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Llywodraeth Cymru
Welsh Government

Welsh Government

Consultation – summary of responses

Review of Wales' Renewable Energy Targets

Consultation issued: 24 January 2023

Responses by 18 April 2023

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

Overview

This document provides a summary of the Welsh Government's consultation on its proposals for revised renewable energy targets for Wales. Our renewable energy targets make sure we meet our duties and ensure renewable generation delivers wider benefit to Wales. The responses are summarised below.

Action Required

This document is for information only.

Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

[CCC Advice Report: The pathway to a net zero Wales](#)

[Distribution Future Energy Scenario - SPEN](#)

[Distributed Future Energy Scenarios – NGED](#)

[Energy Generation in Wales Report 2021](#)

[Energy Use in Wales report – 2nd Edition](#)

[Future Energy Scenarios – National Grid](#)

[Local and shared ownership of energy projects: guidance](#)

[Net Zero Wales Carbon Budget 2 \(2021-2025\)](#)

[Programme for Government 2021 to 2026](#)

[Regional Energy Strategy – Cardiff Capital Region](#)

[Regional Energy Strategy – Mid Wales](#)

[Regional Energy Strategy- North Wales](#)

[Regional Energy Strategy – South West Wales](#)

[Renewable Energy Deep Dive recommendations](#)

[Welsh Government's webpages on the Well-being of Future Generations \(Wales\) Act 2015](#)

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Additional copies

This summary of responses and copies of all the consultation documentation are published in electronic form only. They can be accessed on the Welsh Government's website.

Link to the consultation documentation:

[Consultation Review of Wales' Renewable Energy Targets](#)

1. Context

1.1 Introduction

This document provides a summary of the Welsh Government's consultation on its proposals for revised renewable energy targets for Wales. Our renewable energy targets make sure we meet our duties and ensure renewable generation delivers wider benefit to Wales. The consultation ran for 12 weeks from 24 January 2023 to 18 April 2023.

1.2 Background

In 2017, the Welsh Government set renewable energy targets as part of our commitment to a more sustainable future for Wales.

These targets are for:

- Wales to generate electricity equal to 70% of its consumption from renewable sources by 2030.
- 1GW of renewable energy capacity in Wales to be locally owned by 2030.
- An expectation for all new energy developments in Wales to have at least an element of local ownership from 2020.

Additionally, the [Programme for Government 2021-26](#) includes a commitment to “expand renewable energy generation by public bodies and community groups in Wales by over 100 MW by 2026”.

1.3 Why did we consult?

We have a statutory duty to reduce our greenhouse gas emissions. The [Environment \(Wales\) Act 2016](#) requires the Welsh Government to reduce emissions of greenhouse gases in Wales to net zero by the year 2050, and establishes a framework of interim emissions targets and carbon budgets. Decarbonising our energy system will unlock emissions reduction pathways for other sectors of the economy and will be fundamental to meeting net zero.

We have a duty to carry out sustainable development. [The Well-being of Future Generations \(Wales\) Act \(2015\)](#) (WFG Act) provides a comprehensive framework for sustainable development in Wales, which includes seven long-term well-being goals for Wales. It places a well-being duty on government and specified public bodies to carry out sustainable development. They are to act in a manner which seeks to ensure the needs of the present are met without compromising the ability of future generations to meet their own needs.

We need a secure, affordable energy supply. The climate crisis and our current dependence on global fossil fuel supplies underline the importance of clean, affordable renewable energy that is generated in Wales and supports the well-being of our citizens.

In 2021 we published [Net Zero Wales Carbon Budget 2 \(2021-2025\)](#), which contains policies aimed at reducing emissions to meet our second Carbon Budget while laying the foundation for longer-term decarbonisation. It includes significant effort within our devolved competence to develop a flexible, smart, renewables-based energy system.

