

**Senedd Cymru**  
**Pwyllgor yr Economi, Masnach a Materion Gwledig**  
**Economi Gwyrdd**  
**GE24**  
**Ymateb gan: RWE**

**Welsh Parliament**  
**Economy, Trade, and Rural Affairs Committee**  
**Green Economy**  
**GE24**  
**Evidence from: RWE**



7<sup>th</sup> March 2024

## **RWE submission to Economy, Trade and Rural Affairs Committee Inquiry into the Green Economy**

RWE is the largest power producer in Wales, and the country's number one renewable energy generator, developing some of Wales' first commercial scale projects. We are sewn into the fabric of the Welsh energy system, with RWE's and Wales' transition and decarbonisation journeys closely intertwined. We are currently involved in over 3 GW of energy generation in Wales across 12 sites, of which around 1 GW is renewable, generating one third of Wales' renewable energy production – enough to power 550,000 homes. RWE's Pembroke Gas Power station, which has exciting ambitions for decarbonisation, powers an additional 3.5 million homes.

We also have an ambitious development pipeline, including 7 onshore wind projects totalling ~600 MW, ~400 MWac of solar and storage projects, ~400 MWe of electrolytic hydrogen production, and 1 offshore wind project – Awel y Môr, the only offshore wind farm currently being developed in Welsh waters and set to be the largest private sector renewable investment in Wales this decade . However, in order to deliver this, and do so in such a way as to maximise the economic benefits for Wales, we will need a workforce with the right skills.

The Committee's inquiry is timely given the crucial juncture for the energy transition that the nation currently finds itself at. A combination of policies and incentives is required to ensure that Wales captures the potential benefits of low-carbon technologies. An overarching aim must be to provide a stable regulatory environment in Wales to attract investment in low-carbon technologies. Establishing secure supply chains requires business confidence secured by clarity and certainty regarding targets and the potential project pipeline.

Our full submission encompasses a number of recommendations, but the following points are essential to the delivery of our shared ambitions for a Net Zero Wales:

- Prioritise industrial decarbonisation in South Wales utilising carbon capture and storage (CCS) and hydrogen technologies, to decarbonise rather than deindustrialise the region.
- Focus on removing barriers to renewables and low carbon technologies, including delays to the planning system, inadequate grid infrastructure and current skills shortages.

We are grateful for the chance to respond to this inquiry. We would be happy to engage further on this and can respond to any specific questions or queries.

Cameron Wake  
**Public Affairs Manager**

**Within its devolved powers, what should be the Welsh Government's key priorities to maximise the potential economic opportunities from green economy sectors? To what extent does its current approach reflect these?**

Prioritising industrial decarbonisation will be key to ensuring that Wales fulfils its Net Zero ambitions and maximises economic opportunities from the green economy. With a significant number of major industrial sites and processes, many of which require coordinated approaches, this is an important piece of Wales's decarbonisation puzzle. Initiatives such as the South Wales Industrial Cluster (SWIC) require tailored, coordinated solutions, and ensuring Welsh Government is cognisant of the needs and challenges of wider industry, and supports addressing these, will be an important factor in driving emissions reductions and preventing Wales seeing 'decarbonisation by deindustrialisation'.

As a key member of SWIC through the presence of our Pembroke Net Zero Centre, located at our Pembroke Gas Power Plant, RWE is working with broader industrial players in the cluster to build an understanding of how interventions can support each other's decarbonisation journeys and to consider joint decarbonisation projects. The work and resourcing of Net Zero Industry Wales in driving this forward is a key factor for the Welsh Government. SWIC estimates that steps to decarbonise industry in South Wales by 2040 will help retain 113,000 jobs and create a net positive increase in jobs overall, alongside unlocking £30bn of investment opportunities in the region.

A supportive regulatory environment is also critical in enabling RWE and other members of the SWIC to support the Welsh Government in delivering on Wales's Net Zero targets.

It is important that the Welsh Government does not limit the growth of any viable renewable technology or overly rely on one technology specifically to meet its targets – recognising the respective contribution each can play.

A holistic approach incorporating a broad range of renewable and emerging technologies will be essential as Wales transitions to Net Zero. While there has, understandably, been a focus on renewables deployment, the Welsh Government must also recognise the role of firm, flexible decarbonised gas via carbon capture and storage (CCS) or hydrogen to delivering energy security and decarbonising industry.

