

Agenda – Economy, Trade, and Rural Affairs Committee

Meeting Venue:

Committee room 5 – Ty Hywel
and Video Conference via Zoom

Meeting date: 21 March 2024

Meeting time: 09.30

For further information contact:

Robert Donovan

Committee Clerk

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Hybrid

Private pre-meeting

(09.15–09.30)

Public meeting

(09.30–14.15)

1 Introductions, apologies, substitutions, and declarations of interest

(09.30)

2 Papers to note

(09.30)

2.1 UK–EU Parliamentary Partnership Assembly

(Pages 1 – 8)

Attached Documents:

UK–EU Parliamentary Partnership Assembly: Fourth meeting summary report



2.2 Inter-ministerial dialogue and engagement

(Pages 9 – 10)

Attached Documents:

Letter to the Secretary of State for Environment, Food and Rural Affairs regarding inter-ministerial dialogue and engagement

2.3 Development Bank of Wales

(Pages 11 – 13)

Attached Documents:

2024 03 13 – Letter from Andrew Ling regarding the Development Bank for Wales

3 Development Bank of Wales inquiry: Panel 3 – Global Perspective

(09.30–10.15)

(Pages 14 – 24)

Mike Wedderspoon, Director for Strategic Engagement and Delivery, Scottish National Investment Bank

David Ritchie, Executive Director for Partnerships and Engagement, Scottish National Investment Bank

Attached Documents:

Research brief

Break

(10.15–10.20)

4 Inquiry: Green Economy – Panel 1 – Business and Renewables

(10.20–11.20)

(Pages 25 – 81)

Felix Milbank, Deputy Head of Policy, Federation of Small Businesses Wales (FSB)

Jessica Hooper, Director, RenewableUK Cymru

Ben Burggraaf, Chief Executive Officer, Net Zero Industry Wales

Tom Hill, Marine Energy Programme Manager, Marine Energy Wales

Attached Documents:

Evidence paper – FSB Wales

Evidence paper – RenewableUK Cymru

Evidence paper – Net Zero Industry Wales

Research brief

Break

(11.20–11.30)

5 Inquiry: Green Economy – Panel 2 – Alternative Models of Ownership

(11.30–12.15)

(Pages 82 – 95)

Sarah Evans, Director of Business Growth and Consultancy, Cwmpas

Benedict Ferguson, Co-Executive Director, Community Energy Wales

Attached Documents:

Evidence paper – Cwmpas

Evidence paper – Community Energy Wales

Break

(12.15–12.25)

6 Development Bank of Wales inquiry – Panel 4 – Global Perspective

(12.25–12.55)

Karen Kastner, Vice President, Strategy, Prioritization and Shareholder Relations, Business Development Bank of Canada

Break

(12.55–13.15)

7 Inquiry: Green Economy – Panel 3 – Independent experts

(13.15–14.15)

(Pages 96 – 116)

Derek Walker, Future Generations Commissioner for Wales

Dr Alison Parken, Cardiff University

Dr Jack Price, Wales Centre for Public Policy

Ned Hammond, Head of Energy and Environment, Onward UK

Attached Documents:

Evidence paper – Future Generations Commissioner

Evidence paper – Wales Centre for Public Policy

Evidence paper – Onward UK

8 Motion under Standing Order 17.42(ix) to resolve to exclude the public from the remainder of the meeting

(14.15)

Private

(14.15–14.25)

9 Consideration of evidence following the meeting

(14.15–14.25)

UK-EU Parliamentary Partnership Assembly: Fourth meeting summary report

March 2024

The Parliamentary Partnership Assembly (PPA) is a formal body established under the UK-EU Trade and Cooperation Agreement (TCA). It plays an important role in overseeing the implementation of the TCA and all future UK-EU agreements.

The fourth meeting of the PPA took place in London 4-5 December 2023. This report provides a summary of issues of importance to Wales discussed at the meeting. This report also reflects on the continued development and evolution of the body and the Senedd's role and work in it.

Huw Irranca-Davies MS, Chair of the Legislation, Justice and Constitution Committee and Samuel Kurtz MS, a member of the Economy, Trade and Rural Affairs Committee participated in the third meeting and the report has been agreed by them in that capacity.

If you are interested in the work of the Senedd on the PPA or would like to contribute in future to Senedd engagement ahead of its meetings, please contact Nia.Moss@senedd.wales



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1. Issues of importance to the Senedd and Wales

The UK-EU, [the Trade and Cooperation Agreement](#) (TCA) covers large areas of devolved competence or issues that have a significant impact on them. You can find more information about what these are, how these affect Wales and the role of the PPA in the Senedd Research [guides and infographics on the agreement](#).

Key issues of importance to Wales were discussed in the meeting including on youth mobility, mobility for the culture and sport sectors, fisheries, citizens' rights, data protection, climate change cooperation, the EU's Carbon Border Adjustment Mechanism and energy cooperation. Important future areas for cooperation, such as on the development and regulation of artificial intelligence (AI) were also discussed by delegates.

For the first time, Senedd Members were invited to contribute to a plenary item and Huw Irranca-Davies MS spoke about the importance of youth mobility and the Welsh Government's [Taith scheme](#).

Organisations in Wales were invited to submit their views to us ahead of the meeting. We're grateful to all those that were able to do so within the short timescales provided to us. These views were reflected in a written briefing provided to UK delegation members and in Senedd Member contributions during the meetings.

You can watch [the proceedings in full](#) on the UK's Parliament YouTube channel.

“The rebuilding of trust”: a more positive phase in the relationship

Both the UK Minister for Europe, Leo Doherty, and the EU's Ambassador to the UK, Pedro Serrano, emphasised the positive and productive tone in UK-EU relations over the last 12 months. Ambassador Serrano said that the “rebuilding of trust marks this year” with the outcome being greater cooperation.

Minister Doherty praised discussions and work through the TCA forums on the digital economy, cooperation on pharmaceuticals, organics and access for UK lawyers to the EU's market and said the UK is open to discussions on improving youth mobility, cooperation on culture and the development and regulation of AI.

Ambassador Serrano noted that full implementation of the Withdrawal Agreement, including full implementation of the Windsor Framework and citizens' rights obligations, are essential to further cooperation under the TCA. Ambassador Serrano said that the level playing field provisions of the TCA remain an important issues for the EU and that it will continue to follow closely UK reforms to retained EU law and the UK's compliance with the European Convention on Human Rights which is a pre-requisite for law enforcement cooperation in the TCA. He called for early and pragmatic

discussions on fisheries after 2026 and said the work for full and ambitious implementation of the TCA must continue.

The issue of the transparency of the TCA's governance structures and decisions taken within them was raised by members of the PPA. This is an issue addressed by the Senedd's Legislation, Justice and Constitution Committee [in its report on UK-EU Governance](#).

“Mobility creates valuable opportunities”

In its [third recommendation](#) to the Partnership Council, the PPA recognised the valuable opportunities that mobility of citizens, particularly youth and cultural mobility, creates. In recognition of the broad support on both sides to improve the ability of young people and touring artists to travel, move and work cross-border, the PPA called on the Partnership Council and EU Member States to work collaboratively to improve opportunities available. It calls on the UK and EU to allow the use of identity cards for organised school trips and to waive visa requirements. It expressed concern that the UK has agreed to do this for some EU Member States but not all and said that a non-discriminatory approach is essential.

The UK opted not to remain part of the UK's youth and education mobility programme, Erasmus+, after Brexit. Huw Irranca-Davies MS reminded the plenary of the Welsh Government's support for the UK to re-join the Erasmus+ programme and drew delegates' attention to the Welsh Government's [Taith programme](#) which supports participants to come to Wales as well as supporting Welsh organisations and participants to go abroad.

The recommendation makes specific asks for touring artists, an issue discussed several times at the PPA. The PPA urges the UK and EU to prioritise the mobility of touring artists in the review of the implementation of the TCA due before 2026. It calls for both sides to redouble efforts to streamline visa and customs arrangements for touring artists and their teams and to extend the length of visas available for touring.

Senedd Members also drew attention to the issues facing professional and voluntary sporting organisations and athletes post-Brexit and called for the issues facing this sector to also be recognised.

The Senedd's Culture Committee is undertaking an inquiry on [culture and the new relationship with the EU](#). Baroness Deborah Bull, member of the PPA's UK delegation, [opened the inquiry](#) by appearing before the Committee to give evidence on 8 February 2024.

The PPA called on the Partnership Council to respond to its recommendation before the next meeting of the PPA in March 2024.

Progress on citizens' rights welcome but more to do

The progress made in protecting the rights of EU citizens living in the UK and UK citizens living in the EU was welcomed. However, the breakout group on citizens' rights called on the UK Government to take a simple and compassionate approach to implementing the High Court ruling on the status of EU citizens.

It called on training for police and border forces on both sides on the rights of citizens travelling or residing for short periods and called on the European Commission to play a role on providing easily accessible information to UK citizens. The importance of support for organisations working with citizens, particularly vulnerable people, to uphold their right was emphasised. The group called on both the UK and EU to provide sufficient support.

The Senedd's Equality and Social Justice Committee monitors European citizens' rights in Wales.

Room for constructive cooperation on fisheries

Recognising that fisheries remains a contested and contentious areas between the UK and EU, the breakout group nonetheless found areas where constructive cooperation could benefit the industry on both sides. Addressing issues facing Irish and Northern Irish fishing communities is one area where agreeing common solution could help build trust for wider fishing negotiations.

The group called for a collaborative approach to sustainable fisheries management that engages local communities. They agreed there should be a multi-annual approach beyond 2026 to create certainty for communities on both sides with mechanisms for evidence-based stock changes.

Failure to cooperate on emissions trading, energy and climate creates risks

The need for close cooperation on international climate commitments and energy cooperation were common calls from members of the PPA. Speaking in the Plenary session UK Government officials said they were disappointed with progress made to implement the energy title of the TCA and in particular called for greater progress on developing efficient electricity trading arrangements.

Progress on energy cooperation in the North Sea was welcomed but UK and EU members but both called for this to be extended to deepening cooperation in the Celtic Sea and Atlantic. Senedd Members raised the issue of Celtic Sea cooperation in the last meeting of the PPA.

Concern was raised from members on both sides about the risks of potentially different approaches to emissions trading and carbon leakage in the UK and EU. The potential implications of the introduction of the EU's Carbon Border Adjustment Mechanism (CBAM) without cooperation and an equivalent scheme in the UK was discussed. Baroness Hayter raised concerns about the implications of CBAM for the Welsh steel industry on behalf of Senedd Members during

the debate. Séan Kelly MEP, Vice-President for the European Parliament delegation, called for the PPA to act as a forum to eliminate conflict and clashes on emissions prices and carbon adjustment.

UK Government officials said the Government was open to further cooperation on emissions trading.

The TCA's environment, climate and energy provisions are explained in [a Senedd Research guide](#).

Data protection and digital growth are key areas of common interest

The [breakout group](#) noted that the UK and EU's digital economies are lagging behind the US and other regions and said both parties should collaborate to ensure protection of citizens whilst enabling innovation and growth. It called for continued legislative cooperation and engagement between the UK and the EU to ensure standards are maintained and that both sides avoid the lapsing or risking of data adequacy agreements.

The “essential importance of taking action to protect our democracies from misinformation and interference” was identified as a critical area for close cooperation.

2. Senedd engagement in the work of the PPA

Devolved legislatures have much to contribute to the work of the PPA, as this report shows. Devolved members' positive contribution is supported by the level of stakeholder interest and engagement from Wales.

The [summary report on the third meeting](#) considered progress made against five recommendations. Welcome progress continued to be made in the third meeting which shows that the engagement of the Senedd and devolved legislatures in the work of the body is becoming embedded. Particularly welcome during the third meeting was the invitation for members of the devolved legislature to contribute to the discussion on a plenary item.

For Wales, this enabled us to raise the important work on mobility being done in Wales and the continued challenges facing our businesses, culture and sporting organisations. Breakout groups also enabled us to raise issues related to citizens' rights and the important work of the Senedd's Equality and Social Justice Committee on monitoring the operation of the EU Settlement Scheme in Wales. We also raised issues of concern for Welsh fisheries and seas.

Nonetheless, our recommendations on embedding the role of devolved legislatures in the PPA and the need for the continued consideration of allowing the devolved legislatures to participate in all plenary discussions in devolved areas remain valid.

Whilst appreciating the opportunity to contribute to the mobility item, there were many other items where we could have made a positive contribution. For example, issues related to the impact of the EU's CBAM on the Welsh steel industry. We note and welcome the support from Members of the European Parliament's delegation for granting full speaking rights for devolved legislatures during the plenary sessions.

We appreciate the limited time available to all members of the PPA to contribute during plenary debates but continue to press for time to be found for devolved legislatures. The PPA plays a hugely important role in strengthening relationships between the UK and the EU and the devolved legislatures can make a positive contribution to the development of ideas and sharing of good practice.

The Senedd's Legislation, Justice and Constitution Committee [report on UK-EU Governance](#) recognises the important evolution in the working arrangements of the PPA and its importance as a place where political solutions can be found.

Stakeholder engagement

We are grateful for the willingness of stakeholders in Wales to submit evidence, issues and views to us ahead of the last meeting of the PPA. It is invaluable in ensuring that issues of importance to Wales are properly fed in. A key challenge in seeking to engage formally with stakeholders ahead of meetings is that agendas are shared at a very late stage. We will continue to work to improve how and when we engage stakeholders ahead of meetings of the PPA.

The [Senedd Commission has accepted](#) the recommendation made by the Senedd's Legislation, Justice and Constitution Committee, that the Senedd should work with relevant Senedd Committee Chairs and Senedd Members on UK-EU delegations to facilitate stakeholder engagement on UK-EU issues. We look forward to contributing to the work to take this forward.

Engagement with the UK and EU delegations and other Senedd Committees

We drew our last report to the attention of relevant Senedd Committees and the First Minister for Wales. We are grateful for their positive response and we will continue to engage with them. We warmly welcome the Senedd Culture Committee's engagement with Baroness Bull as part of [its inquiry into Culture and the new relationship with the EU](#), based on her important work on this issue through the PPA.

Senedd Committees have continued to engage with UK and EU counterparts on UK-EU issues. The [Senedd's Legislation, Justice and Constitution Committee](#) and [Economy and Trade Committee](#)

engaged with members of the European Parliament's delegation when they visit Brussels in September and November 2023.

The Rt Hon Steve Barclay MP
Secretary of State for Environment, Food and
Rural Affairs
Department for Environment, Food and Rural
Affairs

13 March 2024

Dear Secretary of State,

Inter-Ministerial dialogue and engagement

During our general ministerial scrutiny session on 6 March with Lesley Griffiths MS, the Welsh Minister for Rural Affairs and North Wales, and Trefnydd, the Minister noted that there has been no meeting of the Inter-Ministerial Group for Environment, Food and Rural Affairs (IMG EFRA) since your predecessor Thérèse Coffey's time as Environment Secretary. Members were very concerned to hear this as the Committee believes that inter-governmental dialogue is important to support good policy development and implementation.

When questioned on avian flu and the classification and marketing of free range eggs as a result of birds being housed indoors, the Minister also told us that she had not been given advance notice by DEFRA of the intention to launch a Consultation on removing the 16-week derogation period in egg marketing standards legislation in England and Scotland, which opened on 9 January 2024 and closed on 5 March. The Minister told Members there had been no Ministerial level discussions with her about the intention to consult prior to receiving a letter inviting Wales to participate.

The consultation does not apply to Wales, and the Minister has suggested that the Welsh Government may take a different approach to England and Scotland by not removing the time limit, citing transparency for consumers as the reason why.

As noted in the UK Government EM issued on the EU regulations relating to the marketing of eggs, issued on 19 February 2024, this is a devolved policy area which is subject to the agricultural support

common framework. These Common Frameworks require the different administrations in the UK to engage proactively on potential areas of divergence in policy development.

The marketing of eggs appears to come within the scope of the Market Access Principles enshrined in the United Kingdom Internal Market Act 2020. As you will know, under the mutual recognition principle, eggs that meet the required standards in one part of the UK are able to be sold in any other part of the UK even if the standards there are different. The current situation raises concerns that Welsh egg producers could be put at a competitive disadvantage if the standards for marketing of eggs as 'free range' differs across the UK administrations.

In light of the Minister's comments about the extent of Inter-Ministerial dialogue and engagement, the Committee would like to seek assurances that regular IMG meetings will resume, and that channels of communication between UK Ministers and their counterparts in Wales will be opened up for early and constructive engagement on issues that affect our food producers and consumers. Members would also be interested to hear the UK Government's view on the possible change of free-range egg labelling, and its impact on Wales including the UK Government's expectation around the operation of the UK Internal Market Act in relation to this issue.

Kind regards,



Paul Davies MS

Chair: Economy, Trade and Rural Affairs Committee

We welcome correspondence in Welsh or English

Agenda Item 2.3

Mr Andrew Ling
[address redacted]

13th March 2024

Chairman – Paul Davies MS
Welsh Parliament,
Cardiff Bay,
Cardiff,
CF99 1SN

RE: Development Bank of Wales – Miss Management of Perpetual V2G Systems

I would like to inform the Senedd that Development Bank of Wales appointed advisors that took my business from me.

I was falsely accused of theft from my own company, in which DBoW were investors.

The issues surrounding my removal from my role, transfer of my share capital, and subsequent criminal investigations were all consent items under the banks investment agreement.

In 2013 I founded a clean energy company called Perpetual V2G Systems Ltd.

The company grew quickly and gained significant market traction with companies such as Sainsburys Supermarkets and BT Openreach.

In 2017, we took a £500k investment in the form of a convertible loan note. Part of this fundraise was a condition for me to employ a bank-appointed expert. [Name redacted], on a salary of £150k per year.

To note, [name redacted] and [name redacted] (DBoW) had never worked in tech start up companies previously.

Less than 1 year later, I was accused of taking "unauthorised funds" from the company's bank account and sacked.

This happened to be just 1 month after my refusal to sell the business to BT Group.

I lost my job, my shares (approx £3.8m at that time) , my patent (£13m-£17m valuation) and was forced to go bankrupt in September 2018.

The company carried out an internal investigation and did not allow any external investigations to take place, as per my request.

My removal from the company would have been a consent item that the Bank would have to sign off on.

I attempted to contact the bank during the investigation and was told I could not speak to anyone as I'd stolen £250k.

In 2020 I was arrested by Dyfed Powys Police for theft.

My house was searched by 7 Police staff, and I was held in custody for 8 hours.

I was formally charged by the Crown Prosecution Service in 2022, and the case finally went to Swansea Crown Court in January this year.

[Name redacted], [name redacted] and [name redacted] all gave witness statements against me, and gave evidence at the trial. A number of statements they had made were found to be lies during the trial.

I was found not guilty unanimously by the jury.

I have attempted to contact the bank to discuss the issues I feel they have not completed in accordance with their customer charter, and the Companies Act 2006.

The Bank has responded and asked me to provide legal documents outlining my case against them and other shareholders.

I have now begun legal action to reclaim the losses incurred.

I am also aware of other companies that have been funded by the Development Bank having issues with the same "advisors" provided by the Bank.

These other small business founders have been in touch with the bank, with no response or action.

I have suffered significant financial loss due to the false accusations made against me, and incurred several other damages including loss of reputation and future value of my shareholding and business.

To note, after my dismissal the business was moved from Lampeter, Carmarthenshire where we employed up to 17 local people to Cardiff. Where they employed only 3.

After the business moved to Cardiff, both [name redacted] and [name redacted] set up new battery storage business, using my invention, and even got further funding from DBoW for these copy cat companies.

I would like the opportunity to provide evidence concerning my claims to the Senedd for discussion.

To note, I will also be explaining my circumstances to a national news paper next week, and will pursue legal action against all shareholders that profited from my removal.

Regards,

A handwritten signature in black ink, appearing to be 'AL' with a large loop and a horizontal stroke extending to the right.

Andrew Ling

[address redacted]

Agenda Item 3

Document is Restricted

Green Economy Inquiry

Economy, Trade, and Rural Affairs Committee

FSB Wales

March 2024

About FSB

Celebrating its 50th anniversary, FSB Wales is the authoritative voice of businesses in Wales. It campaigns for a better social, political, and economic environment in which to work and do business. With a strong grassroots structure, a Wales Policy Unit, and dedicated Welsh staff to deal with Welsh institutions, media and politicians, FSB Wales makes its members' voices heard at the heart of the decision-making process.

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?

Climate change presents a significant challenge to our economic and governance systems. Devolution allows for Wales to carve out its own bespoke agenda to address much of this, harnessing decision making that will enact and influence overall policy outcomes related to climate change, food security and economic development. Economic, social, and environmental stresses cannot be addressed in isolation from one another, cross governmental efforts will be necessary if meaningful change is to be overseen.

Un tournant du temps – high inflation, supply chain disruptions and cost increases from Brexit, and the war in Ukraine have directly led to higher commodity prices meaning government must now do more with less. A negative relative GDP growth trajectory of -5% of since 2016¹ means that radical and innovative mechanisms that streamline decision making and guarantee long term funding streams must be unlocked if Wales is not only to be seen as an attractive location for international investment but also taken seriously as a world leader in the fight to cut carbon emissions. This only reinforces the overbearing demand to build the green economy for self-sufficiency and security as well as to harness the potential economic opportunities for local communities.

¹ Springford, J (2022) “[The cost of Brexit to June 2022](#)”, Centre for European Reform, November.

The **Well-Being of Future Generations Act (2015)** shows the holistic approach already taken by Welsh Government to set a world leading precedent on how generational challenges should be addressed in unison with other directives. However, in strengthening our economy to become more versatile and resilient, these challenges will require a strategy that is well-equipped to deliver a smooth transition to a greener economy which harnesses the economic opportunities that ensure a business ecosystem capable of developing their full potential.