In Net Zero Wales, we committed to reviewing our renewable energy targets to ensure the Welsh Government “meet our duties and ensure renewable generation delivers wider benefit to Wales”. A Ministerial [deep dive into renewable energy](#) in late 2021 explored the opportunities for, and barriers to, renewable energy generation in Wales. It sets out a vision for Wales “to generate renewable energy to at least fully meet our energy needs and utilise surplus generation to tackle the nature and climate emergencies. We will accelerate actions to reduce energy demand and maximise local ownership retaining economic and social benefits in Wales”.

The Deep Dive’s vision provides a frame for our review of renewable energy targets and a rationale for the new targets we want to set. Reviewing our renewable energy targets now gives us a chance to reflect on the challenges over the coming years. If we are to achieve Net Zero by 2050, then during the next decade we need to put in place the structure to support our ambition; and the targets we set will help give certainty to the sector of our policy ambitions.

1.4 The evidence base

We published the evidence base underpinning our proposals as a [Technical Annex](#) alongside the consultation document. While the key messages were extracted into the document, respondents could refer to the Technical Annex when considering the issues raised in our consultation questions.

2. Overview of responses and respondent type

The Welsh Government thanks all 119 respondents to the consultation. Of these, 66 replied via the online portal and 53 via email. Responses were from organisations, individuals and local authorities.

The responses were largely positive and supported our proposals and the Welsh Government’s ambition. Several replies noted the need to move away from fossil fuels and encourage the renewables sector. The proposed generation target was viewed as an important means of providing confidence to the sector, though there were suggestions the Welsh Government should introduce individual technology targets.

Some of the most common challenges outlined were the need for the associated enabling infrastructure and wider enabling environment. This included to ensure the right grid infrastructure was in place to support the renewable projects required; to streamline consenting and approval processes; to conserve our natural habitats; and to ensure Wales maximises the benefits from renewable energy developments.

Respondent	Number of respondents
Individuals	49
Organisation representatives	68
Local Authority representatives	2

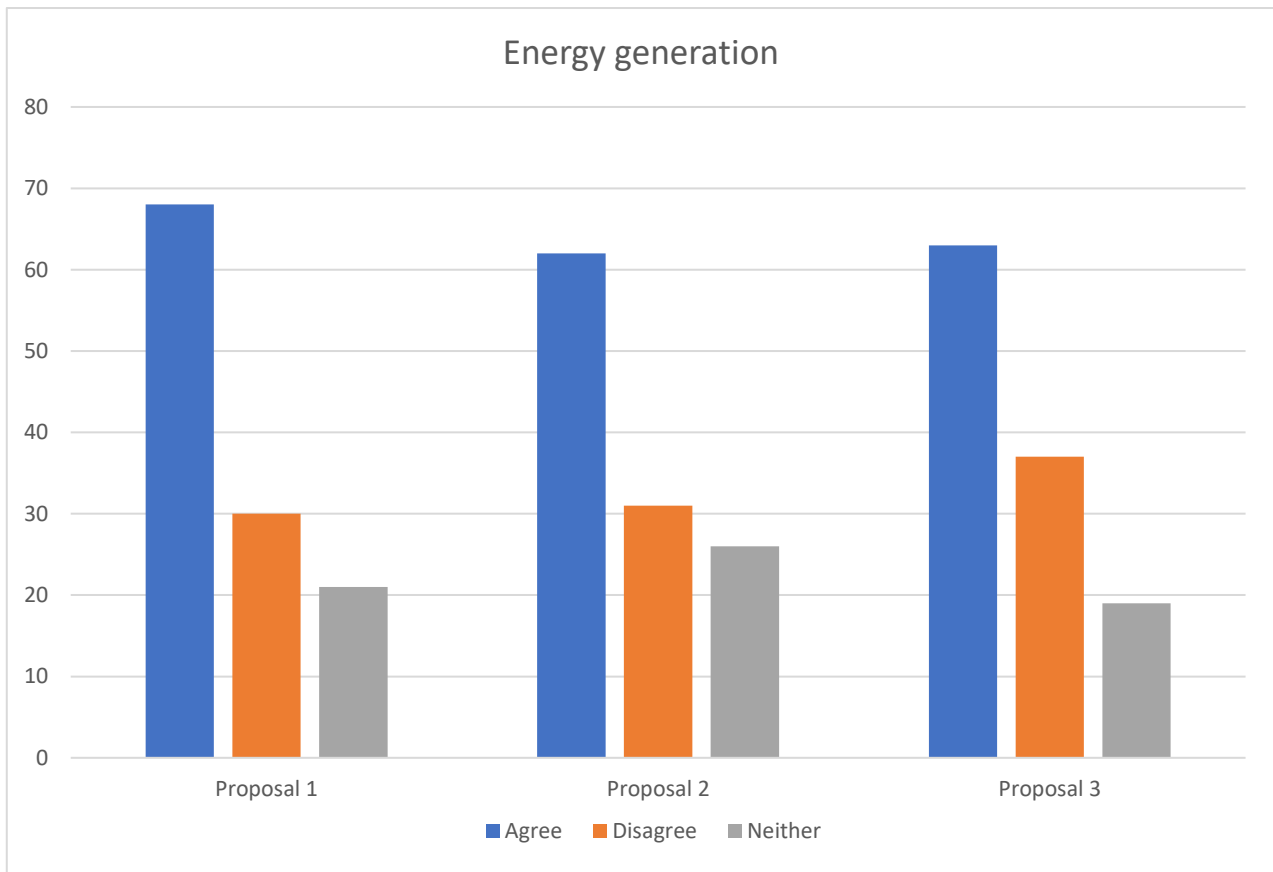
A list of respondents is in Annex A, minus individuals, as well as organisations who requested their response be anonymous.