Welsh Government support for Welsh-based electrolytic hydrogen projects and hydrogen pipeline and storage developments would accelerate the adoption of this technology and maximise the opportunities for Wales. Ideally, the deployment of transmission-scale hydrogen pipelines across South Wales, such as National Gas' Project Union and Wales and West Utilities' HyLine Cymru, can be accelerated so that they deploy in the early 2030s rather than the mid-late 2030s.

Although many of the powers related to CCS are currently reserved to the UK Government, the Welsh Government has committed to working with the South Wales Industrial Cluster and stakeholders on fuel switching and CCUS. The Welsh Government should continue to support the industry's calls for the UK Government to

invest in CO<sub>2</sub> shipping infrastructure in South Wales. A Net Zero Industry Wales report released in 2023 demonstrated a strong economic case for public investment into CO<sub>2</sub> shipping infrastructure in South Wales. Given the lack of suitable transport and storage infrastructure, South Wales will not be able to access the benefits of carbon storage without a viable CO<sub>2</sub> shipping industry. This heightens the risk that the region will deindustrialise, rather than decarbonising via the utilisation of green technologies, risking jobs and investment.

While significant attention is being paid to offshore wind (including floating offshore wind), deployment of all renewable technologies will be essential to meeting Wales's stretching net-zero targets. Supporting onshore wind and solar photovoltaic projects, which are typically quicker to deploy, will help build the skills and supply chain base that can transition to future offshore and floating offshore wind projects. This is a lesson the Scottish Government has recently learnt only after a period of heightened attention on offshore wind around the ScotWind offshore wind leasing process.

Both the UK and Welsh Governments have demonstrated a commitment to Freeports. Further significant strategic investment decisions are urgently required to champion a leading 'hub' port to accommodate the emerging technology necessary to facilitate the rollout of floating offshore wind in the Celtic Sea. A port with the right capabilities will be key to maximising local content opportunities. Two of Wales's ports have the physical and locational potential to deploy floating wind in the Celtic Sea; however, without investment in those capabilities, the breadth and depth of the local supply chain, including retained and new job numbers, will not be realised.

### **What are the key barriers to Wales making the most of opportunities in the green economy, and what steps should be taken to overcome these?**

Early identification, mitigation, and removal of potential barriers to deploying renewable projects are key to maximising existing and new energy opportunities and enabling Wales to meet its Net Zero ambitions. A realistic plan, with timelines for action, is necessary to address the hurdles, barriers and bottlenecks that currently constrain progress.

The most notable barriers currently faced by RWE are:

Grid :

- While we acknowledge that grid issues are not devolved, the Welsh Government should continue to use its convening power to help push for the necessary changes to/with responsible organisations, including the UK Government, Ofgem, and National Grid.
- The absence of adequate grid infrastructure, grid connection delays, increased costs, and uncertainty about connection locations and dates across Wales limit or delay renewable energy projects and are significant barriers to Net Zero. These problems are not restricted to generation, they also apply to demand connections, therefore affecting electrification of industrial decarbonisation and electrolytic hydrogen deployment.

- There is real urgency to develop the infrastructure and capitalise on the potential renewable energy opportunities across Wales. A programme of proactive, anticipatory, and strategic upgrades to the electricity transmission and distribution networks is needed to facilitate onshore wind development, especially in the Mid Wales region, and enable wider decarbonisation across Wales.
- In November 2023, the Welsh Government set out its expectation for underground cables to be utilised where possible. It is our view that, following the Holford rules, grid can be sensitively designed and the starting point should be overhead lines with undergrounding only sections to mitigate unacceptable impacts. Undergrounding is significantly more expensive than overhead, costs that would ultimately be borne by households or, worst case, make a project unviable with a knock-on impact on the deployment of renewable energy projects. Wales is at risk of moving out of line with the rest of the UK, meaning it will potentially lose out with projects siting elsewhere.

#### Consenting Processes:

- The Welsh Government's Developments of National Significance process & decisions in general, timescales and success rates are disappointing (~70% success rate for DNS compared to >90% for NSIPs in England and Wales, and >90% for onshore wind in Scotland since the adoption of NPF4).
- The new Infrastructure (Wales) Bill progressing through the Senedd procedure could improve the situation, but only if public bodies are adequately resourced and timescales are adhered to.
- Response times for planning and permitting need to be streamlined to accelerate the deployment of low carbon and renewable energy projects with clear pathways for decision-making.
- According to RUK Cymru's 'The Critical Role of Welsh wind power' report, on average, onshore wind projects of 10MW or above take more than three and a half years to reach a decision, whilst only one onshore wind farm has been given planning permission under the Development of National Significance regime since 2016.
- Consistent decision-making, which accords with the broadly positive policy framework established by 'Future Wales: The National Plan 2040', is needed to provide certainty for investment for new developments and repowering projects. This could benefit from greater clarity in order to guide developers and decision-makers and, despite this document being broadly positive, Welsh Government continues to adopt other policies, such as on biodiversity, that add further complexity and uncertainty to the planning process.
- Critically, planning authorities, planning-related bodies, and statutory consultees need to be sufficiently resourced to make timely permitting decisions and to effectively engage in the planning process – to enable the most effective outcomes for developers and communities.

