



The voice of the energy industry



A bold vision for the future of energy in Wales



Contents

Foreword 1



Ensuring energy is delivering for the Welsh people

1. Affordable and warm buildings, fit for the future 2-4
2. Building the workforce of the future 4-5



Wales's role in delivering the clean energy transition

3. Scaling up renewable energy and supply chains 6-8
4. Investing in CCUS and nuclear power 8-9
5. Modernising planning and infrastructure 10-11
6. Address the urgent capacity issues of the grid network in Wales 12-13



Foreword

Wales stands at a critical juncture in its energy transition. The 2026 elections come at a time when decisions made in the next few years will determine not just how Wales meets its climate goals, but how it secures its economic future.

Energy, and the wider cost of living, will be a key concern for voters as the nation head into the Welsh elections in May. Bills remain high, communities fear both deindustrialisation and unmanaged infrastructure build-out, and the cost-of-living crisis continues to bite. Whilst delivering more, clean homegrown energy is the main way to achieving sustainably lower bills over the long term, there is action that the next Welsh Government can take to ensure households and businesses can feel the full benefits of the energy transition.

With the right leadership and ambition, Wales can play an important role in the UK's clean energy revolution. With an abundance of natural resources, industrial heritage, and a skilled workforce, Wales has all the ingredients it needs to deliver an ambitious transition.

The Welsh renewables industry alone could attract almost **£47 billion in private investment by 2035¹**, and more than **£50 billion** if the associated transmission grid investments are included. That is almost twice the size of the entire Welsh Government budget for 2025/26, which stands at approximately **£26 billion** – representing a once-in-a-generation opportunity to drive long-term economic growth and cut energy bills. That investment in Wales would support apprenticeships and jobs from Port Talbot to Anglesey, strengthen communities and boost prosperity.

But ambition alone is not enough. Wales must move faster to unlock investment, streamline planning, and deliver the grid and infrastructure Wales needs to power its future. Coordination between the Welsh Government, the UK Government, and industry will be vital – ensuring that every policy decision, every project, and every pound invested works towards cheaper bills, a flourishing environment, and a thriving Welsh economy. What is needed now is bold leadership and clear delivery to remove barriers, strengthen devolution where it adds value, and provide the certainty businesses need to invest at scale.



Ensuring energy is delivering for the Welsh people



1. Affordable and warm buildings, fit for the future

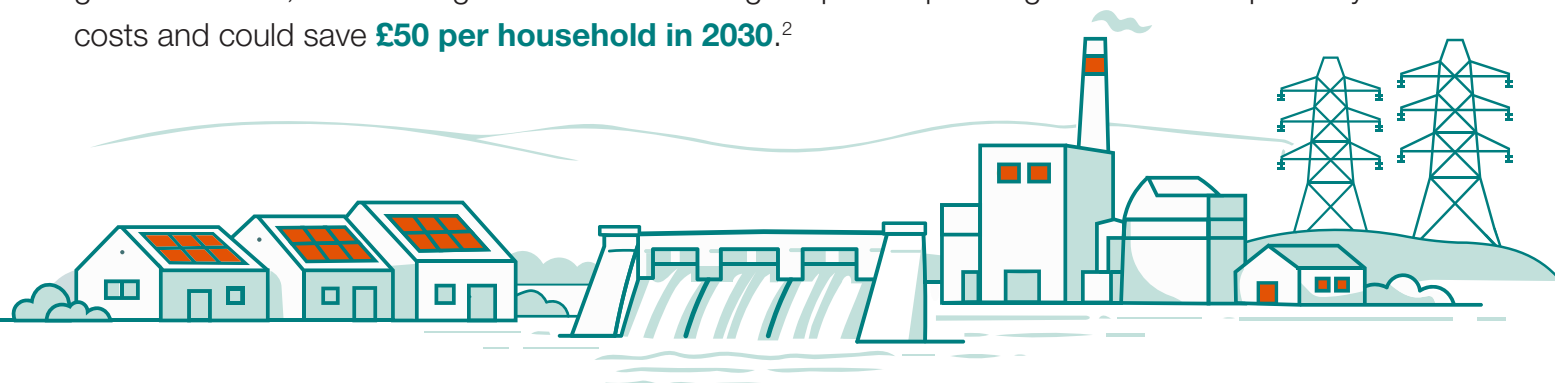
Energy bills in Wales are too high. The solution is clear, a cleaner power system and electrified economy will sustainably lower bills. At the same time, immediate action is needed to address the current affordability crisis, which is having a profound effect on households and businesses in Wales.

