



## **Written Submission by Natural Resources Wales**

This document sets out the response from Natural Resources Wales on the Welsh Government's call for evidence on 'Locally Owned Renewable Energy'.

### **The Role and Purpose of Natural Resources Wales**

Our comments are provided in the context of our purpose to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced, and sustainably used.

Natural Resources Wales has multiple roles in supporting the delivery of renewable energy schemes, including supporting the delivery of appropriately located 'locally owned renewable energy' through our advisory, regulatory, land owner and land manager roles.

- We own land in various parts of Wales where renewable energy development may take place. We also manage the Welsh Government Woodland Estate (WGWE) where we help enable the deployment of renewable energy including windfarms and hydropower.
- We have a statutory duty in relation to permitting a wide range of energy facilities. This varies according to the types of facility – ranging from nuclear power stations to small-scale hydropower schemes.
- We are a statutory consultee in the planning process, which would include commenting on plans where these projects are proposed

### **Main points**

- Natural Resources Wales acknowledges that Wales has considerable potential in developing and benefiting from locally owned renewable energy. Promoting and developing locally owned renewable energy can help address the energy 'trilemma' by reducing energy bills, contributing to energy security and reducing carbon emissions. It also contributes towards investing in, and improving, energy efficiency, increasing the awareness of energy issues, addressing fuel poverty, and contributing to the local economy.
- It will be important to consider the relative balance between enabling local ownership and large scale renewable generation if the ambition for generating 70% of electricity from renewable energy is to be met by 2030. In addition to local ownership, there is a need to focus on both the **national and local benefits** that renewable energy can

provide in accordance with the Well Being of Future Generations Act and the principles of the Sustainable Management of Natural Resources as required by the Environment Act. It will therefore be important to establish a framework to ensure that large scale renewable energy schemes and locally owned renewable energy schemes can deliver benefits nationally - for example in relation to decarbonisation and locally - to communities, delivering environmental, social and economic outcomes.

- We acknowledge that if the UK and Welsh Governments are to meet their energy and decarbonisation targets, they must optimise the potential from local/community sector as well as delivering large scale renewable developments. For this purpose, Wales, must make use of the wider shifts and transition currently taking place within the UK and Welsh energy landscape to explore new opportunities which includes potential within locally owned renewable energy.
- We recognise that, for locally owned renewable energy to make a meaningful contribution to the energy system and wider society, it requires significant institutional changes to the UK/Welsh governance framework, new municipal and community business models and new financial and organisational structures in energy ownership.
- In particular, we recognise that there are currently significant challenges in Wales, including access to grid infrastructure and/or the lack of new business models for smart grid infrastructures.
- Additionally, much of the previous focus for local/community energy projects has mostly been about establishing generation schemes for their own localised use. It is important to note that the natural progression of community owned generation should be not only to use the energy generated locally but also to be able to sell the energy and retain benefits within the community. The growth of local energy generation depends on community generators finding a route to market for the electricity they produce to help retain maximum economic benefits within the community. Control over the supply of energy will also help retain the long-term benefits within the locality/community.
- We support Welsh Government's policy direction as outlined in the Natural Resources Policy in recognising the potential for natural resources in delivering renewable energy. NRW has a duty to prepare Area Statements to help facilitate the implementation of the Natural Resources Policy and we would welcome the opportunity to discuss the potential role of Area Statements to support the deployment of appropriately located renewable energy technologies.

Our detailed comments to your consultation questions are set out in the attached Annex A:

I hope you find our comments useful and constructive. Please contact Adrian James on [Adrian.James@cyfoethnaturiolcymru.gov.uk](mailto:Adrian.James@cyfoethnaturiolcymru.gov.uk), or Kalpana Balakrishnam on [Kalpana.Balakrishnam@cyfoethnaturiolcymru.gov.uk](mailto:Kalpana.Balakrishnam@cyfoethnaturiolcymru.gov.uk) if you would like to discuss in detail.

Yours Sincerely,

A handwritten signature in black ink that reads "Keith Davies". The signature is written in a cursive style with some loops and a small arrow-like flourish above the 'i' in "Davies".

