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Executive Summary:

Another Energy Future is Possible

Government energy and net zero targets cannot be achieved without putting communities at the centre of planning for a different energy future.

- > Growth in generation is still being secured even in the post feedin tariff era. While innovation and determination are carrying this growth, the sector is being suppressed by unfavourable market conditions. A levelling of the playing field is needed, and if delivered, has potential to exceed the value to the people of Wales currently envisaged by government.
 - With the development of GB Energy and local power plans, as well as with changes in Wales, communities have a real chance to play a leading role in changing our energy future.
- Community-owned energy has the potential to contribute to solving many of the challenges people face today. From tackling fuel poverty to energy resilience, to funding local amenities and the environment, to cutting emissions, to building viable and resilient communities – community energy has a key role to play.
- When communities own assets that can generate energy, they secure an income to support what's important locally, while also be participating and developing a sense of ownership in the collective effort to decarbonise our energy system.
- > Instead of hoping for people to 'come along' with plans for large corporate entities to build vast energy infrastructure developments in unspoiled locations or on productive farmland or that one-off cash payments will be sufficient people need to materially benefit in both the immediate and long-term from energy generated locally to them.

Most people know and understand the need to decarbonise our energy system ("The majority of the UK public supports *all* climate policy instruments"). What is unacceptable is more exploitation and extraction of our natural resources, as has happened with coal in our past, with the wealth or profits not being retained to recirculate in our communities.

Community ownership of renewable energy assets, with locally produced energy sold to consumers within the nearby area at a lower price, would help to expand the community energy sector, unleashing the democratising potential of distributed renewables. More community energy supplying their local communities can drive energy costs down, ease the transition needed in grid infrastructure, directly and sustainably tackle fuel poverty, and help to mitigate the growing belief in many communities that people are being forgotten in the energy transition.

This report makes the case for local energy trading and for communities to be at the heart of the green energy transition. We hope this report will begin the conversation about what Wales can do, working with the new GB Energy local power plans to expand the community energy sector, and to overcome some of the barriers that have thus far stalled progress.

Due to the timing of this report and the next Senedd cycle, our recommendations focus on policies to be enacted by the next Welsh Government. We intend to carry out further policy development work and consultation and we would welcome feedback.





What needs to be done?

Targets

Wales aims to meet 100% of its electricity demand from renewable energy by 2035. Welsh Government also aims to have 1.5 GW of renewable energy capacity locally owned by 2035.

Numerous reports such as those below have made recommendations that would support the expansion of the community energy sector and the renewable energy sector more widely to exceed these targets.

National Infrastructure Commission for Wales (NICW), Preparing Wales for a Renewable Energy 2050

Welsh Government Energy Service, Annual Report 2023-2024

Wales Net Zero 2035 Challenge Group, How could Wales meet energy needs whilst phasing out fossil fuels by 2035?

Independent Commission on the Constitutional Future of Wales, Final report

Institute of Welsh Affairs, Sharing power, spreading wealth:
Towards an equitable energy transition for Wales

We are in the process of consulting on sector development of the following objectives and policies, before creating a full manifesto for 2026. Please send any feedback to us at info@ynnicymunedol.cymru

Beyond net zero – Community Energy Wales's objectives

- 1. All energy used by people and businesses in Wales will be owned by people in Wales and wherever possible, in the hands of communities.
- 2. All surplus energy produced and exported out of Wales will benefit people in Wales.



Short term measures (2026-31):

The following measures will help the next government elected to the Senedd move us towards these long-term objectives:

A Community Energy Act to provide for the following:

Community Energy for All

Everyone should be able to become stakeholders in of community energy and participate in the benefits. CEW recommends that the next Senedd government finds ways to expand the numbers of people able to own shares in community energy, starting with those in fuel poverty. This could be achieved by creating a community wealth fund.

A Community Wealth Fund

Existing community benefits (onshore wind currently typically at £5,000 per MW) to be increased to include a '*levy on natural resources*' to provide funds for a 'top slice' of community benefit to be paid into a national investment fund to help support more community ownership, and ultimately reinvestment in more assets. Legislate for community benefit funds to cover all technologies and to increase in line with RPI. This might be more usefully expressed as a percentage of profits than as a figure in £ per MW of capacity.

> A Right to Benefit from Local Energy Markets

All people to have the right to purchase energy supplied from local (non-transmission) energy (at the time it is generated and in a way that rewards customers for supporting grid balancing).

Mandatory Shared Ownership offer

All energy developers in Wales mandated to offer a percentage ownership of their projects to the community.

> Public Procurement

Duty on Welsh Government-funded funded public bodies to procure community energy, where possible, through Power Purchase Agreements (PPAs) and any other local trading mechanisms that become available in the future.

> Public duty to support the circular economy

The Energy Act will provide a legal duty on all publicly funded bodies for non-extractive / community regenerative funding applications, economic development support and any other project proposals for public support to be treated more favourably than projects and economic proposals that are extractive. Law to include a public bodies test that would align all future government support with the Well-being of Future Generations Act.

Additional legislation²

- > Community right to buy (first option to purchase assets that would benefit the community, before it is sold on the open market).
- > Land access reform.
- 2 Senedd Local Government and Housing Committee, Community Assets



Further Measures

- Jobs for the future a green skills college: a network of courses throughout Cymru and linked work experience opportunities for community development apprenticeships, apprenticeships for installers (solar, wind, hydro) and repowering.
- **Funding:** a transparent system of start-up grants and low interest loans for capacity building, shared ownership development, a CEW-led new starter service offering advice and support, and a fund to help community groups pay for grid connections (until the establishment of a sustainable community wealth fund). All funding to be recycled for further investment.
- Overcoming regulatory barriers: we will continue to push for Ofgem
 to adopt the P441 "Creation of Site Classes" regulatory modification
 in order to enable widespread local energy trading. Licensed Energy
 Suppliers then need to be mandated to facilitate local energy trading
 in such complex sites. This is another example of the frameworks
 not working for the issues we face in Wales, which adds to the case
 for devolving these powers. We call on the next Senedd to back the
 devolution of energy regulation powers to enable local trading and to align
 regulation with Ynni Cymru's Smart Local Energy System work.
- Community energy and Crown assets: a number of recent reports have highlighted the risk of economic extraction. We note the significant risk of failing to secure agency, ownership and economic benefit from managing Crown assets for green energy production. The next Welsh Government should lead and support the community energy sector to get a fairer deal for the people of Wales in respect of Crown assets.



