to industry estimates, this has resulted in Northern Ireland losing out on at least £500 million of investment, over 500 construction jobs, 354MW of renewable capacity (construction of which could have started this year) and around £800,000 per year in community benefits for local economies.

Second, in recent years the price of permits for the UK Emissions Trading Scheme (ETS) has become significantly cheaper than the EU ETS as a result of decisions of the previous UK government to offer more permits to UK industry (Sheppard and Millard 2023). As of February 2024, the permit price in the UK was under £40 per tonne of carbon dioxide, compared to over €60 per tonne in the EU (Millard 2024). However, Northern Ireland is subject to the EU ETS, with the result that fossil fuel generators in Great Britain that only have to buy permits under the UK ETS can generate electricity more cheaply and export surplus to Northern Ireland. In turn, this market distortion in electricity prices can hurt the business case for renewable energy developers in Northern Ireland.

Third, since Brexit, the UK is no longer part of the EU's Internal Energy Market (IEM). The result is that current interconnectors between the UK and the EU operate inefficiently as prices are not explicitly coupled between the two electricity markets

4 These certificates are issued to renewable generators as proof that the electricity they have generated has come from a renewable source.

(Wind Europe 2024). This inefficiency in electricity trading also has a knock-on impact on the Single Electricity Market and risks distorting electricity prices, which further increases uncertainty over expected returns from renewable generation in Northern Ireland (Whitten et al 2023).

RECOMMENDATIONS FOR NORTHERN IRELAND, POWERS RESERVED WITH THE UK GOVERNMENT

- Work with the EU to re-establish mutual recognition of Renewable Energy Guarantee of Origin (REGO) certificates to boost the business case for Northern Ireland.
- Grandfather a proportion of UK Emissions Trading Scheme (ETS) permits and link prices to match the EU ETS. There are good reasons to pursue this policy in its own right (for example, generating revenue for government and preventing 'carbon dumping' where higher-carbon industries move to the UK because of cheaper permit prices) but in the context of Northern Ireland, it will also support the business case for wind projects.
- Re-establish price coupling between the UK and the EU's Internal Energy Market to ensure more efficiency electricity trading.

Absence of policy support

Since the phase-out of support for onshore wind in the form of Renewables Obligation Certificates (ROCs) in 2016, there has been no formal policy support for renewable development in Northern Ireland. Some stakeholders who we spoke to suggested that up until now there has been political resistance to any scheme that may be seen to increase energy bills, after the political backlash of the Renewable Heat Incentive in Northern Ireland. Encouragingly, from March 2025, the Northern Ireland government will now be publishing the high-level design of a CfD scheme, with auctions anticipated to take place in the first quarter of 2026.

RECOMMENDATION FOR NORTHERN IRELAND, POWERS RESERVED WITH THE UK GOVERNMENT

- Work with the UK government to bring forward the offshore wind leasing CfD scheme.

8. RECOMMENDATIONS

Meeting the UK's ambitious renewable energy targets will require a four-nations approach, where every part of the UK plays a key role in delivery. In this chapter we set out the learning that the devolved administrations can take from each other, our recommendations for each devolved administration and our recommendations for the UK government.

However, above all else, our two core recommendations relate to the critical importance of collaboration and involve the devolved administrations and the UK government working closely together. The pipeline of projects necessary to achieve clean power exists, but the margin for error is tight and projects are distributed across different jurisdictions of the UK.

Fortunately, all indications are that the new UK government recognises this, as do the devolved administrations. Working relationships are close and productive at both administrative and political levels, particularly between the Scottish and UK governments. This is reflected in:

- such developments as a "joint vision" for GB Energy to work with Scottish public bodies (DESNZ and Scottish government 2024)
- proposals to use reserved powers to update transmission network planning in Scotland (DESNZ 2024f)
- the joint commissioning of the Strategic Spatial Energy Plan (DESNZ 2024g)
- various reports of productive working relationships across senior ministers.

This is a positive base from which to now build. There are opportunities for the UK and devolved governments to deepen and expand their collaboration, ensuring an enduring responsiveness to shared challenges and achieving shared aims, with accountability clearly articulated and shared across UK and devolved government ministers. Areas of collaboration would include both reserved issues such as grid infrastructure, revenue support, ports and supply-chain infrastructure and devolved issues like planning and skills. Practically, this could include the following.

- **Establishing a joint commitment to the shared project of transforming energy systems across the UK through clear targets and committed actions.** Governments of the UK should collaborate to align renewable energy targets, which should be embedded in the national UK government's forthcoming plan for clean power by 2030. This plan will shape a wide range of decisions, including reprioritisation of the transmission connections queue (NESO 2024), and so will have material impacts on where and when renewable projects are developed.
- **Ensuring a four-nations approach is baked in to all efforts to coordinate policy and delivery.** This should span political engagement (for example by refreshing the net zero interministerial group and reviewing its terms of reference to ensure it is mission-aligned) and mechanisms to coordinate across UK government departments (the Department for Energy Security and Net Zero [DESNZ], the Ministry of Housing, Communities and Local Government [MHCLG], the Mission Control for Clean Power and the Treasury) as well as other institutions (NESO, the energy regulator Ofgem and so on). A four-nations approach should encompass consultation early in the policy

development process and address resourcing issues, given the high levels of wind deployment relative to population (and population-indexed budgets) in the devolved jurisdictions.

