



Electricity
north west

Investing in Lancashire



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A note from Ian Smyth, Chief Executive Officer at Electricity North West



This is a really exciting time for us and for the region. It's the people who live, learn and work in the North West who we are here to serve. As well as a huge network investment over the next five years, we're also committed to delivering some of the top rated customer service scores in the country.

We'll also deliver all this investment while keeping our part of bills low, which we know is absolutely essential given the current cost of living crisis.

When you pay your electricity bill to your chosen supplier, around £123 a year comes to Electricity North West to enable this investment. We spoke to more than 18,000 customers and stakeholders to develop this plan and we know that it will deliver fantastic value for the region.

We'll continue to develop and deliver our cutting-edge engineering innovations, that will keep the network reliable, efficient and safe.

As the network operator, it's our job to make sure everyone living and working in the North West can continue to depend on the network, just as they do now. After more than three years of planning and preparing, we're excited to get the shovels in the ground and put the plans into action.



We are a safe and trusted partner

- ✔ Our Licence-to-Operate is foundational - we have a strong social conscience with trust, legitimacy and reputation crucial to our operations and the communities we serve
- ✔ Safety is our first and foremost priority - for our colleagues, our customers and our communities
- ✔ We have a unique relationship with our customers as a single licensee - based on strong trust and legitimacy through extensive ongoing engagement.

Who we are and what we do

Electricity North West Limited is the North West's power network. We are one of Great Britain's 14 electricity Distribution Network Operators (DNOs). We are responsible for maintaining and upgrading over 57,000km of electricity network and thousands of substations across the region. We supply electricity to the diverse communities in our region which extends from Macclesfield all the way up to Carlisle.

Our overhead lines, underground cables and substations bring power to 5 million people in 2.4 million homes and businesses. We invest millions of pounds in the region focusing on key areas of safety, reliability, customer service and enabling net zero.

This document highlights our work in Lancashire and aims to explain the local network and our performance in your area. All information is correct as of July 2023.

Our operational area



We deliver a reliable essential service for everyone in the North West, 24/7.

We're proud to be the essential team that everyone who lives and works in the North West relies on.

Scan the QR code to see our £2 billion investment in the North West



Number of customers **2.4m**



Overhead lines **12,519km**



Underground cables **44,872km**



Submarine cables **24km**

Total network length **57,415km**

Investing in our region 2023 - 2028 (RIIO-ED2)

We are regulated by the Office of Gas and Electricity Markets (Ofgem) who provide DNOs with the licence to operate and who decide what's fair for us to charge our customers. Ofgem's current price control (known as RIIO-ED2) covers the five-year period from 1 April 2023 to 31 March 2028.

Over the next five years we're investing £2bn in the region's infrastructure to keep electricity flowing and meet the increasing needs of the region. That's more than £1m a day - the largest ever investment in the network!

This includes new investment in the operation, maintenance and upgrading of the region's electricity network to support our customers in their transition to adopt low carbon technologies such as electric vehicles, heat pumps and solar panels. We will also reduce our customers' time without power during a power cut by 20%.

We will also be investing a significant amount in enhancing our customer services and supporting those in vulnerable circumstances. Support will include helping customers in power cuts, helping those in fuel poverty and ensuring that no one is left behind in the green transition. We'll invest in world-leading innovation and technology and continue to be the most digital network operator in Europe. The investment will also enable the continued development of our award-winning apprentice scheme and create hundreds of jobs directly and as part of our supply chain.

Electricity North West's business plan 2023-2028 can be found here:

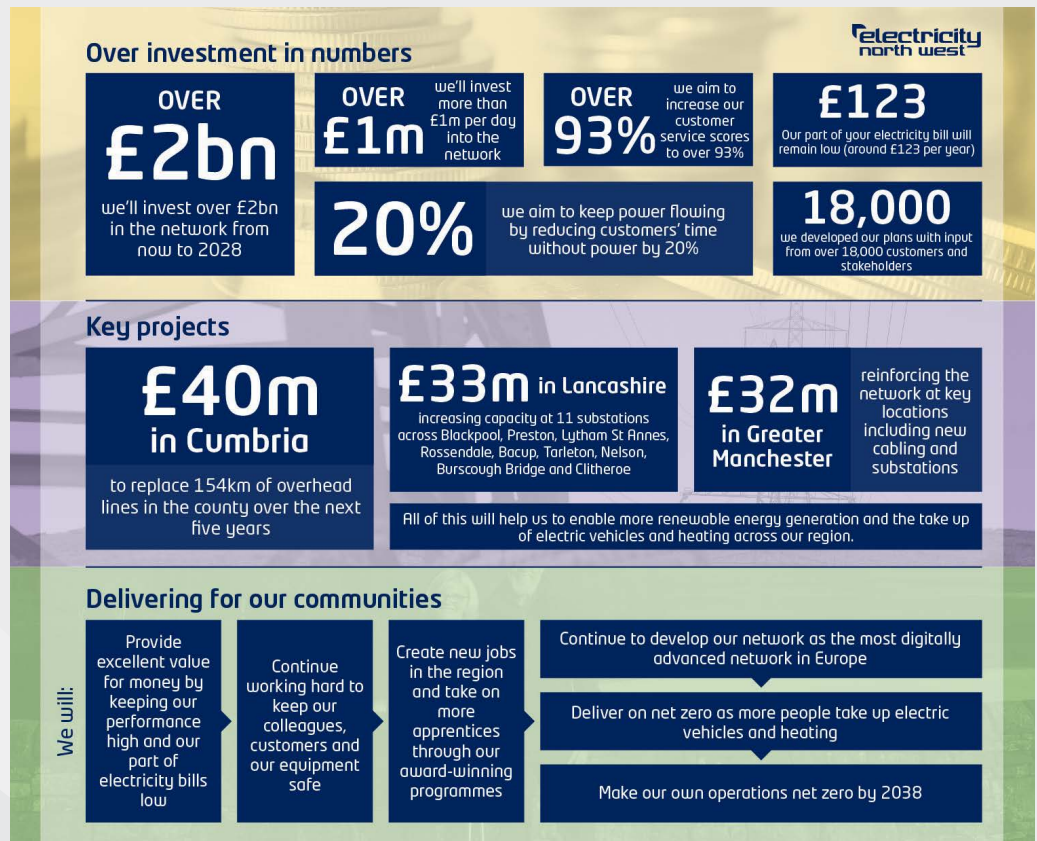


We are a safe and trusted partner



We are an employer of choice in the North West - with a strong focus on attracting, developing and retaining a diverse and inclusive talent pool.

Our RIIO-ED2 investment in numbers



Lancashire's electricity network

We own and operate the network of towers, transformers, cables and meters that carry electricity from the national grid and distribute it throughout the North West. We take high voltage

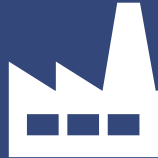
electricity and lower the voltage in order to make it safer to use in homes and businesses. Our network in Lancashire consists of overhead lines and underground cables that keeps your life running every day.

132 kiloVolts (kV)



The voltage of electricity we receive from National Grid.

33kV and 11kV



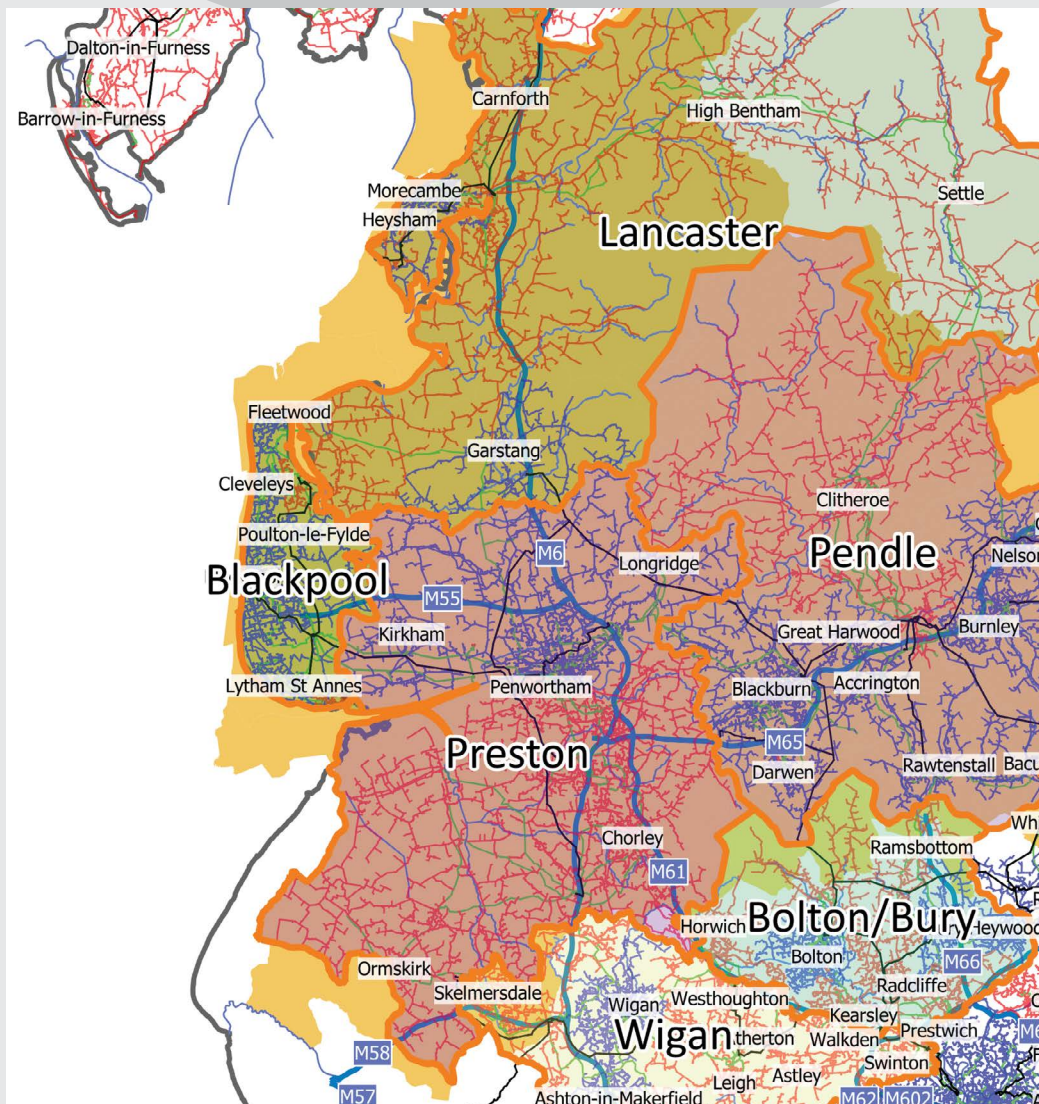
We reduce the 132kV down in our substations to supply the communities in our region.