Critical infrastructure and the further development of technologies will offer long term solutions that address security concerns, while investing in local communities that have a strong grounding in SME activity. At the heart of this must be a drive to enhance the competitiveness of Wales's net-zero industries. In FSB's 'Accelerating Progress' report, we highlight how small businesses are keenly aware of the need to act on climate change; however, many are resource-poor in terms of time, expertise, and finances. In this regard, efficiency is key to ensuring that the green economy in Wales is fully optimised. Our recent reports on skills (['A Skills Led Economy for Wales'](#)) and on manufacturing (['Manufacturing Momentum'](#)) emphasise this need for matching skills and to build capacity and capabilities of SMEs, and supplier development. There is a need to make the soil fruitful for investment in Wales, and to provide long term plans and support institutions that provide stability and confidence for investors.

In our own assessment of this, the focus point for Welsh government should be to consider.

1. A simplified regulatory framework
2. A streamlined financing model for Welsh infrastructure projects
3. The establishment of an arm's length body to coordinate investment in Wales, including a focus on the green economy and utilising contracting arrangements, tools such as the Social Partnership and Procurement Bill to ensure SME opportunities.
4. A revision of enhanced skills training opportunities in green innovative industries.

Developing the economic mission further to provide a roadmap to the industries we wish to foster and attract, and the role SME's will play in both promoting a modern and dynamic green economy in Wales should be placed in high standing in a list of priorities. Through a simplified, faster, and more predictable framework which secures the volume needed for raw materials, and ensuring users can benefit from the low costs of renewables will give Wales the security it needs to reinvest in local community projects, local procurement opportunities and the advancement and dissemination of modern technologies and innovative practices. Anchor institutions – whether government, public and education bodies, or large firms and private investment – are key in ensuring the development of these supply chains.

In our assessment, we've concluded that Welsh government should further explore the practicalities of an Economic Development Agency for Wales as an arm's length body which can be used as a departmental tool to coordinate with established institutions such as Development Bank Wales (DBW) and Business Wales to oversee, incubate and foster economic growth across the country in line with climate and environmental directives. The aim is to provide a comprehensive ecology of support and development to build our businesses' capacities and capabilities. In doing so, would create a more supportive environment for scaling up the Welsh business sector to both be attractive for investment but also for research and development alongside Wales's universities.

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?

Most enterprises in Wales are SME, constituting 99.3% of all active businesses. Specifically, micro-enterprises, those with fewer than 10 employees, make up 94.7% of total enterprises. In terms of employment and turnover, SMEs contribute significantly, accounting for 62.9% of private sector employment and 42.5%, respectively, in Wales¹.

Subsequently, the race to cut carbon emissions, and transition the Welsh economy to a more sustainable and greener alternative will require a concerted effort to work with SME's effectively if the goal targets are to be met by 2050.

The key starting point for policy makers to understand is that SMEs are time and capacity poor, often have no access to finance and will require clarity, support and advice on steps they need to take, as well as the skills they require. Building networks of SMEs and relationships for the long term is key to this.

A key barrier is that relationships with business support institutions (e.g. Business Wales and Development Bank of Wales) – which are well-regarded – tend to be at the start-up of a business. However, after the first 3 years and when many businesses are looking to scale up and so require specialist and bespoke support, many feel that support is not available or unsuitable. This can be addressed through looking at businesses through a 10-year growth journey lens, with relationships built through patient capital (particularly on net-zero), and through better links and signposting from public and private (which often can provide more specialist support) providers.

As per our [2021 Accelerating Progress Report](#), an example of where there is a lack of clarity and certainty on the costs of those businesses that have not yet taken steps to address their energy usage, 29 per cent of small businesses say energy is not a significant cost, 24 per cent say that the return on investment takes too long or is too uncertain, and 22 per cent highlight the lack of capital (savings) as a reason why they are unable to invest. While businesses are expected to lead the way in the transition to more sustainable energy sources, it

is important that they are given the tools to do so in a tough economic climate, and that the opportunities are highlighted and the incentive structure in place.

We have seen a promising development in on-shore and off-shore wind farms being developed by major leading companies such as Vattenfall, Minesto and Copenhagen Infrastructure Partners and Bute with other projects such as the Swansea Tidal Lagoon potentially offering further opportunities in the near future. These projects have a commitment to improve community energy and energy security as part of their stated investment value, but a formalised mechanism that guarantees SME's access to contract and procurement opportunities would be useful, with contractual arrangements following accordingly. Welsh Government should explore and use its powers in the Social Partnership and Procurement Act (2023) to ensure SMEs have ample opportunity to harness these. Within this framework and by use of a potential Economic Development Agency for Wales, additional direct assistance can be administered to SME's who need additional guidance in making a green transition which would in turn help in building green skills through supply chain management and relationships.

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

A Welsh Government arm's-length body which is able to directly coordinate procurement would help streamline and guarantee that funding is directed in the right place and that the concerns of businesses can be triaged depending on organisational size and issue. Healthy supply chains, and good supply chain practice in general, can yield significant benefits to smaller suppliers, customers (often larger businesses), the wider economy, and society. Simply, good supply chain practice makes business sense, bringing a genuine competitive advantage to both larger business customers and smaller suppliers. A lack of coordination at this stage has the potential to make the Welsh governments strategy of net-zero less efficient and more complicated.

It is also important that the different institutions complement and support one another in providing an ecology of support for businesses in Wales. This would need to have a central point of contact and clear signposting to support (public and private) for SMEs – our polls show Business Wales is well known and part of the furniture, so could fulfil this role effectively, if provided with resources to do so.

Access to finance is a perennial issue, and a long-term fiscal strategy is a necessary part of providing SMEs with support for transition as needed. Welsh financial institutions such as the Development Bank for Wales have a strong track record in delivering for SME's. In a 2022 survey conducted by FSB Wales, respondents were asked about seeking business support from various organisations. Results showed that 11% accessed support from the Development Bank, while 22% sought assistance from Business Wales, and 3% from the

British Business Bank. The Development Bank does well in terms of recognition. In FSB Wales research from 2022, 65% of respondents were familiar with the Development Bank of Wales. This shows growing awareness - an FSB Wales 2018 survey, where only 41% of respondents were aware of it shortly after the bank's establishment.

There is value in reviewing how DBW's fiscal and monetary policies could be broadened to complement a refocused strategy on the Welsh green economy both to provide investment support, but also to provide support and advice to other institutions on bringing in investment capital to Wales. It should continue to ensure partnership working and harness the fiscal firepower of UK institutions such as the British Business Bank – an institution which also needs to be part of the approach to delivering in funding and capacity to assist SMEs to develop capability which contributes to net zero.

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?

We can look at this in terms of 3 linked issues that need addressing, with some specific needs within that overarching framework:

1. Access to skills and support architecture around skills
2. Identifying specific skills for the green economy and priming those skills
3. Aligning the short term and long term.
4. Access to skills and support architecture around skills

Our recent skills report, '[A Skills-Led Economy for Wales](#)' found several issues that cause issues around accessing skills for SME employers, including around green skills.

OECD research finds that the UK could benefit from a 5% productivity gain if the level of skills mismatch was reduced to OECD best practice levels. While many economic development and growth levers do not sit with Welsh Government, this area is largely devolved, and so should provide a clear economic priority and be developed as a mission for Welsh Government to address on a cross-governmental basis. As a key driver for future economic development and opportunities, this holds true for green skills for the future particularly.

Small businesses in Wales are currently grappling with accessing sufficiently skilled staff while they also confront the challenge of a growing perceived mismatch between the skills in the education system and those that business needs.

This in a Welsh economy where 99.3% of businesses are small businesses, and provide 62.9% of private sector employment¹, the part of the economy that has the most potential to grow is the small business economy. So, the opportunity costs of not addressing these needs for the green transition would be significant.

This structural dilemma arises from a combination of factors, including a lack of foresight in anticipating skill requirements and a failure to adequately adapt vocational education and training to address the evolving needs of the labour market. But continuing the structural mismatch is going to present any green skills agenda with the same problems.

Addressing these evolving needs requires a more robust alliance between the spheres of education and training, and the stakeholders within the labour market, with a particular emphasis on SMEs. This collaborative effort is essential for enhancing the alignment of skills with the rapidly changing demands of the labour market.

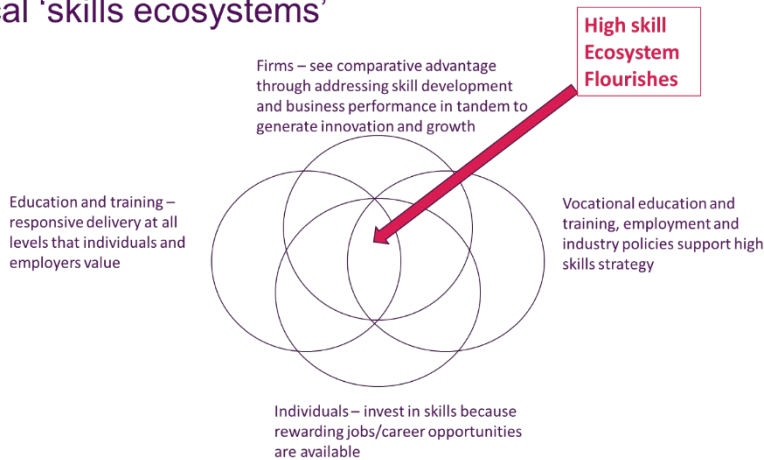
At Welsh Government level, there is a need to ensure a collaborative cross-departmental approach that aligns skills and economic needs and ensures an agenda that addresses the needs of all stakeholders. A Skills led mission that gives Welsh Government a priority through a taskforce for skills-led SME approach, taking in senior officials and policy development across Economy and Skills and Education to ensure a joined-up approach geared toward long term economic development.

There is also a need for a more interconnected policy response at a local level, the importance of which particularly relevant in the case of SMEs, which are much more likely to serve local markets and are required to draw from a local supply of skills. For instance, the OECD has long advocated for a local ecosystem approach² to address issues related to growth, jobs and skills. This is because addressing these issues requires action across a range of inter-connected policy areas – including business support, innovation, skills, economic development, and industrial strategy.

Building core people-management capability and improving firms 'absorptive capacity' is a necessary first step to business improvement given that many SMEs either lack a dedicated HR function or are time and resource poor and therefore lack in depth knowledge of the skills gaps and people management challenges and how to address them effectively.

From this general strategic framework, the economic mission on skills follows. Focusing on growing the SME economy in Wales and refreshing the 'missing middle' agenda we can build the key policy interventions for a better Skills-Led Economy in Wales geared for SME growth, building the capacity and capabilities of our firms while also building our citizens to have new skills opportunities, equipping them for future transition in the economy.

Local 'skills ecosystems'



It is also vital that short term skills gap for areas that will clearly be important for green transition be address. A clear example the role of construction and SME housing developers and retrofitting is a key area that will require both ensuring a substantial workforce and new skills to ensure that they are able to succeed. There are many examples of smaller developers – particularly in rural areas – must refuse or not compete for contracts as there is no local skills base. This issue was exacerbated by Brexit with less labour from abroad, but also with rising wages in urban centres (especially London) displacing workers from more peripheral areas. Filling this gap is essential for success.

Providing for a skilled support network for SMEs – e.g. to provide for green audit that are practical and provide a clear understanding of costs – is also important to build the engagement with SMEs, and to provide the focus on what needs to be done and the relative benefits of transition.

Identifying specific skills for the green economy and priming those skills

In terms of identifying specific skills for future development, there is a continuing need for a clear steer on priorities and arising green economy opportunities – whether they be through Wales' natural resources and comparative advantages (such as in tidal, wind and coastal, and projects such as in Pembrokeshire and Anglesey and across the North Coast) and aligning skills development accordingly. This requires input from multiple areas of expertise.

For SMEs, many of the opportunities arising are within the supply chains, ensuring that there is a legacy of skills development in our communities, building up capacity to take those opportunities.

This requires:

1. Building entrepreneurial skills into areas for high skill industries (such as through universities STEM courses, and hubs for green skills, such as marine biology)
2. Building central hubs of learning to develop specific green skills and spin off businesses
3. Ensuring that investment includes clear obligations towards building SME supply chains for higher and lower skill capacities and support through diffusion of expertise, knowledge and support on capacity and capabilities building in big infrastructure projects. So, areas such as contractual arrangements for investors and Tier 1 suppliers in receipt of public funding is key here, and we should look at using SP and Procurement Act to ensure a system that builds capacity from bottom-up and not looking at only contracting outside or overseas down supply chain.
4. A proportion of the £100m earmarked for the Transition Board should be used to work in partnership with Tata and academic experts to assess and map the supply chain impacts, and also outline areas for skills and supplier development within Wales taking in opportunities in the transition to greener production process.
5. More opportunities for peer-to-peer networking as well as promotion and sharing of examples of good practice via business networks could help to scale and spread successful ways to working. Learning from the impact of community networks from Accelerator programmes should be taken to wider business support mechanisms.
6. Aligning different strands together to ensure that the areas for building these skills are marketed as attractive high skill areas – targeting students to stay, and others to return. This should also align with a general Welsh brand as a green nation and be attractive for sustainable tourism.

Alongside such larger – or community – green projects, there is also the need to build the support system for advice and signposting to expertise through business support such as Business Wales, whether through its own capacity or through a list of providers. The private and public support services should be better linked to ensure that they feed into each other in a way that feels seamless to firms on their journey, via providing a searchable facility and list of accredited and trusted providers to support businesses access additional specialist support.

Ensuring that a green audit (including green skills audit) is something that is provided for SMEs through any loan schemes through DBW, and meaningful action that provides information on initial costs, options for financing (e.g. 0% loans), and what costs savings would be. Providing a systematic holistic support that understands SMEs limits on time (and so capacity and capabilities) is key to success, and this includes match making skills with SMEs. This would look to

address our findings that SMEs are often left to navigate a complex skills system themselves, this particularly being felt more since the loss of capacity in this regard within Careers Wales.

Better Alignment the short term and long-term priorities in any mission approach.

Another reason to look at a systematic approach within a Green Economic Mission and to build the institutional ecosystem to support skills in SMEs in Wales is that it will need to manage the tension between

- (1) Identifying priority areas to ensure long term capacity and capabilities building, aligning to a wider economic mission in long term
- (2) Provide flexibility for a fast-changing agenda, allowing for understanding that serendipity in unexpected innovation developments within Wales can also play a role in shifting priorities

Balancing these diverse needs requires fleshing out the delivery of the Economic Mission, the mechanisms for delivery, putting economic development at heart of skills. There is also a need to ensure that short term decisions for skills-led sustainable economic growth are aligned to the Mission – in other words that any mission has an impact and clear influence on budgetary decisions in the short term. It is noticeable that a refresh of the Economic Mission released in November appeared to be separate and/or have no influence over the draft budget proposals, at least in terms of skills.

This is important, as short-term decisions now can hollow out capacity and capabilities in Wales for the medium term and raising them back is exceedingly difficult. Ensuring a system that provides for the just transition shaped to the needs of SMEs at present with a view on the future is key to success.

A useful way to bring a longer-term vision in alignment with present pressures is to provide autonomy on decision making – properly accountable – for Arm's Length Bodies and provide an ecology of different institutions tasked with clear remits and responsibilities, and with partnership agreements in place to further the economic mission and a green transition.

In terms of skills, the Commission for Tertiary Education and Research (CTER) potentially provides new opportunities for better skills matching in this regard and has responsibility to better access for employers in its remit. It should be tasked in its ways of working with ensuring alignment with the business support institutions, again as appropriately set out by the steer provided by Welsh Government through the economic mission and economic strategy underneath the Mission, with partnership working, contractual arrangements following those functions accordingly.

It is important to retain an SME focus in these ways of working, as this is where there is real opportunity to endogenous growth and skills development, and so

supplier development. As such, when looking at a system that iterative when identifying skills, there is a need to balance between short-term bite size skills courses that are reactive to immediate needs, and also how this can feed into apprenticeships and more formal accreditations to build progression over the long term, both of which are key to learners and different parts of the SME sector.

Another area in terms of addressing short term vs long term is from the side of support for businesses looking for new skills and looking to grow their business. Our interviews indicate that there is general satisfaction with the role of business support (e.g. Business Wales, DBW) in supporting startups, but many find they struggle for support after the first 3 years, and this is a key area of focus and intervention through skills (including green skills). In this case building relationships with buildings and planning for 5-10 years, alongside skills system support for SMEs, and aligning to patient capital so as to build a relationship over the long term, would provide an approach that not only builds the number of new businesses but provides the support ecology for growth, and the capacity and capabilities to take advantage of new opportunities, including in the green economy.

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?

For SME employers it is vital that schemes start from understanding the pressures upon them, in terms of capacity (time and costs). Therefore, any aim to move must start from a basis of looking to provide headroom for SMEs to transition through alleviating costs and/or time in any schemes proposed, and that SMEs have fair access with schemes shaped to include their needs in a just transition. As noted, this also makes sense in terms of sustainable growth, prioritising growth from community businesses embedded in their local areas.

As such there are numerous opportunities in this agenda, if we get the frameworks right. It is important that the Welsh Government accentuate the positives and develop a strategy and narrative that focuses on tangible benefits for businesses and communities, be they in terms of lower costs or supply chains or new business opportunities. Currently the story SMEs hear are added costs and obligations, or at best mitigations of risks, rather than the numerous opportunities. But this story requires the link of the long-term vision to concrete proposals that focus on providing benefits now, and a strong steer from government to provide credibility for investment.

This can develop from the next steps in forming the means by which we will achieve any economic mission. This requires clarity on what Government will do (and won't do), how it will build advantages in Wales, what tools it can use and develop (e.g. DBW; long term finance plan), it would focus on developing access

to finance (including 0% loans specific to green economy and sectoral needs for efficiency etc); noting how it will ensure businesses who are tenants in their premises can also be afforded the tools to gain from any efficiency.

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?

The above questions have dealt with the partnership working through arm's-length organisations in Wales and provide a model too for providing the infrastructure that better facilitates working across governments, with arm's-length bodies tasked with implementing a green economic strategy serving as an honest broker to align strategy and guard against duplication. Arm's-length bodies – properly held accountable to the Senedd and Westminster as necessary – can provide a long-term view, independent and trusted evidence, and serve as central point of contact for engagement with the public and across different governments from local to UK, as well as potentially in providing confidence to investors.

In terms of Welsh and UK Government working together, the experience has been patchy, and there are elements of competing visions leading to competing funds duplicating and providing more complexity within Wales. For example, SPF funding being centralised to UK risks projects being approved that duplicate Welsh Government activity, or indeed compete with them, and there is some cross over in British Business Bank funds in Wales and Development Bank of Wales funding available to businesses. Other areas where Wales struggles is in innovation and R&D funding.

For SMEs, the main issue is that they should not see the joins between different governments when looking at finance and SPF schemes, and Business Wales has been a successful shop window in this regard, with very high recognition in our surveys, and it needs to continue to be resourced to fit its responsibilities effectively and to provide the interventions that support businesses towards growth, and that funding needs to be secure for the long term (so beyond 2025). UK and Welsh Governments partnership on freeports has shown that governments can work together toward a common goal, and British Business Bank working closely on some funds with the Development Bank of Wales shows that good practice is done, but it should be done in a more systematised way to ensure maximising the advantages of different levels of government and institutions, whether in local intelligence and networks in place, or in terms of fiscal resources and expertise.

However, there are also areas where we can see how this can be resolved by allowing an ecosystem where various parts 'do what they do best'. In the Investment Fund for Wales for example, there seems to have been good partnership work between DBW and the BBB, with the latter providing fiscal

firepower and DBW's subsidiaries tasked with the allocation of funds (BBB does not directly fund anyone but works in partnerships).

Similarly, it appears that – with some obvious tensions at times – Welsh Government and UK Government have worked effectively together on freeports. We would hope this would carry on being a model as they develop, alongside the green projects in train, with each aware of the institutional strengths the other (and local government) brings to the agenda's success, and the legitimacy of each party.

There are lessons to learn for SPF in terms of its performance thus far. FSB has always advocated that decisions on the funding allocated should be held by Welsh Government to align with regional economic goals, but that does not mean that this is an endorsement of the previous funding arrangements. Rather, the opportunities – wherever the levers lie – would be to make the system more flexible and reactive, better aimed at SMEs (so with longer time frames for submission, marketing and for budget cycles, as SMEs struggle to access such funds). A system that looks at using arm's-length bodies can also align the strategy of UK as a whole and that of Welsh Government with appropriate weighting, or in a way that is not zero-sum.

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?

We welcome that both candidates for prospective FMs have placed a central and renewed emphasis on the economy. As noted, there is an urgent need to build from the economic mission to be a clear influence on decision making for annual budgets. This should align too with the Future Generations Act and may need to revisit the National Indicators for a prosperous Wales.

- The use of arm's-length bodies can provide expertise and ways of working that make the most of the resources available. – a regional development body to bring in investment and create the stable architecture for investor confidence; partnership across institutions and shared ways of working can also provide for mutual reinforcement.

Some aspects that can be taken now that build toward the long term are less costly than others – for example building networks of SMEs, engagement and links to FE and HE, aligning skills system to decision around business support – so do what we do better through alignment and a holistic strategy based on a renewed economic mission. They are largely based around ways of working than additional costs, although ensuring that growing and building networks they are included as value in any targets and performance indicators is important.

Indeed, part of the point of the 'mission economy' is to provide the shape to better use and allocate resources, and so this structural and network, and relationship building towards the same goal is one that can and should be undertaken as it is not costly, is based on ways of working and clarifying remits and responsibilities and how different parts of an ecology in support of business work together better.

