north west
net zero hub

# North West Clean Power

**A regional roadmap to localise the Government's Clean Energy Superpower Mission**

POSITION PAPER
SUMMER 2025

# THE NORTH WEST CLEAN POWER POSITION PAPER

## The North West Clean Power Position Paper is a regional roadmap to localise the Government's Clean Energy Superpower Mission and consolidate key decarbonisation themes into a single document.

It aims to provide knowledge transfer across the public sector and showcase best practice projects supporting the North West's (NW) transition to net zero. This summary document is for public sector organisations and their partners to support scale up of local power projects across the region. The paper examines current government policy that should shape local plans to decarbonise the North West, ensuring that the transition generates long-term prosperity for businesses and communities alike.


Download the complete paper here

**The North West Clean Power Position Paper is structured around three themes**


**Economic factors** explores economic drivers and initiatives impacting and supporting net zero delivery.


**Key sectors** highlights the decarbonisation work across the built and natural environment.


**Cross cutting** examines overarching challenges relevant to all sectors in achieving net zero.

Within each of these three themes, national policy developments and regional trends are summarised, current best practices are highlighted and opportunities are identified for local action and regional collaboration.

## BIG PICTURE

# The UK government's Clean Energy Superpower Mission aims to make the UK a leader in clean energy by 2030.

Scaling up action on net zero will transform the lives of the NW's seven million residents by improving economic security, creating thousands of high-quality jobs, driving business growth and enhancing public health through cleaner air and improved infrastructure.

By leveraging government investment and private sector capital, the NW can lead the UK's transition to a net zero economy, positioning itself as a hub for green innovation and industrial decarbonisation.


### North West Context

**3rd**

The NW is the UKs 3rd most populated region, with two major metropolitan areas and five cities. Around 70% of the area is rural and 10% of residents live in rural areas.

**£220bn**

In 2021, the North West generated a Gross Added Value (GVA) of £220 billion (8.8% of the national total) and was the fastest-growing regional economy in the country.

**10%**

of UK greenhouse gas (GHG) emissions: The NW was responsible for 10% of the total annual UK GHG emissions in 2022.

**11%**

of UK energy use: the region is a net importer of electricity with an annual energy use of 160 TWh (11% of the UK's total).

# THE NORTH WEST ENERGY SYSTEM

## The energy system is rapidly transforming, with investment flowing into the NW. The region has a diverse and evolving power system and generates electricity from a mix of renewable technologies, fossil fuels and nuclear power.

### A SNAPSHOT OF CURRENT RENEWABLE GENERATION CAPACITY

**Wind**

**Onshore wind: 511 MW**
The NW has more onshore wind deployment that other English regions.

**Offshore wind: 2.7 GW**
Offshore wind farms constructed in the Irish Sea generate significant electricity, with an additional 2 GW already in the development pipeline.

**Solar: 920 MW**

About a quarter of solar comes from large ground-mounted solar farms, with the rest from domestic, small commercial and larger rooftop microgeneration systems.

**Hydropower: 20 MW**

The NW has over 50 small-scale river-based projects currently in operation. Four tidal schemes have been proposed but are not yet underway.

**Battery storage: 428 MW**

Large-scale battery energy storage systems are attracting investment around the NW, playing a significant role in balancing the grid.