Headlines: Welsh community energy in 2023

- > 47 active community energy groups and umbrella organisations based within Wales
- > 3.2 MW of new electricity capacity installed during 2023

- > 32.4 MW total of community-owned capacity
- > 11% increase from the 2022 total
- > 164 full-time employees working in the sector in Wales
- > 15 new jobs created

Continuing community challenges

The cost of living crisis continued to affect households across Wales, with persistently high costs for gas and electricity causing worry for thousands of families. According to National Energy Action's data based on Welsh Government estimates3, 614,000 households in Wales were living in fuel poverty (equivalent to 45% of all Welsh households), with as many as 115,000 in severe4 fuel poverty (8% of all households). However, since those figures were released, standard annual domestic electricity bills had risen steeply in real terms and there was no repetition of the Energy Bills Support Scheme (paid directly onto people's bills), meaning fuel poverty figures continued to grow.

Community energy organisations across Wales find themselves delivering essential basic energy services, including providing emergency cash for pre-payment meters and energy savings advice to help support struggling families and retirees cover their bills.

Project development

The data gathered this year also demonstrates that the challenges faced by community energy organisations remain the same as last year. There continues to be limited organisational capacity (despite the 15 new jobs created as a direct result of the Welsh Government's resource grant). Feasibility funding continues to be a challenge, as does developing sustainable business models for new projects, with the consequence that new proposals or groups wanting to take action are unreported. The sector needs local energy trading to be opened up, releasing this currently unmeasured capacity. For more information on the benefits and potential of local trading, see page 25.

The number one challenge reported remains grid connection difficulties. Of the 18 MW energy capacity currently stalled, 16.9 MW of potential is lost due to inability to connect to the grid due to long upgrade / reinforcement timeframes or prohibitive connection costs.



³ NEA fuel poverty in Wales ma

⁴ A household in Wales in "severe fuel poverty" spends over 20% of its full household income (before housing costs) on heating

In terms of shared ownership opportunities where local communities have the chance to invest in major developments, Community Energy Wales continued working with a number of developers – for example RWE on the Alwen Forest Wind Farm and Grid Connection and Gaerwen Wind Farm, as well as community engagement with Low Carbon Alliance and Gower Power at Parc Solar Caenewydd. Community Energy Wales has also set up a new Shared Ownership Working Group, bringing developers and community energy groups together to explore matters of joint interest.

Welsh Government

In 2023, Welsh Government announced that Ynni Cymru and Trydan Gwyrdd Cymru would be formed:

Ynni Cymru as the new publicly owned energy company for Wales and

Trydan Gwyrdd Cymru as the new publicly owned renewable energy developer for Wales.

Community Energy Wales has been working with staff in both organisations to ensure that the voice of the sector is understood and remains part of these developments.



Community energy policy context (Wales and UK-wide)

KEY TARGETS











10 emis

1.5 GW rom locally owned renewa OO% emissions reduction

2020

2021 - 2026

2030

2035

2050

In 2023, a new **Energy Act** was passed in Westminster without the amendments that had been proposed by the <u>Power for People</u> campaign and supported by the community energy sector across the UK which would have enabled local energy trading.

In Wales, "Net Zero Wales", the plan for the second carbon budget to reduce Welsh public sector carbon emissions, remained on track and targets were reviewed.

Net Zero Wales Carbon Budget 2 (2021 - 2025)⁵

- > Reduce carbon emissions by 63% by 2030 and at least 100% by 2050
- expansion of renewable energy generation by public bodies and community groups by over 100 MW by 2026

Review of Wales' Renewable Energy Targets 2023⁶

- > 100% of Wales' electricity needs from renewable sources by 2035
- 1.5 GW of renewable energy generation capacity to be locally owned by 2035
- all new energy projects in Wales to have at least an element of local ownership from 2020 (see more about shared ownership on page 27)

Community Energy Wales and its members play a vital role in supporting local communities, while meeting the legislative goals for net zero. Since 2023 and the last Welsh State of the Sector report⁷, the policy context has evolved across both Welsh and UK governments, with far-reaching implications for the present and future of community energy organisations.

- Net Zero Wales Carbon Budget 2 (2021 2025)
- 6 Review of Wales' Renewable Energy Target
- 7 Community Energy Wales State of the Sector 202







2024 UK General Election

Community Energy Wales developed key policy pledges that candidates were asked to sign up to ahead of the 2024 UK election. CEW asked candidates to pledge to:

- 1. introduce a new, additional 'rent on natural resources' for all energy and energy infrastructure developments, with the funds raised contributing to a new community wealth fund
- 2. create a legal right to access local energy
- 3. support the setting of targets for publicly procured energy to come from local or community sources with the proportion rising over time

UK Energy Act 2023

The Energy Act 2023 — hailed by the Conservative government at the time as the "biggest piece of energy legislation in the UK's history" — did not contain one single reference to "community". Instead of supporting the local trading amendments (see page 24), the UK Government created a £10-million-pound **England-only** fund over two years to fund feasibility studies and community energy start-ups. Both Community Energy Wales and Community Energy Scotland made representations to ministers to highlight the missed opportunities of this bill for communities across the wider UK and to **question the funds being limited to England-only**, to no avail. The one-off £10 m fund is a drop in the ocean compared to the opportunities communities could have had to contribute and benefit from decades-long benefits through local trading.

- 8 Press Release: New laws passed to bolster energy security and deliver net zero
- 9 legislation.gov.uk Energy Act 2023
- 10 Preparing Wales for a Renewable Energy 2050 report

Preparing Wales for a Renewable Energy 2050¹⁰

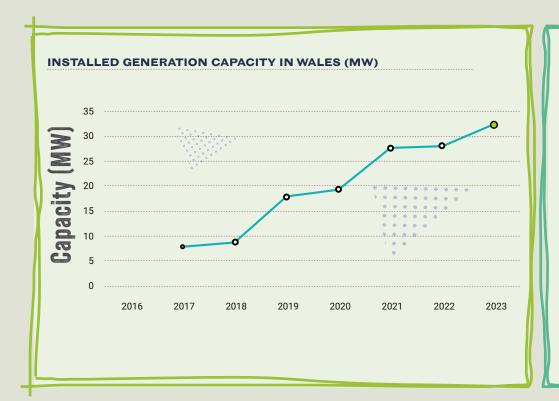
The National Infrastructure Commission for Wales (NICW) published a set of recommendations in October 2023 which focused on a long-term strategy and action plan for meeting net zero by 2050. The most relevant recommendations for the community energy sector include measures encouraging Local Planning Authorities to proactively support community energy projects, a Renewable Energy (Wales) Bill to be brought forward in the next Senedd to legislate to enable greater community ownership from renewable energy, changes in developer-led projects to include community ownership requirements rather than the current shared ownership guidelines and that the ownership of a scheme by the community should be a material consideration in planning.