Alongside this, a budget outlook that fits the aims of Well-Being of Future Generations agenda in terms of economic sustainable development, noting that decisions now under particular political pressure – such as drastic cuts to skills budget – make building to the same capacity (never mind growing further) as now will be increasingly difficult as these institutions and schemes are difficult to rebuild once lost.

But while finance and funding are tight and the economy remains in challenging times, it is useful to build the relationships and support networks necessary to provide for SMEs 'absorptive capacity' and towards them building capacity and capabilities now, but also able to absorb better the support available when the financial environment is better.

Another place to look is where are the key parts for sustainable growth and is the money currently allocated targeted at the right parts of the system. Prof Dylan Jones Evans' recent evidence to the Finance Committee's inquiry on the Development Bank raised that DBW's performance figures illustrated the need to target more smaller and micro firms, and that he noted that the figures for job creation and growth in these areas were convincing on this. He also noted that referrals from Business Wales to Development Bank – and so evidence of alignment of priorities on micro businesses in particular – should be greater than it is.

So, a focus should be on the mutually reinforcing aspects:

- Ensuring finance and funding are targeted at the areas that can grow most, through SMEs supported across a 10-year journey for growth as appropriate and provide more support beyond the startup phase.
- Building the skills and business support apparatus, including relationships with business, to maximise the efficiency of long-term financing of green economy by preparing the ground now.
- We should explore how we can increase fiscal firepower while aligning Welsh strategies and local expertise – this can be through partnerships with UK institutions such as the British Business Bank; but also, through an arm's length regional development body that looks to bring in external investment and provides a stable system for investor confidence.

RenewableUK Cymru response: Member input

Consultation page: [Green economy \(senedd.wales\)](https://www.senedd.wales/green-economy)

Economy, Trade, and Rural Affairs Committee
Welsh Parliament
Cardiff Bay
Cardiff
CF99 1SN
Email: SeneddEconomy@senedd.wales
19 February 2024

Senedd Economy, Trade and Rural Affairs Committee: Green Economy inquiry

Across RenewableUK and RenewableUK Cymru, we work with our members to support the building and operating of our future energy system, powered by clean energy. We jointly represent over 460 member companies across Wales and the UK to ensure an increasing amount of renewable electricity is deployed which will support the decarbonisation of our economy, reduce emissions, and respond to the climate emergency. Our members in Wales are business leaders, developers, and technology innovators. We have a broad membership with extensive experience from all the major onshore and offshore wind (fixed and floating) developers operating in Wales, as well as key ports, supply chain, grid and planning stakeholders. Our members deliver **investment, jobs, community benefits and reduce emissions** in Wales. RenewableUK Cymru welcomes the opportunity to respond to the Senedd committee's inquiry on the Green Economy. This response has been informed by discussions and input from our RenewableUK Cymru members to bring together the views of industry – our response will be focused on the wind energy sector and the associated infrastructure's role in supporting the green economy.

The role of renewable energy generation at the heart of the green economy

A diverse, flexible, renewable based energy system is fundamental to support the net zero ambition and energy transition in Wales. Deploying a mix of technologies across Wales will bring a range of benefits; reducing our reliance on fossil fuels and international gas prices resulting in increased energy security, lowering electricity bills, unlocking productivity, and reducing carbon emissions to tackle the climate emergency. **Significantly, accelerating renewable energy generation across Wales to decarbonise our power system, industries, heating and transport while supporting the development of associated infrastructure and supply chains will be the crucial foundation of our future industrial growth and green economic prosperity.**

Accelerating renewable deployment as a foundation for powering the green economy will provide lower cost electricity. Renewable energy was significantly cheaper than fossil fuels during the energy crisis in 2022, shielding bill payers from some price rises. Even prior to the gas crisis, renewables had already saved consumers over £6.1 billion on their bills (equivalent to £221 per household) in 2021 by displacing gas¹. Renewables helped the UK avoid the need to buy nearly £12.5 billion of gas in 2022². As well as enhancing national prosperity, there are **multiple local benefits** to renewable energy development through **jobs, GVA, local supply chain development, community benefit funds** (onshore wind projects are already contributing more than £6.5 million a year to Welsh communities and could grow to £20 million a year by 2035³), **landowner payments supporting rural diversification; improvements to outdoor access and recreational facilities; habitat restoration and management plans to enhance local areas; apprenticeships and skills training; business rates paid over the lifetime of a project; inward investment in rural and coastal areas; and the provision of the cheapest form of electricity for homes and businesses.**

It has been encouraging to see the setting of the Welsh Government's target to meet 100% of Wales' electricity demand from renewable energy sources by 2035 and net zero by 2050 with supporting activities through the

¹ [Renewed Importance: How Renewables Cut Energy Bills \(ukonward.com\)](https://www.ukonward.com/news/renewable-energy-cut-energy-bills)

² [Analysis: Why UK energy bills are soaring to record highs – and how to cut them - Carbon Brief](#)

³ [Welsh communities poised to seize the green energy opportunity from onshore wind | RenewableUK Cymru](#)

Renewable Energy Deep Dive to address barriers to renewable energy deployment. However, an accelerated deployment of large-scale renewable energy projects across Wales and in the Irish and Celtic Sea will be key to achieving these targets and the pathway to achieving this remains unclear. Now is the time to focus on working in partnership between the Welsh Government, industry and communities – and in collaboration with the UK Government on reserved matters – to create a positive and aligned policy environment for renewable energy deployment, to establish Wales as a leader for net zero, and maximise the associated benefits for the Welsh economy, communities, ports, supply chain and enhanced biodiversity. **Providing certainty and confidence for investment is absolutely crucial.** It’s only with project delivery that we will see these benefits realised. With significant UK and global competition for renewable energy projects and supply chain capacity and capability, we risk losing out on the largest economic opportunity for Wales in decades if we do not provide the right market and policy signals.

The scale of the opportunity

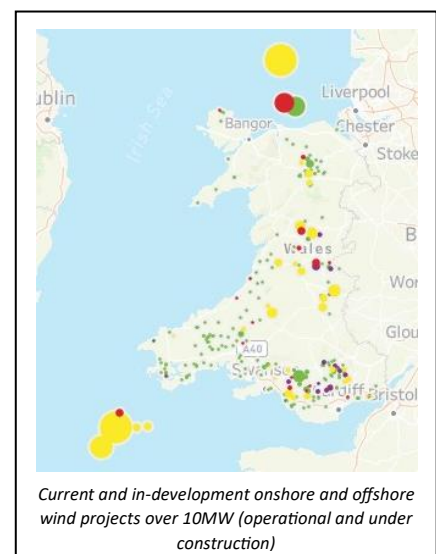
The green and net zero economy concepts are both built on a foundation of renewable energy generation. To realise these economic opportunities, a long-term pipeline of projects and certainty for timely delivery is crucial.

According to ECIU, there are almost 20,000 business across the UK currently within the net zero economy which are contributing £71billion (3.7%) in Gross Value Added (GVA) to the UK economy annually. This includes hot spots in North-East Wales and South Wales where £310million (4.4%) and £1616million of area GVA comes from the net zero economy supporting 3,397 and 16,090 FTEs respectively⁴. GVA per employee within the net zero economy in many regions contrasts to the economy-wide levels. While Wales does not experience high economy-wide productivity (where London and the South-East dominate above the UK average), the net zero economy in Wales is over three times more productive than its regional average at £181,200 GVA per employee, the highest in the UK. This demonstrates that the net zero economy is a highly productive sector for Wales.

The green economy opportunity for Wales associated with the development and delivery of wind energy projects is significant. Wales has an extraordinary opportunity to deploy a variety of onshore and offshore wind energy technologies as well as wave, tidal and solar – all of which can bring economic opportunities across the geographical regions of Wales, if enabling actions and infrastructure are urgently put in place. To date, Wales currently has just under 2GW of operational wind energy projects, including 1250MW of onshore wind and 726MW of fixed offshore wind.

Power generation from Wales’ diverse renewable sources will be at the heart of the future Welsh green economy, with the potential to deliver 9GW from wind power alone by 2035. However, this will still be below the target to reach the required 29TWh. This 9GW is made up of current capacity and the pipeline of projects under construction, consented, in planning or under development. To match the projected rise in demand, this will require more than **quadrupling the renewable electricity generation in just over 10 years.** Yet there is an enormous distance to cover. More than three quarters of this capacity has not yet been built, and from our research of public domain projects, more than half are in the early stages of development, and yet to enter the planning system.

From RenewableUK’s Energy Pulse platform and knowledge of projects not yet in the public domain, the potential pipeline includes just under 2.5GW of onshore wind (with an additional 2.6GW not in the public domain) and 2GW of new fixed offshore wind. As well as ~300MW of floating offshore wind test and demonstration projects, The Crown Estate’s 4.5GW Leasing Round 5 in the Celtic Sea is expected to deliver around 2.5GW of floating offshore wind in Welsh waters by 2035 with a potential future pipeline of up to an additional 12GW across the region. While offshore wind is set to ramp up, onshore wind still remains one of the lowest-cost and quickest to develop at scale, with rapid construction times of just over a year. It will be crucial for Wales’ decarbonisation efforts especially in the near-term – to



⁴ [Mapping-net-zero-economy-ECIU-CBI-DataCity-Jan2023.pdf \(edcdn.com\)](https://www.edcdn.com/files/2023/01/Mapping-net-zero-economy-ECIU-CBI-DataCity-Jan2023.pdf)

enable us to move away from fossil fuels faster. A strong onshore pipeline will also support the development of consistent Welsh supply chain and skills capacity and capability in preparation for offshore projects.

The deployment of renewable energy technologies has created thousands of jobs, generated millions of pounds in investment and contributed to communities. The UK's renewable energy industry now employs over 40,000 people and could employ over 100,000 direct jobs by 2030 if targets are maintained. Wales stands to see significant economic benefits as a result of onshore wind development, with an expected £4.4 billion in additional GVA and 3,000 jobs by 2030⁵. Floating offshore wind has the potential to deliver 3,200 jobs in Wales and South-West England for the first GW of deployment⁶, with further forecasts predicting 29,000 floating offshore wind jobs across the UK by 2050⁷. As well as significant opportunities for supply chain companies across Wales and adding value from the sector locally, Wales can export energy and expertise globally from all technologies. As demonstrated, renewable energy development across the project lifecycle directly employs a significant number of workers. To maximise the economic benefits to Wales, ensuring our ports and supply chains are ready for the pipeline of projects coming through is critical to support thousands of indirect jobs and stimulate wider economic growth.

Key challenges and enablers

The recently published Energy Generation in Wales 2022 report⁸ shows that Wales only added 43 MW of additional installed renewable electricity capacity in 2022, with the proportion of electricity generated in Wales from renewables falling from 33% in 2020 to 27% in 2022. Therefore, it is crucial that barriers to renewable development including **consenting and planning delays, grid capacity, skills bottlenecks, and ports and supply chain readiness** are addressed to deliver projects successfully and to give developers confidence to continue to invest in Wales. Providing certainty for both onshore and offshore wind projects across Wales will be key for long-term and stable investment and a pipeline for current and future jobs in the sector for people in Wales.

We want to see a clean, secure and lowest-cost energy system powered by renewable energy, and supported by a thriving domestic supply chain and workforce. We are calling on the Welsh Government in collaboration with the sector and key stakeholders to support the following measures to maximise the deployment of renewable energy projects and seize the economic opportunities that come with it.

1. Set a **clear delivery plan** for reaching the 100% renewable energy target by 2035 and net zero by 2050 to provide certainty for investment.
2. Within devolved powers, focus on unlocking further **consenting and planning resource, providing defined timescales for delivery and strategic anticipatory skills investment** for critical occupations.
3. Provide **leadership and convening power** to demonstrate a strong signal that Wales is *the* place to come to invest in the green economy.
4. **Collaborate through an improved intergovernmental mechanism on key strategic matters** that are reserved to the UK Government.

Further details on the above key enablers are provided in the answers to the questions below. We would welcome the opportunity to engage with the Senedd committee on the outcomes of this inquiry.

⁵ [onshore_wind_prospectus_fina.pdf \(ymaws.com\)](#)

⁶ [Benefits of Floating Offshore Wind to Wales and the South-West: Supply Chain Report – ORE \(catapult.org.uk\)](#)

⁷ [Floating Offshore Wind Centre of Excellence | ORE Catapult](#)

⁸ [Energy Generation in Wales: 2022 \(gov.wales\)](#)

Questions

- 1. 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?**

In order to deliver on the opportunities set out above, there are several key priorities that the Welsh Government should focus on to provide certainty in the process and confidence in timescales.

1. Setting a **clear delivery plan** for reaching the 100% renewable energy target by 2035 and net zero by 2050. Producing a plan with stage-gates and defined timescales will provide certainty to the sector. Using devolved powers to build confidence and a strong policy environment for delivery – not just ambition – whilst working in partnership with the sector will further create market demand, leverage sustained private investment and provide pathways for investment in supply chains, skills and training. Setting ambitious technology specific minimum targets will maximise the economic, societal and environmental benefits of a diverse energy system across Wales. Targets will also provide clear commitment and demand signals to industry of long-term certainty to invest in the deployment of renewable energy projects across all technologies. The sector stands poised to respond to a positive signal from Welsh Government that there is a role for private investment in onshore wind development in Wales. Deep dive recommendation 10 identified the opportunity for an Onshore Wind Sector Deal and once the sector is confident of Welsh Government's commitment to support the deployment of onshore wind, we can work in partnership and begin to align the details of a Deal to the benefit of the people, economy and net zero ambitions of Wales.
2. Within devolved powers, the Welsh Government's focus should be on unlocking further **consenting and planning resource, providing defined timescales for delivery and coordinating strategic anticipatory skills investment** for critical occupations. These activities will enable accelerated delivery, sufficient engagement within the planning process, a consistent deployment of projects to better encourage supply chain investment and ensure that we have a skilled workforce ready in Wales to deliver these projects.

- a) Addressing the lack of consenting and planning resource and providing defined timescales

Consenting and planning delays pose significant risk to our renewable energy and net zero ambitions in Wales – which will inevitably impact related economic opportunities. With targets to reach 70% of electricity demand from renewables by 2030 and 100% by 2035, timely consenting and planning will be crucial.

We will need to more than double the best build rate of energy infrastructure we have achieved in the past fifty years and do that every year for the next eleven years. However, in 2023, less than 50% of Developments of National Significance (DNS) applications were determined on time. As well as consenting and permitting wind and other energy projects, associated infrastructure and supply chain upgrades and industrial decarbonisation projects will result in a significant amount of work for Natural Resources Wales (NRW) advisory teams, Welsh Government civil servants, Planning and Environment Decisions Wales (PEDW) and Local Planning Authorities (LPA). In addition to wind energy projects going through Town and Country Planning Act, DNS, marine licensing processes (and eventually the Infrastructure Consenting regime) and grid distribution schemes there will of course be statutory consultation requirements for larger projects in Welsh waters (>350MW), grid transmission and over 132kV and cross-border projects going through UK NSIP regimes. The in-combination impacts of multiple projects on permitting timelines cannot be underestimated with a majority of levers sitting with Welsh Government. Decarbonising industry will be important over the coming decade (for example Pembrokeshire Net Zero Centre, TATA Electric Arc Furnace) – and we need renewable energy projects in place to power this future clean energy system – more in Wales equals more energy security and more economic opportunity for Wales.

At present, we have an under-resourced process at WG, NRW, PEDW and LPA level. We are already seeing a rise in submissions which will increase rapidly over the next 5 years. A focus is needed on pace as well as scale – to reach

the 2035 targets, we need to see accelerated decision making, more decisions being made, and more decisions being made efficiently. Pragmatic decisions are important in this energy transition. With leasing and initial ports funding processes now under way, consenting and planning is recognised as one of the most considerable risks for ports, developers and the supply chain. Ports upgrades delivered on time are crucial for maximising the benefits of offshore wind projects. There is a real risk that offshore projects could be delivered without maximising the benefits to Wales if the ports and supply chain are not ready in time.

The industry of course accepts the need for a robust process. There are many variables and uncertainties within renewable energy development however, and de-risking processes and providing certainty where possible is vital for delivery. **Defined timescales and sufficient resources will be absolutely crucial to address the scale of the challenge.**

b) Supporting anticipatory skills investment

To support strategic skills investment, the Welsh Government should develop a **workforce strategy and action plan** in collaboration with the renewable energy industry, training providers and education institutions to bring together and strategically coalesce the number of separate activities that are already taking place and identify gaps for future programmes. This should be delivered by cross-governmental working groups with dedicated skills resource for government, local authorities and statutory bodies. The accompanying actions needed to make sure the skills demand is met are outlined in question 4.

3. Provide **leadership and convening power** to demonstrate a strong signal that Wales is *the* place to come to invest in the green economy and make the case for Welsh projects on a UK level. Timescales are important for this sector and therefore in key areas, specific activity that provide strategic intervention need to be driven and championed. We have already seen this in the case of Welsh Government's early funding to de-risk ports' activities. We also need to see support in building the onshore wind supply chain in preparation for offshore projects – members feel that a Welsh industry doesn't currently exist as there hasn't been enough work to build a domestic industry with delivery of a consistent pipeline of projects. For example, Welsh firms and workers who worked on Vattenfall's Pen y Cymoedd onshore wind farm 5 years ago have had to seek work elsewhere. The impact of policy inaction is already being felt. One of our other members advised us that they run an apprenticeship programme and unfortunately, there were no apprentices taken on in Wales in 2023 and none planned for 2024. This is because of the demand for new renewables elsewhere in the UK, where they are building new projects. It's a similar story for other renewable energy developers. Wales is unfortunately being left behind. Furthermore, anticipatory investment in skills and apprenticeships and work to attract anchor companies to Wales that will enable Welsh SMEs to take an active role in the supply chain should be prioritised. For example, the Scottish Government have recently put forward grants to secure private sector investment in a new cable factory for the offshore wind sector which will leverage inward investment to Scotland⁹. The actions needed to encourage supply chain investment are outlined in question 3.
4. Collaborate through an **improved intergovernmental mechanism on key strategic matters** that are reserved to the UK Government to accelerate the build out of renewable energy projects in a sustainable way. A four nations task force with devolved governments and regions would better coordinate the key (reserved and interfacing) activities that are relevant to all nations such as building grid capacity, market support, ports and supply chain investment, and skills and workforce development.

⁹ [Growing Scotland's green economy - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/growing-scotland-green-economy/pages/100_to_110.aspx)

2. 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?

Key barriers for Wales to make the most of the green economy centre on lack of certainty and infrastructure.

- A **lack of a detailed plan** with actions to ensure certainty and delivery. We welcome the ambition, and we now need an associated roadmap that combines the best of private, public and community energy. Detailed proposals are needed to tackle issues such as grid, aviation and peatland and marine habitat restoration/enhancement which have the power to halt many developments. We need detailed proposals to tackle some of these issues and we certainly need a roadmap for deployment of the energy and grid projects required to get us to net zero. However, one of the main things we need from the Welsh Government is stronger leadership and more co-ordination. The National Infrastructure Commission for Wales recommended in their recent report that a vision and action plan should be led and co-ordinated by a cross-Welsh Government / public sector / industry delivery group, chaired by the Minister to ensure coordination across Government and the public sector. They had received evidence that “various Welsh Government departments are acting in an uncoordinated way and that, ultimately, policy is unclear on issues such as soils, peat, biodiversity and protected areas”¹⁰. At present, we have multiple departments (many sitting in the same Climate Change directorate) that are pulling in opposite directions in terms of policy. There is a need to focus on what the Welsh Government wants to achieve and then ensure that civil servants are aligned on delivery. These projects are significant in size and they will give rise to some environmental impacts - this is expected of any development project – however, we won't get to net zero without these projects given the go ahead at scale and at pace. The planning process and Environmental Impact Assessments are set up to deal with these competing impacts in the public interest and to take advantage of the significant contribution these projects will make to offsetting carbon emissions, as well as the socio-economic benefits and biodiversity enhancements that will be delivered alongside these projects.
- As explained above, **planning and consenting delays**. Innovative ways to increase resource should be explored such as a central resource pot to support specialist topics and a re-allocation of roles to provide clear career pathways in the profession. At present, we have a number of policies and guidance that have different and often conflicting aims and objectives which can impact the delivery of renewable energy projects, for example, Future Wales and Planning Policy Wales Chapter 6 in the case of onshore wind and visual impact guidance in the case of offshore wind. Clear policy alignment across government would support more efficient and clearer decision making.
- Our current **insufficient grid network** in Wales is a significant barrier to maximising the benefits of the green economy. With electricity demand set to more than double¹¹, there is real urgency to develop the infrastructure and capitalise on the potential renewable energy opportunities across Wales and the Irish and Celtic Seas. Grid buildout needs to happen at pace in parallel with generation. We welcomed the work on Future Energy Grids for Wales and the Local Area Energy Plans however these should now align with the generation pipeline to maximise opportunities for Wales beyond meeting demand. Supporting the need for a North-South transmission route and futureproofing the Holistic Network Design Follow Up Exercise beyond the initial 4.5GW is essential to make sure Wales’ grid needs are championed with key stakeholders such as Ofgem and National Grid. By working in collaboration with UK stakeholders, we need to ensure that the Electricity Networks Commissioner’s recommendations are also delivered effectively in Wales through the Transmission Acceleration Action Plan.
- **Supply chain capability and port readiness**. Immediate investment is needed for ports to increase their capacity and capability to support fixed and floating offshore wind projects and the pipeline of work in the Irish and Celtic Seas in the years to come. The recently published Celtic Sea Blueprint¹² from The Crown Estate

¹⁰ [Preparing Wales for a Renewable Energy 2050 – report – The National Infrastructure Commission for Wales](#)

¹¹ [Future Energy Scenarios \(FES\) | ESO \(nationalgrideso.com\)](#)

¹² [The Crown Estate - Celtic Sea Blueprint](#)

highlights the minimum requirements needed to deliver the first three projects in the Celtic Sea. It identified the gaps, such as ports readiness, availability of service vessels, and export cables to transport electricity to land. Addressing these gaps is important to deliver not only these wind farms but the future pipeline and global demand.