- Having valid planning permission is one of two eligibility requirements for the CfD, alongside a signed grid agreement with a connection date falling within the CfD window. Issues within the planning process therefore have a tangible impact on what projects can come forward. As an example, Welsh projects made up only 3% of solar capacity in Allocation Round 5 (compared to 97% in England), and 3% of onshore wind capacity (compared to 97% in Scotland).

#### Environment Requirements:

- A range of environmental requirements risk creating increasingly restrictive conditions for the location of onshore wind, solar, and low carbon energy infrastructure in Wales.
- The recent revisions that the Welsh Government has made to Planning Policy Wales in relation to biodiversity, particularly relating to peat, whilst welcome in terms of a focus on nature, has introduced significant uncertainty to onshore low carbon and renewable energy developments. Planning policy guidance regarding the use of agricultural land for batteries and solar PV is also overly restrictive. Onshore low carbon and renewable energy developments are capable of co-existing with agriculture and forestry whilst also securing opportunities to deliver a net benefit for biodiversity.
- We would welcome further clarity and guidance to ensure that the new planning policies are not interpreted in a way which has a significant impact on the deliverability of onshore low carbon and renewables, as a substantial increase in clean energy will be required to meet Net Zero targets and tackle the impacts of climate change.
- Similarly, Natural Resources Wales is currently consulting on a new National Park in North East Wales, and again, we hope this can be delivered in a way that does not significantly reduce the deliverability of onshore renewables in the area. The consenting risk for renewables projects even outside the National Park boundary would increase given the consideration of the impact on the setting is a key planning consideration.
- Natural Resources Wales (NRW) is also progressing with a piece of work called 'Wales Integrated Natural Beauty Mapping', which may extend landscape protections and therefore increase restrictions on development. Whilst it is not entirely clear what the outcome will be, it is important to consider the impact on onshore renewables deployment in Wales.

#### Importance of strategic collaboration between Government and Industry

- RWE works across several collaborative forums, covering a range of topics and comprising a range of key stakeholders, through which broader issues are identified, discussed and addressed. Examples include the OWIC (the Offshore Wind Industry Council, the Offshore Wind Acceleration Taskforce, and the South Wales Industrial Cluster).

- RWE finds such forums helpful touchpoints for bringing relevant stakeholders around the table to focus on pertinent issues and challenges. This can result in outcome-focused, meaningful plans for change, which help shape frameworks appropriately to support shared objectives and remove associated barriers and hurdles.
- Recently, we have been engaged in the steps taken by the Scottish Government, working with Scottish Renewables, to develop an Onshore Wind Sector Deal to help the Scottish Government deliver its ambitious onshore wind targets. This process has helped to forge a joint agreement between the Scottish Government and developers on the opportunities and challenges, with agreement on a joint strategy and approach moving forward. The full document includes actions for government, the sector, and public and private collaboration across the supply chain, skills and the circular economy, communities, land use and the environment, planning, legislative and regulatory, and technical.
- We support calls for a similar process in Wales to help drive further onshore wind deployment.

#### Institutional bottlenecks:

- There is also a risk of institutional 'bottlenecks' that could impact the ability to deliver the transition, including a lack of relevant skills training and qualified workers to carry out the scale of work required.
- As the wider UK, Europe and the world turns increasingly towards clean energy development it is essential for a just transition that the workforce in Wales is equipped with the skills to take up new employment opportunities. With this, new career opportunities, helping to revitalise communities across Wales, will be maximised.
- There needs to be a joined-up, strategic forward plan to tackle these issues, which could play an increasingly restrictive role in the rollout of new clean energy infrastructure and associated economic development opportunities. RWE welcomes the publication of the Welsh Government's Net Zero Skills Action Plan, which seeks to create a more strategic approach to addressing skills requirements.
- As well as these more general barriers we face when developing new projects, there are also labour market-specific issues. The labour market is currently very tight, with insufficient people either unemployed or in training to meet recruitment needs in the energy industry. This can be slow to change, with a lag in how quickly education institutions can respond to change within the industry. As a general rule, we expect new courses to take up to four years to be developed, which does not match the speed of development of new technologies and changes within the industry.