3. Consultation responses

This section provides an overview of the responses and includes the identification of the number of “Yes”, “No”, and “Neither” responses. In some cases, answers to the questions were given in a block of text and not all contained “Yes”, “No” or “Neither” in the answers; in which case one of the three categories has been inferred from the reply.

The tables below illustrate how the respondents answered the questions followed by their summarised comments.

3.1 Energy generation – proposals 1, 2 and 3



3.1.1 Proposal 1

Question 1: Do you agree with Proposal 1, to retain the scope of the previous generation target, focussing on generating electricity to meet future demand?		
Agreed	Disagreed	Neither
68 (57.14%)	30 (25.21%)	21 (17.65%)

The majority agreed with the continued scope of the targets to focus on electricity to meet future demand. Many acknowledged that electricity demand would increase and be Wales’ main energy supply, highlighting the logic of retaining focus on electricity. A few wished to extend the focus so that export-related targets (i.e., beyond demand in Wales) could be considered, especially given Wales’ renewable energy potential.

A number underlined the concurrent need to reduce demand and to change consumption culture. Improved energy efficiency and investment were regarded as essential, and one response noted the importance of increasing investment in every part of the electricity value chain. Additionally, a small number pointed to the role of smart energy systems to manage electricity demand fluctuations.

Throughout the responses, the key role infrastructure has to play in achieving Wales' renewable energy targets was cited. One response stressed the importance of linking generation with grid infrastructure to ensure the grid was sufficiently upgraded.

Some recognised the role that hydrogen might play, especially in “hard to decarbonise” areas, such as industry and transport.

3.1.2 Proposal 2

Question 2: Proposal 2 states: That Welsh Government use the CCC's Balanced Pathway as a basis for Wales' electricity demand projections when setting renewable energy targets. We will also incorporate 9% transmission losses into our projections. Do you agree with this proposal?		
Agreed	Disagreed	Neither
62 (52.1%)	31 (26.05%)	26 (21.85%)

There was broad agreement for the use of the CCC's Balanced Pathway, with many noting the sense that this made. A number proposed the Welsh Government periodically review the CCC's calculation for accuracy, and to ensure the targets remain consistent with the most reliable analysis for electricity demand projections. Some responses wanted greater clarity on how the Welsh Government would keep the targets under review, especially if there were significant increases in the suggested electricity demand profile.

The possibility of using alternative sources for electricity demand projection was considered. While using the CCC's was consistently seen as the most suitable, others were recommended, such as the Welsh Government's forthcoming Future Energy Scenarios or the National Grid's Future Energy Scenarios.