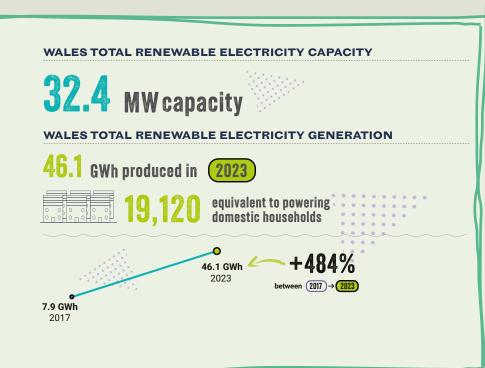






Community renewable energy generation in 2023







Our member organisations reported a total of **32.4 MW** of **wind**, **solar** and **hydroelectric** generation capacity in 2023 in Wales. These figures include **5 MW of generation** from Gower Power's purchase of Brynwhilach Solar Farm in December 2023, which was part of a Community Energy Together (CET) deal for eight solar farms purchased by five community energy organisations (for more information, see Case Study). Although Brynwhilach did not represent any *new* capacity (it had been operational since 2017), it did pass into community hands last year.

Overall, the figures gathered over the last seven years still show a steady increase in generation capacity installed in Wales, but these need to rise more rapidly to meet Welsh Government's target for at least 1.5 GW of renewable energy capacity to be locally owned by 2035, with this year's figure corresponding to just over 2% of the target. In a reasonable scenario where **half** of the 1.5 GW *local* target capacity is in *community* ownership¹¹, around 65 MW of new projects are needed annually. Although these figures seem high, they are achievable with viable routes to market put in place. For more on our proposal for local energy markets and whole energy systems (see pp. 24 and 29).

11 With the other half (750 MW) owned according to Welsh Government's looser definition of 'locally owned installations' ("owned by one or more individuals or organisations wholly owned and based in Wales, or organisations whose principal headquarters are located in Wales" – Local and shared ownership of energy projects in Wales)



∠ Case study

Gower Power, Brynwhilach Solar Farm, and Community Energy Together

Late 2024 saw the culmination of a long journey for the 5 MW Brynwhilach Solar farm – along with similar operational ground mounted solar farms across both England and Wales – into community ownership. This was achieved in a ground-breaking partnership between Community Energy Together, Finance Earth and Bright Renewables.

CET (Community Energy Together) is made up of five Community Benefit Societies (Shropshire and Telford Community Energy, Kent Community Energy, Yealm Community Energy, Wight Community Energy and Gower Power) working together to create a portfolio of seven solar farms with a total generation capacity of around 36 MW, all supported by Bright Renewables, a community-owned asset manager. With support from Finance Earth, junior lending offers from Big Society Capital and Power to Change, and senior lending from abrdn, CET members were able to open local share offers to raise over £1,650,000 to meet the lender offers.

The acquisition of the solar farms added 20% to the total solar PV in community ownership in England and Wales. Collectively, they are expected to yield around £20 m of surpluses from investment into local projects over their lifetime.

This is a significant breakthrough for the Community Energy sector, demonstrating the capability and professionalism of established community energy organisations, evidenced by successfully attracting institutional finance, not only to the solar farms but to Bright Renewables as a community owned asset manager – showing the community appetite and ability to move beyond generation into wider vectors of the energy system.

communityenergytogether.co.uk





Finance and investment

The quantitative data showed a total of over £6.4 million turnover for community energy organisations across Wales. These figures include income from Welsh Government and local authority funding, National Lottery funding, community shares, bonds and loans.

2023 saw a decrease on the previous year's Welsh Government funding from £1.55 million to £1.15 million, but an increase in other (unspecified) central government funding from £147,000 in 2022 to £195,000 in 2023. Direct local authority funding remained at around £10,000 in 2023. There was also some residual European Regional Development Funding (around £150,000 annual), but a doubling of the Distribution Network Operator (DNO) funding on the previous year from £38,000 in 2022 to £72,500 in 2023. National Lottery funding remained more or less stable at around £140,000/year.

The figures also showed £2.5 million in investment secured, meaning that the sector is in a strong position, but that we need to aim much higher. If we look at the total figures since 2017, we see investment into community renewable energy schemes of just under £30 million across the whole of Wales. It is encouraging that the sector in Wales, with less than 5% of UK population, has secured over 10% of the overall investment for the UK.

Constitution to the first secured willion investment secured million investment secured since 2017



∠ Case study

Ynni Ogwen – Heuldro

Ynni Ogwen's Heuldro programme in Bethesda, which was started with the help of funding received from the town's hugely successful hydro scheme, provides solar panels on community buildings and business premises. Heuldro 2 was awarded over £100,000 over two years as part of the Welsh Government Energy Service's Community Energy Resources Grant, to fund a Development Manager post. Heuldro 2 aims to add an additional 600 kWp of capacity to the portfolio. The solar panels installed are already powering Canolfan Cefnfaes Community Centre and the scheme is inviting community buildings or business properties to host panels on their roofs and benefit from more affordable, cleaner electricity.



Employees and volunteers

Most Welsh community projects can be found in rural areas and small urban centres, meaning that they can be an important source of local jobs and volunteering opportunities, especially for younger or unemployed people who struggle to enter the workplace. Despite challenging conditions in 2023, 15 new positions were created, however, most of these jobs were part-time (0.25 or 0.5 FTE, full-time equivalent).

There has been a slight decrease in the number of volunteers working with community energy projects and schemes. This could be due to volunteers acquiring paid positions or the result of people having less time for various reasons. There are, however, some standout success stories across Wales with projects such as Cwm Arian Renewable Energy near Crymych and Welcome to our Woods in Treherbert with over 80 volunteers between them giving time to help the sector.

"What's happening is, everyone volunteers, [...] there are no shareholders making a profit, and there's no beneficiary other than the whole community"



∠ Case study

Welcome to our Woods

Welcome to our Woods (WTOW) is a member-owned development organisation based in Treherbert working across the Upper Rhondda Valley. Their work includes community well-being, food resilience and landscape-scale stewardship of woodland natural resources. They do this by running and organising activities such as courses in the use of forestry tools, Working in Nature and workshops on a diverse range of topics including healthy eating and invasive species management.

Last year, they were able to offer new contracts to three of their existing volunteers who had undertaken NVQ level 2 courses in regenerative horticulture and coppicing and greenwood trades at partner organisation Black Mountains College. The three volunteers now work as a forester / millhand and agroforestry officers together with WTOW. Thanks to upskilling, WTOW has successfully managed to increase the number of paid jobs it can offer while improving the CVs and building the skills profile of its volunteers, as well as improving work-life balance. In addition, another volunteer has been running yoga classes in the woods and other well-being courses, including working with recovering addicts, and has launched her own company – another great example of how community energy organisations can be a catalyst for creating new jobs and supporting people to launch their own projects and businesses.