#### **What actions should the Welsh Government take to support development of Wales-based supply chains in green economy sectors?**

Resolving the aforementioned barriers will be key to incentivising investment in Wales-based supply chains in the renewable energy sector.

A combination of policies and incentives is required to ensure that Wales captures the potential benefits of low-carbon technologies. An overarching aim must be to provide a stable regulatory environment in Wales to attract investment in low-carbon technologies. Establishing secure supply chains requires business confidence secured by clarity and certainty regarding targets and the potential project pipeline.

Early investment in key supply chain capabilities, such as ports and lay-down space, is essential to unlocking supply chain growth. A more comprehensive policy is therefore required to support investments in enabling infrastructure such as ports, manufacturing capabilities and skills. This broader policy could include direct support measures for supply chain companies (such as grant funding and strategic investment from the government) and the inclusion and alignment of policy with other key stakeholders, for instance, The Crown Estate in the offshore wind sector.

With regard to electrolytic hydrogen there is only really one UK-based PEM electrolyser manufacturer, able to deliver at scale in the UK, and they are based in Sheffield. More UK-based electrolyser manufacturers would be beneficial, and it would be positive if they could be encouraged to locate manufacturing facilities in Wales.

**What skills challenges exist in relation to transitioning to a green economy? What actions should be taken, and by whom, to ensure the skills are there to meet the growing demands of a green economy?**

As previously outlined, a need for an appropriately skilled workforce is a barrier to the timely deployment of renewable technologies. As the wider UK, Europe and the world turns increasingly towards clean energy development, it is essential for a just transition that the workforce in Wales is equipped with the skills to take up new employment opportunities. Without this, new career opportunities, helping to revitalise communities across Wales, will not be maximised.

A lack of a joined-up, strategic forward plan to tackle these issues may play an increasingly restrictive role in the rollout of new clean energy infrastructure and associated economic development opportunities. RWE does welcome the publication of the Welsh Government's Net Zero Skills Action Plan, which seeks to create a more strategic approach to addressing skills requirements. Welsh Government should seek to play a coordinating role, identifying skills needs, linking up between skills providers/recruiters, academia, and the private sector, and help with raising awareness. At present, such interventions are often ad hoc and limited in nature, which can limit impact. Measures should also be taken to increase awareness of the opportunities available to individuals and businesses.

RWE is working in partnership with Tata Steel and ABP in relation to the port at Port Talbot, and we believe there are substantive opportunities to help the workforce transition to valuable roles in the renewable energy industry and supply chain. We look forward to working with the Welsh Government to help ensure that those



seeking new opportunities are offered the skills training required. This could be an area where more direct intervention could reap positive rewards in the short-term.

Alongside the deployment of new generation technologies, significant investment in the grid and both re-powering and decommissioning of renewable technologies will feature over the coming years. Across each of these workstreams, there will be a dependence on a supply of engineers, especially electrical engineers, as well as those with digital skills across data analytics and robotics.

As well as these general skills needs, there are several further skills that RWE has assessed as experiencing both a shortage, where it is difficult to recruit, and either current or anticipated high demand. These include consenting managers, development project managers, cable jointers, design engineers and welders. The following roles also exhibit one of these qualities: procurement, controlling, geophysicists and marine ecologists.

In the short term, the biggest issue is specialist skills. Shortages in roles such as specialist engineers, electrical engineers and technicians, those working on high voltage systems, and those with digital skills across data analytics and robotics are already impacting projects.

A lack of consenting skills impacts both the public and private sectors. Companies like RWE rely on consenting specialists in consultancies to support our projects, and the lack of consenting-related skills within local authorities, statutory consultees and government departments is compounded by a lack of resources, acting as a barrier to deployment. This has knock-on impacts on the supply chain, with a lack of certainty inhibiting the development and retention of skills.

In the longer term, we expect high demand for finance-related skills as these are needed across all sectors; the energy sector will be in competition with other parts of the economy for those with accounting, contract management and procurement skills. We expect skill shortages to persist in engineering, technical and digital skills, with gaps also forecasted for project and programme management and data analytics for engineers.