415/240 volts



This is then further reduced to feed homes and business.

The map shows our Lancashire network



Investment in your area

Electricity North West is embarking on the largest ever investment in the North West's power network, including £33m in key projects for Lancashire.

As part of the commitment, we are replacing equipment and increasing capacity at 11 substations across Blackpool, Preston, Lower Darwen,

Rossendale, Lancaster, Tarleton, Nelson, Burscough Bridge and Clitheroe. We are also planning to replace many kilometres of cable and refurbish almost a dozen steel towers across the county. Our capacity investment also focuses on creating more capacity on the region's electricity network, ensuring it is ready for the shift towards greener technologies like electric cars and heat pumps.

Nelson substation

Nelson substation is situated on Fleet St, Nelson and supports supplies to approximately 34,000 customers. The substation consists of 2 x 60MVA grid transformers and a 33kV switchboard.

Assessment of the condition and fault levels for the assets at this substation has led us to plan the replacement of one of the grid transformers and the whole 33kV switchboard by end of March 2028.

£3.9m
Cost

34,000
Customers
supported

March
2028
Expected
completion

Lancaster substation

Lancaster substation is located adjacent to the River Lune and is equipped with 3 x 90MVA grid transformers and a 33kV switchboard and supplies over 65,000 customers.

There are several 33kV oil-filled cables from this substation supplying primary substations in the Lancaster and Morecambe areas. We have several projects to replace the 33kV oil-filled cables with environmentally friendly solid cables and one of the grid transformers.

£7m
Cost

65,000
Customers
supported

March
2028
Expected
completion

Blackburn & Lower Darwen substations

We have planned network reinforcement works to replace two 33kV switchboards at Strawberry Bank (in Blackburn) and Lower Darwen substations due to fault level issues.

Approximately 50,000 customers will benefit from this investment (Strawberry Bank 6,000; Lower Darwen 44,000 customers).