Infrastructure needs and associating the CCC's projections with the UK Government's Holistic Network Design was suggested as a useful addition to using the CCC's Balanced Pathway.

Of those who disagreed with the CCC's electricity demand projections, some believed the demand estimates should be lower; while others thought the projections under-estimated demand, offering alternative calculations.

One consultee did not agree with linking electricity demand with renewable electricity targets and would like clearer calculations for transmission losses. Alternatively, one response believed “transmission losses” should be changed to “network losses” to incorporate distribution losses as well as transmission losses. There was one proposal that we should give greater emphasis to supporting microtechnology and community energy schemes to reduce transmission losses.

3.1.3 Proposal 3

Question 3: Proposal 3 states: That Welsh Government set a target for us to meet the equivalent of 100% of our annual electricity consumption from renewable energy by 2035 and to continue to keep pace with consumption thereafter.

Agreed	Disagreed	Neither
63 (52.94%)	37 (31.09%)	19 (15.97%)

A large number applauded the proposal's ambition for Wales to meet the equivalent of 100% of our annual electricity consumption from renewable energy by 2035, and to continue to keep pace with consumption thereafter. Supporting the target, there were many suggestions around additional pieces of work the Welsh Government could consider to ensure the target was met.

Some of the proposed additions or amendments to the target were:

- technology specific targets which would provide developer confidence and demonstrate Welsh Government ambition across technologies;
- an increased focus on offshore wind, given the importance of it to both the overall target and for Wales as a whole;
- the importance of embedding nature into decision-making;
- embedding behaviour change intervention as part of the overall target;
- introducing an energy reduction target within the proposals;
- recognising the importance of energy storage to the achievement of Wales' renewable energy targets;
- including nuclear energy as a supplier of electricity.

There were a range of views on our proposed generation target. Some considered them to be insufficiently ambitious, particularly in relation to energy export and to offshore wind. Others considered the targets to be unrealistic, with a belief the Welsh Government should reconsider how best to decarbonise, while balancing environmental and tourism effects.

If we were to increase our target, then caution must be taken concerning maximising the value to Wales for hosting renewable electricity, both regarding increased income and in ensuring there is a sufficiently strong supply chain to support the scale of investment this would require.

A number pointed to the potential of having individual technology targets (onshore wind, offshore wind, solar etc), as this would accelerate deployment with a diverse renewable energy technology mix, which would improve energy security.

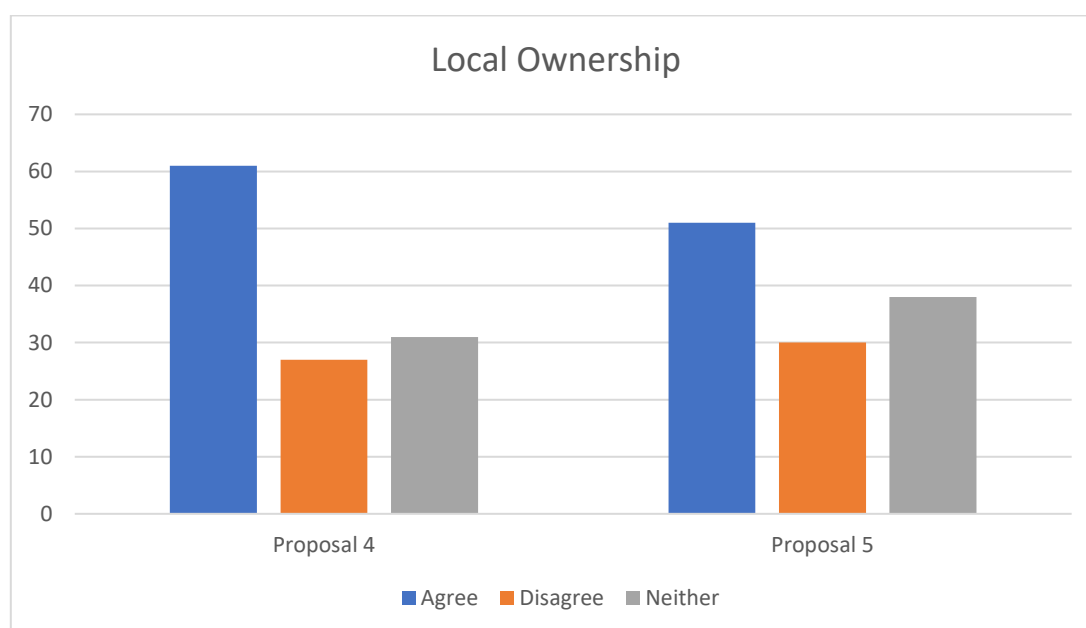
Some concerns regarding our proposed target focussed on the fact that renewable energy can suffer from supply reliability issues. One respondent suggested the target should be linked to seasonal demands instead of yearly average; while another wanted a target which included a mix of weather and non-weather-dependent renewables to strengthen supply security.