We are eagerly awaiting the results of the FLOWMIS scheme and also exploring future potential long-term support mechanisms through the RenewableUK led Industry and UK Government Port Task and Finish group. The Welsh Government should continue to support regional coordination and collaboration to maximise local supply chain opportunities and attract inward investment to grow the domestic supply chain capability using stepping-stone projects. The Welsh Government should also work with the UK Government to make sure that UK level initiatives such as Contracts for Difference reform, Sustainable Industry Rewards and strategic intervention through the Industrial Growth Plan delivers for the industry and supply chain in Wales.

- **Skills bottleneck and job transitions.** As noted in the answer to question 1 and expanded upon in question 4, a skills bottleneck will impact not only project delivery but also the prospects for Welsh jobs. It is important to note that in the move to a green and net zero economy a number of jobs will need to transition. Therefore, there is a real need to plan ahead to make anticipatory investment in skills development and structured transition programmes to not only protect jobs but maximise the economic opportunities for Wales, rather than bringing the majority of the workforce from elsewhere.

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

Across the world, it is recognised that there is an enormous need for new supply chain investment to deliver the increased wind, green hydrogen and other clean technology targets set out in recent years. There is now a global race to decarbonise, leading to significant increase in demand for renewable energy components. This demand poses a real risk of creating pan-national supply chain bottle necks which could affect Welsh projects. This issue simultaneously presents a risk and an immense opportunity for domestic supply chain development to meet market demand.

Given the UK's leadership in technologies such as fixed bottom and floating offshore wind, green hydrogen and tidal stream – coupled with its ambitious targets for future development – both Wales and the wider UK are well placed to attract manufacturing investment, in addition to seeing the growth of companies providing goods and expertise in operations and maintenance, consenting, and project development. For example, recent analysis has found that the UK supply chain for offshore wind alone has the potential to capture £92 billion of GVA by 2040¹³. However, there is considerable competition for this investment, and the domestic supply chain needs to remain internationally attractive in the long run. Notably, the USA and EU have announced a range of new fiscal measures and policies to incentivise private investment in 'green technology' manufacturing facilities to capitalise on this industrial opportunity.

On a UK level there are a number of schemes, policies and investments that will impact the Welsh market. For example, leasing expectations around social value from The Crown Estate, impacts of the move from Supply Chain Plans to the Sustainable Industry Rewards within the Contracts for Difference Scheme¹⁴ from Allocation Round 7 onwards and the development of the Industrial Growth Plan (by RenewableUK, OWIC, The Crown Estate and Crown Estate Scotland). Depending on the outcome of the Floating Offshore Wind Manufacturing Investment Scheme (FLOWMIS) process, significant investment could be on its way to South Wales ports to prepare for the floating wind opportunity. Making sure UK level initiatives deliver across the UK is vital for investment into Wales.

¹³ https://www.owic.org.uk/files/ugd/1c0521_8481391e44014ceda91900ce301adb53.pdf.

¹⁴ <https://www.gov.uk/government/consultations/introducing-a-contracts-for-difference-cfd-sustainable-industry-reward>

According to The Crown Estate's Celtic Sea Blueprint¹⁵, there are a number of opportunities for South Wales and South-West England "from the assembly of the large floating platforms needed to house the turbines, building on the existing local high-skilled welding and concrete expertise and existing local suppliers. It highlighted opportunities for local ports across the region from the assembly, transport and storage of parts during the construction and life-cycle of the sites. The first three windfarms alone will need:

- More than 260 turbines spread across the three sites, each some 300 metres tall, around the same height as The Shard, on a floating platform about the size of a football pitch
- More than 1000 anchors to secure the floating turbines to the seabed, with at least 300km of mooring lines
- Nearly 900km of cables (enough to stretch four times the length of Wales / nearly enough to stretch from Lands End to John O Groats) to link up turbines and connect them to the electricity network".

In Wales, we have the potential to be at the forefront of driving development with key stone ports and a number of SMEs with transferable skills and experience. With a skilled manufacturing base to feed into this new industry, investment in the region now is critical to develop our port capabilities. We need to attract the right anchor companies to develop our own local supply chain capabilities and safeguard against bottlenecks in project delivery. Identifying our competitive advantages in Wales to prioritise first-mover investment will kick start this opportunity. Using data from OWIC's Supply Chain Capability Analysis, Industrial Growth Plan and the FLOW Task Force (of which we welcome Welsh Government's active participation), will support this identification and prioritisation. This work should be done with urgency so that the opportunity isn't lost as it did with turbines in the past.

There are a number of experienced companies in Wales such as Jones Bros working on onshore and offshore projects in Scotland and the North-East of England. Local companies need to see developments being consented years in advance to give them reassurance that there is a pipeline of projects to work on; otherwise they will seek work elsewhere in the UK or abroad. With certainty through a clear action plan for the delivery of the diverse onshore and offshore project pipeline in Wales, Welsh companies can build capacity and capability to meet the demand.

Furthermore, increasing the capacity of specialists with renewable energy supply chain technical expertise within the Welsh Government as they do in Scotland could help coordinate collaborative approaches and advise developers of the Welsh supply chain offer. The Welsh Government can also assist with seizing several priority opportunities to further Wales's role in this sector, by working with existing Welsh businesses to invest in carbon-neutral production facilities to secure material supply, including sufficient concrete supply and improving local market share for reinforcement steel.

Continued resourcing and capacity building of the clusters – the Offshore Energy Alliance in North Wales and the Celtic Sea Cluster - will support coordination and strategic investment. Further using the Growth Deals across Wales including in Mid Wales to drive investment and export opportunities from renewables will be vital for building supply chain confidence.

4. 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?

We are at a critical juncture in Wales to prepare our future workforce for the opportunities that lie ahead through the development of wind energy projects – which will also support other key industrial decarbonisation and net zero developments. Renewable energy generation underpins the green economy story across Wales. Decarbonisation of electricity should enable the decarbonising of heat, industry and transport, and logically priority should be given to growing the resources and skills in renewable energy and the electricity grid in order to enable progress in these areas. To capitalise and maximise on these opportunities for jobs and economic growth for Wales,

¹⁵ [Supply chain for Celtic Sea floating wind farms could power 5,000 new jobs and a £1.4bn boost for the economy | The Crown Estate](#)

urgent investment in skills development is needed to ensure Wales does not miss out on these opportunities. The Welsh Government has key convening powers and a capital investment role to play whilst working together with industry to bring forward strategic activities that coalesce activities with a shared vision and priorities for Net Zero skills in Wales. Unfortunately, recent cuts to the apprenticeship budget in Wales will mean that the much-needed increase in the scale and pace of apprenticeships will be difficult to meet.

To stimulate the green economy in Wales, by the 2030s, our vision is for the wind energy sector to be among the most attractive, equitable, diverse and inclusive sectors to work within in the Welsh and wider UK economy, with clear pathways to employment for new talent and those moving sectors during their careers. To **accelerate the delivery of renewable energy to meet targets**, we need a strong and stable workforce in Wales. According to the Offshore Wind Industry Council (OWIC)'s Offshore Wind Skills Intelligence Report, to meet the UK Government's British Energy Security Strategy 50GW target by 2030, we need to attract and retain around **100,000+ people in the offshore wind sector alone**. That represents an increase of some 70,000 on today's estimated workforce and highlights the overall challenge for the UK. However, it also demonstrates the opportunity for Wales to develop people with the skills to support the entire renewable energy sector as well as the challenge it will face in competition for labour within the UK itself as well as with other sectors. Recent estimates suggest that, between now and 2050, the floating wind sector **alone** could create 37,000 jobs¹⁶ and many of these could be in Wales to support projects in the Celtic Sea. These offshore numbers are only a part of the requirement. To deliver on decarbonisation, Wales and the wider UK will need significantly more people to deliver renewable energy projects and maximise the opportunity and benefits for the Welsh economy.

In terms of the level of skills/employment challenge, the main concerns were prioritised as follows:

1. Shortage of specialist skills/labour
2. Attracting new talent
3. Encouraging young people into the industry
4. Losing existing talent
5. Retention of graduates

The main barriers identified by our members to address the skills needs in Wales are a lack of:

- A singular, solid delivery plan/pathway with coordination from a central point in Wales which interfaces with the wider UK requirement. There isn't enough cohesion and clear messaging on skills. There is currently fragmentation of the skills system i.e. piece-meal activity taking place, but a strategic approach is needed rather than on a project-by-project basis.
- Lacking an industrial strategy for Wales in terms of key competitive advantage areas.
- An associated lack of clarity over leasing and consenting timelines/timescales leads to uncertainty for projects. This affects supply chain and thus economic growth and skills as without an understanding of volume and pipeline it's difficult for businesses to understand the need to scale-up and invest.
- Knowledge, awareness and understanding of the sector and the opportunities it presents (including industry roles and what they entail). Lack of local knowledge and career guidance amongst both school-age students and those of working age.
- Funding and not enough resource in the public sector to 'own' this challenge.
- Local Infrastructure including housing, schools, provisions which will be vital to support a growing workforce in specific regions associated with these projects.
- Conflicting public policy objectives and Government priorities, inflexible existing skills structure.
- Buy in by some educators and providers.
- Urgency to move forward the skills agenda strategically. There is a significant risk that Wales will lose out on the opportunity if the workforce isn't ready.

¹⁶ (ReEnergise-Summer2022-WV.pdf (catapult.org.uk))

- Sufficient number of courses in further and higher education across the country to train and provide the necessary qualifications.
- Experienced older workers. With the loss of these workers in the coming years, there is limited opportunities to pass on knowledge and skills to younger workers.
- Centre of excellence hub and skills centres. As skills are largely being looked at regionally, associated with specific projects, opportunities for centralised, highly effective and valuable centres of excellence are being overlooked.
- Approach which looks at onshore and offshore projects holistically to smooth pipeline.
- Approach to better able people to transition between sectors to match demands.

There is a risk of institutional ‘bottlenecks’ that could impact on the ability to deliver the energy transition, which includes 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. Without this, new career opportunities, helping to revitalise communities across Wales, will not be maximised. As it stands, there is no joined-up, strategic forward plan to tackle these issues, which could come to play an increasingly restrictive role in the rollout of new clean energy infrastructure and associated economic development opportunities.

The industry’s overall focus is on supporting: priority occupations (outlined further in the response), cluster-based partnerships, a just transition and a diverse and inclusive sector. These cross-cutting themes should prioritise activities for attraction and recruitment, retention and upskilling, training provision and educational outreach.

To deliver on these, the Welsh Government should develop a **workforce strategy and action plan** in collaboration with the renewable energy industry, training providers and education institutions to bring together and strategically coalesce the number of separate activities that are already taking place and identify gaps for future programmes. This should be delivered by cross-governmental working groups with dedicated skills resource for government, local authorities and statutory bodies.

The action plan should include actions for government and industry to work collaboratively:

- To clearly **identify the range of skills needed and timeframe** for the requirement for industry to deliver the 2035 target. The timeline should indicate the number of jobs and roles required year on year to fulfil net zero ambitions which should then translate to a delivery plan for skills and training provision requirements from further and higher education and a corresponding personnel figure.
- Developing a **compelling offer for the workforce** in collaboration with other stakeholders through **attraction, recruitment, retention and upskilling**. This offer should include: providing clear information on career pathways and job profiles, ensuring that the right apprenticeship frameworks exist in Wales aligned to priority occupations, with the supporting quality training provision to deliver these. A step change in apprenticeship funding and attracting young people, local residents and people from other industries, through communications and career engagement tools. For example, national Net Zero opportunity campaigns and supporting skills passporting arrangements across the sector. We also need a clear financial offering to help people actively choose green training options over and above others, e.g. through payment of bursaries, grants and financial support¹⁷. According to the Local Government Association, 80% of the workforce needed for 2030 are currently in the labour market. It is not only industry and developers that require more skilled people. Parts of the public sector that are critical to help realise the renewable energy potential are vital i.e. well-resourced and skilled public bodies.
- A focused **effort to prioritise Critical Occupations** ensuring the industry tackles the skills and recruitment to the roles the sector needs first and most and engaging with and provide capital funding for those training

¹⁷ https://www.edge.co.uk/documents/472/Skills_Shortages_Bulletin_13.pdf

providers who will help us to do so. Focus of funding should be on priority sectors, critical occupations and industry bottlenecks. The first of these will be planning and consenting roles.

- The industry will **work collaboratively for place-based solutions through cluster-based and local partnerships** where strategies and plans delivered at a national level work hand in glove with tailored, impactful local solutions.
- **Improve future sector data collection specific to Wales** – aim to establish a clear baseline of the state of jobs and skills across net zero sectors in Wales, gather survey data from across small and medium-sized businesses and data with regards to diversity and under-represented groups. Assessing teachers and careers advisers’ understanding of industry opportunities and needs would also be beneficial¹⁸. A recent report by the University of Strathclyde ‘The Economic Impact of Scotland’s Renewable Energy Sector’¹⁹ demonstrates the importance for initial up-front investment to make the most of the opportunity and support presented by the renewable energy sector including significant GVA for other sectors and industries.
- **A communication campaign to promote green jobs, career pathways and routes into the sector.** This should work cohesively across the UK and devolved governments to promote sector opportunities, the differentiation and categorisation of roles (e.g., planning, technical and sector-specific, construction etc.), to communicate jobs in a new and exciting way (e.g. the role of planning in place-making and delivering infrastructure that the world will need by 2035 and beyond), case studies to encourage **diversity and inclusivity** within the sector and provide clear information for young people and those of working age to access information about careers. A collaborative framework for national, regional and local **educational outreach, support and engagement** would strategically inform pupils, students and parents about the opportunity the sector represents.
- **Onshore projects (wind, solar, battery storage) will be crucial stepping stones to develop the workforce for hydrogen and offshore wind at scale.** This represents a significant opportunity for sustained upskilling of personnel in Wales, with skills demand building steadily as a green runway to the needs of the offshore sector. These skills will be both demanded and transferable throughout the sector – making the need for renewable energy focussed skills more acute, particularly in the wider UK context. It is also important to note that other energy sectors – nuclear, decarbonisation of heavy industry will require similar skillsets – driving an exponential need for focussed delivery of skills in a timely fashion to meet 2035 targets for Net Zero.

Extensive detail on the actions needed to be taken and by who are outlined in our response to the Welsh Government’s consultation on Net Zero Sector Skills.

5. 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?

As highlighted in the Welsh Government’s Net Zero Sector Skills and Just Transition consultations. Also, according to the Green Jobs Taskforce report produced for the UK Government²⁰, “the potential economic opportunities of the transition to a low carbon economy are becoming clearer, with domestic and global markets in low carbon

¹⁸ SWIC, Port of Milford Haven (2022) Milford Haven Waterway Energy Sector Skills Study

¹⁹ [The Economic Impact of Scotland’s Renewable Energy Sector original.pdf \(scottishrenewables.com\)](#)

²⁰ [Green Jobs Taskforce report - GOV.UK \(www.gov.uk\)](#)

technologies estimated to be worth billions of pounds to the UK economy over the coming decades. All sectors of the UK will go through a transformation on the journey to net zero and this will impact the workers and communities they sustain". Governments, industry and the education sector across all stages of the green jobs life cycle need to build pathways into green careers for people from all backgrounds; and to ensure that workers and communities dependent on the high carbon economy are supported with the transition. A clear pipeline of projects will provide confidence in the volume of work available locally

There are a number of actions currently undertaken through the Scottish Onshore Sector Deal and the UK Offshore Wind Industry Council that the Welsh Government can learn from and work with industry to deliver. These include, for example, commitment from the sector to enhancing the current skills and training provision for apprenticeships, transition and vocational modules and passporting initiatives between heavy industry to the offshore renewables sector respectively.

6. 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?

Collaboration is absolutely key for delivery. Developing a partnership between the public, private and community sectors with a mechanism for regular and sustained cooperation will not only improve delivery but also build social capital to garner trust between the government and the sector.

To ensure a green economy is realized that bring multiple economic, social and environmental benefits to Wales there needs to be a recognition of the returns currently being delivered to Wales plc through employment, contracts and environmental management (as well as community benefits). There is a need for a concerted effort to recognize that all parties' developments are needed to reach net zero – public, private and community projects - and this is not taking away from Wales in GDP or otherwise. By working together, there is an export market that is not extractive and that could bring multiple added benefits in economic terms but also in local opportunities for Welsh jobs and businesses sharing Welsh expertise and services globally.

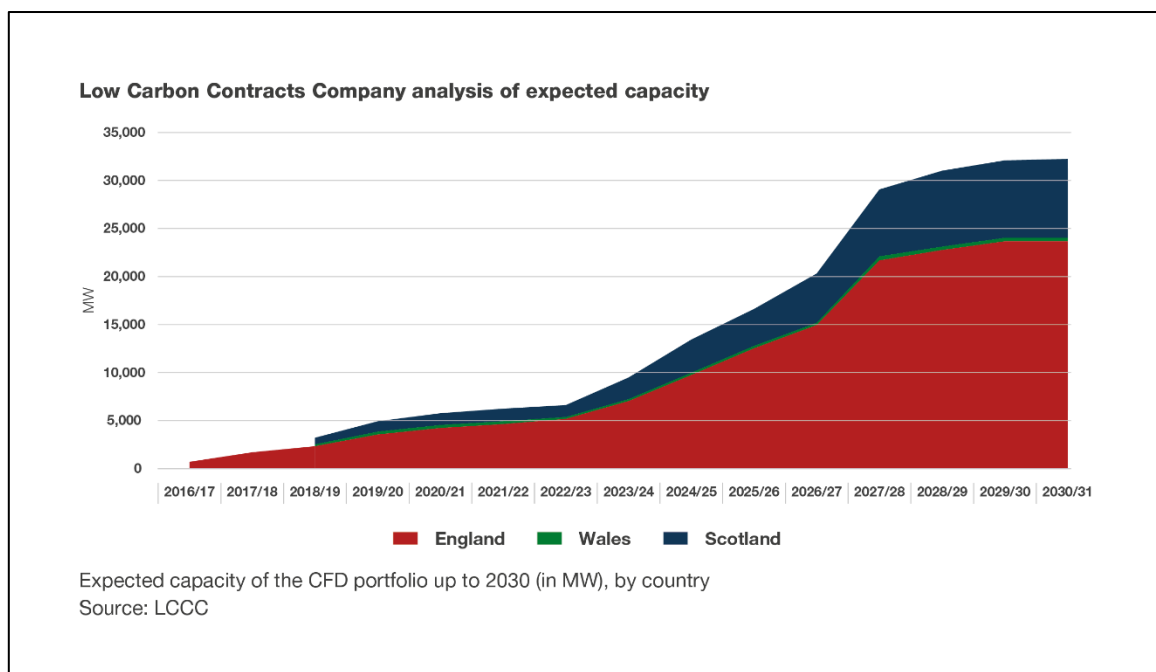
To realise the significant potential that the diverse mix of renewable energy projects can bring to Wales, there is a need for strong collaboration between the Welsh Government and key stakeholders including the UK Government, renewable energy developers, the supply chain, ports, Ofgem, National Grid and The Crown Estate to ensure there is a streamlined, facilitating environment for development, to create a certainty in pipeline of projects and increase investor confidence.

Legislative reforms are being explored for The Crown Estate's powers to borrow capital and invest to enable the delivery of leasing round projects. The Welsh Government should continue to work closely with The Crown Estate to identify strategic areas of investment that will maximise regeneration and economic growth for the region.

While the role of government will be crucial, it will not be able to deliver net zero on its own. A societally inclusive, economy-wide effort will be needed, with coordination of activity at all levels. The four nations task force proposed, including representation from governments and industry, should therefore be established to maintain momentum and coherence on key strategic issues such as support for delivering large-scale infrastructure – grids and ports – and supply chain investment.

7. 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?

- There is real need to recognise the potential represented by private investment. Creating a clear and unequivocal signal that makes Wales an attractive place to do renewable business will be vital to stimulate the green economy. Prioritising investment which leverages private sector funding will support the government’s objectives in a range of areas.
- Increasing confidence and delivery by prioritising and re-allocating funding for consenting and planning resource and skills programmes will in turn maximise investment in areas such as biodiversity restoration and enhancement programmes and job creation.
- Allowing the private sector to collaborate with the aim of some developments in long-term shared ownership.
- Supporting Clean Growth Hubs, Growth Deals and Clusters as networks to share resources, develop infrastructure streamline resource and support local growth by coordinating and attracting investment.
- Recognising that for Wales to capitalise and maximise this green economic opportunity, the consideration of export prospects of this industry should go beyond providing power to the rest of the UK - and should focus on the associated potential industrial growth.
- The Contracts for Difference mechanism is a critical financial support framework available for renewable energy projects in the UK. A graph from the Low Carbon Contracts Company, who operate the CfD scheme, shows that historically very few Welsh projects have been awarded a CfD compared to England and Scotland. Given this backdrop and the latest AR5 result, it underscores the pressing need to facilitate the right investment environment in Wales to meet the step-change in deployment needed by 2035. This should be supported by the Welsh Government providing clear policy positions and strategic investment support decisions to attract significant inward investment to Wales.²¹



²¹ [Future-Energy-Wales-The-Critical-Role-of-Welsh-Wind-Power.pdf \(renewableuk-cymru.com\)](#)

Driving the COGS to start a green industrial revolution in Wales

Author: Ben Burggraaf, Chief Executive Officer, Net Zero Industry Wales

1. Introduction to Net Zero Industry Wales

Net Zero Industry Wales (NZIW) is a not-for-profit body which provides independent guidance and support to Welsh industries in their transition to delivering net zero.