Keith Davies  
Planning, Landscape, Energy and Climate Change Manager

## Annex A

### Section 1: Targets

**Question 1:** Please provide evidence to support or reject expanding 1GW target to encompass both electricity and heat projects.

“The target announced is 1GW of renewable energy capacity to be local owned by 2030”.

From a climate perspective, the UK Climate Change Committee in its December 2017 carbon budget report, recommended that Welsh Government should develop a Renewable Heat Strategy.

NRW supports this position and recommends that the current target of 1GW locally owned renewable energy capacity is reserved for generating capacity of electricity and that a separate target is developed for heat projects in Wales.

Additionally, with the expansion of players within the definition of ‘locally owned’, 1GW target would seem less ambitious if shared between electricity and heat.

**Question 2:** Please provide evidence on the level of ownership we should consider reasonable to fulfil the requirement

No comments. We recommend separate targets for electricity and heat, and to retain the current target for electricity.

**Question 3:** Please provide evidence to support or challenge expanding the expectation on shared ownership to encompass other new electricity and heat projects

See answers to Question 1

### Section 2: Definitions

**Question 4:** Do you agree with the definition of local ownership above?

Strongly agree      Agree      Neither agree  
not disagree      Disagree      Strongly  
Disagree

We agree

Please provide evidence to support or amend the local ownership definition

- We support the definition of local ownership which is broad and includes ‘public sector’ organisations. As a public-sector organisation NRW falls within this definition and has significant knowledge and experience of facilitating the development of renewable energy projects on the land we own and manage via our Energy Delivery Programme. All our energy projects include a traditional model of Community Trust Fund and more recently, we have encouraged developers, the Alwen project for example, to offer local ownership through share options - a clear indication on how

we integrate and improve the element of local energy within our developments. However, it is important to note that it would require significant institutional and regulatory changes to the UK/Welsh governance for public organisations such as NRW to be able to optimise benefits from local energy, despite the inclusion within the proposed definition. For example, NRW is currently unable to sell the excess electricity we generate or claim a stake in a project that is developed on the land we own and manage due to constraints within the existing regulatory framework.

- We also recommend strengthening the definition by ensuring that a certain percentage of the value from local ownership assets provide evidence that it benefits the people of the Wales. We believe the definition is far too simplistic as any of the big companies could register as a company in Wales and claim local ownership. This relates to our previous point stating local ownership does not always contribute to local benefits - whereby the project could be locally owned but provides no added benefits to the people of Wales as potential for profits to be shipped offshore and/or the profits retained by an individual or company.

**Question 5: Do you agree with the definition of shared ownership above?**

Strongly agree      Agree      Neither agree  
not disagree      Disagree      Strongly  
Disagree

Please provide evidence to support or amend the shared ownership definition.

- NRW agree with the definition of shared ownership as partnerships plays a vital role in supporting and enabling the development of renewable energy projects. It allows communities interested in developing renewable energy to achieve scale as seen in the case of Germany and Denmark. It also empowers communities to become more actively involved in national energy supply and use, which promotes energy efficiency. However, it would be beneficial, and could possibly safeguard the interest of communities and individuals, if a clearer definition of 'shared ownership' could be developed which includes/promotes a percentage within the stake of the project.
- It is also beneficial to have a clear distinction between 'public sector' and 'public bodies' and have a clear understanding on the expectation of these two sectors. Businesses in Wales, especially large multinationals and companies falls within the highest energy users and contributors to emissions. Hence is important to know how these businesses can be supported to contribute to renewable generation in Wales through this target.
- We also recommend that Welsh Government should produce guiding principles on the relationship between communities and developers, focussed on benefits, which will help safeguard interest and opportunities for both parties.

Local Energy Scotland, for example, has produced a set of guiding principles on onshore renewable energy development.

<https://www.localenergy.scot/resources/good-practice/shared-ownership/>

**Question 6:** Do you agree with the definition of community ownership definition

Strongly agree      Agree      Neither agree  
not disagree      Disagree      Strongly  
Disagree

Please provide evidence to support or amend the community ownership definition.

Yes, we agree.