Planning and the need to streamline the consenting and approval process was often noted as a barrier to the achievement of our renewable targets. The need for streamlined planning processes, better resourced local planning and an improved grid infrastructure were common concerns.

Although the responses concentrated on the suitability of our generation target, the importance of flexible, effective, and secure grid management was commonly mentioned, along with the vital need for increased energy storage. Local energy projects were cited as an option to reduce national reliance and to limit infrastructure, such as pylons and cabling. Where pylons were necessary, the importance of undergrounding electricity cables was noted.

Some responses cited potential negative effects of the targets and the associated additional energy infrastructure. These included the potential impact on the Welsh landscape and on wildlife, with offshore wind energy often considered to be less damaging than onshore generation.

3.2 Local ownership – proposals 4 and 5



3.2.1 Proposal 4

Question 4: Proposal 4 states: That Welsh Government set a target for at least 1.5GW of renewable energy capacity to be locally owned by 2035, excluding heat pumps.		
Agreed	Disagreed	Neither
61 (51.26%)	27 (22.69%)	31 (26.05%)

Respondents appreciated that local ownership could reduce grid reliance and energy losses, hasten renewable energy capacity, increase energy security, and allow communities to have more say on new infrastructure. Several responses thought that greater local ownership would enable a more flexible energy-mix due to different technologies adopted across Wales. One response called for flexibility over how the target is achieved, to allow for bespoke local ownership models.

The renewable energy sector was positive about community ownership. One organisation wished for greater commitment to working with developers. Other organisations believed the Welsh Government’s publicly owned renewable energy developer would provide an opportunity to deliver community education on renewable energy, and to work with the private sector for the benefit of Wales. There was some concern regarding attracting more

developers to Wales; as such, it is considered important to assess the risks and costs related to ownership models for large-scale offshore projects.

Some responses stressed the importance of grants and other support to encourage uptake and shift decision-making from centralisation towards communities. One respondent thought all new renewable energy projects in Wales above 5MW should be 5% to 33% community owned.

A few contributors wanted more ambitious targets, and reassurance the targets would be reviewed regularly. One said it would be important for the Welsh Government to open collaborative opportunities with the public sector, and another wanted more focus on farm-related local ownership. Another suggested defining different targets for different project capacity thresholds.

There were some concerns that this target might hinder the deliverability of the headline target, investment, and secure energy supplies. Another did not like the term “community” as projects would not incorporate all a community’s residents. One contributor said too many small energy projects failed, and that supply would be erratic due to reliance on the weather.

One response reiterated the need for renewable energy projects to be “nature positive”, and that community-based energy projects were more likely to be developed in nature friendly locations. Another consultee believed the target should include social value in addition to local ownership targets.

3.2.2 Proposal 5

Question 5: Proposal 5 states: That Welsh Government set a target of 5.5GW of renewable energy capacity to be produced by heat pumps by 2035, contingent on scaled up support from the UK Government and reductions in the cost of technology.		
Agreed	Disagreed	Neither
51 (42.86%)	30 (25.21%)	38 (31.93%)

There was much support for heat pumps, and for a heat pump target. However, there were comments questioning how the 5.5GW target would be quantified as this would require detailed information on the capacity of a large number of individual units. A few responses pointed to a “number of units” target rather than an energy capacity target, as this would allow for easier quantification and monitoring supporting more effective target comparisons.