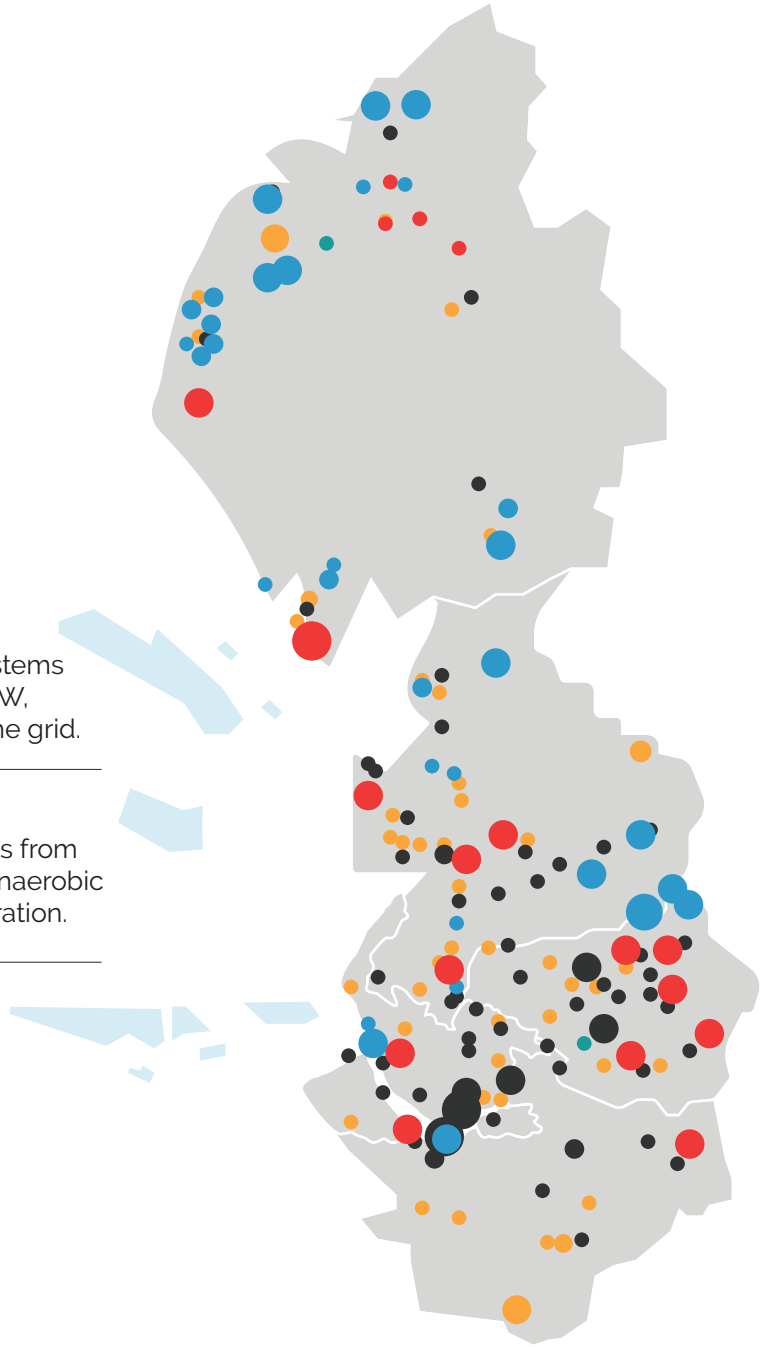
**Other renewables: 347 MW**

Additional renewable generation comes from other technologies, such as biomass, anaerobic digestion, landfill gas and waste incineration.

**SCALE**

1 MW >50 MW

Only sites of 1 MW or above have been mapped



# A LEADING REGION

## The NW can position itself as a leader in the clean energy transition.

### A DEVOLUTION OPPORTUNITY

The NW is already demonstrating national leadership on the net zero agenda with substantial progress across many sectors. All areas of the NW are currently agreeing devolution settlements with the UK government, creating a timely opportunity to introduce targeted interventions that stimulate private investment. The expansion of English devolution will allow local governments greater control over grant funding, particularly for home and public building retrofits, and will enable the integration of energy planning with broader regional economic development.

**Local growth plans:** Clean energy jobs represent one of the fastest-growing sectors of the economy. Local growth plans can identify regional strengths and target investment to accelerate development.

**Heat zones & local energy planning:** Local authorities can accelerate the electrification of heat, the rollout of heat network zones and building energy efficiency. As reforms to the planning system progress, local government also has a key role in ensuring that the local planning system and spatial plans support the expansion of low-carbon infrastructure.

### REGIONAL COLLABORATION

Further opportunities for regional collaboration include:

**Local government leadership:** Across the NW, 35 councils have declared climate emergencies, developed carbon reduction plans and, in many cases, set net zero targets ahead of the national 2050 deadline.

**Energy system planning:** Throughout 2025, the National Energy System Operator (NESO) will consult with local government to develop Regional Energy Strategic Plans. Local government and businesses must jointly provide evidence to NESO and the Distribution Network Operators (DNOs) to align grid upgrades with near-term investment.

**Clean energy jobs:** The NW's leading training institutions can offer dedicated net zero skills programmes and work to embed net zero skills into apprenticeships and retraining schemes to future-proof the workforce with high-quality skills and knowledge.

**Public awareness:** Creating a common approach to public messaging around climate and net zero to help address public concerns.