Persistently high energy bills through the 2020s will have real and lasting consequences for households and the well-being of communities, and could also weaken public trust in the long-term transformation of our energy system. Yet it is that investment in clean power and modernised energy infrastructure that will ultimately deliver what people need most – secure, affordable energy and warmer homes.

The UK Government has set an ambition of achieving a **£300 reduction** in the average household dual-fuel energy bill. It took an important step towards this in the 2025 Autumn Budget by ending the Energy Company Obligation scheme, and **shifting 75% of the cost of the Renewables Obligation** from bills onto general taxation, which lowers the policy-cost component of the energy bill. Whilst this initial step is welcome, to reach further reductions, the underlying causes of high energy costs need to be addressed. Real, lasting reduction will depend on long-term structural reform to how energy is priced and paid for. That is why the Welsh Government must continue to play an active role in pressing the delivery of these commitments to ensure that households across Wales can benefit from lower, fairer energy bills.

The solution is clear, a cleaner power system and electrified economy will sustainably lower bills.

Working with the UK Government, the Welsh Government should rapidly address areas with significant grid constraints, accelerating network build through improved planning. This would improve system costs and could save **£50 per household in 2030**.²



However, the biggest savings are likely to be found in more targeted approaches that make the most of technologies around the home and businesses, such as heat pumps, heat networks, solar panels and electric vehicle charging. Accelerating the uptake of these technologies will enable households and businesses to use electricity more efficiently and shift consumption to cheaper, low-carbon periods. Crucially, growing electrified demand also spreads fixed network and system costs across a larger customer base, helping to reduce per-unit costs for everyone.

Ensuring this infrastructure is designed for the long term will be critical to meet rising demand, support private investment, and accommodate the large-scale rollout of electric heating, transport and other low-carbon technologies.

Energy UK's updated modelling indicates that, following the 2025 Autumn Budget intervention, policy cost rebalancing could deliver a further **£240 in savings for households** using electric heating, making a meaningful contribution to affordability and the electrification of home heating.

While many of the most significant policy levers remain reserved with the UK Government, the Welsh Government still has important tools at its disposal to help lower bills for Welsh households.

The Welsh Government could deliver savings by:



Reviewing permitted development rights (PDRs) to facilitate the installation of energy efficiency upgrades and low-carbon technologies.



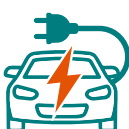
Looking at extending the Optimised Retrofit Programme, in line with ambitions for decarbonising heating and alleviating fuel poverty.



Introducing a scheme similar to the Business Energy Scotland scheme currently operating in Scotland, which is run by the Energy Saving Trust (EST). In 2022/23, it awarded **£122 million in loans** to householders and businesses to improve their energy efficiency, install renewables or switch to sustainable transport.



Supporting the smart meter rollout, including upgrading metering in social housing and government buildings, and using supportive, proactive and reactive communications. The Welsh Government must present a consistent, positive message which underlines the importance of the rollout and its role in delivering a lower-carbon and secure electricity system.



Setting clear direction on electric vehicle (EV) charging, network capacity and planning to unlock private investment and ensure infrastructure keeps pace with future transport and energy demand.

If the Welsh Government does that, industry can:



Invest with confidence in skills, supply chains and innovation to scale low-carbon heat and whole-home retrofit solutions.



Co-ordinate rollout activity with networks, installers and manufacturers so homes are ready for heat pumps, heat networks and flexibility services.



Accelerate delivery at volume, bringing down costs, improving customer experience and supporting households out of fuel poverty faster.

2. Building the workforce of the future

Wales has long played a central role in powering the UK, from its coalfields to its present-day contributions to energy production. We must learn from the last major shift in the Welsh energy economy, ensuring that communities are included in long-term planning and the economic transition is fair for those impacted by the industrial change. As we scale up clean energy production and modern infrastructure, Wales has the chance to do things differently – by planning ahead, investing locally, and ensuring that new energy development supports jobs, skills and prosperity in the communities that host it.

Decarbonising the economy should be a catalyst for opportunity, creating secure, well-paid jobs and driving long-term investment in Welsh communities. It can be a transition that supports workers, strengthens local economies, and ensures that these benefits are shared widely.

To ensure success, the Welsh Government and industry need to work hand in hand to equip people with the skills and support needed to move into future-facing roles, particularly in areas most impacted by industrial decline.

As we scale up clean energy production and modern infrastructure, Wales has the chance to do things differently.



To do so, the Welsh Government should:



Prioritise just transition pathways for oil and gas workers, including retraining and redeployment into renewables, carbon capture, usage and storage (CCUS), and grid roles.



Expand investment in colleges, apprenticeships, and training centres focused on clean energy industries.