**Section 3: Evidence of Benefits of Ownership**

**Question 7:** Please provide evidence of benefits already being delivered for Wales from renewable energy project.

- NRW agree that shared ownership of renewable energy projects deliver beyond financial benefits and agree with the list of non-financial benefits listed in the document. We currently use our powers to work with developers through lease ownership to ensure obligations within the Options Agreement and Lease, to provide wider social and environmental gains.
- One of NRW's biggest challenge is that there is uncertainty as to whether our existing legislative framework enables us to sell the electricity we generate to the grid. We recommend Welsh Government to enable the development of a power supply and purchasing structure in Wales so that we can maximise our role and benefits in the delivery of locally owned renewable energy capacity on the Welsh Government Woodland Estate.
- NRW is currently exploring the possibility of a commercial model whereby we contribute the value of the area from the Welsh Government Woodland Estate required to a developer. And, instead of our usual business practice requiring lease rent or royalty, we will be exploring shared ownership in that development. We would welcome an opportunity to discuss this with Welsh Government.

**Question 8:** Please provide evidence of the relative value of the different benefits outlined in the section above. As part of this assessment we would welcome evidence about what the priorities should be for action to secure increased benefits to Wales.

- Many community energy projects provide benefits of demand side response (DSR) management which contribute to grid stability especially during peak times. DSR redistributes use away from peak times, when pressure on the grid and prices are at its highest. Through varied market mechanisms it incentives customers to use electricity when supply is abundant, hence much cheaper. This provides the opportunity for a consumer to become a 'prosumer' who make active decision using real time price signals. Empowering communities to take an active role in reducing their energy bills supports decarbonisation, enhances energy security and promotes affordability. This could be better facilitated with a 'new pricing model' that focus on communities in control of their energy use. National Trust community energy initiatives have shared some good examples of projects (i.e. Bethesda) doing this but for costs purposes.

- There is evidence that engagement in energy generation induce demand reduction. A study by the European Environment Agency (EEA)<sup>1</sup> on achieving energy efficiency indicates that by far one of the most effective demand reduction strategies was using community-based initiatives. These generally reached carbon reduction levels of 15-20% and proved resilient in the long term in comparison to 5-10% for measures such as smart meters and self-reporting. Community energy through a cultural feedback drives just the kind of bottom-up demand-side reduction in energy usage that policy makers across the developed world are striving for.
- We believe there are a number of groups and individual already operating successfully in Wales who can help increase community/local energy. We recommend that Welsh Government support and develop on these successes through 'capacity building' and funding which could then be shared and spread. Community/local energy does not always need to be geographical individuals or communities. It could also be lead and delivered by communities of interest.
- We also recommend continued policy and regulatory support for, and investment in, appropriately located large scale renewable energy schemes to optimise benefits for Wales. This would help boost investor confidence, which was damaged by the series of sudden and numerous energy policy announcements by the UK Government since 2015. To large extent, the direction of energy and climate change policy depends on what investors do, including how, when and where they invest. Improved investor confidence and investment provides opportunities for communities to develop locally owned renewable energy through the envisaged shared ownership model.

## Section 4: Challenges of shared ownership projects

**Question 9:** Please provide evidence of specific challenges in relation to shared ownership projects. As part of this assessment we would welcome evidence about whether shared ownership itself represents a barrier to deployment of renewable energy projects.

- There are mounting evidence indicating, the greater the number of partners, the more difficult and time consuming it is to get a project off the ground. This is often more evident within community/locally owned projects. Key issues include
- Difficulties in relation to purchase and lease of land and agreements with third parties.
- Barrier to access rights for development.
- Limitation of capital availability within 'local ownership'.
- Availability of upfront associated cost such as scoping and planning.

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<sup>1</sup> European Environment Agency, 2013. Achieving Energy Efficiency through Behaviour Change: What Does It Take?

**Question 10:** Please provide evidence about where a challenge or barrier to shared ownership has been successfully addressed.

No comments.

## Section 5: Ownership Models

**Questions 11:** Please provide evidence of developments using other ownership models not included above.

No comments.