Established in 2022, with support from Welsh Government & Welsh Industry, it aims to provide a neutral & trusted voice, whilst empowering industry to play an active role in the delivery of net zero through the uptake of low carbon technologies.

Net Zero Industry Wales seeks to foster collaboration (private & public sector) and helps to unlock investment, with the ultimate aim of making Wales the country of choice for sustainable goods and services.

2. Background

Welsh Energy Landscape

Like the rest of the UK, macro factors have led to Wales facing rising energy costs and greater uncertainty of energy supply.

Wales generates c.9% of total UK generated electricity, and there continues to be reliance on imported gas to generate electricity sufficient to meet demand. Wales, along with Scotland and Northern Ireland, are net exporters of electricity, with the majority going to England. Electricity generated from renewable sources accounts for c.30% total generation, largely from onshore and offshore wind. Despite Wales' geography enabling an endowment of wind and wave power potential, its renewable generation share is the lowest of all UK countries and has been since 2012.

On the demand-side, Wales' energy consumption has fallen by 24% from 2005 to 2022, largely driven by a decline in industrial use, such as crude steel production.

Wales has a limited window to accelerate its transition to renewables that can provide social value and secure long-term energy stability. This requires a green industrial strategy underpinned by strong industry collaboration.

Wales’ energy ambition

Welsh manufacturing & power sectors contribute up to 50% of the nation’s carbon footprint¹. Since the closure of the coal mines, these sectors have struggled to gain access to competitively priced energy in the region and wider UK.

There are multiple targets set by the Welsh Government and other stakeholders that will require the Welsh energy sector to unlock its full potential with renewable technologies and reduce dependence on fossil fuels.

Wales must generate electricity equal to 70% of its consumption from renewable sources by 2030, and the Welsh Government is consulting on whether to introduce a 100% target by 2035. As of 2021, c.55% of electricity consumption in Wales was generated from renewable sources. Additionally, at least 1 GW of renewable energy capacity to be locally owned by 2030 and 1.5 GW by 2035. In 2021, 897 MW of renewable electricity capacity was locally owned.

Meeting the 2030 and 2035 targets will require an urgent step-change to accelerate Wales’ renewable energy project deployment. Our analysis, below, outlines the need for renewable generation to increase by c.280% to meet the 2035 target.

Practical implications of targets

	2021	2030F	2035F
Electricity Generation (TWh)	27	33	48
Electricity Consumption (TWh)	14	19	29
Renewable generation as a % of consumption	55% (Actual)	70% (Target)	100% (Target)
Implied absolute renewable generation required to meet targets (TWh)	7.7	13.3	29.0
Increase in renewable generation from 2021 required to meet targets	–	73%	277%

Note: F = forecast

Achieving Wales’ energy ambition not straightforward

Welsh Coal drove the original industrial revolution and played a substantial role in shaping Wales’s proud industrial & cultural heritage. Wales could be at the heart of the next Industrial Revolution.

But the path toward this, is not an easy one. Welsh reliance on imported gas in the context of rising energy costs and energy supply uncertainty means Wales needs to accelerate

¹ Source: Climate Change Committee – Progress report Reducing emissions in Wales – 2020 emission level (industry & power sectors combined value) – published June 2023

actions for long term energy security. Solutions need to increase domestic control and provide greater cost certainty. So far, Wales has relied on predictable and centralised energy supply from the grid, coupled with market mechanisms to balance supply and demand. Balancing mechanisms have been costly and heavily reliant on gas and large players in the market.

In addition, the recent announcement by Tata Steel regarding the Port Talbot Steelworks will have a significant impact on not just their workforce, but their families and the surrounding communities.

But contrary to these recent events, the historical trend of industrial decline and the wider belief that decarbonisation of industry leads to job losses, there is actually a bright future for industry in Wales, if only the opportunity is unlocked now.

3. The South Wales Industrial Cluster (SWIC) Plan

Affordable, sustainable & secure

Wales must now deliver a just energy transition that results in affordable, sustainable and secure energy. Reliable and predictable renewable energy generation will enable Wales to use energy and gain a competitive advantage for industries with intensive energy use.

Furthermore, increased export requirements from renewable generation centres to satisfy wider UK demand as forecast by the National Grid's - "Future Energy Scenarios" (FES) require investments in generation, transmission and flexibility solutions.

Over the last 5 years, the manufacturing & power sectors in the South Wales region, which contributes to the overall majority of Wales's industrial emission and is one of the largest industrial clusters in the UK, has worked together to create the South Wales Industrial Cluster plan. This plan was published in March 2023².

The SWIC cluster plan outlines an ambitious pathway, to reduce 16 million tons of CO₂ by 2040, requiring £30 billion of mainly private investment, to make this a reality. This pathway not only ensures that industry in Wales continues to produce high value goods & services, but also provides a quicker route to decarbonise, compared to the counterfactual, i.e. the continued de-industrialisation of the energy intensive industry in Wales.

A significant proportion of the emissions reduction achieved since 1990 (54% since 1990) was achieved by de-industrialisation, as manufacturing & associated emissions were offshored over this period. This isn't only globally irresponsible, but also makes the nation's supply chain less resilient and removes well paid jobs from our economy, demonstrated by the 47% reduction in manufacturing jobs over the same period³.

² SWIC: A plan for green growth – March 2023

³ Aldersgate Group Report: Economic benefits of

Wales has significant renewable energy generation potential, which is an important source of new energy and it's expected to become globally cost competitive in the long term. This will drive a new “green” industrial revolution and enable Welsh industries to prosper, be more resilient & sustainable and contribute to a more equal & globally responsible Wales.

Details of the SWIC plan, which is a blue print for the wider industrial decarbonisation across Wales and the associated 5 step decarbonisation pathway, were shared with the committee in February and incorporated as an appendix to this paper (see appendix 1).

The importance of industry and government collaboration

Collaboration between government and industry is crucial to develop and implement roadmaps on a cluster-by-cluster basis to develop the right culture, policy & regulation framework and infrastructure, to achieve the Welsh net-zero targets.

Government

Government (both UK government, Welsh government where devolved powers exist, and Welsh local authorities) must provide support through policy, investment, and infrastructure. Government needs to take decisive action to address the binding constraints and market confidence that can make investment in renewables a challenge.

Examples of actions by government can include:

- Establish timelines in close collaboration with Industry for clusters to achieve renewable energy and net-zero targets. The Innovate UK Industrial Decarbonisation Challenge program, led by Innovate UK has been very effective to do so for the large industrial clusters, however now has come to an end.
- Establish & continue the deployment of innovation competitions to facilitate early phase projects and development of new clusters (regions) and Clean Growth Hubs (places), in particular the ones that are “dispersed”.
- Develop economic models to support low-carbon infrastructure, which include ways to support anticipatory investment in electricity, hydrogen, port and other enabling infrastructure.
- Support (applied) research and development investment into renewable energy and or deep decarbonisation initiatives, to support industrial and wider societal “deep” decarbonisation beyond 2040.
- Encourage investment into emissions reduction through financial incentives such as tax credits, loans, grants, revenue support mechanisms (eg. Contracts for Difference) or even government backed guarantees.

- Leverage existing infrastructure and brown land to facilitate the formation of Clean Growth Hubs, building on the existing industrial activity, combined with anticipatory investment in infrastructure.
- Reduce regulatory barriers, in particular areas where government has devolved powers, such as lengthy planning & environmental permitting processes, and reduce uncertainty by appropriately resourcing the statutory bodies.

Industry

Industry must closer collaborate with government, the regulators and its surrounding communities (aligned with the Wellbeing of Future Generations Act) and lead the way to establish financial support. Examples of actions from industry can include:

- Build trust between partners within clusters within the regions and the clean growth hubs more locally, by forming working groups with representatives from all stakeholders, with the aim to create strong public-private sector partnerships.
- Assess the range of industries within each of the geographic regions to understand the needs within the clean growth hub, to develop a place based decarbonisation pathway (using the 5 “Cogs” outlines in the SWIC cluster plan, see appendix 1).
- Develop commercially viable models and risk sharing initiatives such as power purchase agreements (PPAs), which are underwritten by Government, to reduce the financing risks for the developers.
- Create sustainable funding model for energy and decarbonisation investments, which not only looks at the historical costs of energy but also forward, i.e. take into account the potential “shocks” and increased volatility of the energy markets, to increase resilience, as well build in the societal cost of carbon emissions.
- Financially support the creation of strong public & private sector partnerships, which unlocks anticipatory investment in skilled resources, as well as co-fund the resources needed to appropriately resource the statutory bodies, beyond “business as usual”, to ensure they aren’t on the critical path of the delivery of net zero.

4. Making the South Wales Industrial Cluster plan a reality

The SWIC plan outlined in the previous paragraphs, requires £30 billion of private investment⁴, over a period between 2025 – 2040. This equating to an average investment rate of £2 billion per annum.

Alongside this, there is the deployment of the Floating Offshore Wind (FLOW) technology in the Celtic Sea, with each GW requiring ca. £3 billion of investment. With 16.5GW in the pipeline, this would need at least a further £50 billion of investment to deliver.

This level of investment in industrial decarbonisation, alongside the deployment of FLOW is unprecedented and requires a high level of coordination & planning, delivered through private-public sector partnerships, to ensure that:

- The private investment can be attracted with the appropriate level of UK Government revenue support (CO₂, hydrogen, electricity business models, Contracts for Difference, etc.);
- Planning and environmental consents can be secured in a timely fashion, to reach financial investment decisions;
- Wales has the capability to manufacture materials & sub-components and people to construct, build & maintain the assets, which ensures that the social value is retained in Wales.

In recognition of this need to coordinate and plan, Net Zero Industry Wales (NZIW) has been tasked, to lead & support the delivery of the decarbonisation plans of the Welsh Industrial Clusters (SWIC & NEWID) and its partners.

Each of its NZIW's members have signed up to the following pledge:

“The Net Zero Industry Wales members are committed to transition towards producing more sustainable goods & services in Wales, as set out in the cluster plan(s), at a pace needed to meet the legally binding targets.

However, in a globally competitive environment, Welsh Industry needs the active support of UK, as well as Welsh Government, to create the Supportive Culture, Policy & Regulatory frameworks and Attractive Infrastructure that creates a level playing field, encourages the significant investment needed to make the transition to Net Zero and prevents carbon leakage.

This investment will build on Wales's Industrial Heritage and power the Green Industrial Revolution needed, to create a trusted, sustainable, prosperous & resilient industry that the citizens of Wales can continue to be proud off.”

⁴ SWIC: A plan for green growth – March 2023

4.1 Barrier 1: UK Government revenue support for Welsh Industry

From its inception, NZIW has been working in collaboration with UK & Welsh Government and its members, supported by Innovate UK grant support, to develop a credible solution to liquify & ship CO₂ from South Wales to one of the industrial clusters that are either part of Track 1 or 2 of the cluster sequencing program led by the Department of Energy Security & Net Zero (DESNZ).

This is a priority because without local geological carbon storage opportunities, the shipping of CO₂ is the only way that emitters in SWIC can access storage for captured CO₂.

To date Innovate UK has committed roughly £20 million of investment to develop these solutions. This grant funding has been matched by private sector investment as part of the Industrial Decarbonisation Cluster program.

As outlined in the South Wales Industrial Cluster plan, deployment of Carbon Capture & Storage technology is the first main step in the delivery of this plan. Therefore, developing a credible solution & demonstrating that UK Government revenue support through the CO₂ business models, represents “Value for Money” for the UK tax payer, will enable one of the largest industrial clusters in the UK, to access the £20 billion of financial support to deploy Carbon Capture & Storage technology and hence enable a just transition.

In the summer of 2023, NZIW commissioned an economic study to investigate whether liquifying & shipping CO₂ represents value for money for the UK tax payer and therefore justifies UK treasury support.

The report published in December 2023 concluded that there is a strong economic case for CO₂ shipping, as the deployment of a shipping solution, is forecasted to deliver £18.9 billion of GVA contribution over 20 years compared to the counter narrative, i.e. continued de-industrialisation of South Wales.

To unlock this social value and £8.6 billion of private investment, £2.4 billion of revenue support is forecasted to be needed over 20 years. This equates to 12% of the £20 billion of support that the UK treasury has already committed to support the deployment of carbon capture & storage technology in the UK and equivalent to Wales's proportional contribution to the total UK emissions covered by the UK Emissions Trading Scheme.

To date, non-pipeline-transport (NPT) solutions, i.e. the shipping of CO₂ hasn't secured firm support from the UK Government. However DESNZ has announced in its CCUS vision that subject to certain conditions, it's planning to support NPT solutions from 2025 onwards following a consultation in 2024, with the aim to deploy the at scale beyond 2030.

Given the significance of the South Wales Industrial Cluster and that it has no geological storage for CO₂ within pipeline range, the cluster needs access to storage via ship, in order to support the delivery of Welsh and UK Governments legally binding decarbonisation targets for 2030 and beyond.

To unlock the opportunity of shipping CO₂, the UK Government needs to allow emitters that can only access geological storage by ship, like those in South Wales, to access business model support. More specifically the ask is to allow existing Track 2 clusters like the Scottish (Acorn) and/or Humber (Viking) clusters, to include NPT solutions in their Anchor Plans, which DESNZ requests the Track 2 clusters to produce, in December 2023, alongside the CCUS vision announcement.

Furthermore, UK Government should support the development of a CO₂ liquefaction port infrastructure in South Wales and select SWIC as the pioneer pilot project in the UK, both as part of the Celtic Freeport development and demonstrate CO₂ shipping at scale, ahead of full deployment from 2030 onwards.

Delivering this will help unlock the shipping of CO₂ as a national opportunity and support the hydrogen economy in Wales (Step 2). Both of which are key enablers of a future decarbonised electricity system.

To enable the development of a hydrogen pipeline between Milford Haven and Port Talbot, (connecting the two Celtic Freeport ports) and attract the necessary investment, Wales & West Utilities need approval from the energy market regulator Ofgem. This to allow them to recover the significant investment in this pipeline, through their customer's bills, over its asset life (45 years).

The study “Future Energy Grids for Wales”⁵ commissioned and published by the Welsh Government, clearly outlines a need for a hydrogen transmission & distribution network to transport the hydrogen generated in Wales. To that end, NZIW would like to see Ofgem making the necessary changes in gas licencing regulations, in order to allow companies like Wales & West Utilities to recover the investment, in the same way as investments into natural gas infrastructure for the next Price Control period (2026-2031).

Further delays in providing clarity on whether the South Wales Industrial Cluster can access the CO₂ business model support and whether investment's in hydrogen infrastructure can be recovered through customer's bills, will risk the economic impact to be delayed at best, at worst to be unrealised, as allocated investment is committed to other parts of the UK, Europe and or the world.

⁵ Future Energy Grids for Wales – Q2 2023

4.2 Barrier 2: Timely completion planning and environmental consent process

Once private investment is committed and, enabled by estimated £2.4 billion of UK Government revenue support over 20 years, it's important that the planning and environmental consenting process is delivered in a timely fashion to meet the DESNZ milestones to govern the cluster sequencing program and reach financial investment decision by the private sector.

The investment programme could reach a size of approximately £6 billion per annum and includes the deployment of Floating Offshore Wind at a rate of 1GW per annum. This requires an appropriate level of resource to be available for public bodies to undertake their statutory duties. Currently, it is likely that the planning & environmental consenting process is on the critical path for delivering decarbonisation & renewable projects.

Net Zero Industry Wales welcomes open, transparent and collaborative engagement with public bodies (e.g. Natural Resources Wales, Planning & Environment Decisions Wales and local authorities), to support delivery of the planning & consenting process in a timely way. The latter would in many cases require additional resources to be brought in, which could potentially be privately funded, if the respective governments can provide policy certainty for such a transformative and unprecedented investment program.

5.3 Barrier 3: Availability of skilled individuals and capability to deliver the large investment program

Wales may struggle to deliver the scale of investment, outlined in the previous paragraphs, once the financial commitment are made by the companies, without further forward planning and anticipatory investment, to maximise the potential social value it can create within Wales's communities.

On the backdrop of decades of industrial decline, the unprecedented scale of investment needed to turn this around, Wales's capability to construct, operate & maintain the assets and associated infrastructure, is likely to be severely challenged, without intervention.

It's not easy and straight forward, to deliver investment programs of £300-£400million per year. This is of comparable size to Tata Steel's investment plan, which aims to deliver a £1.2 billion investment in 36 months. If the scale is increased to multiple billions of pounds per year, as outlined in the previous paragraphs, the challenge is greater still.

To deliver this unprecedented level of transformation, Wales will need skilled workers. So, there are huge opportunities for up-skilling people ahead of these investments over the

next couple of years in anticipation of this demand, while creating well-paid, quality jobs for our future generations.

Net Zero Industry Wales would advocate to train and support the individuals, families and wider communities affected by Tata Steel's announcement and get them ready & trained to construct, operate and maintain the new low carbon facilities and infrastructure that are planned to be built over the next five years.

A starting point for this would be to create an individual skills “passport”, which is externally accredited & verified and recognises the knowledge & skills acquired by learning on the job or internal courses, which aren't necessarily covered by accredited qualifications. This would allow these skills to be more easily transferred between employers across Wales & beyond.

5. Final comments

As Net Zero Industry Wales's Chief Executive Officer, one of my main priorities is ensuring that this unprecedented level of investment becomes a reality, whilst ensuring that Wales has the right investment environment and skilled people to deliver these projects.

On the 11th March 2023, Net Zero Industry Wales is organising its first EmpowerCymru event in Cardiff, at which the industry and investment community will come together. I hope to bring some clear feedback from this event into the committee meeting on the 21st March.

It's my firm belief that maintaining the current momentum or even accelerating the implementation of the South Wales Industrial Cluster plan, will enable the economic impact of Tata Steel's announcement to be mitigated in the medium to long term, as well as, shorten the period that the impact has in the short term.

Wales has the potential to become the country of choice for sustainable goods and services.

We can do this, if the resources available & urgency, matches the scale of the ambition!

Appendix 1: Industrial decarbonisation pathway for South Wales

The South Wales Industrial Cluster plan outlines a decarbonisation framework that provides a pathway for the manufacturing & power sector cross Wales, to decarbonise.

This pathway revolves around “Five Cogs” of decarbonisation that drive the Green Industrial Revolution (see figure 1).

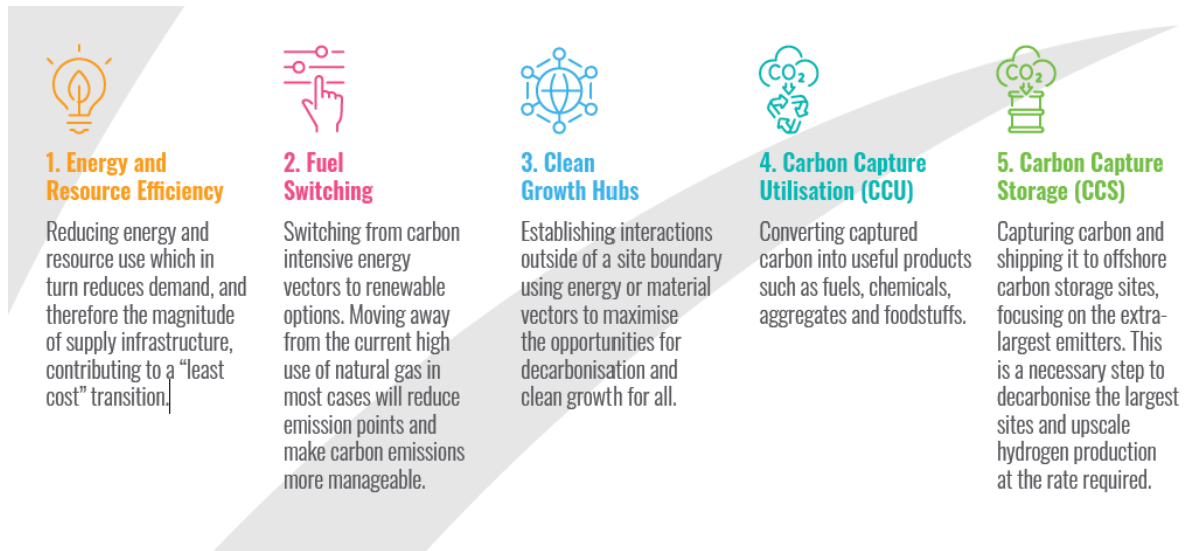


Figure 1 The five cogs of decarbonisation (source SWIC: A plan for green growth)

The detailed analysis undertaken within the SWIC cluster plan project, to develop this framework also provides a breakdown on how each of the “Five Cogs” contributes towards reducing the 16 million tonnes of CO₂ emissions (see figure 2).