Implement commitments in the UK's modern industrial strategy, including factoring the needs of industrial strategy ones in the development of future apprenticeship and wider skills policy, working closely with Medr.



Work with the energy industry and the UK Government to implement the Clean Energy Jobs Plan, maximising opportunities for public and private collaboration.



Explore the creation of a Welsh Just Transition Fund, modelled on Scotland's North East & Moray fund, to support coalfield and heavy-industry communities in the Valleys, Wrexham, Port Talbot and beyond.

If the Welsh Government does that, industry can:



Deliver thousands of high-quality, long-term and secure jobs in Wales.



Invest confidently in Welsh supply chains and skills.



Ultimately, deliver cheaper and cleaner electricity to people up and down the nation.

Wales's role in delivering the clean energy transition



3. Scaling up renewable energy and supply chains

Wales is home to some of the UK's best renewable energy assets, from onshore and offshore wind to solar and hydroelectric power. More than that, it is equipped with several ports – including Port Talbot, Holyhead, and Milford Haven – that are ideally located to support offshore wind, hydrogen, floating wind industries, and other technologies.

Large-scale renewable energy represents one of the clearest and most immediate opportunities to deliver lasting, transformative benefits for Wales. The Welsh Government's target of achieving clean power by 2035 can unlock unprecedented investment, growth, and skills across every part of the country.

Expanding renewables could generate almost **£46.9 billion of private investment**, of which over **£10 billion** would flow directly to Welsh businesses. This growth could support around **8,000 high-quality, well-paid jobs** in rural and urban communities alike, with average salaries **26% higher** than the Welsh average, and **deliver up to £7 billion in annual GVA**. Crucially, these projects would also provide **£183 million in community benefit funds**, helping local people share directly in the clean energy transition.³

Expanding renewables could generate almost £46.9 billion of private investment.

However, there are significant blockers that are slowing down the delivery of clean energy in Wales. New generation projects face delays, investors report uncertainty in both the planning system and regulatory frameworks, and grid developers face delays to their own investment plans for upgrades and additional network infrastructure (detailed next page).



To reverse this trend, the Welsh Government must work with the UK Government to create the conditions to unlock investment, speed up deployment, and reinforce investor confidence.

The Welsh Government could deliver more investment by:



Expanding investment in offshore and onshore wind, solar, hydroelectric power, tidal stream, and floating wind – leveraging Wales’s natural geography and port infrastructure. Tidal resources may provide complementary low-carbon generation in the future, while industry continues to focus on projects it can deliver at scale.



Being a clear and strategic partner, working with the UK Government and industry to best deliver a reformed national pricing model which delivers for homes and industries in Wales, whilst ensuring that the UK remains an attractive place to invest.



Working with the Department of Energy Security and Net Zero (DESNZ) to ensure generation grid connection reforms are implemented successfully.



Working with the UK Government, Ofgem, National Energy System Operator (NESO), energy network operators and the wider sector to establish an effective strategic approach to connecting new demand and aligning this with local low-carbon generation capacity.



Continuing support for community energy groups and local authorities through the Welsh Government Energy Service, to develop renewable energy projects, including solar, wind, hydro power, and energy storage technologies. Between 2018 and 2023, public sector and community organisations have invested **£169.8 million** in energy efficiency, renewable energy generation and zero emission fleets, resulting in an estimated **£320.8 million** in lifetime savings.⁴



Strengthening Ynni Cymru’s role in delivering and coordinating with Great British Energy, National Wealth Fund, local authorities and community groups to roll out low-carbon and smart projects, avoiding duplication where the private sector is already investing in Wales and building engagement.

If the Welsh Government does that, industry can:



Scale up investment in Welsh ports, manufacturing, and supply chains to capture the economic value of clean energy projects.



Accelerate delivery of renewable projects, creating high-quality jobs and boosting local economies.



Provide long-term certainty for communities through skills development, innovation, and partnerships that anchor clean growth in Wales.

4. Investing in CCUS and nuclear power

Wales's industrial clusters, particularly in South and North Wales, are pivotal for the UK's decarbonisation efforts. The South Wales Industrial Cluster aims to integrate CCUS and hydrogen technologies; however, a lack of movement on the track process has resulted in further delays.

In England, nuclear is currently having a revival. The sector directly employs more than **64,000 people**, and **211,000 jobs** are reliant in some way on its activities. While nuclear energy requires billions of pounds of private investment, the existing nuclear fleet has also made a **£123 billion contribution to the UK.**⁵

Wales also has a long and proud history of nuclear energy, with Wylfa on Anglesey and Trawsfynydd playing central roles in the UK's power system for decades. Following years of uncertainty due to stalled proposals and slow progress, the UK Government's announcement confirming Wylfa as a priority site for new nuclear development marks an important reset and a clear signal of intent.