£3.1m
Cost

50,000
Customers
supported

March
2028
Expected
completion

Other investment projects

Blackpool substation

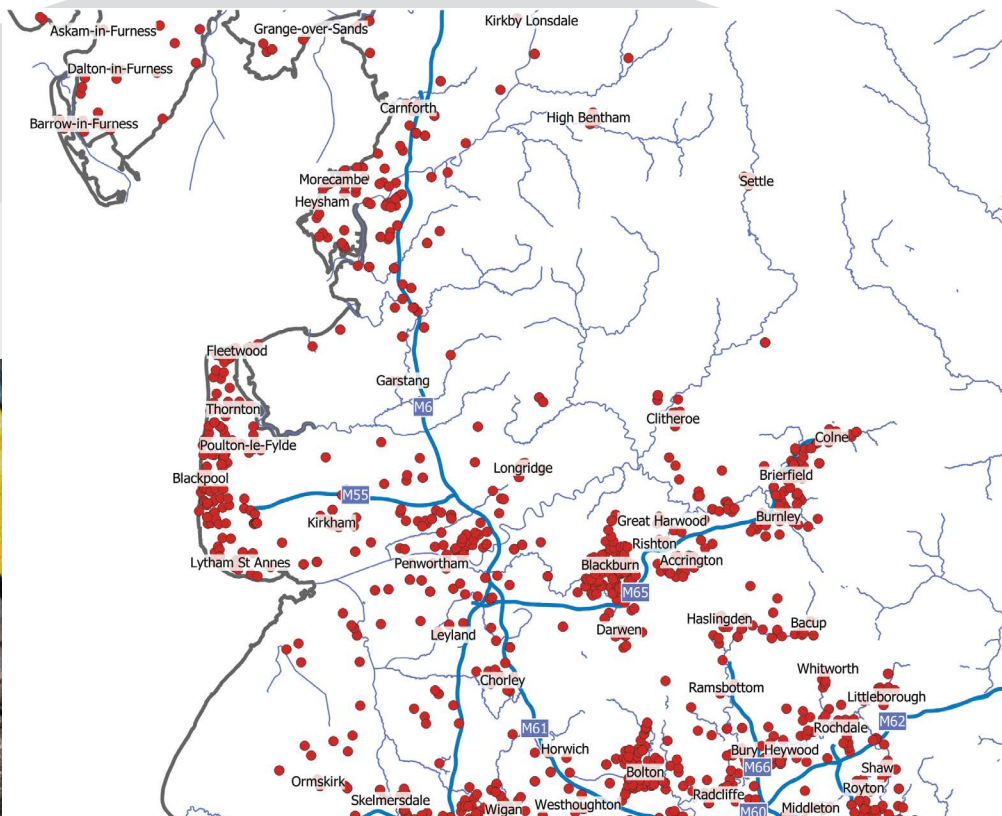
Blackpool substation is equipped with 2 x 90MVA transformers and supplies over 48,000 customers.

Asset condition assessment has shown that the two transformers are in a poor condition and require intervention before any in-service failure. We have therefore decided to replace these transformers.

£4.94m
Cost

48,000
Customers
supported

March
2028
Expected
completion



The case studies provided are just some of the Lancashire projects we are investing in. Each red dot on the map shows the site of all of our upcoming investment projects. Correct as of July 2023



Digital and innovative investment

- ✓ We are the most digitally advanced network in Europe - through our Network Management System (NMS) and our network connectivity model
- ✓ We are innovative - delivering the most innovation of any company in our sector
- ✓ Digitalisation and innovation are key enablers - unlocking net zero delivery at pace.

Smart Street

Using innovative voltage control technology, Smart Street will enable our networks and customers' appliances to perform more efficiently and make it easier for low carbon technologies to connect to the electricity network improving energy efficiency and reducing bills for 250,000 customers.

Investment
£64m

Savings up to
£70
per year

Customers
impacted
250,000

LineSIGHT

Faults on rural networks can sometimes cause overhead power lines to hang low whilst remaining live, which also creates a public safety hazard. New technology developed by Electricity North West will enable the detection of damaged equipment earlier and help us to pinpoint the location of faults, enabling more efficient despatch of repair crews.

Investment
£34.5m

Overhead line
impacted
800k

Estimated
finish date
March 2028

CLASS

Our award-winning CLASS project uses innovative voltage control to reduce demand for electricity without customers noticing a difference to their service. CLASS (Customer Load Active System Services) is a low-cost solution which uses voltage control to manage electricity consumption at peak times. By installing cutting edge 'voltage controllers' in our substations we could save customers in the North West around £100 million over the next 25 years.

CLASS revenue shared
with customers
50%

North West
customer savings
£100m

Estimated
finish date
March 2028

Dig, Fix and Go

A bespoke incentive mechanism that aims to drive a transformational change to reduce the disruption of our emergency street works on customers. This is a proposal formed and led by our customer and stakeholder feedback. Reducing disruption by accelerating emergency street works to below five days on average.

Investment annually
£5m

Average duration of
emergency street works
5.8 days

1 day reduction
benefit per year
£21m

Reliability

We measure the reliability of our network by looking at how frequently and for how long faults occur on our network