Respondents commented that incentives would be crucial, such as offering financial help, communicating effectively, an adequate supply chain, setting phase-out dates, and creating opportunities in education and for electricity network investment. There was some concern that the uptake of heat pumps might be dependent on UK Government incentives, which were outside Welsh Government control.

One solution suggested was that heat pumps should be a requirement for any new builds, and grants offered for existing houses. However, it was clear that upskilling would be required to ensure heat pump rollout was possible.

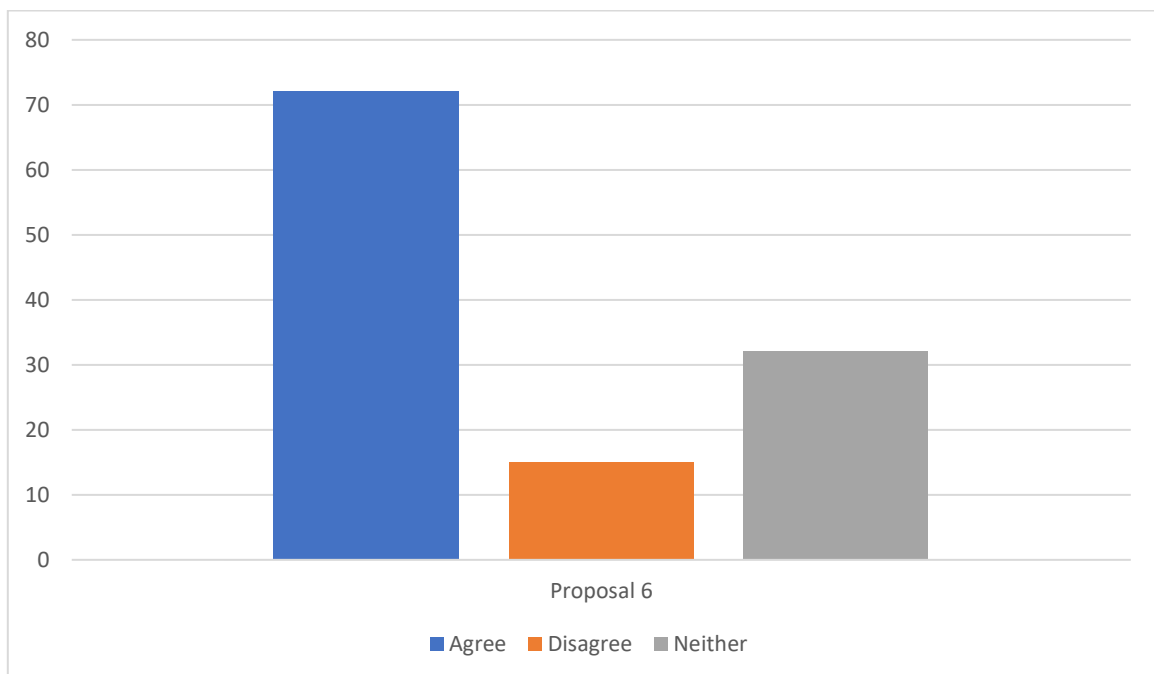
One consultee argued the Welsh Government should encourage local heat pump production for the benefit of the Welsh economy; and another wanted domestic and commercial installation targets separated to ease progress monitoring.

Some considered the target to be unrealistic considering current low installation figures, alongside a requirement for insulation and relatively high replacement costs. Others regarded heat pumps as unreliable, noisy, and expensive to install. Wales’ old housing stock was also cited as being too expensive and difficult to adapt to heat pump technology.

For those who disagreed with the target, a number argued that alternatives to the heat pump target should be considered. These alternatives included a target aimed at “homes as power stations”, adopting the right technology for each building, reducing grid-reliance, and requiring less infrastructure; and a target encouraging smart local energy systems. One response argued we should consider a target around heat networks, alongside heat pumps.