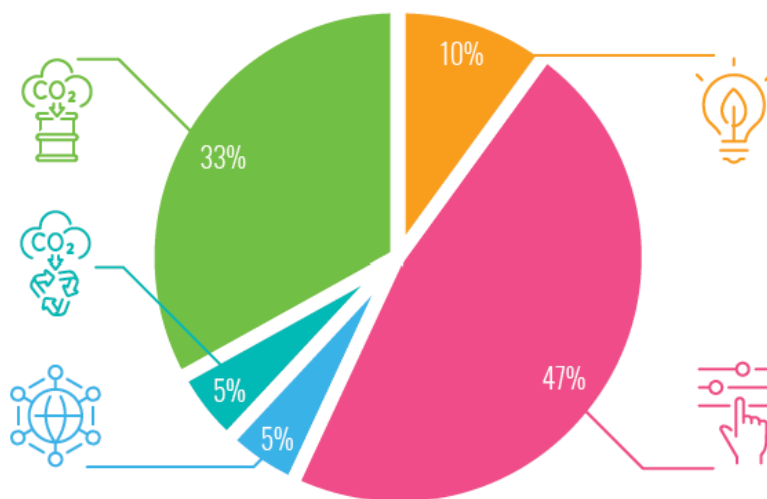


Figure 2 the contribution of each of the Five Cogs towards reducing the 16 million tonnes of CO₂ (source SWIC: A plan for green growth)

Figure 2 shows that there is a key role for the deployment of Carbon Capture & Storage (CCS) technology and Fuel Switching (enabled by hydrogen and/or electrification), which combined contribute toward meeting 80% of the targeted emission reduction.

In the case of the Port Talbot steelworks, this includes incorporating an Electric Arc Furnace and continuing the production of iron through a Direct Reduction Iron or similar technology route, as an alternative to the “traditional” Blast Furnace – Basic Oxygen Steelmaking route, currently deployed at Port Talbot.

The remaining 20% will be delivered through the other three “Cogs”, i.e. Energy & Resource Efficiency, Clean Growth Hubs and Carbon Capture & Utilisation (CCU). In the case of the Port Talbot steelworks, this includes the increase of steel scrap enabled by the Electric Arc Furnace, as well as the use of CO₂ to produce Sustainable Aviation Fuel, like implemented at a commercial scale in Ghent, Belgium and China.

The sequencing & pace of the deployment of the required port, CO₂, hydrogen and electricity infrastructure which support the realisation of the emission reduction for each of the cogs, determines the way the manufacturing & power sector in South Wales, is likely to decarbonise.

The high level sequencing between now and 2040, i.e. “the transition period”, is as follows:

Step 1. Carbon Capture & Storage combined with CO₂ shipping

Deployment of carbon capture & storage technology, which captures the CO₂ from large emitters. In the absence of an adjacent CO₂ store, these emissions need to be liquified and shipped to a store in the East coast of England (Viking cluster) or Scotland (Acorn cluster). The current projects developed in the Milford Haven Clean Growth Hub, show a potential to deploy this technology at scale, from 2030 onwards (subject to CO₂ business model support).

Step 2. Hydrogen distribution pipeline

Construction of a hydrogen pipeline (Project HyLine Cymru) between Milford Haven and Port Talbot Clean Growth Hubs, of which the Steelworks is an integral part. This pipeline is enabled by step 1, i.e. the CO₂ shipping infrastructure and allows the development of a “blue” hydrogen production facility, which needs carbon capture & storage infrastructure (step 3). The work that has been undertaken within the SWIC Deployment project shows that a pipeline could be in place from 2032 onwards (subject to regulatory approvals). The ultimate aim of this dedicated pipeline, is to link with the proposed hydrogen “back bone” for the UK, also known as Project Union (developed by National Gas Transmission).

Step 3. Blue hydrogen production

Construction of blue hydrogen plants enabled by the proposed hydrogen pipeline and UK Government's hydrogen business model support. These blue hydrogen plants produce low carbon hydrogen at a scale & consistency, needed to allow industry to “fuel switch” in the Milford Haven and Port Talbot Clean Growth Hubs (if appropriate), which sit within the Celtic Freeport area. The pre-feasibility studies of the blue hydrogen project have been completed as part of the SWIC deployment project and further work on this is on hold, until the CO₂ and hydrogen infrastructure projects have acquired more certainty (step 1&2).

Step 4. Industrial emitters switch to hydrogen, where electrification isn't an option

Fuel switch industrial emitters to hydrogen, to minimise the use of unabated fossil fuels and associated CO₂ emissions. The large-scale low carbon hydrogen generation in the Milford Haven Clean Growth Hub, will allow industry in this hub to further decarbonise using hydrogen, as well as hydrogen to be blended into the natural gas transmission system (up to 20%). The proposed pipeline between Milford Haven and Port Talbot, will also enable the further decarbonisation of the Port Talbot steelworks, port and the production of sustainable aviation fuel from captured CO₂. The hydrogen business model support, ensures that the cost of hydrogen for the end user, will be the same as the cost of natural gas.

Step 5. Industrial emitters switch to electricity

Electrify industrial processes where hydrogen isn't the best solution for businesses in the medium & long term or is not appropriate. The electrification and the associated emission reduction is enabled by the required electricity grid re-enforcement work, the proposed electrification business models, and full decarbonisation of the electricity grid by 2035. It is anticipated that any significant electrification of industrial processes will not take place before 2035, based on the current timescales for grid investments (10 years+). The proposed construction of an Electric Arc Furnace at Port Talbot steelworks would be an exception to this. The aforementioned business model support is needed, to ensure that businesses that don't get financially penalised, as the cost of electricity per unit of energy is still significantly larger than the equivalent fossil fuel energy source.

In parallel to the 5 steps outlined above, the deployment of the Floating Offshore Wind projects will commence, of which the first seabed lease round has been launched by the Crown Estate (in total 4.5GW), with at least, a further 12GW in the pipeline beyond that. The 16.5 GW of wind energy is enough to displace at least 50% of the fossil fuels used in industry (2020 levels) and reduce Wales's dependence on fossil fuels, in line with the Climate Change Committee's balanced pathway.

It's important to note that fossil fuels still play an important role during the transition period and beyond 2040, given the fact that the UK is dependent on fossil fuels for 78% of its energy needs⁶ and in the ambitious, Balanced Pathway to net zero, oil and fossil gas are forecasted to still play a significant role in the UK's energy mix in 2050, to ensure it's affordable, resilient as well as sustainable (also known as the Energy trilemma).

The floating offshore wind developers and their partners are not only planning to supply the wind energy into the electricity grid, but also looking to produce green hydrogen. The production of green hydrogen at GW scale is unlocked by the proposed hydrogen pipeline between Milford Haven & Port Talbot, the connection into the national hydrogen backbone (project Union) and is complementary to the blue hydrogen production.

This two “energy vector” (electricity & hydrogen) approach, will ensure that curtailing of wind energy is minimised (i.e. stopping wind farms from generating when there isn't enough electricity demand to match the generation), as well as the deployment rate of Floating Offshore Wind technology isn't determined and/or limited by the development of the electricity grid.

It's well documented that there is also a significant potential for Welsh industry to play a key role in the supply chain of the construction of the Floating Offshore Wind (FLOW) farms, deployed in the Celtic Sea.

This could not only ensure that a lot of the social value associated with the development of these wind farms, is retained in Wales, but if Welsh industry is decarbonising in parallel with the deployment of FLOW in the Celtic Sea and increasingly is using this energy source to power Welsh Industry, it would also decrease the “embedded carbon” associated with the construction of these wind farms. This will accelerate the impact these wind farms will have on Welsh, UK and global emissions.

⁶ House of commons Environmental Audit committee, Accelerating the transition from fossil fuels and securing energy supplies, December 2022

Document is Restricted

Agenda Item 5

Economy, Trade and Rural Affairs Committee

Green Economy Inquiry

Cwmpas is a development agency working for positive change in Wales. We are a co-operative, and our focus is on building a fairer, greener economy and a more equal society, where people and planet come first.

As part of the Social Enterprise Stakeholder Group, we are the lead partner in delivering Social Business Wales, the Welsh Government's specialist support service for social enterprises, co-operatives, and employee-owned businesses.

Our consultancy team works with the Welsh Government, local authorities, housing associations, universities, charities, social enterprises, and businesses in the private sector, helping them to think creatively and act smartly so they can embed the kind of positive values within their operations that bring sound and lasting social and economic benefits to the communities they serve.



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?

It is key that we understand that every sector can be a part of the green economy. Social enterprises we have supported across many different sectors all make a significant contribution to the green transition by making sustainable choices and embedding them in their business model. This can clearly be the case when the social enterprise is operating in a sector with a clear link to the green transition, like community energy production, but also when operating in other sectors. By supporting the development of the social enterprise model in all sectors we can maximise economic, social and environmental impact through the triple-bottom line business model. This model embeds and prioritises the valuation of social and environmental impact to the same extent as economic impact within businesses.

The Welsh Government has strongly supported the development of the social enterprise sector through its funding of Social Business Wales, and the continued funding following the end of EU-funding. It has supported the Social Enterprise Stakeholder Group's ambition to make social enterprise the business model of choice by 2030. In 2020, the SESG published its Vision and Action Plan: Transforming Wales through Social Enterprise, which seeks to make social enterprise the business model of choice in Wales by 2030. We will be updating on progress against this ambition over the next few months.

The sector is growing from strength to strength in Wales. There are now approximately 2,828 businesses in the sector, an increase of 22% from 2020 (2309). We believe that the next stage in making Wales the best country in the world to start and grow a social enterprise will be putting this model, and support for the sector, at the heart of Wales' economic strategy. This will be key to maximising the economic, social and environmental value that the sector can provide. Embedding

this model within the green economy will maximise the positive impacts and supporting a green transition.

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?

Mapping data – barriers to growth within the social enterprise sector

As discussed previously, we believe that the growth of the social enterprise model in Wales is essential to achieving a just transition and maximising the economic, social and environmental potential of the green economy.

The Social Business Wales mapping exercise, published in 2023 with research conducted in 2022, highlighted some of the barriers to growth within the social enterprise sector. 'Energy costs' was cited by nearly a third of businesses (31 percent) as one of their main barriers to growth. Equally, economic climate and high inflation were cited by nearly half of respondents (48 percent), compared with 19 percent in 2020 and 23 percent in 2018. Cash flow was also a barrier for a quarter of businesses (25 percent) which more than doubled from only 10 percent in 2020.

The greatest barrier for businesses, however, was time pressures/lack of staff capacity, which was noted by 52 percent of social businesses surveyed. It's interesting to note that 'obtaining grant funding' has also risen to 51 percent, having fallen in 2020 to only 31 percent. This follows a pattern seen elsewhere with the effect of the pandemic, where there were a number of resilience or recovery grants for businesses in 2020 which were no longer available in 2022.

Businesses who suggested that accessing finance was a barrier for their business were asked a follow up question to understand the nature of these challenges. The data suggests that a key driver of this concern was a lack of time to be able to apply for finance (34 percent or 40/118 businesses), which reflects the broader barriers facing businesses around organisational and staff capacity. A further 32 percent didn't have the expertise to apply for finance, which suggests a skills need within the sector.

Businesses were able to offer free text responses around the support they needed to address their barriers to growth. The most common response was around marketing (16 percent or 39/237 businesses). Whilst 9 percent commented that they needed funding to address barriers, 15 percent said they wanted training or support to be able to access funding or finance themselves. A significant number of responses referenced support around staff or training, with 14 percent needing support with recruitment for staff or volunteers, 13 percent needing training for their existing staff, and a further 2 businesses struggling to recruit apprentices.

Businesses were also asked about the blended finance model, which was used for funds such as the Third Sector Resilience Fund and the Social Business Growth Fund (i.e. a mix of grants and loans) and may become more prevalent in the future. Most businesses (55 percent) are aware of the funds and, where they are aware, most (55 percent) indicated that they are interested in the model. This is despite the fact that only four percent accessed blended finance in the past year (see Figure 5.15), suggesting that there is good scope to increase this type of offer as an alternative for businesses who are eager to access grant funding.

Barriers to social businesses achieving net zero

Despite the fact that social businesses embed environmental sustainability through the triple-bottom line model, achieving net-zero remains challenging. In the most recent social business mapping exercise conducted in 2022 additional questions were asked of businesses around commitments to

and actions on becoming a business with net zero carbon emissions. Over half of businesses said that mitigating the climate crisis was a 'high' or 'essential' priority for them. Businesses were also asked if they have fully committed or considered becoming carbon neutral or net zero, with 15 percent of businesses committing and 36 percent of business considering it. This demonstrates that whilst many feel that addressing the climate crisis is a priority, a limited number of these businesses have fully committed to becoming carbon neutral or net zero.

Businesses were most likely to have introduced energy efficiency measures (63 percent or 129/205 businesses), whilst 39 percent (72/184) were considering switching to renewable energy. Comparably, the SEUK report suggests that 30 percent of social enterprises had installed energy efficiency devices in the last twelve months whilst according to the Business Insights and Conditions Survey in March 2022, approximately eight percent of businesses reported taking at least one strategic action to protect the environment. This demonstrates that Wales, and the social enterprise sector, is leading the way.

Businesses who hadn't considered becoming carbon neutral or net zero attributed this to a variety of reasons. For 27 percent of businesses it wasn't a priority, with many mentioning a lack of time or staff resource and some saying their focus was on their core social mission. For 10 percent of businesses the cost of implementing measures to become carbon neutral was the main reason why it was not something they had considered. For example, one business noted they were operating from an old building where the cost of energy saving measures would be too high. Responses indicated that for many businesses, energy efficiency measures on buildings were believed to be the primary action their business was able to take towards mitigating the climate crisis. Similarly, 18 percent commented that taking action was not in their power, mostly because they rent space and do not have the power to make energy saving adjustments. A further 19 percent of businesses felt that becoming carbon neutral was not relevant to their work, with many not having fixed locations, some being based outside, or being run by volunteers.

This evidence suggests that the social enterprise sector is eager to contribute to the development of the green economy – both businesses operating in sectors with the potential to grow during the green transition, and across all sectors through embedding sustainable practices. However, there is a clear need for tailored support to social enterprises and businesses more widely to achieve a just transition to net-zero.

Rebalancing local economies – lack of ownership

In order to achieve the type of economy we need in Wales, we need to empower communities to find solutions to the challenges we face. Ensuring the skills, innovation and entrepreneurialism we need to grow Wales' green economy will mean everyone in our communities must be engaged and have access to the new businesses and jobs that will be created. Doing this as effectively and justly as possible requires a re-balancing of local economies, anchoring decision-making and wealth in the hands of communities themselves. This will ensure that the interests of Welsh communities are at the heart of new business models. The development of social enterprises and community-led business models must be at the heart of strategies to achieve this model of economic development.

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

The Welsh Government has a key role in supporting and nurturing local, Wales-based supply chains across economic sectors and within new industries within the green economy.

Central to this is the need for specialist support for social enterprise. Social enterprises are rooted in their local communities and engage local people in measures to address the climate emergency, combining the innovation and entrepreneurialism of the private sector with its focus on well-being and working to the benefit of local communities. This triple-bottom line approach is the best model for developing the green economy in Wales. The impact of the Social Business Wales programme highlights the key role that specialist support plays for new and growing businesses within the sector and ensuring that this is available to new social enterprises in the green economy will be key in the short and long-term.

In addition, the Welsh Government should pro-actively nurture the market for social enterprises to start and grow in the green economy. This can be done in a variety of ways that build community wealth in local economies. In 2022 we published a Guide to Building Stronger Local Economies that brings together a variety of concepts that build community wealth - employee ownership, the foundational economy, social enterprise, social value, community shares and community-led schemes, and the circular/sharing economy. All of these have a key role to play in facilitating the growth of social enterprises within local economies.

A positive example is Creating Enterprise, a social enterprise in Conwy. A subsidiary of Cartrefi Conwy, it started trading in 2015 and has quickly grown into the social contractor of choice for North Wales. It builds environmentally friendly homes using sustainable materials and is innovative in finding new ways to lower its carbon footprint, such as by sourcing eighty percent of its timber from Wales and constructing its frames onsite. As well as having an environmental mission, it has a social mission to create well-paid, full-time employment opportunities for the local community it serves. Its Creating Futures Academy helps local people find and access training, volunteering, and employment opportunities. In November 2020, it was named as the Fastest Growing Company in Wales. This team is the perfect example of how social enterprise can deliver on its three ambitions: business success, environmental sustainability, and helping people.

An important policy area is around procurement reform. The Welsh Government should continue to seek to embed a community wealth building, social value approach to procurement and ensure that well-being and impact on local economic development is at the heart of procurement strategy. The Social Partnership and Public Procurement Bill is a positive step in the right direction towards achieving this aim and we will support the social enterprise sector to understand the potential they have in achieving its ambitions.

A key element that has been identified by the social business mapping research is the value that social entrepreneurs give to peer-mentoring and opportunities to network. This is a core part of our strategy for delivering Social Business Wales and we would welcome opportunities to see how this can be funded and facilitated further.

We would also welcome the opportunity to learn from previous examples of challenge funding within the foundational economy and how this model can be used to facilitate innovation in green economy sectors in a way that is accessible for communities and social enterprises.

We are currently working on projects with partners across Wales that seek to support and facilitate high-quality collaborations between the third sector and academia. We believe that learnings from the Third Sector Research Partnership and Resourceful Communities Partnership are key to ensuring that communities can play a key role in sectors of the future, and the green economy is central to this.

A key objective in the Social Enterprise Stakeholder Group's Vision and Action Plan for social enterprise in Wales is for the sector to maximise the potential of digital technology. Support for digital transformation of community groups to form social enterprises and maximise productivity will be essential to ensuring that the potential economic, social and environmental impact of the sector is maximised.

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?

Fundamentally a just transition will mean re-balancing local economies, taking a well-being approach to economic development. Social enterprise should be at the core of this, because the business model means well-being and social impact is valued to at least the same extent as profit.

Part of the social value that the sector produces lies in its role as fair employers, offering a fair wage and conditions. Other questions related to social businesses as employers suggest that 66 percent pay the living wage to all staff (£9.50 in April 2022). The survey found that 22 percent of employers who had taken on new employees in the last 12 months reported that these included individuals who were unemployed immediately before taking up the post, accounting for 65 full time roles and 141 part time roles. This reinforces the sector's role in providing employment opportunities for individuals who are further away from the labour market. Furthermore, the data suggests that social businesses are good local employers, with 78 percent of businesses' workforce living within 10 miles of their workplace, up from 69 percent in 2020 and 57 percent in 2018.

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?

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?

Procurement is key to achieving this ambition. The Welsh Government has a crucial expenditure into the Welsh economy and it can use this spend in an innovative way, seeing it as an investment into building a stronger green economy rather than solely a cost. This can be through continuing to develop its understanding of social value and community wealth building within procurement, continuing and expanding its work to reform procurement processes to enable small-scale, community-based suppliers to start and grow, and enabling the public sector to take a pro-active approach in the market through establishing arms-length social enterprises.

In addition, we have seen the vital role that innovative ethical financing can play for the sector. 2023/24 was another record-breaking year for Social Investment Cymru loan applications, demonstrating the demand and optimism within the social enterprise sector. Supporting the development of this model is the most effective way for the Welsh Government to achieve its

ambition of a just transition, and for maximising the potential of the green economy for Welsh communities.

Ynni Cymunedol Cymru – Community Energy Wales’s submission to Senedd Cymru | Welsh Parliament’s Green economy consultation

1. 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?

Ynni Cymunedol Cymru – Community Energy Wales (CEW), as a membership organisation providing a vitally important sectoral voice to community social enterprises working on energy projects in Wales, is responding to this question on behalf of the sector while recognising the wider context of the green economy consultation. We acknowledge the work already carried out by Welsh Government in this area, and its support for Community Energy Wales and Ynni Teg Community Benefit Society, the new Trydan Gwyrdd Cymru publicly owned renewable energy developer set to launch over the coming months and Ynni Cymru, the new, publicly owned energy company for Wales. With the creation of these last two companies, **Welsh Government has demonstrated it believes in the critical potential of local and community-owned energy in Wales** to help achieve our Net Zero targets and rapidly transform the existing energy system to one which is fairer to the people of Wales and offers them energy at a price they can afford.

Welsh Government aims to reach more than 1 GW of **locally owned and generated** clean energy by 2030 (and a proposal to increase this to 1.5 GW¹). This community energy has been described by our members as a catalyst, generating an income stream to support other green initiatives in their area and building community resilience across renewables, energy efficiency, housing, transport, biodiversity and culture. Integrated community energy has a genuine impact on local economic resilience. It supports a circular economy, and provides a positive, practical and values-led way for people to participate in decarbonisation and support their community at the same time. However, the current funding streams supporting this activity are currently subject to contract rounds and changes in government, which is why CEW believes Welsh Government needs to **prioritise the securing of continued, long-term financial support**, including **capital grants** to enable groups to develop their own energy projects. This has the potential to **unlock explosive growth** of the aforementioned benefits to both the green economy across Wales as a whole and to our local communities.

¹ <https://www.gov.wales/sites/default/files/consultations/2023-07/summary-of-responses-review-of-renewable-energy-targets.pdf>

2. 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?

Similar to the priorities, the key barriers in community energy in Wales involve changes of a policy nature. They include removing **market** and **regulatory** barriers in the renewable energy sector which prevent new schemes or projects and innovative shared forms of ownership and community involvement and benefit. Welsh Government should fully support the newly formed Ynni Cymru to build a coalition of support across the Welsh energy sector and to provide the structures and frameworks required for whole energy systems based on the provision of lower cost local energy markets.

Time delays and the **prohibitive cost of grid connections** are significant barriers for communities wishing to be a part of actively decarbonising the energy system, and Welsh Government (through Ynni Cymru) are already looking into the benefits of local energy systems being rolled out. This type of local and community energy can reduce the pressure on the grid, while capitalising on the value of local willpower, facilitating distributed generation, supporting wider community regeneration and integrating with the development of the EV market and the electrification of heat in a smart way. **Increased start-up finance – especially grant finance** – would help more projects get off the ground and progress through the early, highest risk phases. Communities being able to **access loans to participate in shared ownership** would also help to progress Welsh Government's green economy policy aims.

Community energy has largely been limited to the more rural areas in Wales, which has had an influence on the demographics of those engaged – a higher proportion of older adults sustain the work, but we need to **encourage younger generations to participate**. An **urban community energy strategy with financial and practical support** available for groups to start new projects in Welsh towns and cities will be key to getting the support of young people and those in urban areas. Such a strategy could also develop and underpin the current work being done on **Local Area Energy Plans**.