### DID YOU KNOW

A sharp peak in workforce demand is rapidly approaching for the construction of onshore and offshore clean power projects, as well as CCUS and hydrogen infrastructure. In 2028, 35,000 full-time roles may be required, rising from a baseline of 20,000 in 2024. These are predominantly in the nuclear sector, which will also need to grow.

The NW is demonstrating national leadership on local government-led home retrofit, having delivered over £300 million of national funding since 2020.

Local government can now evidence priority grid investment areas ahead of major developments and secure strategic funding for growth zones.

## CLEAN POWER 2030

The government has an ambition for Great Britain to be supplied with clean power by 2030. The Clean Power Action Plan includes £60 billion of investment over the next five years to upgrade the UK's power grid infrastructure and fast track projects that are ready to connect. This will enable £40 billion of private investment each year into clean power projects.

NW political leadership and local government institutions can recognise the significant opportunity for private investment in the energy system and play an enabling role in attracting inward investment to the region.

## DRIVING REGIONAL GROWTH

The NW has the potential to move ahead of national net zero targets by harnessing its industrial expertise, skilled workforce and innovation capacity. Key economic benefits include:

- High-quality, future-proof employment opportunities and workforce development
- Industrial competitiveness through continued innovation
- Energy cost savings for residents, communities and businesses
- Attracting domestic and international investment in sustainable infrastructure
- Local wealth retention and greater investment returns through local ownership of energy generation assets
- Attracting businesses to locate where clean power and decarbonising infrastructure is available.

## CLEAN POWER 2030 INVESTMENT POTENTIAL

The UK aims to commission enough renewable generation to meet 95% of its total annual electricity demand. Highlights of the scale of investment required for the NW to maximise its contribution towards the national Clean Power 2030 targets include:

- **£2.6 bn** for onshore clean power for wind, solar and batteries
- **£12 bn** for offshore wind opportunities in the Irish sea
- **£10 bn** for industrial decarbonisation opportunities focussed on CCUS, hydrogen and associated infrastructure
- **£3.5 bn** for Mersey Tidal Power Scheme
- **£16 bn** of capital investment potential for heat network infrastructure
- **£12.5 bn** of investment to implement low-carbon heating in non-domestic buildings
- **£2.5 bn** invested in nuclear research and development in the NW.

# INVESTMENT OPPORTUNITIES

## NW Political Leadership and Local Government Institutions can recognise the significant opportunity for private investment in the energy system and can play an enabling role in attracting inward investment to the region.

### LEVERAGING INVESTMENT

**By leveraging government investment and private sector capital, the NW has the opportunity to lead the UK's transition to a net zero economy, positioning itself as a hub for green innovation and industrial decarbonisation.**

The North West Net Zero Hub's research to track the investment needed in different sectors across the region will support and enable the promotion of green finance opportunities across the NW.

**Opportunities for local action and regional collaboration include:**

- Attract private investment and encourage partnerships
- Showcase the regional pipeline of low-carbon projects that meet investor criteria
- Engage pension funds and insurers to invest in regional green projects.

**The region can consider the need for:**

- An investment readiness fund to increase the viability of local green projects
- Green bonds or green finance funds could allow local authorities to raise capital to fund sustainable development projects
- Developing retrofit finance options to homeowners to invest in energy-efficient retrofitting

### DID YOU KNOW

The 10 Year Infrastructure Strategy and the Modern Industrial Strategy will provide substantial public investment in major infrastructure projects in the NW, and will unlock significant private investment, including in Transport, CCUS, hydrogen, long duration storage and nuclear.

Great British Energy will invest more than £8.3 billion over this Parliament in homegrown clean power.

Approximately 62% of the public in the NW want to see urgent action on the climate agenda.

Longer-term planning across the region can be supported by assessing the future electricity demand and identifying opportunities for large-scale generation and storage.

# LOCAL POWER

## The Local Power Plan, backed by GB Energy, will enable local authorities and communities to invest in publicly owned, decentralised clean power projects.

### THE KEY ROLE OF THE NORTH WEST

**The UK government aims to deliver 8 GW of local and community-owned renewables via grants and low-cost loans. Research by the North West Net Zero Hub has identified how the region can make a substantial contribution to this target:**

**Public sector renewables:** The NW can develop over 1,000 MW of local power projects on public land and buildings, including rooftop solar and solar carports at public parking sites.

**Community energy:** The North West Net Zero Hub is supporting communities to develop locally owned renewable energy projects through the GB Energy Community Fund, with 30 active projects underway.