Community energy's contribution to the local economy

FINANCIAL CONTRIBUTION TO LOCAL ECONOMY

£3.9 million contributed

to local economies from organisational expenditure and community benefit funds NVESTMENT RAISED FROM LOCAL COMMUNITIE

£2.5 million invested by communities

2023

In 2023, approximately £3.9 million was contributed directly to local economies from community energy projects. This total consisted of around £3.45 million of direct local expenditure by organisations, plus around £450,000 paid out by community benefit funds across Wales.

Many of our members told us that their community benefit funds are designed to pay out a fixed percentage of the profit from the sale of the organisation's renewable energy. The renewable energy produced is weather-dependent. The more wind and sun, the more energy is generated and so the higher the community benefit fund payout. Others, to ensure that there is a minimum benefit each year, pay out a fixed sum plus a percentage of the profit. Which system is used is a decision made by the organisations themselves.

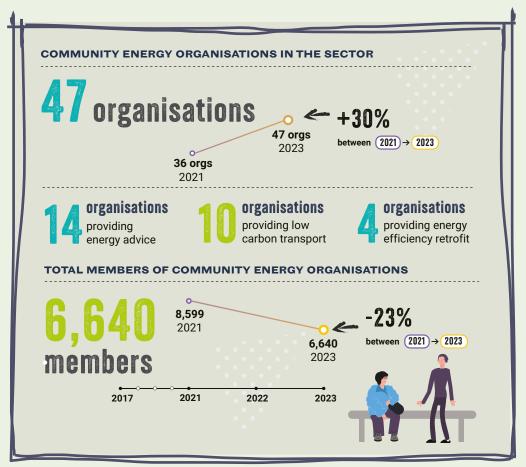
Most of the community benefit funds are invested into low carbon transport, including electric vehicle charging and electric vehicle rental (this works especially well in rural communities and those ill-served by the bus network), educational and recreation activities, energy advice, tackling fuel poverty (see page 19), promoting sustainable travel, community

12 Aquatera Ltd, June 2021, A comparison of the financial benefits arising from private and community owned wind farms

organisations and activities and charity work/donations. Decisions on how the Community Benefit Fund is spent are made democratically by the community. Community-owned schemes have been shown to provide significantly higher community benefits: one of our members, Awel Aman Tawe, pay out just under £44,000 per MW, which is around 9 times the current (and outdated) commercial standard of £5,000 per MW paid by developers. Other examples from Scotland show that "wholly community-owned wind farms provide benefit payments that are, on average, **34 times** more" 12 , with some much higher still.

"I think the main thing is that the profits generated are used for community benefit. It's good that that money hasn't been lost to wealthy shareholders – it's been retained in Wales and it will be used to support community projects or more rural projects in Wales. It's also a good way of engaging people around energy and giving them some ownership and say in their energy future and doing something about climate change and the big issues."





"A lot of conversations about the climate and energy happen in English. Climate change is seen as something fairly Anglicised, so we try to have the conversations through the medium of Welsh and have a Welsh perspective on it. And that's not to be exclusive, we're happy for non-Welsh speaking people to come."

Organisations

Just under 50 community energy organisations were operational in 2023. The majority of these organisations are either community benefit societies (CBSs), community interest companies (CICs) or co-operative societies. Wales also has a handful of 'umbrella' organisations such as DEG (Datblygiadau Egni Gwledig), CydYnni and YnNi Teg, which provide community energy-related services, sometimes alongside their own generation. YnNi Teg was established by Community Energy Wales in 2017 as an independent Community Benefit Society to own and operate a wind turbine in Carmarthenshire, with surplus income going into a local community benefit fund (Meidrim Community Council) and also providing support for Community Energy Wales and the wider sector's activities.

Although there was a modest increase in megawatt capacity in 2023, groups were able to continue their work on the cost of living crisis and fuel poverty reduction. More organisations are diversifying their work, with more offering advice to cut bills or providing low-carbon transport such as electric bikes and buses, carsharing services and charging points.

The Welsh language

There is widespread use of the Welsh language in the community energy sector. Many of our member organisations prioritise the use of the Welsh language, working through the medium of Welsh and offering all services bilingually. As well as being central to the Well-being of Future Generations Act, a "thriving Welsh language" is already a reality in many community energy organisations, especially those located in more rural or smaller urban areas in the west and the north.



∠ Case study

TrydaNi launches next phase of its electric car club network trial

TrydaNi is a non-profit Community Benefit Society partnering with Community Energy Wales on its Charge Up Wales project, funded by the National Lottery Community Fund. For the past two years we've been working together to trial a network of electric car clubs, serving large parts of rural Wales.

We are now providing prepayment cards in vehicles taking advantage of existing public chargers. The TrydaNi pricing structure includes per-mile electricity costs as part of bookings, even if members are using public chargers.

TrydaNi's new website at trydani.org explains all the details of the network's existing car clubs, and how communities and individuals can express interest in setting up their own local club. Members can join via the website and once approved are able to download an app that helps them find and book vehicles, with no need for a physical key.

TrydaNi brings together a number of existing projects including two long-established car clubs in Mid-Wales – Machynlleth and Llanidloes – which transitioned to electric vehicles under the name TripTo, and is now part of the TrydaNi network.

In March the Welsh Government announced further funding of £1m for TrydaNi and its community finance partner, Robert Owen Community Banking. The money is being used to expand the network of clubs so that communities across Wales can trial the new service and explore low carbon, low cost alternatives to conventional car ownership.

TrydaNi's long-term vision is for the electric vehicles in its network to be powered by locally-generated community renewables, keeping costs low and boosting Wales' energy independence. Collaboration with Community Energy Wales partners will be key to delivering on this long-term vision (for example through innovative PPA arrangements that allow car clubs to purchase locally-generated renewable energy).

In a departure from the conventional car club model, TrydaNi members can benefit from the fact that after joining a local club, it's possible to use any vehicle in the TrydaNi network via the same app that they use locally.

As a non-profit Community Benefit Society, community ownership is key to TrydaNi's long-term vision.

During 2025, TrydaNi will further expand its network and launch its full community ownership vision so that members can have a say in the decisions that affect their local club and the wider network.



Energy efficiency and fuel poverty

BILL SAVINGS FROM ENERGY EFFICIENCY & ADVICE CONTROL OF THE CONTR

Welsh Government's 2021 headline figures¹³ showed that 14% of Welsh households were living in fuel poverty. The latest figures from 2022 following the energy crisis show this figure has increased to 600,000 homes: equivalent to **45**%¹⁴ of all households in Wales. Even more worrying is the fact that those figures include practically **all** low income¹⁵ households.