**Question 12:** Please provide evidence to demonstrate the most useful models in delivering shared ownership and local benefit.

As mentioned in Question 4, all our energy projects include a traditional model of Community Trust Fund and more recently, we encourage developers (i.e. Alwen project) to offer local ownership through share options. Currently there is no obligation on the developer to offer the shared ownership but NRW encourages this through our negotiation process. The project is still in early stages, so there is no evidence yet to show how successful or how much benefit communities could reap from this model, but it motivates both communities and developers to work together which may be beneficial for both parties in the long run.

## Section 6: Finance

**Question 13:** Please provide evidence of the types and sources of finance used to develop energy projects in Wales. Evidence to support or challenge the continuation of Welsh Government finance offer would be helpful.

- The policy changes introduced by the UK Government in recent years - the reduction in feed in tariffs for solar, wind, hydro and anaerobic digestion coupled with renewables obligations (RO) withdrawn for solar earlier than expected and subsidies for onshore wind also ended, has had significant impact on local (community) energy. These policies previously provided key support mechanisms for community/local energy schemes, which was a basis for financial viability and profitability. Hence it is important more alternative and innovative financing channels are made available to local energy.
- The current Treasury investment model does not work for smaller scale energy projects. We recommend WG to explore opportunities to maximise current domestic public finance, such as Green Growth to support locally owned projects, including longer pay back periods for what are long term assets.
- There is also scope for Wales to explore opportunities to tap into international public finances such as the World Bank. For instance, the Hydrogen London Programme, based within the Mayor of London's office, is known to access variable funding

sources to develop the numerous hydrogen projects, placing London as the city with the largest portfolio of hydrogen projects within the UK.

- We also recommend that Welsh Government explore other market mechanisms and /or interventions such as property assessed clean energy, green/climate bonds, environmental impact bonds, a pooled finance model, and encouraging pension funds to invest in renewables in Wales.

There is some emerging small-scale citizen finance sector in the UK which may also be of interest. See **Annex B** for more details.

**Question 14:** Please provide evidence of the impact of shared ownership models on access to cost of finance.

We believe that access to finance, is to some extent influenced by the type of partnership in place. For instance, community or local groups may find it easier accessing funds when partnered with a major developer. Similarly, shared ownership with a local authority is likely to provide access to cheap borrowings. However shared ownership with NRW may subject to some challenges. To date, NRW has not been invited or sought to enter a 'shared ownership energy project'. Should this opportunity arise the first hurdle is to ensure that the statutory powers under which we operate, will allow us to contribute public resource and / or assets to achieve such a goal.

## **Section 7: Role of Investment Mechanism and Energy Company**

**Question 15:** Please provide evidence to support or challenge a role for a 'not for profit' energy company for Wales to help deliver local ownership targets.

In the short term, it is probably worth venturing into one of the existing 'local supply options' to enable local energy generators to sell power directly to the residents without going through the wholesale market therefore, having better control over the price and keeping the profits within the local economy.

There are some models in use such as 'Licence Lite', 'Licence Exempt', 'White Label', and 'Energy Service Company (ESCo)' which could be replicated, - bearing in mind the complexity of these solutions does vary and this means that some are better suited to certain scales or demand/generation compared to others.

In the long term, it could be more beneficial for Welsh Government to own the Welsh grid infrastructure (on a more regional level like Germany) and then to create a not for profit company to operate on its behalf which would allow WG to provide access for projects at a price that would help deliver more local ownership and local benefits.

**Question 16:** Please provide evidence of the need for an investment mechanism to increase availability of Wales based capital for investment in energy projects.

- OFGEM's Non-Traditional Business Model (NTBM), provides a good platform whereby Welsh Government or WG appointed organisation could help procure for public bodies to buy community energy through NTBM. There are some trials in NW Wales.
- Development fund which could be facilitated by WG, preferably not public funding because of the state aid implications.
- Welsh Government to facilitate low risk debt finance once project is up and running. We are not certain how much if this is done with current financing model assisted by WG, but Allied Capital in Scotland is a good example.