**Flexible power:** Local councils can invest in batteries on-site and host batteries on public land.

**Heat pumps and heat networks:** The electrification of heat in buildings must accelerate rapidly in the next decade and public buildings are leading by example with commercial heat pumps. These buildings will also form the anchor for heat networks in heat zones in urban areas.

**Quality warm homes:** The NW can continue to lead in delivering retrofit programmes, while also expanding services such as energy advice initiatives and incentive schemes tailored to the able-to-pay market and the private rented sector.

**Supporting the willing to pay:** Local government can help homeowners and businesses purchase solar power, batteries and heat pumps through bulk-buy and trusted trader schemes.

### LOCAL POWER INVESTMENT POTENTIAL

**Highlights from research by the North West Net Zero Hub (2025) show a near-term potential for investment in local power across the NW:**

- **£500 m** for public sector solar power
- **£1.2 bn** for public building heat decarbonisation (heat pumps)
- **£640 m** for heat network anchor schemes and advanced heat zones
- **£25 m** for community owned energy projects (onshore pipeline).

### A LOCAL POWER AMBITION

The NW can contribute over 1 GW of public and community-owned generation to the national Local Power target for 2030.

The NW timeline for decarbonisation is 2040 in the aggregate, with public buildings leading the way.

If all new large-scale wind and onshore solar projects developed in the NW for Clean Power 2030 contributed £5,000 per MW per year this could generate around £18 million annually for NW communities.

High-grade agricultural land is not generally suitable for solar installations, however NW research into Agrivoltaics is demonstrating that in some cases there may be benefits to co-location of renewables with agricultural crops, grazing or greenhouses on lower grade land.

# ECONOMIC FACTORS

## Highlights from the North West Clean Power Position Paper

### BUSINESS SUPPORT

**The UK Business Climate Hub highlights that 90% of SMEs are keen to tackle climate change but find it difficult to know how or where to start to find the right solutions to reduce their carbon footprint.**

Larger businesses must measure and report on their carbon emissions, which presents an opportunity to bring businesses together at local level to share good practice. While SMEs do not need to report on environmental impacts, there are now incentives for those involved in or looking to access supply chain opportunities.

There is existing expertise and experience across the NW, with a broad range of support spread across many programmes. Developing collaborative programmes or subregional centres for support could simplify the landscape for service providers and businesses seeking support.

**RedCAT**

RedCAT, the Lancashire Centre for Alternative Technologies, supports the acceleration and commercialisation of low-carbon technologies by providing financial support, facilitating research and development and fostering partnerships.

### RESIDENTS AND COMMUNITIES

**DESNZ public attitudes tracker (2024) found that 80% of people said they were very or fairly concerned about climate change.**

The Climate Change Committee identifies that local authorities have a key role in the energy transition and are critical in involving local communities while fostering a just transition – prominent principles across a range of UK Government policy.

Local government can support active local communities' ambitions to act on the climate agenda and enable less active communities to engage and participate. Local authorities can also amplify national campaigns by leveraging trusted local voices and tailoring messages to reflect community priorities.

**Rossendale Valley Energy Terraced Streets**

A nationally significant innovation project in Rossendale is assessing small-scale retrofits and communal heating for terraced houses, highlighting the need for community-led implementation of such schemes.

### WORKFORCE & SKILLS

**The Clean Energy 2030 Action Plan highlights that 1 in 5 jobs will see shifting skill demands due to net zero.**

In transitioning carbon-intensive industries to clean energy sectors, many jobs will need some form of reskilling to meet the change. For example, a workforce of 12,000 will be needed to install 160,000 heat pump per year by 2035 in the NW.

Local Skills Improvement Plans should reflect the implications of the Clean Energy 2030 Action Plan for the region, as well as the national assessment of clean energy skills.

**North West Retrofit Skills Plan**

The North West Retrofit Skills Plan was created to assess of the current state of the retrofit workforce and identify the necessary steps to develop the local workforce to be able to achieve net zero targets.

# KEY SECTORS

## Highlights from the North West Clean Power Position Paper

### RETROFIT

**The Warm Homes Plan has committed £13.2 billion towards household energy efficiency, heat pumps and other low-carbon technologies, such as solar and batteries.**

Britain's housing has a high proportion of older houses that are poorly insulated. Existing homes are therefore cold, creating higher energy bills and mould and damp issues that impact on people's health and wellbeing. Retrofit can make a home warmer, reduce carbon emissions and lower energy bills.