Nuclear power remains a vital part of the UK's clean energy future, providing secure, low-carbon, firm power alongside renewables, and supporting high-skilled, long-term employment. As the UK Government progresses the Small Modular Reactor (SMR) programme through Great British Nuclear, Wales is well-placed to play a leading role, building on existing assets, skills and community experience.

Opening the Wylfa site to competition from SMR developers can help ensure value for money and pace of delivery. Crucially, if managed strategically, the skills, supply chains and workforce capability developed through early SMR projects could then be scaled and transferred to a future gigawatt-scale project at Wylfa, anchoring long-term industrial capacity and energy security in North Wales.

However, to achieve these benefits, an incoming Welsh Government must:



Support and accelerate SMR deployment in Wales, ensuring at least one project is delivered as part of the initial Great British Energy - Nuclear rollout.



Maintain Wylfa as a strategic nuclear site, with a clear pathway from SMRs to future large-scale generation where this supports system needs, affordability and UK industrial capability.



Support the South Wales Industrial Cluster, working with the UK Government to unlock investment in CCUS and hydrogen infrastructure.



Support both green and blue hydrogen production and utilisation.



Accelerate the rollout of clear business models for hydrogen and develop supporting regulation for transport and storage.

If the Welsh Government does that, industry can:



Deploy CCUS and hydrogen projects at scale, reducing emissions from heavy industry while safeguarding competitiveness.



Anchor long-term industrial activity in Wales, securing jobs and attracting further private capital.



Deliver new nuclear projects, including small modular reactors (SMRs) and larger power stations, providing stable baseload power, local jobs, and long-term investment.



Invest in Welsh supply chains and infrastructure to build competitive clean energy hubs.



Create and sustain high-quality local jobs in engineering, operations, and manufacturing, ensuring communities directly benefit from the clean energy industry.

5. Modernising planning and infrastructure

With abundant natural resources and a skilled workforce, Wales is well-placed to lead in the green economy. However, this potential will remain unrealised without urgent reform to the planning system.

The current planning system in Wales is a major barrier to progress. Its slow, complex processes are delaying or even derailing vital housing, infrastructure, and low-carbon energy projects. This not only undermines investor confidence but also stalls job creation and economic growth.

The new infrastructure consenting process in Wales, which went live in December 2025, represents a major opportunity to support the delivery of clean energy. However, for this to succeed, the Welsh Government must go beyond procedural changes and provide strong, consistent policy direction, thereby ending the current pattern of compromise that hinders progress. The industry advocates for dedicated infrastructure policy statements to underpin the process, yet the Welsh Government currently relies on the existing suite of national policy, which lacks the clarity, predictability, and investment-ready framework of the UK's National Policy Statements.

Years of budget cuts and a lack of long-term workforce planning have left planning services overstretched, under-resourced, and struggling to maintain standards. Without urgent action to equip local authorities and statutory consultees with the resources they need, Wales risks delays and missed opportunities to deliver the clean energy infrastructure that communities and the economy rely on. By strengthening policy direction, resourcing the system, and investing in skills and workforce planning, the Welsh Government can ensure that the new consenting process supports timely, high-quality delivery and unlocks the full potential of the Welsh energy transition.

To unlock investment and accelerate project delivery, Wales needs a well-resourced, modern planning system. This means attracting and retaining skilled planners, investing in digital tools and innovation, and creating clear career pathways within the profession. Building planning capacity and resilience will help ensure that faster processes do not compromise on quality, and that planning supports, not hinders, the delivery of a prosperous, low-carbon economy.

Beyond simply removing blockers in the planning system, there must be a more proactive partnership between government and industry to explain why new infrastructure is needed, its role in the energy transition, and how it can deliver tangible benefits for communities.

To unlock investment and accelerate project delivery, Wales needs a well-resourced, modern planning system.

These discussions must be collaborative, ensuring that local people have a real voice in shaping the outcomes they value, while the government actively reinforces these messages. Pairing industry ambition with strong government support is not enough for Wales to unlock the full economic, social, and environmental benefits of its energy transition, communities must be meaningfully engaged with, and benefit.

To support this, the Welsh Government must:



Introduce a planning workstream of the Onshore Wind Sector Deal discussions or a Renewables Delivery Forum to bring together industry, planners, and policymakers to identify and resolve practical barriers to project delivery.



Partner with schools, colleges, and universities to promote planning as a career and establish clear entry routes into the profession.



Encourage Welsh transport operators to apply for the UK Government's £30 million depot fund to help offset the high upfront costs of transition.