Community energy groups continue to be increasingly innovative in the ways in which people are supported to save money. New services have been introduced such as workshops or cafés for people to learn about energy efficiency measures they can implement or install in their houses to cut electricity use, home visits to help identify areas where insulation or retrofitting measures (as well as, in some cases, also paying for these measures) would be most beneficial, and energy tariff switching advice and consultation services. There remains a lack of understanding, especially in rural areas, of what retrofitting entails, so some organisations have found themselves having to also offer education services to ensure homeowners understand the costs and benefits of updating ageing heating systems. Trust is essential for this work to be successful, and employing a "local and capable workforce with the skills required to implement and maintain low carbon heat technologies" is an excellent way to achieve this.

One member organisation offers a service where an expert carries out an airtightness and thermal imaging survey to identify where to insulate the property. Another pays for the services of an energy warden to help provide advice and support to help to pay bills.

In total, community energy organisations in Wales calculated that they were able to save billpayers almost **£675,000** in 2023. In addition to cutting bills, this also represents considerable carbon savings – a win for bank balances and the planet alike.

Cartrefi Clyd

<u>Cartrefi Clyd</u> ("Cosy Homes" in Welsh) is a home energy efficiency domestic retrofit advice service which was set up through a working group of Community Energy Wales members. Its service, offered throughout Wales, receives funding from the Energy Industry Voluntary Redress Scheme, the Green Homes Wales scheme, and includes assessments and reports on how to make homes cosy, healthy and kind to the planet.





- 13 Welsh Government, Fuel Poverty in Wales
- 14 National Energy Action Cymru
- 15 A 'lower-income household' is one in which the total household income is below 70% of the UK average household income (before housing costs) (Welsh Government: Material Deprivation and low income)
- 16 Welsh Government 2024 Heat Strategy for Wales



Pipeline and barriers

CONTINUED SECTOR DIVERSIFICATION

6 new energy advice and energy efficiency services

6 new energy advice and energy for renewable energy energy for renewable energy that communities want to deliver

6 stalled newable energy that communities want to deliver

One of the characteristics of a healthy sector is an energised workforce/volunteer group setting up new or additional projects. If all the projects in the pipeline in Wales went ahead, the sector would grow over 50% in size. But our members tell us the barriers to rolling them out remain unchanged, with grid connection and funding issues once again topping the list.

Our data revealed six stalled projects totalling around 18 MW worth of capacity in the pipeline. Some of the six schemes are already fully funded (despite missing out on feed-in tariffs) and are waiting on an affordable grid connection offer without delays caused by grid re-enforcement programming

or from planners. Others have planning consent in place but are struggling to either take on staff or to find the funding to employ qualified staff.

As the sector continues to diversify, the additional energy efficiency and advice services are building potential to capture the supply chain benefits of energy efficiency and retrofit programmes located closer to the housing and communities which need them, building local economic resilience and increasing the quality of service and reducing fuel poverty. Taken as a whole, these activities indicate a maturing of the community energy sector as well as a recognition of the need to innovate and work across all vectors of the energy system.







Stalled projects:

The following table shows the projects which are currently stalled in Wales.

Project	Technology	Scale	Barrier
Project 1	generation, storage, energy efficiency	> 10 MW	developer fund, grid, business model
Project 2	generation	< 1 MW	planning
Project 3	generation, energy efficiency	> 0.5 MW	grid, siting, capacity
Project 4	generation, energy efficiency	> 0.5 MW	business model, fundraising
Project 5	generation	< 0.5 MW	grid, lack of capacity
Project 6	generation	< 0.5 MW	flexibility, capacity, lack of installers, funding

When asked for feedback on specific reasons why the development of their project had stalled, one member reported that regulatory uncertainty is slowing down progress. Another said their turbine (which is already connected to the grid) could not "for technical reasons" be used to supply a domestic consumer club. Another mentioned a lack of support from the wider energy infrastructure.

Other members talk of being hampered by connection difficulties for their rooftop solar project, which has the full support of the community and is ready to be installed. Another member said that activities such as forestry are currently offering better rates of rent for land, meaning community energy schemes are priced out under the current marginal business model for grid-connected projects. One of the stalled projects is shifting away from grid

connection / market PPA as a business model altogether, switching from medium-sized (0.5 MW – 5 MW) renewable energy generating assets to smaller direct-wire projects and multiple, small-scale installations involving a combination of solar PV and battery. This demonstrates the flexibility of the CE sector and recognition that new routes to market – including Smart Local Energy Systems (SLES), behind-the-meter and local energy trading routes to market – need to be supported by regulation, legislation and future funding streams. These measures are needed to secure the potential for community energy to take a leadership role on the local dimension of the energy transition whilst reducing pressure on the bottlenecks caused by insufficient grid investment and wholesale market pricing.

Last year's State of the Sector report identified a series of **barriers** frustrating the progress of community energy schemes, including price volatility in the energy market, increases in construction and grid connection costs and uncertainty over future UK-wide energy legislation. Disappointingly, there only appears to have been movement on the last one, and that was due to a change in government in Westminster.

"And grid is a huge, huge problem which is getting worse and worse because there's no investment going in to upgrade the grid outside of the main urban areas. We're going to constantly be stuck with this problem."

Infrastructure: The leading barrier for projects in the pipeline is grid connection. New rules around queue management are broadly welcome progress, as previously there was a problem with developers 'banking' grid connections but not progressing projects However, the new queue management process is rigid and offers no flexibility in recognition of the particular issues faced by community energy projects. Community energy is at a disadvantage in this system due to it needing additional support and recognition of being of a different status, as the new rules impose risks on the sector that are harder for community energy to manage than commercial developers. As we look at later in the report, this would be solved by opening up the possibility of local energy trading (see page 24). At the time of writing, new queue management rules have been implemented in an attempt to tackle this recognised issue of 'reserving capacity', and we look forward to progress in this area in the next State of the Sector report.

Funding and long-term planning: the viability of new projects (or the expansion of existing ones) has been directly affected by a lack of consistency in UK Government policy (tariffs, tax benefits such as the social investment tax relief (SITR) scheme, etc.) and fluctuating subsidies (some projects still receive EU funding). Longer-term planning is needed to help organisations source funding to employ experts capable of navigating increasingly complex legal frameworks and planning regulations. In rolling out GB Energy, the UK Government faces the choice of either continuing with the existing market (and rolling out a new series of subsidies to make investments financially viable for the community energy sector) or 'fixing' the energy market to allow viable — alternative — core business models (route to market) by designating community energy as a class of its own.

Outreach of community energy projects: an Ipsos survey¹⁷ commissioned by Bristol Energy Coop (BEC) in England at the end of 2023 showed that only 5% of Welsh respondents were aware of the concept of community energy, with 54% saying they had "never heard of [it], and do not think [they] could accurately guess what it is"¹⁸. To combat this, one State of the Sector respondent suggested coordinating strategy more country-wide, or even region-wide, and another proposed pushing support for local generators to supply local consumers more directly. Another member spoke of the importance of increasing resources to give community energy a voice within national decision-making processes. Community Energy Wales has been working more closely with its counterparts in Scotland and England on these UK-wide matters of interest to the sector.