If **community energy groups were able to trade directly** with local consumers, this would **reduce their energy costs** and **finance more new generation** at the same time. Until now, the sector has been able to participate in supply agreements that help reduce costs for consumer, while maintaining revenues for the generator. **These 'sleeved' agreements need to be expanded**, especially with the public sector – where carbon reporting barriers to procuring local renewables need to be removed. Welsh Government should **push for change in the non-devolved regulation** which affects the ability to trade locally (whereby community energy providers can sell the energy they produce at a reduced cost to local consumers). Ynni Cymru should focus on this as a 'mission critical' task, including working with visibility of billing data to secure the billing solutions for local energy clubs that Licensed Energy Suppliers are currently failing – or refusing – to develop or provide.

Finally, as wholesale export to grid remains at too low a level to lever finance or support small to medium (community-scale) generation projects, **planning legislation should be reformed** so that **community ownership is regarded as a material consideration in planning applications** and Welsh Government should **require all public sector bodies to prioritise the procurement of local, community-owned energy** wherever possible.

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

Wales currently suffers from a **lack of solar PV installers** willing to install or maintain and operate sub-1 MW ground-mounted solar PV projects. This is a huge barrier to some projects, which have already received consent but are unable to proceed due to the fact nobody can install them. **Support for community-scale installers** would be a huge area of opportunity to ensure Wales leads in green renewable electricity. Private correspondence with Wales-based installers has revealed they would be able to design such projects and should be able to deal with the DNO at this scale, but that they would struggle with the project management and staff resources, looking to pull in a project manager and then **subcontract much of the work locally** rather than recruit 5/10+ additional electricians. With an experienced commercial project/site manager who could look to **procure local electrical and plant services**, such local installers would be able to use local expertise and even be willing to train up additional staff to carry out any ground works and rail systems.

As some existing renewable energy projects come to the end of their operational lives, **repowering** their assets dating from the 1990s-2000s would be a key opportunity for wind energy sites utilising refurbished wind turbines to pass into community ownership. This would both improve the life cycle of the materials, feed into the circular economy and provide turbines at reduced cost for projects trying to get off the ground. This is an opportunity for Welsh businesses to fill **gaps in the second-hand turbine supply chain at appropriate scale** and in the refurbished turbine market, which is under-developed in the UK compared to mainland Europe.

One of Community Energy Wales's local social enterprise members has highlighted it is vital we remember that supply chain does not fit within any one government department: supply chains work geographically at community and inter-community level, through agriculture, energy, food, trade, education, care and transport. A refreshing redesign will be needed, **place by place**, which takes into account all the sectors in combination and can be implemented across both a specific and wider geographical area.

4. 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?

One of the most important levers Welsh Government has at its disposal is the ability to coordinate and connect with a range of different sectors in an attempt to increase the attractiveness of employment in the field and encourage young people to consider a career in the green sector. Job fairs could take place regularly across each region in Wales, including everything from sole traders to local businesses and multi-nationals. The onus needs to be on **inspiring the next generation**, and the only way to do this is to provide their teachers with a better understanding of the sector and future potential. One of CEW's members has raised the issue that the provision of ICT training to the level that jobs of the future need is almost invisible in Wales.

Many green jobs of the future are going to be self-employed or small businesses, and with 94.6% of the total enterprises in Wales being 'micro-enterprises'² (i.e. employing between 0-9 employees), both business skills and green skills will be essential for the future Welsh workforce. Nowhere in the field of education currently provides for this reality.

In *Prosiect Sero Net Gwynedd*, for example, one of CEW's members is also working to train local people up in 'green skills' – specifically energy advice, domestic and non-domestic energy assessment – and is supporting work on projects around retrofit. North West Wales is facing a serious lack of people with sufficient expertise in these areas at present, and while there are many grants available that provide some of the funding necessary to upskill local people, there are many challenges: recruitment, as people need to understand what they are signing up for and the value of undertaking such training; funding, as people are unwilling to leave more secure jobs or trades to join a programme with one or two-year funding; plus there are also issues with retaining people once they have earned their qualifications. The existing funding schemes such as ECO4 often govern procurement in such a way that small, local installers are unable to meet the criteria (CEW has been made aware of skills shortages across Wales in the following schemes/accreditations: RECC - Renewable Energy Consumer Code, MCS - Micro-generation Certification Scheme, BSI - British Standards Institute - PAS - Publicly Accessible Standard 2030 and 2035 respectively, IAA - Installation Assurance Authority, BBA - Competent Persons Scheme, TrustMark / QualityMark, MasterBuilder, INSTA Group, HIES and Insurance Backed Guarantee - The Home Insulation & Energy Systems Quality Assured Contractors Scheme, National Insulation Association and CITB - Construction Industry Training Board). As an example of combatting this skills gap, our member *YnNi Llŷn* is seeking to create an umbrella to upskill local installers, which will bring better service to local people and ensure that more of the economic benefit from ECO4 measures actually lands in the local economy. Welsh Government could and should support scaling up and replication of such initiatives. It is also clear that **education and information about 'green' skilled jobs needs to be made clear to young people** (as young as 13 when choosing their GCSEs) when deciding on their career options and that they are seen as (and *are*) good, stable career options.

² <https://www.gov.wales/size-analysis-businesses-2023>



Finally, there are clearly some other issues around the term 'Net Zero', with many people feeling it is **unjust** and will put the **already struggling at even more of a disadvantage**. To name one example, people in rural areas across Wales cannot easily get around without a car, and there is real fear they may be forced to. We suggest this lies with the current communication around the term from Welsh Government, but this is much deeper than just messaging: people need **tangible evidence that they will not be left behind**, and that their worries and fears will be listened to and taken seriously.

5. 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?

CEW recognises the degree to which the narrative around a Just Transition in the energy sector has focused on the impacts on businesses and workforces needing to change their operations and skills from a high carbon to a net zero economy. As our Just Transition statement³ illustrates, the focus of the community energy sector is somewhat different: **we are not invested in carbon intensive activities, but instead focused on securing the local economic, circular and social benefits of the democratising power of community-owned renewable energy generation, storage and distribution assets.**

The community sector does suffer from a lack of skills (please also refer to our response to Question 4), with many jobs requiring an unusually diverse skillset spanning technical, communication, governance and engagement skills. Long-term support and investment are needed to bring such people into our sector. This is visible to some extent in the positive impacts of Ynni Cymru and the awarding of resource grants to a number of CEW member social enterprises, as well as in the expansion of Community Energy Wales and Ynni Teg, currently funded by Welsh Government. However, these grants are due to run out in the next 12-24 months, and this does not fit the timeframe required to get enough new generation in place to secure jobs for the longer term. It is critical that Welsh Government recognises that “community projects installed [...] offer between 12-13 times as much community value re-invested back into local areas as would be achieved through 100% commercial models”⁴ and **ensures that financial support is not discontinued**, putting all the progress and work invested to date at risk.

The main challenge for the future workforce itself (employer and employee alike) will be ensuring a **smooth transition of careers for professionals and tradespeople in mid-life** as the transition to Net Zero progresses. This will involve providing them with all the necessary support and benefits to undertake such a change in career that need to go above and beyond just the existing personal learning accounts (PLAs) in place designed to train people in new skills acquisition.

³ <http://www.communityenergYWales.org.uk/ycc-login/resources/just-transition-position-statement-1.pdf>

⁴

https://assets.publishing.service.gov.uk/media/5a7c1b9640f0b645ba3c6bd6/20140108_Community_Energy_Modeling_FinalReportJan.pdf

6. 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?

According to the UN Environment Programme, a green economy is defined as **low-carbon, resource-efficient** and **socially inclusive**⁵. To make full use of the potential of the green economy and deliver a just transition holistically and across all levels of society and within organisations and to ensure better outcomes for all, Welsh Government needs to work in closer partnership with local areas to develop the workforce and projects, and to change behaviour: civil servants and ministers still invest too much time and place too much emphasis and investment on trying to attract large international companies, whereas the focus should be on ensuring lasting employment is created locally using community cohesion as a key to success.

The relationship between Welsh Government, councils and the third/community energy sector needs to be strengthened, **moving from a mere supply-based arrangement to partnership** – community energy can be the vehicle to release benefits to the community and money from the profits to reinvest directly into the communities, becoming **key in regenerating our villages and towns**. Community Energy Wales's Just Transition policy position paper clearly explains how energy groups would be able to install generation at scale if public bodies committed to buying their energy from them. Local councils, Welsh Government and other public bodies should prioritise community energy procurement in recognition of the added value from our sector. This can be achieved through a flex power purchase agreement, sleeving contract and/or a larger-scale Energy Local agreement.

Welsh Government will need to **work closely together with Ynni Cymru to focus resources on unlocking these critical market barriers**, rather than diluting efforts into services that might duplicate the work of existing community organisations, Community Energy Wales and the Welsh Government Energy Service.

⁵ <https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy>

7. 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?

In the current landscape, large-scale decarbonisation projects (such as established renewable energy technology, onshore wind and solar and battery/storage systems) face few or no barriers. Shared ownership models based on a community share raise for an equity stake, however, are not capable of securing sufficient shared ownership stake, meaning **additional and innovative finance models** will need to be found. Evidence around this topic has recently been secured by the Welsh Government Energy Service in a report commissioned to independent corporate finance adviser QMPF. In this report, finance innovations such a **'patient' underwriting** of equity stakes is mentioned as a potential way of ensuring long-term success for all stakeholders: developers, funders and community projects alike.

At this point Community Energy Wales would like to reiterate the findings of a former Department of Energy and Climate Change report stating that community projects can “offer between **12-13 times as much community value re-invested back into local areas** as would be achieved through 100% commercial models,”⁶ clearly maximising both investment and returns in a way which pure profit-driven commercial models cannot. CEW's core mission is to support and accelerate the transition to a fair, net zero and community-led energy system. This is based on an overarching vision that **communities should not only participate in, and shape the energy system**, but also that **Welsh communities retain benefit from the energy transition**. Supporting innovative finance to implement and promote **local energy trading** and **whole energy systems** will address the multi-vectoral wicked problems by maximising and democratising power, while maximising both local and national benefit. This model of just transition facilitates distributive and procedural justice. As well as being able to benefit from community owned energy generation and distribution, we want to **maximise citizens' involvement and shared participation in energy decision-making and governance**. People's active involvement in their local community energy groups helps to do this and we are working for more people to get involved. Furthermore, the community energy sector addresses both energy and social justice through community benefit funds in response to identified local need. The community projects funded are often **catalysts in providing a wider range of local sustainability initiatives** in communities.

6

https://assets.publishing.service.gov.uk/media/5a7c1b9640f0b645ba3c6bd6/20140108_Community_Energy_Modeling_FinalReportJan.pdf

Agenda Item 7



Comisiynydd
Cenedlaethau'r
Dyfodol
Cymru

Future
Generations
Commissioner
for Wales

By email

12th March 2023

Paul Davies MS

Chair of the Economy, Trade and Rural Affairs Committee

Dear Paul

Thank you for the opportunity to provide evidence to the Economy, Trade and Rural Affairs committee inquiry on the green economy ahead of my evidence panel session. The Committee will be aware that in November I published [Cymru Can](#), my new strategy for the seven years of my term as commissioner. As part of this strategy, I have made it one of my missions to help transition Wales to an economy that puts people and planet first. I would like to see government at all levels working together with communities and business to make this happen.

What we know about prevailing economic models is: that they use natural resources at a faster rate than can be replenished; that driving down the price of goods can lead to unsustainable and unethical practices; and that the gap between the richest and the poorest in society continues to widen.

Continual economic growth is often seen as the goal, but the Well-being of Future Generations Act provides a broader measure of success. Our Well-being Goals describe A Prosperous Wales as an *“innovative, productive and low carbon society which recognises the limits of the global environment and uses resources efficiently and proportionately”*. It also emphasises skills, education, and fair work in generating wealth.

There are two main elements to take this forward:

1. All economic policies and plans in Wales need to consider how they maximise benefit across all the Well-being Goals so that our **whole** economy becomes ‘greener’ - to meet the definition of a Prosperous Wales.
2. We must focus on areas of growth in the sectors where there is potential to create green jobs whilst simultaneously, improving environmental resilience and improving well-being in communities.

This raises questions around how we create:

- an economic model that exists within planetary boundaries and affords everyone a decent and healthy standard of living.
- more jobs in nature to prioritise long-term solutions to the nature crisis and species loss alongside net zero (for example, Nature Service Wales).

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- a more equal, accessible and diverse workforce where more Black, Asian and minority ethnic people, people with disabilities, and women entering this skilled, green workforce.
- a sustainable, circular economy, where wastes create a by-product value chain and replace our reliance on our natural resources and carbon intensive processes.
- food production and supply which works regeneratively in nature and offers a sustainable future for producers and processors, whether in Wales or the global economy.
- Community wealth building where the benefits from carbon sequestration, financing nature restoration and renewable energy are retained within the local and rural economy.

For a green, well-being economy to become the reality here in Wales, we must consider what we need it to provide (towards social, cultural, environmental, and economic well-being) and recognise where current practices do not take us there. We must **prioritise** investment on things that enable us to act urgently to address longer-term trends and needs, such as nature depletion and food security, for example; and **stop** investing in measures that move us further away from our well-being goals and [national indicators](#). Such an approach requires long-term thinking and collaboration at the interface of different policy areas.

In my [written evidence](#) to the Senedd Finance Committee on 18 January this year on the scrutiny of the Welsh Government's strategic budget, I outlined my concerns about a lack of evidence of preventative thinking and decision making for the long term. Overall, I felt there was a lack of demonstrating how the Well-being of Future Generations Act had been applied and what difference it had made to investment decisions. Budgetary constraint is not a justification for not applying the Well-being of Future Generations Act. On the contrary, it is even more reason to think and act differently.

The green economy must be embedded across all layers of economic policy and delivery:

Moving to a green, well-being economy in Wales will require a major transition at all levels of economic policy and delivery. At national level, I am encouraged by the direction of travel of the Welsh Government's economic mission, and its commitment to reviewing the mission's progress against the Well-being of Future Generations Act.

Corporate Joint Committees (CJC) are required to develop well-being objectives– and I look forward to working with them, particularly as they collaborate with the Growth Deals, around the contribution of their regional economic strategies to Wales' well-being goals.

I am currently reviewing the well-being objectives of Local Authorities and Public Service Boards (PSBs) and I can see the emergence of objectives around foundational economy, circular and the green economy. It is essential that all these layers of economic governance pull together in the same direction to achieve the well-being goals.

I have been encouraged by work happening in southeast Wales via the Cardiff Capital Region (CCR) team to encourage climate action with businesses. The team has been doing some excellent involvement through its Business Climate Coalition hosting events for businesses in the region to engage on what they need to do and why it's important. Businesses, including SMEs and sole traders, are learning about behaviour change theory, circular economy principles and the need to act urgently on climate change.

We must mobilise business behind Wales' well-being goals:

We cannot achieve Wales' well-being goals without businesses playing their part. I am encouraged by the interest I have seen in the Well-being of Future Generations Act from the private sector. Large and small Welsh companies are aligning their corporate strategies to Wales' well-being goals – and my team has been working with the Welsh Government on a Well-being of Future Generations toolkit for Small and Medium Enterprises (SMEs). I believe there are more opportunities for action, collaboration and investment from the private sector that the Welsh Government and the wider public sector can unlock. This would mean developing a national approach to involving business in the well-being goals and would mean developing clear and consistent communication of the well-being goals, 'a golden thread', across all the points at which the public sector interacts with the private sector, for example from the Economic Contract through to the technical assistance, grants, and finance available to business from the public sector, along with public body procurement policies.

Procurement is still an opportunity were not fully grasping:

My team has also been working on how procurement processes can promote the application of the Well-being of Future Generations Act. By asking suppliers to consider their Well-being Impacts and to describe the positive contribution their commercial activity could have on the economic, social, environmental, and cultural well-being of Wales, this approach could support the development of Wales-based supply chains in green economy sectors.

The green economy should promote community wealth building:

Wales is a relatively small nation, but this means we can be agile enough to do things very differently. We are a country of abundant renewable, natural resource which can be used to meet our energy needs and restore biodiversity in a net zero and nature positive Wales. However, we must learn from the past and do everything in our gift to ensure that the benefit of this stays within Wales and within local communities.

The Economy Minister has stated his intention to develop a foundational economy lens to renewable energy and low carbon transport – and develop supply chains for the green economy in Wales. This is an approach that CJs and local authorities should adopt across their economic plans. My own

background in the social enterprise and co-operative sector has shown me how these business models, which are prominent within community wealth building approaches, are well-suited to building a well-being economy.

There is potential to create green jobs whilst simultaneously, improving environmental resilience and improving well-being in communities:

Food production, supply and procurement must be prioritised as a green economy sector. We already have a highly skilled workforce in our rural economy, but like so many other industries, in this current climate of change, our farming community and all ancillary sectors must be supported to transition in a way that is just. Opportunities should also be maximised through growing the scope of the National Nature Service, for example, to bring together a skilled workforce of new entrants in agroecology and nature-based solutions with our farming sector.

We must address barriers to change:

My team and I will focus on addressing barriers to change, challenging outdated concepts of economic growth at any cost. We must align how we think about our economy with wider well-being considerations - demonstrated by the 50 National Well-being Indicators. How we measure success is key and requires a system change beyond monetary value and traditional economic measures like GDP, alone. There is an opportunity to create a culture across all sectors which is inclusive, and values driven.

One way I am doing this is through our [Future Generations Leadership Academy](#). The Academy provides the opportunity for businesses in Wales to enrol their own future leaders each year. What they learn equips them with the skills to go back to the organisation and shape corporate plans around sustainable development and the Well-being Goals. These same businesses are also supporting the Academy to make spaces available for a wider cohort of under-represented individuals to take part, with the aim of reducing inequality and disadvantage across Wales.

I look forward to discussing these points further with you and the Committee in my evidence session next week.

Yours faithfully,



Derek Walker

Future Generations Commissioner for Wales



Submission to the Economy, Trade and Rural Affairs Committee's Enquiry into the Green Economy

The Wales Centre for Public Policy

1. The Wales Centre for Public Policy (WCPP) seeks to improve policy making and outcomes by enabling public bodies, the Welsh Government and other decision makers to access authoritative independent evidence to help them address the key economic, social and environmental challenges facing Wales.
2. WCPP is funded by the Welsh Government, the Economic and Social Research Council, and Cardiff University. It is a member of the What Works Network and is the Welsh partner for the International Public Policy Observatory.
3. This submission summarises research we have undertaken that bears on the topic of the Committee's enquiry. This research includes evidence reviews based on academic and 'grey' literature, as well as data collected through interviews with experts and workers in key industries.

Evidence

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?

4. The Welsh Government has held responsibility for economic development in Wales since devolution. Under the reserved powers model introduced by the Wales Act (2017), it has general competence in this area. Certain functions including those relating to economic, fiscal and monetary policy; currency; and financial regulation, are reserved to the UK government. Maximising potential economic opportunities from the need to decarbonise both within and outwith the green economy sectors overlaps in a number of ways with efforts needed to maximise productivity and reduce inequality (Newman, et al. 2021).
5. Despite some key policy levers being reserved to the UK government, the Welsh Government has considerable powers in the policy areas of education and skills; important drivers of productivity which will play a critical role in growing the green economy. The Welsh Government has the leverage to coordinate investment in skills, transport, R&D, working places, and developing clusters with supportive supply chains; all essential components of a successful transition to net zero. These should be underpinned by a vision of economic development for Wales to build investor confidence. This should consider how different sectors can



mutually support one another, areas of comparative advantage and opportunities for regional collaboration and innovation (Tilley, 2022).

6. There are important pieces of legislation and supporting policies that have been established with devolved powers which have the potential to support the green economic transition. For instance, the Well-being of Future Generations Act provides the overarching framework; Corporate Joint Committees should enable regional collaboration; and the establishment of the Commission for Tertiary Education and Research (CTER) offers opportunities to embed partnership working, and to facilitate the tertiary education sector's response to the substantial demand for reskilling (Pember et al., 2021). The ongoing challenge is building the capacity for implementation.
7. Against the context of past economic performance, economic geography and local political economy; the creativity and strategy of leaders operating within the local governance structure is critical (Tilley et al., 2022). The interplay of economic institutions, leadership and networks is an important enabler of private sector capital, which in turn is required for the investment and innovation needed to develop the green economy. In Wales the availability of capital has been an historical constraint, although the establishment of the Development Bank of Wales has more recently facilitated SME access to finance (Henley, 2021).

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?