- **Transparent monitoring of progress to clean power.** As well as outcomes across the UK, the framework for wind deployment should set out clearly the respective roles of each government of the UK and the wider group of institutions (NESO, Ofgem and so on), building accountability for delivery of the actions of each.
- **Clearly defined roles for the devolved governments in the rapidly evolving landscape of energy institutions**, including GB Energy, which will be a new publicly owned clean energy company, and NESO. This could include consideration of observer status, board positions or even, in the case of GB Energy, ownership stakes.

RECOMMENDATIONS FOR ALL THE DEVOLVED ADMINISTRATIONS AND THE UK GOVERNMENT

Learning from the devolved administrations that can be applied to all UK jurisdictions
Follow Scotland's lead and require Supply Chain Development Statements from wind developers to give certainty of future demand to manufacturers and in turn increase the proportion of wind projects using local content.
Follow Scotland's lead on the fourth National Planning Framework (NPF4), with clear policy statements and planning guidelines that recognise the need for wind development in order to deliver climate goals and support decision-making.
Follow Wales' lead with development company, Trydan Gwyrdd Cymru, which could develop private partnerships where local government and communities take a stake (that is, not just private finance initiatives of the past because the state also takes a share of the profits).

Recommendations within the devolved administrations' powers that require UK government funding and coordination
Increase funding to every devolved administration as part of a recruitment drive coordinated with the devolved administrations to increase staffing capacity within the UK Planning Inspectorate, devolved government departments, statutory nature conservation bodies and local planning authorities.
Work with existing initiatives within devolved administrations to ensure skills for wind manufacturing, installation, maintenance and repair are included within local college curricula and vocational training courses.
Work with the devolved administrations to deliver a comprehensive workforce plan for the offshore wind sector, which sets out the skills needed and the support and training that each nation will provide to support training and retraining and guarantee decent jobs.
Introduce citizens' juries that include diverse voices, to provide local perspective on political debates over new developments and grid upgrades.

Recommendations for the UK government
Deliver a comprehensive green industrial strategy that ensures coordination with and collaboration between all four UK nations.
Develop a national offshore wind vessel fleet, which developers can hire to generate income and speed up delivery.
Introduce capital grants and a long-term support mechanism for port infrastructure upgrades.
Set out a UK-wide communications campaign alongside the devolved administrations to make the positive case for new projects and grid upgrades and why they are needed.
Accelerate the rollout of Accelerated Strategic Transmission Investment (ASTI) grid upgrade projects, working closely with the devolved administrations on devolved areas such as planning.
Introduce capital grants for investment in domestic wind manufacturing.
Expand Contracts for Difference (CfD) bonuses to all renewable technologies and clarify the role the British Jobs Bonus will play as part of domestic supply-chain investment to deliver high-quality local jobs.

RECOMMENDATIONS FOR WALES

Recommendations for the Welsh government	Recommendations for Wales where the UK government reserves powers
Set out a clear Welsh Renewables Strategy with explicit minimum capacity targets for solar, onshore wind and offshore wind to establish market confidence.	The UK government should work with the Civil Aviation Authority to ensure wind-compliant radar becomes the standard upgrade.
Introduce policy statements through the incoming Infrastructure Consent regime to support decision-making.	
Clarify planning guidelines to presume in favour of onshore wind projects that fall outside of pre-assessed areas.	
Update Welsh planning policy to presume in favour of development on degraded land, conditional on developers contributing to its restoration.	

RECOMMENDATIONS FOR SCOTLAND

Recommendations for the Scottish government	Recommendations for Scotland where the UK government reserves powers
Finalise the Energy Strategy and Just Transition Plan. As part of that, ensure targets are ambitious enough for deployment in Scotland to play a full role in achieving the clean power mission. This should include mapping out the interactions between UK and Scottish policies and a commitment to refreshing this mapping as policies develop.	Through the joint energy acceleration strategy, work with the Scottish government to clarify how UK government public investment can be aligned with the Scottish Green Industrial Strategy.
Ensure rapid completion of the National Marine Plan 2 (NMP2) and refresh the Sectoral Marine Plan for renewable energy. This should include policy alignment with other parts of the UK where appropriate and prioritise opportunities for plan-level strategic compensation to deal with the impact on habitats.	
Continue work on making sure the planning and consenting systems are fit for purpose, including ensuring they are adequately resourced – both financially and with a strategy to ensure the pool of trained planners working in the public sector is large enough to manage the demands arising from renewable energy acceleration.	

RECOMMENDATIONS FOR NORTHERN IRELAND

Recommendations for the Northern Ireland executive	Recommendations for Northern Ireland where the UK government reserves powers
Restore original setback requirements and remove the 10x restriction.	Work with the EU to re-establish mutual recognition of Renewable Energy Guarantee of Origin (REGO) certificates to boost the business case for Northern Ireland.
Work with local communities to deliver solar farms beyond just developed land	Grandfather a proportion of UK Emissions Trading Scheme (ETS) permits and link prices to match the EU ETS. There are good reasons to pursue this policy in its own right (for example, generating revenue for government and preventing 'carbon dumping' where higher-carbon industries move to the UK because of cheaper permit prices), but in the context of Northern Ireland, it will also support the business case for wind projects.
	Work with the UK government to bring forward the offshore wind leasing and CfD scheme.
	Re-establish price coupling between the UK and the EU's Internal Energy Market to ensure more efficiency electricity trading.

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