¹⁷ **Ipsos**, Community Energy: A climate solution that's potentially right at the doorstep

¹⁸ Ipsos survey data tables

Support for the sector in Wales

There are two new government agencies charged with expanding publicly owned energy in Wales.

Trydan Gwyrdd Cymru

Trydan Gwyrdd Cymru has been incorporated as a business wholly owned by Welsh Government, with a remit to "develop and deliver renewable energy projects, starting on the Welsh public estate, with the best possible long-term economic and social benefits for the people of Wales".

Trydan Gwyrdd Cymru's goals include being an exemplar developer, working with the wider industry and communities.

Ynni Cymru

Local Partnerships has been commissioned by Welsh Government to develop Ynni Cymru as an energy company for Wales — alongside the existing Welsh Government Energy Service — with the following four key objectives:

- To expand locally owned renewable energy used and generated in Wales;
- To optimise the efficiency and effectiveness of locally owned renewable energy use and generation projects;
- > To accelerate the transition and deployment of smart local energy systems across Wales and
- > To facilitate a just transition to net zero, retaining the benefits for Welsh communities.

Ynni Cymru has recently made grant awards totalling £10 million of capital funding for Smart Local Energy Systems (SLES) (ranging from £25,000 - £1 million per single project or collaborative application) for projects which bring together energy generation, storage, demand reduction and infrastructure in a local area. Projects must be completed by the end of March 2025. A number of community energy organisations submitted applications and next year's State of the Sector report will be able to update on these in detail.

The depth and breadth of Welsh Government's commitment to securing more local agency in the transition to a future, sustainable energy system is welcome. Coordinating efforts to ensure there is no duplication or gaps left is essential work. Community Energy Wales now leads a Wales Community & Local Energy Support Agencies group, with the objective of working together with Ynni Cymru, Trydan Gwyrdd Cymru, the Welsh Government Energy Service as well as our own community energy developer YnNi Teg, to ensure that communities wanting to take local energy actions are provided with clear support, appropriate signposting and proactive connection between the different providers and stages of support.



Local energy trading

Last year's State of the Sector report made Community Energy Wales's position on local energy trading clear: it could be "key to cutting bills and kickstarting community energy uptake". "Local energy trading would place local generation and consumption at the forefront of energy systems. This creates a dynamic environment where consumers actively participate in and benefit from the transition to cleaner, more sustainable energy practices" 19.

A private member's bill failed to pass debate in the last parliament despite substantial cross-party backing. Amendments to the Energy Act (2023) based on the principles of the private member's bill were not accepted by the previous government either, despite continued substantial cross-party support.

Community Energy Wales worked with <u>Power for People</u> to encourage support for the private member's bill and the subsequent proposed amendments to the UK Energy Act.

While rejecting the amendments which would have achieved this, the government at the time agreed to take evidence on the barriers to community energy and how they could be removed. This was coupled with a Ministerial commitment to report annually to Parliament on the government's progress in supporting community energy.

In responding to this call for evidence, Community Energy Wales made the case that the government risks failing on its decarbonisation objectives as the existing grid was not designed for our future energy use: electric vehicle charging and the widespread use of heat pumps will increase the demand

for energy. Community-led whole energy systems facilitated by local trading can make a substantial contribution to easing pressure on the grid while scaling up the community energy sector and supporting a just transition.

With a new Government in place at San Steffan (Westminster), CEW has produced a detailed briefing for Ministers and civil servants, in partnership with Community Energy England, Community Energy Scotland, Bath and West Community Energy, Low Carbon Hub and our member organisation, Energy Local. This re-states the need to enable local energy trading, and lays out key actions needed in 2025, as follows:

We need Local Energy Markets to achieve the Local Power Plan and maximise its benefits

The Problems:

- > To reduce carbon emissions, we must change the way we manage our electricity usage and networks.
- > The distribution network (the part of the grid that delivers power to our towns and streets i.e. the powerlines that we see on our streets) was not designed for our future energy use – electric vehicle transport charging, widespread use of heat pumps and renewable generation.
- > This has led to problems for the transmission network (this is the level of the grid that lies above the distribution network and carries vast amounts of energy over long distances through pylons and underground lines).

19 Quotes taken from Community Energy Wales, State of the Sector 2023 report







- > Because of the growth in decentralised renewable technology, the assumption that all generation is connected straight to transmission level is no longer fit for purpose.
- One of the richest countries in the world is suffering from extremely high levels of fuel poverty. Levels in Wales have reached 45% in the past year.
- > Recent shocks to the energy market show that we are vulnerable to volatility in global power prices.

The Solution – Local Energy Markets

- Public opposition, logistical barriers and costs mean that we cannot rely entirely on large scale generation and new transmission lines. Community owned, small-scale generation is popular and can be optimised through local energy markets.
- > Working together with local authorities, communities can build local energy markets that incorporate heat, EV charging and generation, meeting our future energy needs locally.
- Local energy markets mean cheaper bills for energy users and better rates for energy generators. It would lead to a profound change to people living in fuel poverty.

- Demand and generation are matched as much as possible within a local energy market – meaning we are less reliant on external energy sources such as gas, and less vulnerable to global price spikes.
- Local energy markets allow small scale generators to have a viable business model, meaning communities can develop and own their own energy projects.
- Many older energy projects that are reliant on the feed-in-tariff will need repowering soon in a completely different energy landscape to the one that they were developed in originally. Grid capacity and infrastructure are at danger of being wasted if we do not repower these projects. A local energy market would provide a viable business model for repowering



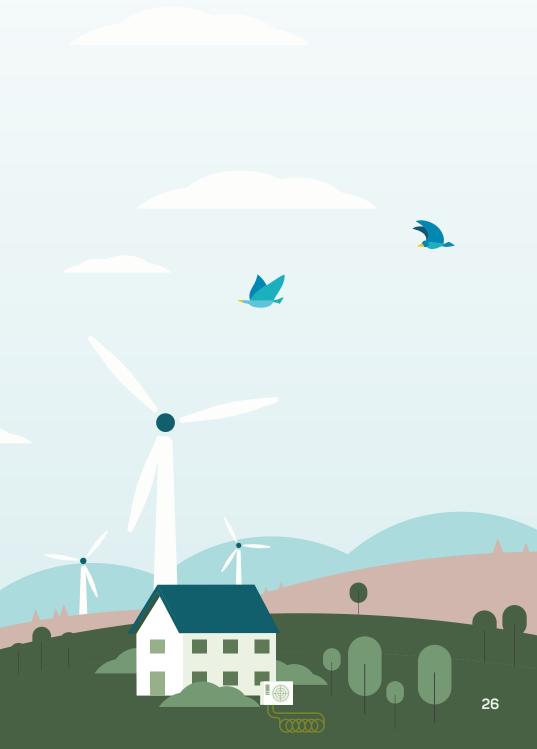
Without supporting Local Energy Markets and addressing current barriers, meeting Local Power Plan objectives will be extremely challenging. If the following actions were delivered however, the community sector would be able to exceed the current GW target.