8. Barriers partially include the limited capacity of the Welsh Government to borrow for investment and limitations in its capital budget. Under current rules and in the current financial context, councils are under pressure to prioritise their spending, including that on climate change policies. Decarbonising buildings and fleet, which are the second and third largest sources of local authority emissions, will involve large amounts of capital funding if local authorities are to meet the Welsh Government's aim of a net zero public sector by 2030. By fully understanding the emissions profiles of their area (beyond simply the direct emissions from their activities), local authorities could potentially better target their limited funds towards the opportunities for green investment which offer the best value for money emissions reductions (Notman et al., forthcoming-a).
9. Heat decarbonisation and electric vehicle chargers are two examples of projects which could be supported using pension funds, as they are likely to be long term and low risk. However, it has been suggested in evidence to the Scottish Parliament that there is a reluctance to invest given a lack of data and inconsistencies between smaller local level projects. Therefore, taking a collaborative approach and packaging several similar projects together in different areas could help encourage pipelines of guaranteed work which are needed to attract investors (Scottish Parliament Net Zero Energy and Transport



- Committee, 2023; Notman et al., forthcoming-a). Collaborative procurement for electric vehicles has already been used to achieve cost savings in a Welsh context (Welsh Government, 2023).
10. In the development of energy infrastructure, Wales is limited by its lack of direct control over aspects of the energy system. For instance, while it has consenting powers for onshore developments under 350MW and all wind power projects, larger-scale projects and offshore generation are not within its devolved competences. This means that Wales is dependent on actions at a UK government level to deliver things like new nuclear power, and on the Crown Estate for offshore developments. This is particularly important for the transition to a green economy given the need to rapidly scale-up construction of low- and zero-carbon electricity generation capacity (Price, 2023).
 11. Energy infrastructure is also limited by the fact that control over the grid is reserved. The Welsh Government are already working with the ESO and Ofgem to upgrade grid capacity in Wales, which is a critical limiting factor for new infrastructure particularly in rural areas. However, while the Welsh Government lacks direct levers to act, devolving the energy transmission system is unlikely to be an easy or desirable solution to this barrier (Regan, 2023). Co-ordination between governments; and between governments, the ESO and the regulator, will be important to ensure that infrastructure can be developed and delivered in appropriate haste.
 12. A barrier to development is the current planning system. While the Infrastructure (Wales) Bill aims to speed up the process of consenting for major projects, we believe there are further lessons which can be learned from other countries to streamline and simplify the planning process (Notman and Price, 2023). For instance, the Netherlands has simplified its offshore planning process so that sites are pre-selected, grid connections and projects are authorised before they are put out to tender for construction. This has increased the build rate of energy infrastructure while reducing risk for investors. However, changes made at a Wales level would need to be carefully monitored to ensure that they do not reduce opportunities for public engagement and that they do not inadvertently create new administrative hurdles across other levels of the planning system in Wales and the UK.
 13. The retrofit of residential buildings is one area where the green economy can deliver ancillary benefits as well as reducing emissions, with opportunities to lower household bills, reduce fuel poverty, improve health outcomes and create a significant number of jobs. However, slow uptake of heat pumps and energy efficiency measures to date means that these will need to be deployed at an unprecedented scale (Notman et al., forthcoming-b). Our review of international retrofit schemes suggests that innovation in policy delivery appears to be



outpacing evaluation evidence. Therefore, there is limited insights into the advantages and disadvantages of different policy approaches. This is a concern in the face of the huge scale of change that is required and means that to meet net zero targets, policymakers may have to make decisions on retrofit policies with limited evidence on what works (Coles-Riley et al., forthcoming).

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

14. The ability to develop Wales-based supply chains will differ by sector and by the nature of the skills and capacity needed. In some sectors, developing supply chains will be a matter of reskilling and upskilling existing workers, for example, in heat pump installation (Notman et al., 2023). In some sectors, however, bringing the supply chain to Wales will require more extensive intervention. This will be the case where domestic capacity does not currently exist or where new skills or jobs are required. Interventions in the skills system as well as incentives for businesses to establish themselves in Wales will be needed. In other sectors it may not be economically efficient to develop Wales-based supply chains as the scale of investment, capacity and skills needed may be prohibitive and the end result not competitive without extensive and ongoing public support. In such cases, UK or even international collaboration may be beneficial.
15. Of concern is the future of existing supply chains and whether they will be able to adapt to changes in their industry. For instance, the automotive industry currently has a large supply chain within Wales (Johnson et al., 2020). This includes small- and larger-scale manufacturers. However, with changes to car production resulting from the shift to electric vehicles, there is a risk that actors within the current supply chain may not have the skills or ability to retool production.
16. This is particularly relevant for roles such as car mechanics as electric vehicle engines operate differently from petrol engines and require different skills (including the use of computer-based diagnostics). If barriers to entry are raised, for instance through requiring new qualifications, this could limit a prominent source of employment for young men from working-class backgrounds (Silva et al., 2021). It would also have the potential to disrupt or replace an existing small business ecosystem within Wales. Therefore any changes should be accompanied by direct support for reskilling, as well as indirect support to encourage participation including providing affordable, accessible and flexible transport and childcare and ensuring that other factors such as access to social security benefits continue (Skeels, 2022).
17. Another risk is if demand for younger skilled workers comes at the expense of a large proportion of the existing workforce, which may increase unsustainable short-term and precarious jobs. For example, skilled workers may be recruited at scale for the installation of infrastructure, but then become unemployed when it is



installed, with only a small proportion of that workforce being required for maintenance (Notman et al., 2023).

18. Procurement legislation, ensuring there is sufficient capacity to effectively implement the legislation and supporting local businesses to tender are all critically important aspects of developing and maintaining local supply chains. Our work has highlighted capacity challenges within the procurement profession; and the importance of stewardship to maximise the public value of procurement (Tizard and Mathias, 2019; Johnson, 2019).

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?

19. While many job roles will change as a result of the green transition, in Wales this will mostly include changing skill sets within existing jobs rather than the creation of new job types (Silva et al. 2022; Valero et al., 2021). Skills challenges are therefore likely to include reskilling and retraining workers rather than adapting to wholly new job types, and changes to the education and skills system for new entrants to the labour market.
20. Skills needs are difficult to outline in detail in sectors where the technology is not yet proven at scale, or the future mix of different technologies is still unknown. There are some skills which can be transferred from high-carbon industries to green industries with support and adaptation, for example from the petrochemical industry to marine energy, however there will need to be coordination and dialogue to determine whether government, industry, or workers themselves will be responsible for financing this reskilling (Notman et al., 2023).
21. The education and skills system also currently lacks the capacity to reskill existing workers. Providers only deliver courses if there is likely to be sufficient uptake, meaning that provision is limited if there is a lack of demand. Funding also occurs in short-term cycles based on predicted uptake, meaning that providers are reluctant to invest in areas with emerging technologies which may be critical for net zero but are financially unviable. This creates a vicious cycle where courses are not provided due to a perceived lack of demand, but the lack of demand is somewhat rooted in the belief that there are no courses available. (Notman et al., 2023).
22. Responding to training needs requires long-term support, local access to courses and support at work. Partnerships between industry and education providers are developing in some sectors and regions, but better coordination could help industry and education providers plan their next steps (Notman et al., 2023). The establishment of the CTER offers opportunities to develop this, in particular by building on current practices such as regional skills partnerships (Pember et al., 2021).



23. Several of our interviewees highlighted the need for increased coordination within Welsh Government, as the transition is often thought about in policy silos, with skills needs and sector-related issues discussed, planned for, and funded separately. Sector experts stated that they often had held similar conversations around net zero and skills with several teams of officials in the Welsh Government (for example, between skills, climate change, and the relevant policy team) and that joined-up messaging from across the Welsh Government would likely provide a valuable signal to industry about Welsh Government's plans for the transition and how they can help develop skills in their own workforce.
24. Funding was also highlighted as a particular challenge, as European Union funds have previously been wholly or partially responsible for several key skills initiatives and training programmes, with worries about where new external funding may emerge from (Notman et al., 2023).

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?

25. WCPP research has consistently called for the application of the Well-being of Future Generations Act to facilitate a just transition in Wales (Lesch, 2020; Price, 2020; Price et al., 2021; Morgan et al., 2022). The Well-being of Future Generations Act offers a framework through which the requirements of a just transition can be embedded in the governance of Wales, in particular by focusing on long-term impacts; sustainable development; and the well-being of citizens in Wales.
26. However, developing a governance framework for a just transition does not by itself guarantee that a just transition will take place. Concrete action will be required to promote a just transition in response to specific events as well as as part of the policymaking process. In practical terms, this will mean planning for shifts in employment over the whole economy and working with partners to support those at risk of redundancy or industry closure.
27. Without any intervention, the market will dictate the changes within industry and in education and skills provision that are needed to reach net zero. This would be an undesirable outcome: not only is it unlikely to lead to a just transition, but it may result in certain industries leaving Wales and to the offshoring of future emissions. Intervention to support a just transition should therefore focus on supporting industry to decarbonise within Wales and on directly and indirectly supporting workers where they need to retrain or learn new skills, see paragraph 15.
28. It will be important to assess the current workforce's skills and future skills needs prior to the closure of carbon-intensive industries to ensure that retraining and reskilling opportunities are relevant and meet industry demand. The Welsh



Government and Business Wales already have resources in place that may be used to assess current skills, future skill needs, and provide effective training or upskilling opportunities. There are also opportunities for the Social Partnership Council, formed through the Social Partnership and Public Procurement Act, to incorporate lessons from previous transitions and facilitate collaboration between the Welsh Government, employers and trades unions to develop, fund and implement effective policies for the transition (Silva et al., 2022).

29. The economic geography of the transition will be a key consideration in this area. Green industries will not necessarily be situated in similar locations to the industries they replace: for instance, renewable energy generation is not likely to occupy the same footprint as existing gas-fired power stations.
30. This offers opportunities for rural Wales where new industry and ancillary industries and services could develop through the transition. This could be encouraged, particularly through social value procurement and/or encouraging community-owned energy generating assets.
31. For existing workers and areas currently dependent on industry however, there is a less optimistic picture. With the closure of blast furnaces in Port Talbot, for instance, programmes retraining and reskilling workers are necessary but not sufficient to mitigate the employment and well-being effects this will have. To allow workers to move to skilled, well-paying jobs with as much esteem as steel working, businesses could be incentivised to site themselves close to closing or transitioning industries. This could include preferential access to workers as part of the transition arrangement alongside other incentives.
32. This will require bold, strategic thinking and a commitment to connect businesses sited in traditional industrial sites with 'new' industries, in partnership with bodies like Ofgem, the ESO and UK government.

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?

33. Previous industrial transitions demonstrate the importance of collaborative approaches: evidence shows that they can help to develop a shared vision for planning and policy approaches (Silva et al., 2022). The ability to form partnerships between national governments, local governments, citizens, and the business sector is key to ensuring that policies are successful, and will likely also be the case in Wales (Morgan et al., 2023).
34. At an institutional level, the Welsh Government will need to work with private sector employers; local authorities; trades unions; public services and the UK government, particularly as the UK government's ability to mobilise resources is orders of magnitude higher than the Welsh Government's.



35. However, no just transition measures will feel just if they are not accompanied by meaningful dialogue and input from affected workers. The politics of recognition are important alongside efforts to distribute opportunity more fairly, particularly where job losses are possible (Price, 2020). The need for active, collaborative dialogue has been highlighted by recent political controversies in Wales.
36. Policy responses in other transitions were more effective in supporting workers and communities where local and regional impacts were considered. Identifying areas at high risk from the transition and anticipating associated skills and investment needs will involve effective data collection and engagement with public and private actors at a local and regional level. Policy responses need to be inclusive and involve coordination across industry, unions, skills institutions and local communities, providing tailored and localised support (Silva et al., 2022).
37. Regional Skills Partnerships are established to address skills shortages by influencing skills provision in their regions based on employer-led insight and labour market intelligence. However, their remit is limited to full-time further education provision and apprenticeships, restricting their ability to develop and deliver green skills training across the education system (Silva et al., 2022).

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?

38. There is substantial opportunity for the Welsh Government to work with local authorities to support innovative forms of finance for local decarbonisation projects. There are examples of public-private partnership at a significant scale in a number of UK local authorities, including Bristol City Leap, Greater London Authority's Retrofit Accelerator - Workplaces (formerly RE:FIT), Greater Manchester Combined Authority's (GMCA) partnership with the Green Finance Institute, and Glasgow's Greenprint for Investment (Notman et al., forthcoming-a). While some options proposed by the Green Finance Institute, such as GMCA's examination of Property Linked Finance (PLF), have not yet been implemented in a UK context, others, like Local Climate Bonds (LCBs), have been trialled by a number of local authorities, with Blaenau Gwent committing in October 2021 to exploring a Green Bond launch (Notman et al. forthcoming-a; Green Finance Institute 2024). In most cases, however, public funding remains crucial to leveraging private investment at local authority level (see EY and GMCA 2023).
39. Analysis of local authority finance during the pandemic (National Audit Office, 2021) suggested that short term, ring-fenced funding opportunities provided by the government do not support good long-term financial planning. Evidence



produced by WCPP (Jones et al, 2015; Downe and Taylor-Collins, 2019) points to a need for a more strategic approach focusing on three broad categories of response to fiscal pressure: increasing efficiency; targeted investment; and renegotiating the boundaries of Welsh Government and council responsibilities.

40. There are several examples of exploration into the boundaries of council responsibility. Stoke City Council is developing its goal to become an energy sufficient 'Great Working City', pushing the boundaries of energy regulation and localism by moving towards local ownership of energy supply and reimagining the role of the council as a strategic broker of resources (Nesta and the Local Government Association, 2018). In Wales, Dr Edward Thomas Jones, of Bangor University has actively been exploring the growth of community enterprises and local ownership as examples of communities' own bottom-up solutions in the face of local challenges (Thomas Jones, 2023). Menter Felinheli is an example of a community-led social enterprise is attempting to take ownership of the 260-year-old harbour in the village of Felinheli (Gwynedd). Menter Felinheli have developed a funding strategy and will shortly launch a community share offer as part of a blended finance package to purchase the harbour.
41. Social Finance has created a framework for financing Nature Based Solutions (NBS) to societal, economic and environmental challenges (Wilk et al., 2020). Their governance, business and finance framework explores how to build a funding structure which takes advantage of the diverse benefits of NBS and the possible stakeholders involved. It contains aggregated examples and recommendations from across the globe to highlight innovations in paying for NBS.



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The Economy, Trade, and Rural Affairs Committee: Green Economy Inquiry – Onward written evidence

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?

Sustainable Farming Scheme

As over 90% of Wales' land is used for agriculture, farming has a key role to play in meeting decarbonisation and biodiversity targets.¹ Most farmland in Wales is used for rearing sheep and cattle, which are some of the least profitable types of farming. Adopting the principle of public money for public goods through the Sustainable Farming Scheme (SFS) could support a green transition in farming, while providing opportunities for new income streams.

SFS has come under considerable scrutiny, but the Welsh Government should hold its nerve and introduce the scheme in a form close to that currently envisaged. Onward's *Greener Pastures* report recommended various changes to England's Environmental Land Management schemes (ELMs), designed to increase participation and raise ambition.²

Wales' SFS is ambitious, but some elements of the scheme may not be straightforward enough to encourage participation. In particular, the Welsh Government should consider giving farmers longer to meet the 10% tree cover rule or broadening the rule's scope to include other features that sequester carbon and enhance biodiversity. It also needs to accelerate the introduction of 'optional actions' and 'collaborative actions' to incentivise the most environmentally ambitious farmers.

Business rates

Heavy industry plays a significant role in the Welsh economy. Fixed costs place a considerable burden on energy intensive businesses, which typically operate on low margins. To relieve some of this pressure, Onward's *Green Jobs, Red Wall* report recommended offering long-term business rates exemptions of up to 100% in return for investment in green technologies.³ As the Welsh Government has responsibility for business rates, it could implement this policy to support industrial decarbonisation.

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?

Planning capacity and capabilities

Onward's research for an upcoming report has identified five elements that need to be in place for the green transition – public investment, regulation, skills, planning, and international relations. Some of these elements are more relevant for the UK Government but the Welsh Government has some control over others.

One issue that is regularly cited as holding back the green economy is lengthy planning processes, in part caused by a lack of capacity and capabilities in local authorities' planning departments. For example, a survey by the UK Government found that only 5% of local authorities feel their ecological resource is adequate to

scrutinise applications that might affect biodiversity and less than 10% have sufficient expertise to deliver biodiversity net gain rules.⁴ The Welsh Government should ensure that planning departments have the capacity and capabilities needed to accelerate planning processes without compromising environmental protections.

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

Local content requirements

Onward's *Greening the Giants* and *Green Jobs, Red Wall* reports both recommended introducing domestic content requirements for the supply chain of key net zero technologies, such as battery technology and steel in the automotive industry.^{5 6} The Welsh Government could explore local content requirements or work with the UK Government to expand domestic content requirements to industries that would support the Welsh economy, such as floating offshore wind.

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?

Skills passport

Skills shortages are frequently highlighted as a problem for the green transition in almost every sector. Onward's *Green Jobs, Red Wall* report noted that one problem is workers having to retrain or gain new qualifications to do similar jobs in adjacent sectors, such as oil and gas and offshore wind. The paper recommended the UK Government work with industry to develop a "skills passport" for the energy sector.⁷

The Scottish Government has funded a programme to develop an energy skills passport specifically for offshore industries. The Welsh Government should work with the UK Government to accelerate development of a nationwide "skills passport" for the entire energy sector and heavy industry.

Reskilling and upskilling support

There are several skills gaps in sectors that are key to supporting the broader green economy. Less than one in five boiler engineers are currently installing heat pumps and nearly half do not know where to receive training.⁸ Only 16% of car mechanics are qualified to work on hybrids and electric vehicles (EVs).⁹ Part of the responsibility for reskilling and upskilling these workers lies with their employers. But the benefits of their new skills would be felt beyond those companies as it will enable greater uptake of heat pumps and EVs, which would reduce emissions, enhance energy security and boost the green economy.

The Welsh Government provides some financial support for this reskilling and upskilling, for example through the Flexible Skills Programme. But it should consider whether this is sufficient to encourage companies to invest in their workforce's net zero related training.

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?

Advice for farmers to restore nature and transition to regenerative practices

Onward's *Greener Pastures* report highlighted that farmland used for grazing sheep and cattle is well suited to entering environmental land management schemes that entail significant nature restoration, such as the 'higher tier countryside stewardship' in England or 'optional actions' in Wales. Farmers will need advice to enter these schemes and adapt their farming practices.

Greener Pastures recommended the UK Government accredit third party organisations to advise more farmers on higher tier stewardship agreements, a policy the Welsh Government could adopt to help farmers undertake optional actions.¹⁰ The Welsh Government currently plans to introduce optional actions between 2025 and 2029. It should accelerate the introduction of these actions to support environmentally ambitious farmers. Accrediting third party organisations to advise farmers on these actions could help to bring them in more quickly.

Supporting workers to move into adjacent industries

Onward's *Green Jobs, Red Wall* report recommended that the skills passport should include the ability to add additional "bolt-on" training for more specific skills requirements to prevent them having to repeat training they have already completed.¹¹ This would support workers that need to move into adjacent industries to begin new jobs more quickly.

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?

Private markets for nature based carbon and biodiversity credits

Onward's analysis of Climate Change Committee data in the *Greener Pastures* report showed that UK companies could have demand for over £3 billion of carbon credits by 2030. Farmers that undertake nature restoration projects or transition to regenerative practices could capitalise on this demand as well as emerging demand for biodiversity credits.

But they will need to have confidence that they will profit from creating credits to make the necessary investment. And when they do make the investment, they will need to demonstrate that they have produced high quality credits to attract buyers. *Greener Pastures* recommended the UK Government develop mandatory standards for private biodiversity and soil carbon credits. And it called for the creation of a "nature credits bank" to purchase nature based carbon and biodiversity credits that cannot receive a pre-determined base price in the private market.¹²

The Welsh Government should work with the UK Government to progress the development of policies that are needed to establish a robust, well-functioning private nature based credits market. It should also engage with large corporates and private investors to drive demand for Welsh nature based carbon and biodiversity credits.

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?

Rural affairs budget

The rural affairs budget has been cut by 13% for 2024/25 and stands at just over £400m.^{13 14} Analysis conducted for the RSPB, the National Trust and The Wildlife Trusts suggests that Wales needs around £500m per year to meet its environmental land management priorities.¹⁵ And Welsh Government modelling shows farm business incomes could drop by £81 million following the introduction of SFS.¹⁶ The Government should

not reduce the rural affairs budget any further and should aim to increase it when possible to deliver a green transition in the agriculture industry.

UK Infrastructure Bank

The UK Infrastructure Bank (UKIB) has £22 billion of financial capacity to provide debt, equity and guarantees to businesses and local government to deliver a green industrial revolution. The bank's capacity includes £4 billion specifically for local authorities.¹⁷ Given budgetary constraints, local government could look to UKIB for capital to support environmental projects. And the Welsh Government should engage with the bank to provide financing to companies where it does not have the capacity to offer direct support.

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- ¹ Welsh Government, 'Survey of agriculture and horticulture: June 2023', 23 November 2023
- ² Onward, 'Greener Pastures', 16 December 2023
- ³ Onward, 'Green Jobs, Red Wall', 16 December 2022
- ⁴ The British Property Federation, 'BPF calls for a better resourced planning system to ensure the success of new biodiversity net gain regulations', 7 February 2024
- ⁵ Onward, 'Greening the Giants', 26 March 2021
- ⁶ Onward, 'Green Jobs, Red Wall', 16 December 2022
- ⁷ Ibid
- ⁸ Installer Online, 'Only 18% of installers install heat pumps and 44% don't know where to go for training', 17 March 2023
- ⁹ Auto Repair Focus, 'EV qualified technicians – numbers grow but skills gap predicted by 2029', 16 January 2023
- ¹⁰ Onward, 'Greener Pastures', 16 December 2023
- ¹¹ Onward, 'Green Jobs, Red Wall', 16 December 2022
- ¹² Onward, 'Greener Pastures', 16 December 2023
- ¹³ The Farmers' Union of Wales, 'Cuts to rural affairs budget major blow to industry, FUW says', 19 December 2023
- ¹⁴ Welsh Government, 'Wales Budget 2024–2025', December 2023
- ¹⁵ Rayment Consulting Services, 'An assessment of the financial resources needed for environmental land management in the UK', 6 June 2023
- ¹⁶ Welsh Government, 'Potential economic effects of the Sustainable Farming Scheme', December 2023
- ¹⁷ UK Infrastructure Bank, 'Strategic Plan', June 2022