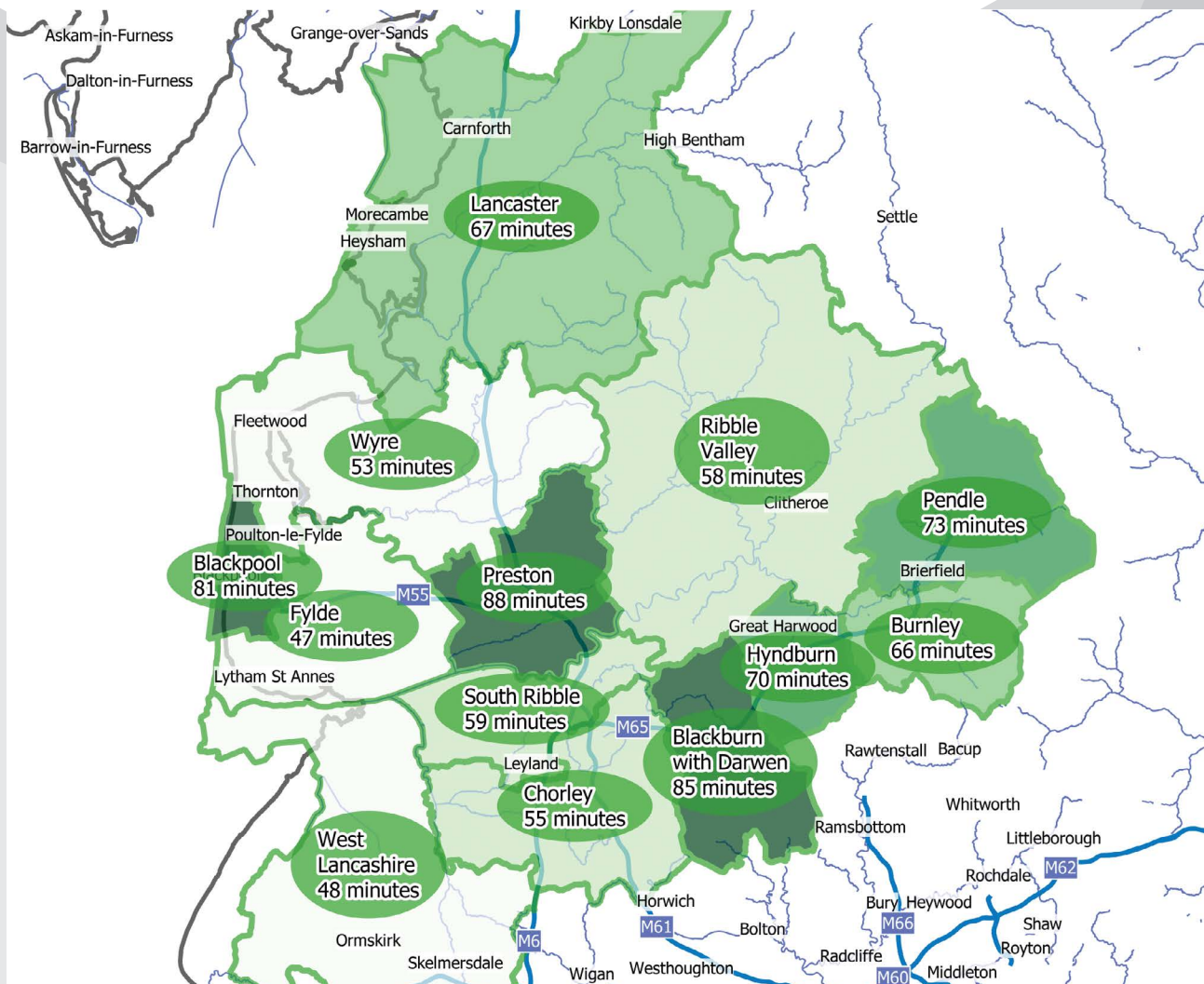
We recognise our responsibility to provide a reliable and safe network for our customers. When our customers do experience a loss of power due to planned investment, maintenance or faults we try to restore power as quickly and safely as possible.

When your power goes out, it is our top priority to get you back on as quickly as possible. The time this takes is influenced by factors such as:

- Type of the fault - underground cable or overhead line
- Location
- Adverse weather - it may not be safe for our engineers to work
- Cause of fault.