1. Enable the P441 modification.

The P441 modification provides regulatory certainty and clarification of when a 'complex site' can be used. It also streamlines certain processes making it easier to use.

2. Introduce primary legislation to secure Licensed Energy Supplier facilitation of Local Energy Markets (using the P441 modification)

- a. The P441 modification will create regulatory certainty for suppliers to service local energy markets.
- b. In addition to supporting P441, reform legislation as soon as possible to mandate that licensed electricity suppliers must support local markets; and strengthen the position of local energy markets within the power market.
- c. Local energy markets must enable a price that provides a material reduction to demand customers and material increase in income to the generator.



Shared Ownership

Welsh Government's expectation for all 'new energy projects to have at least an element of local ownership from 2020' emphasised the need for renewable energy developers to work with the communities hosting projects to ensure that as much benefit as possible is retained locally. Clear guidance was published by the Welsh Government on community, shared and local ownership of energy projects²⁰.

After initial interest from developers, CEW continued to engage the sector on meeting this policy objective throughout 2023, recruiting some new members who have since participated in establishing a Shared Ownership Working Group. This meets quarterly and is cochaired by one community member and one developer member.

The data gathered from our members also showed that fewer are involved in shared ownership projects than would like to be, and that the great majority of those would welcome the opportunity to enter into shared ownership projects through CEW. Many onshore projects are currently entering the planning system and members of the Shared Ownership Working Group initially identified a lack of properly resourced support as a key barrier for both developers and community counterparties. A key objective of the Shared Ownership Working Group was to look for ways to meet this resource gap during 2024.

Despite the initial interest, CEW notes that only a small number of developers appear to be making sincere efforts to meet the Welsh Government's objective or to even seriously engage with Community Energy Wales. The Shared Ownership Working Group has not yet successfully resolved the resource issues.

CEW has recently started working with Ynni Cymru to assess planning applications submitted since the shared ownership policy was announced by Welsh Government and will be publishing a register of these applications online in 2025. This register will highlight where good practice is being achieved and which developers are leading the way, while clearly recording which projects reveal a lack of meaningful effort to deliver shared ownership outcomes.

As we enter a new phase of on and off-shore project development, it is essential that Wales avoids another round of extractive practices from corporations, gets better value for our communities and demonstrates the real benefits available to the people of Wales in the transition of the energy system. This is needed both to secure value for the people of Wales, and to mitigate the risks posed by a growing opposition narrative. If the voluntary policy aim and guidance continue to be disregarded by developers, a legally mandated shared ownership mechanism must be put in place to avoid losing this once in a generation opportunity.

20 Welsh Government Local and shared ownership of energy projects: guidance



Turning to the successes, CEW has continued to work with RWE on its Alwen Forest and Gaerwen Wind Farm proposals, while one of our members, Awel Aman Tawe, has signed Memoranda of Understanding with Coriolis Energy and ESB on the Y Bryn Wind Farm and with Naturalis/ Renantis on the Mynydd Fforch-Dwm Wind Farm, as well as offering a template memorandum of understanding and developing ancillary community engagement support services to the sector. This has included working with Low Carbon Alliance to identify Gower Power as a shared ownership counterparty to the Parc Solar Caenewydd project. Parc Solar Caenewydd opens the door to shared ownership on a 'split site' basis, whereby communities could be given the right to purchase a fenced portion of a solar farm. As some of the examples given in this State of the Sector report show, there are a few different commercial models available and new ones are being created all the time. There's no reason why developers cannot engage and design models which could be advantageous for them and community energy organisations alike in the words of Welsh Government's guidance, "making better projects, together'.



Whole Energy Systems

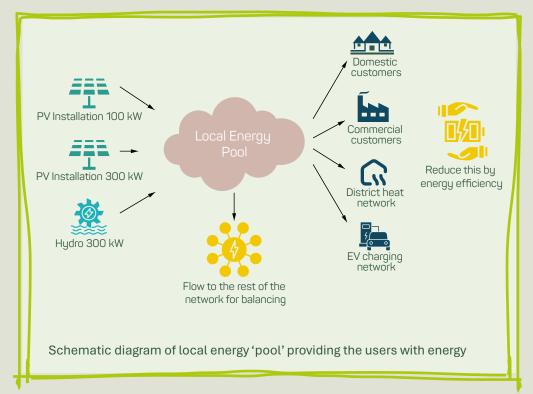
As the community energy sector matures in Wales, our members are becoming active within wider, connected, place-related energy activities.

In 2023, Community Energy Wales participated in a partnership research project led by Gwynedd Council and our member Energy Local, along with community partners Cwmni Bro Ffestiniog and Partneriaeth Ogwen. This research investigated the potential to tackle power, energy efficiency, heat and transport needs across two communities in Gwynedd facing a low-wage labour market, inefficient public housing stock, heightened job insecurity and an unprecedented cost of living and energy crisis. The research developed a feasibility case for a Community Energy Service Company (CESCO) model. This would build on local energy trading, growing the market for locally owned generation and for local people and businesses to have access to clean, local and low-cost energy.

This project represents an excellent example of a whole energy systems approach, which considers power, heat, mobility, product manufacture and usage as a dynamic system rather than separate issues with different solutions. This 'bundling together' of different areas means that there is no longer a requirement for each strand (heat, retrofit, power, transport) to be financially viable as a standalone system, thereby removing potentially the largest barrier to new schemes. Combined with real-time data for participants (who set up a Consumer Access Device (CAD) permanently connected to their home broadband), anyone taking part can access their consumption via an internet-based dashboard and even receive notifications when energy is cheapest so they can switch on their more energy-intensive devices to save money.

Community Energy Wales believes that part of a better energy future is for the people of Wales to regain some of the trust in energy suppliers by helping to promote new, innovative systems to build local energy markets that incorporate heat, EV charging and generation, meeting our future energy, heating and transport needs locally. As both heating and transport gradually move away from fossil fuel

burning to power them, we are looking to the electricity network to provide all our future needs – and we need to broaden our thinking towards a new network of separate yet interconnected community-level schemes, supported by large-scale, developer led generation delivered through the transmission network.









Get involved in community energy



If you are an individual that wants to support community energy, join the RhanNi network.

RhanNi (Our Part) is a growing movement for people who want to support Community Energy in Wales.

- Do you want to help improve your community?
- Do you care about our planet & our environment?
- Do you want to see Welsh communities keep the benefits from green energy?