3.3 Skills - proposal 6

Question 6: Proposal 6 states we intend to track the growth (turnover and employment) in the low-carbon energy sector in Wales using the Low Carbon and Renewable Energy Economy Survey. We will supplement this data with information from industry leaders and representative organisations. We will use this data to measure the success of our implementation plans to upskill the workforce and support economic growth in Wales.		
Agreed	Disagreed	Neither
72 (60.5%)	15 (12.6%)	32 (26.89%)



The majority agreed with this target and wanted the Welsh Government to encourage investment and manufacturing to create long-term economic benefit. Some believed Wales should be managing all its renewable energy ambitions - from manufacturing products to implementing its own energy projects.

The role of skills for community renewable energy projects was cited, since such projects provide opportunities for local training and employment, while generating income and reducing energy costs.

Remarks included the need to invest in upskilling Wales' workforce, including its farmers; the question as to whether "green growth" existed; the view that country comparisons should be considered; and the importance of monitoring and adjusting to ensure Wales was genuinely benefiting.

Some thought we might replace or supplement our use of the Low Carbon and Renewable Energy Economy Survey with nature-based employment and economic benefits; independent surveys to avoid industry bias; trade union and community discussions; surveys from local councils and relevant forums; learner data to track learner trends; or the Offshore Wind Industry Council's "People & Skills Survey" for regional information. There was also concern from some that the Welsh Government were using "low carbon" statistics instead of renewables, as these would capture other industries, such as nuclear.

Jobs displacement data was noted as important for analysis to ensure some sectors did not lose skilled workers, while school-leavers and university graduates should be informed of energy-related career options. Some respondents would like to see data collected on training uptake and apprenticeships, job quality, trade union engagement and sectoral analysis.

3.4 Welsh language use – question 7

Question 7: Can you explain whether any of the proposals could be altered to have positive effects or increased positive effects on:	
(a) opportunities for people to use the Welsh language;	
(b) treating the Welsh language no less favourably than the English language;	
(c) ensuring no adverse effects on opportunities for people to use the Welsh language.	
Number of comments	57 (47.89%)

Many responders were positive about the Welsh language, the effects of the proposals and the opportunities to use Welsh. Some did not consider the targets would have any impact on the Welsh language.

Respondents thought that as renewable energy projects would bring employment to Wales, including Welsh-speaking areas, Welsh-speaking communities were less likely to migrate. One consultee believed any export ambitions and technology targets would maximise benefits to wide geographical areas in Wales. Therefore, the Wales-focussed targets could be an opportunity to promote Welsh, particularly in the private sector. One organisation's multi-lingual digital communication included Welsh. Some noted creative media to promote the Welsh language, such as through storytelling or videos.

One consultee said the potential for energy-related apprenticeships would encourage Welsh school-leavers, including those who spoke Welsh. Another suggested courses and qualifications could be offered through the medium of Welsh. Others saw any community projects as providing opportunities for language collaboration.

One response cited the number of Welsh-speakers working in Agriculture, Forestry and Fisheries being 43% - the highest percentage of any sector - highlighting the potential benefits of diversifying farm-related businesses into energy generation.

One organisation thought adding Welsh language requirements would limit opportunities to attract the relevant skills to Wales. However, it suggested looking at how bilingualism worked in Norway. Many respondents said it would be essential to observe bilingual policies to ensure Welsh and English were given equal status.

Some commented that if non-Wales based companies operated within Wales, particularly by hiring temporary employees, English would be the sole working language. The nuclear industry was seen as a potential threat to Welsh language use due to a perceived influx of workers from outside Wales and the fact that the sector does not necessarily suit community ownership models. How renewable energy projects would be integrated into communities was seen by one as an issue; if infrastructure was imposed onto communities without sufficient consultation, the people affected would feel ignored and excluded.