**What will workers and employers need for a just transition to a Net Zero economy to be achieved, and what actions should the Welsh Government take to deliver the elements of this that lie within its devolved powers?**

RWE's contributions to Welsh communities grow by approximately £2.7 million annually. Over their lifetime wind farms operated by RWE renewables will invest more than £67 million into Welsh communities. Awel y Môr (the Gwynt y Môr extension) is scheduled to be Wales's most significant renewable energy investment over the next decade and will provide power to 500,000 additional homes. We are also developing a further pipeline of ~600MW of innovative onshore wind projects across Wales.

The company currently directly employs around 350 people in Wales, with dedicated offices in Baglan, Dolgarrog, and Port of Mostyn, as well as onsite at our power stations. This figure will grow through the construction and operational phases of the company's projects in the development pipeline.

RWE's UK comprehensive turbine apprenticeship hub is based in North Wales and has so far trained nearly 100 apprentices to support the industry's future. We have partnered with Coleg Llandrillo Menai to establish an award-winning turbine apprenticeship programme.

During construction, the Gwynt y Môr site produced 700 jobs, with a further 100 highly skilled jobs created in the long term.

Providing such jobs and investment into the Welsh workforce is a key way RWE contributes to a just transition to Net Zero.

Clarity and certainty regarding further renewable energy opportunities in Wales would attract the required private sector investment and help embed supply chains in Wales, thus deepening and widening the benefits for Wales and supporting a just transition.

From our experience, colleges are willing to look at a more collaborative network working with industry along the lines of the very successful Energy Skills Partnership (ESP) model. The ESP is the college sector agency in Scotland for the energy transition, zero carbon transport, engineering, construction and STEM, and leads on the Climate Emergency Skills Action Plan. Its vision, which now covers all colleges in Scotland, is of a college sector working in partnership with government, agencies and industry to meet national and regional skills needs. This approach focuses on each college's specific 'USP', improving the ability of colleges to meet the industry's skills and training needs. The replication of this endeavour in Wales could be a powerful mechanism for delivering the skills needed for the transition.

All of RWE's UK wind turbine technicians are trained through Coleg Llandrillo Menai, and more recently, many technicians joined the company due to courses developed between the college and RWE. We are keen to work with Welsh institutions to ensure provision can be supported to meet needs locally where feasible and have had early conversations with several universities and colleges to get their views on how RWE can work with them in ways that are effective, meaningful and impactful, including understanding the touch points for engaging with students directly.

A failure to address the existing skills needs would have fundamental implications for Wales's Net Zero transition and the economic benefits it could yield. Skills would need to be imported from other parts of the UK, or indeed the world, meaning that the local population would miss out on the opportunities that the transition could bring. These workers would be more likely to come on a peripatetic basis, leading to lost second-order economic benefits like the local spending of the workforce. The flip side of this is that it would mean a loss of employment opportunities for the local workforce, losing, in turn, the opportunity for Wales to export its skills. More direct intervention may be required on skills to secure investment and ensure the Welsh Government can reach its climate ambitions.

**How will the Welsh Government need to work in partnership with others to realise the potential of the green economy and deliver a just transition? To what extent is the partnership working that is needed being undertaken?**

A 'transition', by its very definition, is a process. It is not something that happens immediately and can take place in a multitude of ways and stages. Establishing targets and objectives are essential signposts in indicating ambitions and intentions. Such targets are helpful for companies like RWE, who make decisions based on long-term investment horizons. However, stated ambitions then need to be followed up with associated political, regulatory, and, in some cases, financial support frameworks which establish how RWE and wider organisations can contribute to meeting these ambitions.

RWE favours a collaborative approach to tackling identified issues and creating positive outcomes. We recognise governments and the private sector need to work together to identify, tackle and overcome broader challenges. Likewise, we actively work with and support communities where our projects are based to help them realise the wider benefits of hosting projects in their areas.

**The Welsh Government says it will face considerable budgetary constraints in the short term. How should it prioritise investment to support development of the green economy over the shorter and longer-term? What innovative approaches to financing could be considered to maximise potential investment and benefits?**

The private sector has greater confidence to invest when it has clarity, certainty, and long-term commitments from the government. The Welsh Government could use its powers to establish a regulatory environment which ensures high environmental standards combined with clear, consistent, long-term targets to unlock business investment. The Welsh Government can establish a green economy in Wales by ensuring environmental governance bodies, such as NRW, are adequately resourced and by publishing long-term strategies that give clarity and detail. Supply-side reforms that provide clarity and consistency without costing money will be key to maximising opportunities, such as expediting the consenting process.