What is RhanNi?

We want a green energy system that is community-led, is fair and puts people at its heart. By joining RhanNi, you will be a part of a collective voice pushing for the change we need to see.

RhanNi offers the tools and knowledge to help you inform decision makers when it comes to energy. You will be kept informed of the actions you can take to support the growth of community owned, not-for profit community energy, including share offers, volunteer opportunities and more.

We are building a strong movement of people working to help our communities realise their full potential, while tackling the climate emergency.

Membership of RhanNi provides access to Fforwm Datblygu – our quarterly development forum that together experienced community energy groups with people who are keen to learn how to start a project.

If you want to start a community energy project in your area – get in touch with us through your RhanNi membership.

Join Community Energy Wales as a member

Membership of Community Energy Wales is open to any form of organisation that supports our aims and objectives. If you are a community organisation, third-sector organisation, private developer or other, contact us to learn more about membership options.

Save the Date

Community Energy Wales Conference 2025 "Looking Beyond Net Zero"

Our 2025 Conference will take place at:
The Centre for Alternative Technology in Machynlleth. **10 - 11 June**

About the research

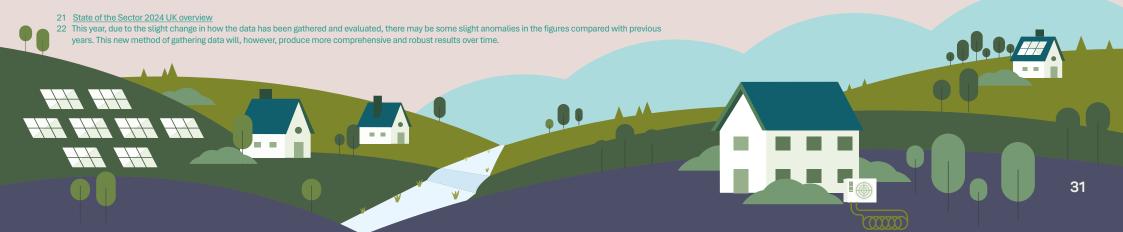
This year's annual Community Energy State of the Sector (SotS) report has been funded by Welsh Government and sponsored by SP Energy Networks. It analyses the activities carried out in Wales by community energy organisations throughout 2023 and is based on the qualitative and quantitative data captured via a brand-new portal designed and rolled out this year especially for Ynni Cymunedol Cymru – Community Energy Wales, Community Energy Scotland and Community Energy England to work together to promote the sector and to demonstrate its scale and impact.

The sampling once again encompassed a wide range of organisations working in the Welsh community energy sector – from local, place-based schemes generating electricity, providing energy advice and retrofitting boilers and heating systems to umbrella organisations such as DEG (Datblygiadau Egni Gwledig), YnNi Teg and Partneriaeth Ogwen, which go above and beyond just generating electricity or heat, also providing outreach services, skills-sharing events and community-led action across Wales.

A **State of the Sector 2023 overview**²¹ for Wales, Scotland and England has already been published. It contains headline figures in the following areas: [1] renewable energy generation and capacity, [2] finance and investment, [3] employees and volunteers working in the sector, [4] sectoral contribution to the local economy, [5] energy efficiency & fuel poverty measures and [6] project pipeline details. Data gathering, analysis and reporting were carried out by Community Energy England, Scotland and Wales²² together. We are grateful to the community energy organisations that took the time to complete the survey, and whose responses form the basis for this report. The dataset is supplemented by data gathered from other organisations via previous State of the Sector surveys and desk-based research. Our thanks go to Community Energy Scotland for their invaluable help and support in analysing the data on our behalf.

This report drills down into the figures in Wales within its specific context and policy landscape, providing an overview of the current sector and looking to the future. This year's SotS is quantitative data-driven, but also include some qualitative data taken from the portal or captured by the team during the research period.

Community Energy Wales (CEW) would like to thank all the participants who took time to share their views and data on the status of community energy in Wales.



About Ynni Cymunedol Cymru – Community Energy Wales

Ynni Cymunedol Cymru – Community Energy Wales is a membership organisation which supports the interests of community energy groups throughout Wales.

We connect, inspire and support our members – a network of grassroots practitioners delivering energy generation, energy efficiency, low-carbon community heating, community transport, and education and outreach projects – to lead a just transition towards a zero-carbon society.

- > **We support** communities, which should be at the forefront of the transition to a renewable energy system, to deliver their projects.
- > **We connect** community organisations to share learning and best practice.
- > **We inspire** through leading innovative projects in partnership with our members so that other communities can learn from us.

Community Energy Wales is the voice of the community energy sector in Wales. Our work includes influencing decision makers, promoting the work of our members and researching the sector to continue improving community energy.

As many community organisations are aware, the journey from an initial idea to the realisation of a project can be fraught with frustration and delay (see page 22 on barriers).

Community Energy Wales supports groups to develop projects through:

- > Fforwm Datblygu / Development Forum a quarterly online forum where established community energy groups can pool their experience and new groups can learn from sectoral wisdom.
- Gathering evidence about where the stumbling blocks or barriers are that delay or prevent schemes from being able to go ahead – be this access to the right kind of funding at the right time, regulation, planning and licencing issues or grid connectivity.
- Campaigning on behalf of the sector and influencing the formation of energy policy in Wales and the UK in support of delivering clear community energy targets.





As the proud sponsor of this year's Community Energy 'State of the Sector' portal, **SP Energy Networks** are delighted to contribute to the ongoing dialogue and development of community energy initiatives across North Wales. This year marks a significant milestone for us, with the creation our new dedicated Community Energy Team, who will be working with communities and organisations across the UK to deliver our new Community Energy Strategy.

SP Energy Networks is a Distribution and Transmission Network Operator and we keep electricity flowing to 3.5 million homes and businesses throughout Central and Southern Scotland, North and Mid Wales, Merseyside, Cheshire and North Shropshire. We do this through the network of overhead lines and underground cables which we own and maintain. No matter who you pay your bill to, we're the people to contact if you have a power cut, need a new or upgraded power connection or spot an issue with our equipment.

Our commitment to community energy is unwavering. We recognise its critical role in our journey to Net Zero and in transforming our energy infrastructure to better serve the needs of our communities. Community energy projects not only foster local resilience and sustainability, but also empower communities to take charge of their energy futures.

We are dedicated to continuing our collaboration with **Community Energy Wales** to support community energy groups and projects.

The work of community energy bodies is invaluable in driving forward the community energy agenda. Their support and advocacy are instrumental in enabling communities to realise their energy ambitions.

We extend our gratitude to the communities and to **Community Energy** Wales for their relentless efforts and partnership. Together, we are making strides towards a more sustainable and equitable energy future.

Thank you for your continued support.