3.5 Other issues – question 8

Question 8: We have asked a number of specific questions. Do you have any other issues that you wish to bring to our attention, which are not captured by the above questions?	
Number of comments	101 (84%)

Numerous respondents added suggestions and supporting evidence, building from comments in their earlier answers. A few supplied detailed information on different energy generation and storage technologies. Some reiterated the need to retain Wales' landscape, wildlife and tourism, and therefore preferred offshore energy generation and/or local energy projects to large-scale onshore projects. Several wanted reassurance the targets would genuinely benefit Wales, as they believed organisations based outside Wales were currently profiting from Wales' resources to the detriment of Wales.

There were further calls for energy export ambitions, smoother planning systems and an upgraded grid. Additionally, to realistically aim for net zero, several consultees commented that it would be essential to introduce incentives to encourage behaviour change, reduce energy demand and increase energy efficiency - as one organisation explained, tackling climate change required engagement at all levels.

4. Next Steps

Our renewable energy targets are an important part of our commitment to meet our duties and ensure renewable generation delivers wider benefit to Wales. Recognition of the climate crisis and energy price rises have brought into sharp focus the need for a further step change in our ambitions. A local supply of secure, affordable renewable energy, within the context of a strong GB network, is the foundation to a prosperous, zero carbon society.

Feedback from the consultation will be considered when finalising our proposed new renewable energy targets. Any new targets will sit alongside our existing targets and, as with our existing targets, we will report against progress on them through our Energy Generation in Wales annual reports.

Annex A – List of Responding Organisations

Listed below are the responding organisations who declared their organisation and did not ask for their responses to be anonymous. This may include responses from individuals who are members of an organisation, but who do not necessarily reflect that organisation's views. The list does not include individuals or anyone who asked for their response to be kept confidential.

- Anaerobic Digestion & Bioresources Association (ADBA)
- Ashfords LLP
- BHA (British Hydropower Association)
- Bute Energy
- CADNO - Cymdeithas Atal Dinistr Niwclear Oesol (society for the prevention of everlasting nuclear destruction)
- CBI (Confederation of British Industry)
- CIWM Cymru (Chartered Institute of Wastes Management Wales)
- CND (Campaign for Nuclear Disarmament)
- COADEC (Coalition for a Digital Economy)
- Community Energy Wales
- Country Land & Business Association Cymru
- CPRW Ynys Môn (Campaign for the Protection of Rural Wales, Anglesey)
- Design Commission for Wales
- Development Bank Wales / Banc Datblygu Cymru
- DP Energy
- EDF Renewables
- Electrical Contractors Association
- Elgin Energy
- Energy Saving Trust
- Energy Service Wales
- Energy & Utilities Alliance
- Enfinium
- Equinor
- Facilitating the Future
- Ffestiniog Railway Co.
- Floventis Energy
- Friends of the Earth Cymru
- FSB (Federation of Small Businesses)
- GWPB Ltd (Great Western Power Barrage)
- Gwynt Glas Offshore Wind
- Hiraeth Energy
- Hitachi Energy
- INNOVO Network
- Institute of Welsh Affairs
- Marine Energy Council
- Marine Energy Wales
- MCS Charitable Foundation
- National Grid
- National Grid ESO (Electricity System Operator)
- Nesta Cymru
- Net Zero Industry Wales
- NFU (National Farmers' Union)
- NRW (Natural Resources Wales)

- Ørsted
- Parc Cenedlaethol Eryri
- Pembrokeshire Coast National Park Authority
- Powys County Council
- Regional Learning & Support Partnership Carmarthenshire
- RenewableUK Cymru
- RES (Renewable Energy Systems)
- RheEnergise
- Royal Town Planning Institute
- RSPB (Royal Society for the Protection of Birds)
- RWE (Rheinisch-Westfälisches Elektrizitätswerk)
- Scottish Power
- Solar Energy UK
- South Wales Fire & Rescue Service
- Statkraft
- Step Up Product Development Ltd
- Torfaen County Borough Council
- Vattenfall
- Wales TUC (Trades Union Congress) Cymru
- Welsh Nuclear Free Local Authorities
- Wind2