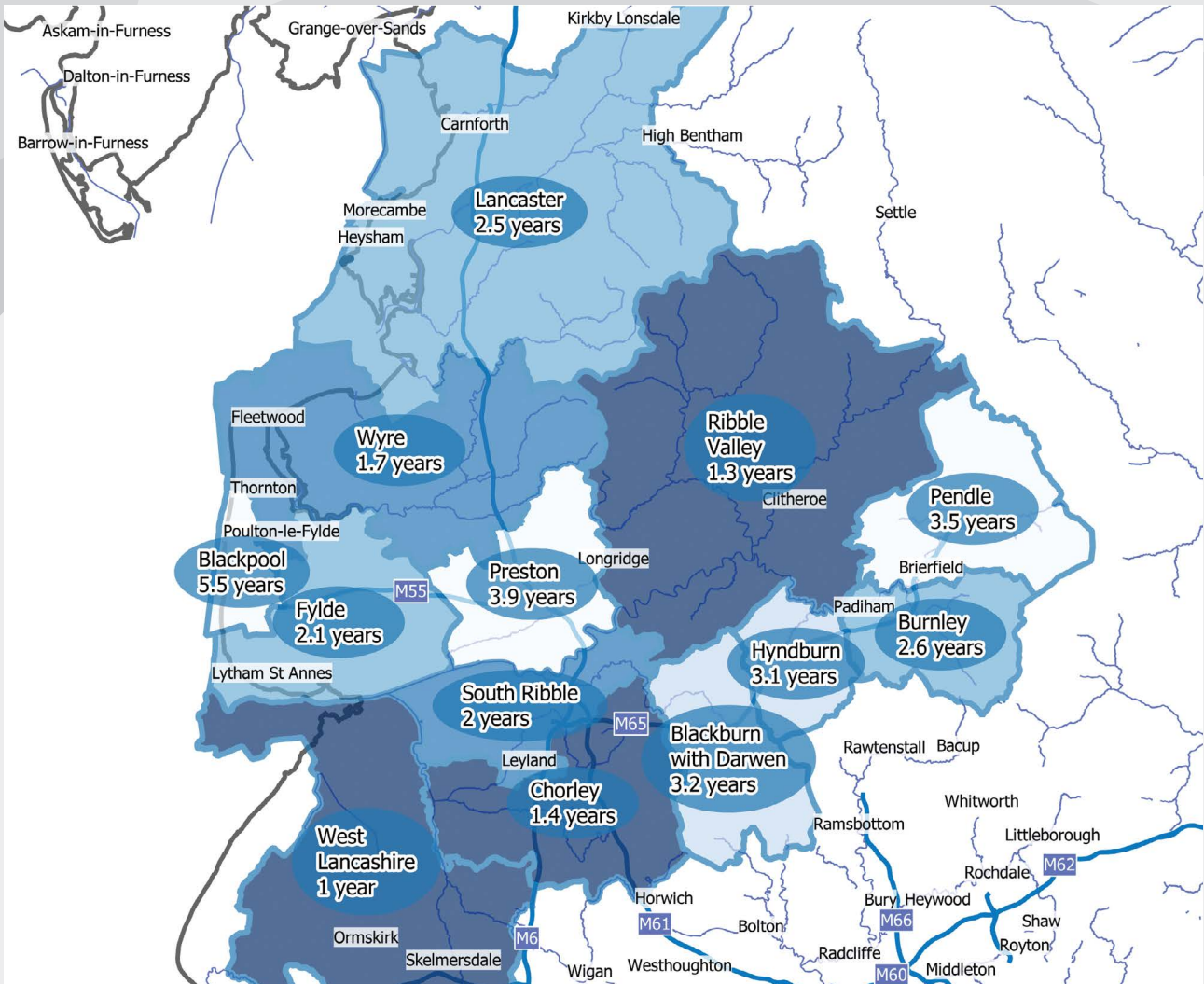
On average you may experience power cuts more frequently in certain areas. The information collected from power cuts is used to help inform our investment to carry out reinforcement and replacement work on the network to reduce the frequency of power cuts. In the 2022/23 regulatory year, Ofgem record that our performance for reliability across the whole of the North West was the best of any DNO, also exceeding their targets by more than any other DNO.

Average duration of power cuts in Lancashire




Correct as of July 2023.


Average time between power cuts in Lancashire



Correct as of July 2023.

We deliver for consumers

- 

We are customer focussed - understanding the communities we serve, meeting and anticipating our region's needs, driving both social and economic value
- 

We are high performing - delivering for our customers consistently as assessed by Ofgem.