Secure greater funding from both the Welsh and UK Governments to strengthen the capacity and capability of the planning system.

If the Welsh Government does that, industry can:



Deliver projects which work with communities, offering benefits and systems that are best tailored to their needs.



Work in genuine partnership with communities, ensuring local benefits such as jobs, investment, and improved services.



Bring forward major private investment into renewable generation, grid upgrades, and low-carbon infrastructure with greater confidence and certainty.



Support a new generation of planners and technical specialists, strengthening local capacity and skills across Wales.



Build a planning and delivery system that is faster, more transparent, and better able to balance community, environmental, and economic priorities.

6. Address the urgent capacity issues of the grid network in Wales

The Welsh Government has committed to meeting 100% of its electricity needs from renewable sources by 2035. However, this will necessitate updated grid infrastructure with additional network capacity, particularly in mid-Wales, where much of the future renewable generation is planned. Currently, it lacks the necessary distribution and transmission capacity.

To meet these ambitions, grid development must be treated as a national strategic priority.

The incumbent Welsh Government has a preference for undergrounding cables. However, this poses significant cost and delivery barriers. Independent studies have shown that undergrounding lines, as opposed to using overhead transmission lines, are significantly more expensive, ranging from five to ten times more expensive, more environmentally disruptive and will result in higher costs for consumers and taxpayers.⁶

More so, this position is inconsistent with wider UK policy, creating further uncertainty and could result in Wales falling behind Scotland and England, rather than being a critical partner in putting the UK on the global stage as a world leader in renewables.

As public concern for infrastructure grows, clear national leadership is needed to explain trade-offs and present the case for delivery. Clarity is needed on the viability criteria for undergrounding, using the current evidence base and reflecting the licensing conditions of network operators, to ensure Wales benefits from the transformative economic and environmental opportunities of renewable energy.

While electricity transmission is a matter with the UK Government, the **Welsh Government holds a pivotal role in distribution networks, ensuring delivery aligns with national objectives and must:**



Urgently revisit the planning presumption for undergrounding, considering recent cost and impact data.

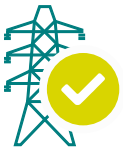


Issue a strong policy signal supporting the strategic importance of distribution network infrastructure to unlock demand and supply connections by 2030 and 2035, and transmission to reach 2050 targets.



Review permitted development rights to accelerate enabling works e.g. network upgrades involving little or no new infrastructure.

Clear national leadership is needed to explain trade-offs and present the case for delivery.



Work with NESO to ensure distribution networks are recognised in the transitional Regional Energy Strategic Plan (tRESP) and the link is prioritised in the upcoming transitional Centralised Strategic Network Plan 2 (tCSNP2) refresh.



Set up a Wales-UK Grid Task & Finish Group to bring all key players together, identify and address blockers to grid investment, and ensure the economic and environmental promise of Welsh renewables is not lost.



Collaborate actively with the UK Government and industry to manage Wales's unique grid planning landscape.



Develop an informative and supportive engagement and communication plan, to lead, engage and inform people with easy-to-understand factual information about electricity transmission and distribution grid infrastructure, and support public engagement by promoting or commissioning a clear overview of the processes involved in major infrastructure projects.

If the Welsh Government does that, industry can:



Accelerate the development of clean energy projects across Wales, particularly in mid-Wales, where grid constraints have held back investment.



Bring forward private capital to upgrade and modernise infrastructure, supporting local supply chains and skilled employment.



Work collaboratively with network operators and communities to deliver timely, affordable, and publicly supported grid reinforcement.



The voice of the energy industry

Energy UK is the trade association for the energy industry, representing companies investing billions of pounds to secure our country's current and future energy needs.

From growing start-ups to major electricity generators, grid and infrastructure developers and energy suppliers, our members are driving change across power, heat, transport and flexibility.

We provide a collective voice for the sector working with governments, regulators, charities and other organisations to provide crucial insight that shapes policy, offers solutions and promotes best practice.

Our broad view across the whole system supports evidence-based positions which are not tied to particular technologies, and are focused on delivering strategic benefits for people, businesses and the economy.

We champion initiatives such as our [Vulnerability Commitment](#), which pushes suppliers to go beyond regulation to support customers with additional needs, and [TIDE](#), the industry's drive for greater inclusion and diversity. Through our [Young Energy Professionals Forum](#), we support the development of future leaders.

We are equally committed to our team and are proud to be recognised as a 'Gold' Investors in People employer.

For more information, please contact our Senior Public Affairs Manager, Shauna Dubler at shauna.dubler@energy-uk.org.uk.