Local government have an important role to play in retrofit. They can create local area-based strategies, funding opportunities, skills and advice programmes to improve uptake.

**Local Energy Advice Demonstrator**
The North West Net Zero Hub has piloted seven Local Energy Advice Demonstrator (LEAD) projects, testing in-person energy advice delivery, identifying retrofit barriers and finding solutions to improve uptake.

### NON-DOMESTIC BUILDINGS

**£15 billion is required to decarbonise the NW's public estate and will support local jobs and business growth.**

The 2020 Heat and Buildings Strategy called for the decarbonisation of non-domestic buildings through heat pumps, heat networks and hydrogen, with the public sector expected to lead by example.

Lessons from public sector projects can inform commercial building decarbonisation, strengthening local supply chains for assessors, designers and installers.

**Liverpool City Region Public Sector Decarbonisation Scheme**
Liverpool City Region Combined Authority is leading a sub-regional consortium to deliver a public building investment programme that combined £35.8 million of national grant funding for heat decarbonisation matched with local funds and loan, alongside a multi-million rooftop solar programme.

### MAJOR INFRASTRUCTURE

**The UK government has an ambition for Great Britain to be supplied with Clean Power by 2030. The NESO has advised on a pathway to meet this ambition CP2030.**

The transmission network is undergoing a Great Grid Upgrade to ensure that power from offshore wind and other major energy supply infrastructure can be transmitted to demand areas across the UK.

Local Government and Business must work collectively to provide evidence to the NESO and DNOs to ensure that transmission and distribution power networks are upgraded to coincide with short-term investment plans.

**Project Collette**
Community investment is central to Project Collette, a proposed 1.2 GW offshore wind farm off the Cumbrian coast, it will empower the local community to have a say in how a portion of the profits are used.

# CROSS CUTTING

## Highlights from the North West Clean Power Position Paper

### INNOVATION

**UKRI innovation funding invested in the NW was £671 million in 2022, 9% of the national total.**

The UK Innovation Strategy sets out a long-term plan to drive innovation-led growth and boost private investment, with a commitment to an equitable distribution of innovation funding across all regions. The Modern Industrial Strategy will allocate over £3 billion to the Mission Advanced Manufacturing over the next four years, supporting R&D and capital funding to unlock investment across the UK.

To secure further national funding, the NW must continue to showcase its leadership in decarbonisation and innovation.

**Cumbria Innovate for Success**
Enterprise Cumbria has supported industry by developing low-carbon plans for businesses which stimulated private investment in on-site solar power and plant and equipment upgrades.

### HEAT

**The supply chain must be expanded so that the industry can deliver 600,000 heat pump installations per year into domestic properties by 2028.**

Heat electrification is key to domestic decarbonisation, with heat pumps set to replace gas boilers in most UK buildings. New heat networks in high density urban areas will be vital to support the transition to low carbon heating.

Local authorities can support the heat pump supply chain to grow for retrofit and develop local evidence for heat network zones.


**Greater Manchester Heat Network Vision**
The Greater Manchester Heat Network Vision cites an ambition of decarbonising 36% of heat demand to be met by 2038 through heat networks, unlocking over £5 billion of investment.

### ENVIRONMENT

**Peatlands in the NW cover approximately 65,000 hectares. The UK government ambition is to invest £200 million over 20 years to restore at least 35,000 hectares of peatland by 2050, in an aim to sequester carbon and improve habitats.**

Under the Environment Act 2021, Biodiversity Net Gain (BNG) requires all new developments to deliver at least a 10% improvement in biodiversity over pre development levels.

Unlocking green finance is crucial to scaling nature-based solutions, with agri-focused funding targeting farmers and landowners to promote sustainable practices.


**Cheshire and Warrington Sustainable and Inclusive Economic Strategy**
Cheshire and Warrington's Sustainable and Inclusive Growth Economic Strategy (Consultation) makes the link between economic growth and action on the environment, recommending 30% of land and sea to be connected and protected for nature's recovery by 2030.

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The North West Net Zero Hub is not liable for any decisions adopted by organisations based on the recommendations contained in this report.

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GMCA GREATER MANCHESTER COMBINED AUTHORITY

ENTERPRISING Cumbria PROMOTING LOCAL AND INCLUSIVE GROWTH