Keeping customers' bills low

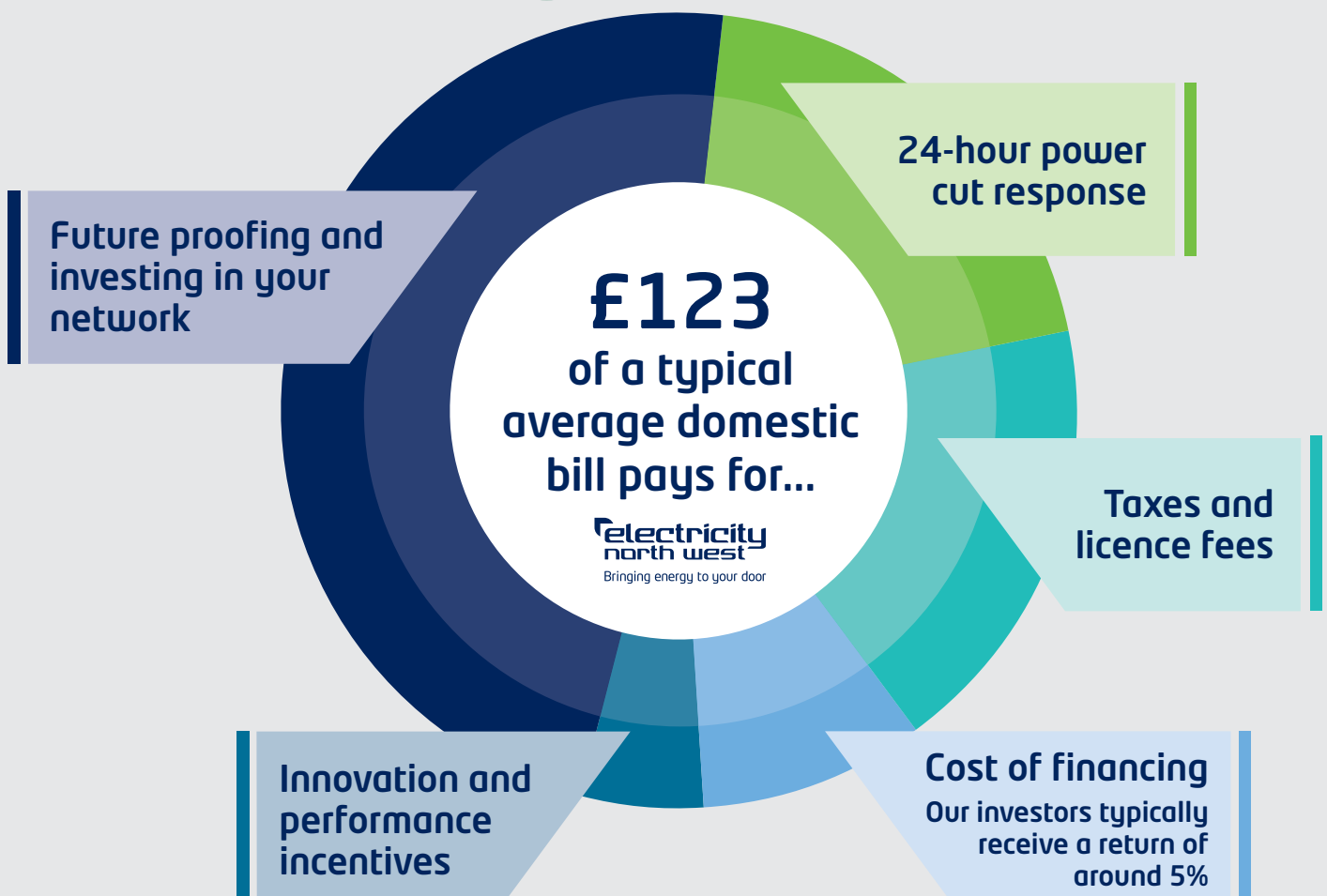
- ✔ Providing excellent value for money - with high performance and our part of the electricity bills remaining low
- ✔ 'Value for money' is key
- ✔ Electricity North West provides high value for consumers through efficient cost benchmarking

Our prices are some of the lowest in the country.

Whichever supplier you pay your bill to, a small portion comes to us to fund the network.

In the same period we'll invest £2bn.

Over the next five years our part of bills will be around £123 a year, that's just 33p a day.



Customer service



We know every household's needs are different - that's why our Extra Care support is led by you.

Our flexible approach means we can act to support a variety of challenges your household faces, with a personal and supportive service. Extra Care register is the new name for our priority services register.



Scan the QR code to sign up to our Extra Care Register

We are committed to providing the highest quality of customer service for our region.

If you're in a power cut, our Extra Care Register helps us to keep you safe and informed until the power is back on.

Notice of planned power cuts



Regular updates while your household is without power.

Weather updates



Earlier weather warnings to help you plan and prepare.

Nominated contact



Nominate a friend or family member for us to keep updated in the event of a power cut.

Password sign up



Register a unique password so if we ever need to visit you at home you feel safe knowing we are who we say we are.

Additional support



We can provide accommodation, hot meals or additional services to help support your individual needs.

For extra care, extra support, extra help when you need us most...
Find more information and sign up here www.enwl.co.uk/extracare
Prefer to chat? Call us for free on 0800 195 41 41

Take Charge

We've teamed up with Citizens Advice and Energy Saving Trust to bring you Take Charge, a free impartial advice service that's available to all households in the region. From local charities to strategic partners, we're proud to work with, support and invest in organisations which make a huge difference to thousands of lives throughout the North West.