**Question 17:** We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them.

- We recommend for synergy between the contribution of public organisations to renewable energy targets and the ambition for a carbon neutral public sector by 2030, to ensure maximum benefits between these two goals.
- We recommend Welsh Government to explore the role for housing in addressing both the energy and climate issue. Most of our existing housing stock will still be around in 2050, and it will effectively need to be carbon-neutral. There are currently pockets of highly-insulated homes, or homes with PV arrays, but these technologies (or their carbon equivalents) will need to be applied wholesale across the board. It makes sense to undertake this transformation on an area by area basis (comprising essentially the same type of housing within each estate). The concept of locally owned renewable energy has great potential to facilitate (through Community Interest Companies or like) the platform to address this work.

There are potentially two key roles for the selected model/organisation;

- i) To oversee the blanket implementation of suitable renewable energy technologies to houses.
- ii) Develop a model to fit within the current 'energy framework' to facilitate householder to sell their output to the grid to help maximise benefits.

Such a model (i.e. Community Interest Companies) pioneered within the energy sector would be equally applicable to other "Area of Transformation", particularly in relation to climate adaptation. This model has the potential to fit well with the requirement of the Wellbeing of Future Generation Act, particularly the goal "A Wales of cohesive communities" and the "Long term" and "Involvement" ways of working.

- To date, most 'community energy' schemes are relatively small, often associated with rural communities, with the prime objective to reduce local energy costs and to generate a small income for the development of other (i.e. non-energy) community schemes. These objectives are perfectly laudable, but the amounts of energy generated (and therefore carbon emissions prevented) are generally relatively insignificant when viewed Wales-wide. To address the energy trilemma and reap maximum benefit through community energy, we need to explore opportunities to apply the principles and benefits of community energy to larger communities in our

towns and cities, where the energy generated (e.g. through roof-mounted PV arrays) or saved (e.g. through insulation; air source heat pumps) may be greater. This will help address the economies of scale and the (artificial) segregation of energy generation and demand reduction targets and initiatives.

## Annex B

### Emerging smaller scale citizen finance sector in the UK;

- Peer to peer lending' – where projects can gain access to funding/capital without having to resort to large commercial market players such as banks. For example - Abundance Investment, authorised and regulated by the Financial Conduct Authority which is leading in the UK's fast-growing peer-to-peer investment arena.

Swindon is the first council in the country to use Abundance, a platform that allows people to invest in energy projects using debentures, which act like bonds and pay out regular returns. The first Abundance projects in 2013 funded electricity bills for schools, leisure centres and a library. Since then the platform has raised £40m from investors to help fund 25 projects and paid back £7m in returns.

The Council Solar Bond is the first of its kind in the UK, bringing together residents and small investors from across the country to invest directly in the Swindon community solar farm, with a minimum stake of just £5. All investors will benefit from an effective rate of return of 6%, paid in cash twice yearly in instalments of capital and return, while benefitting from the lower risk inherent in investing alongside Swindon Borough Council. The Swindon solar farm will be fully owned by the Council who will be the sole shareholder. Along with the financial benefits, the solar farm – which will have a capacity of 5 megawatts (MW) – will help Swindon in its aim to install 200MW of renewable capacity by 2020, enough to meet the equivalent energy requirements of every home in the Borough. A total of 140MW is already in construction.

- Local Energy Scotland -is one-stop-shop for all local energy needs, which provides support at every stage - from initial planning, through development and funding applications, right up to and beyond the launch. The initiative also, provides free and impartial advice. It also administers the Scottish Government's Community and Renewable Energy Scheme (CARES), which offers grants and loans to support local energy development across Scotland.
- Repowering London - helps co -produce energy programmes with community group and local authority, which provides direct inputs into the deployment of generation, raising investment, and re investing in local economies and social projects.
- Pure Leapfrog, aims to build portfolios of projects to reduce financial risk through aggregation. It provides high level social investment and professional support to community energy projects in the UK, assisting them in building models for funding, offering legal support, and assisting into identify and obtain low cost bridge financing through access to commercial and social finance markets.
- The County of Hampshire which has established Hampshire Community Bank, tasked with delivering a low-carbon economy, and they explicitly cite the German banking model as key to supporting renewable energies.