Scan the QR code to Take Charge

Environmental Action Plan and Biodiversity



Improving sustainability by looking after the environment across our region

Our biodiversity action plan, part of our Environmental Strategy, increases the biodiversity of the land we manage. We have identified more than 100 sites where we can make significant biodiversity improvements. The sites are largely grassland and woodland and we've carried out surveys to assess their current state so we can track the level of uplift we provide. We will cut the sites bi-annually and leave the cuttings on site in a dedicated area to promote wildlife habitats.

We will also take care to look for nesting birds and protected species and the cuts will be completed at specific times of the year to help the native wildflowers and grasses flourish. The programme has been designed in line with the government's 25-year plan which requires a biodiversity net gain of 10%.



Improving our management of trees near overhead lines

Our teams of trained arborists and surveyors will increase inspections of vegetation near overhead lines in ED2, and work collaboratively with landowners to prune, fell and dismantle more trees at risk of damaging our network.

In ED2, we plan to address the impacts of diseased trees, particularly Ash Dieback – a highly destructive disease caused by a fungus – which causes ash trees to weaken. This poses a greater risk of falling onto overhead lines with consequent impacts on power cuts and safety.

We have also reviewed the number of trees that we cut down during our proactive vegetation management activities. While most trees are pruned or coppiced by our skilled arborists, some trees do need to be fully cut down. Due to the need to fell diseased trees affected by Ash Dieback, during ED2 we may have to cut down up to 10,000 trees per year. We plan to work with partners to plant 10,000 trees in our region per year over the 2023 to 2028 period.



Scan the QR code to view our Environment report

Our role is changing in Lancashire...

DSO, Flexible Services, Connections

The electricity distribution landscape is changing rapidly as we move towards a net zero carbon future. The traditional one-way flow of electricity from large generation sites to homes and businesses is being replaced by a more complex, multi-directional network that includes distributed generation such as wind turbines and solar power, as well as electricity storage and electric vehicles.

To meet the challenges of this changing landscape, we are evolving and enhancing our Distribution System Operation (DSO) processes. This includes planning and forecasting, which predicts the impact of customer choices and societal changes to inform where network development is required and where there are opportunities for flexible services.

Flexible services can help to balance the network and reduce the need for costly and time-consuming reinforcement. They do this by compensating consumers and generators for utilising their electricity differently in a way that benefits the network. For example, consumers may be incentivised to adjust their electricity usage during peak periods, or energy storage systems may be asked to store excess renewable energy for later use. In our most recent tender for flexibility, we had 25 requirements in Lancashire across four locations where we were seeking capacity of 93 MW and offering flexibility providers up to £1,022,720.

Our whole-system approach to electricity distribution involves collaborating with local authorities to develop Local Area Energy Plans (LAEPs). Their primary goal is to outline the most efficient and economical route for decarbonisation, providing a clear action plan for the local area. We're supporting local authorities by providing technical support, and transparent data.

By actively engaging with stakeholders, we're ensuring that decisions are made in collaboration and are aligned with the priorities of the region. This includes regular consultations, workshops, and feedback mechanisms that enable us to gather valuable insights and incorporate them into our planning processes.

Flexible Services requirements
25

Capacity
93 MW

Locations
4

Funds available
£1.02m



Scan the QR code to view our Get connected website



Enabling the region to reach net zero

As the region's network operator, it's our responsibility to enable the transition to net zero and provide a smart and flexible network which meets the changing needs of our customers and supports a low carbon economy across the North West and Lancashire.

Our target is to reach net zero as an organisation by 2038. We are committed to enabling and facilitating our regional stakeholders to reach their own regional targets.

Preparing our network

To make sure our network can meet the extra demand and to adapt to the unparalleled changes we expect to see, we are implementing plans now to ensure customers can continue to enjoy one of the most reliable electricity networks in the UK, at the lowest possible cost.

Our 2023-2028 business plan will ensure that the network is ready for the 630,000 electric vehicles expected to be on the North West's roads as well as the significant increase in the installation of electric heat pumps.

We are doing this by increasing capacity and flexibility, investing in digital technology and developing innovative solutions to deliver more efficient ways of working.

Samlesbury Enterprise Zone

This £7.5 million project, a collaboration with Lancashire County Council, ensures that the electricity network can meet the demand from the new Samlesbury Enterprise Zone, near Preston.

A new low carbon substation and 22km of underground cable will guarantee the Enterprise Zone all the power it needs to drive clean growth and

help it become a national centre of excellence for advanced engineering and manufacturing.

The new substation is one of the first low carbon primary substations on our network, powering itself by clean energy generated from its own on-site solar panels.



Inspiring and enabling our customers to take action on net zero

We provide information, advice and guidance to customers and businesses to help them take action to reduce their energy bills and carbon emissions.

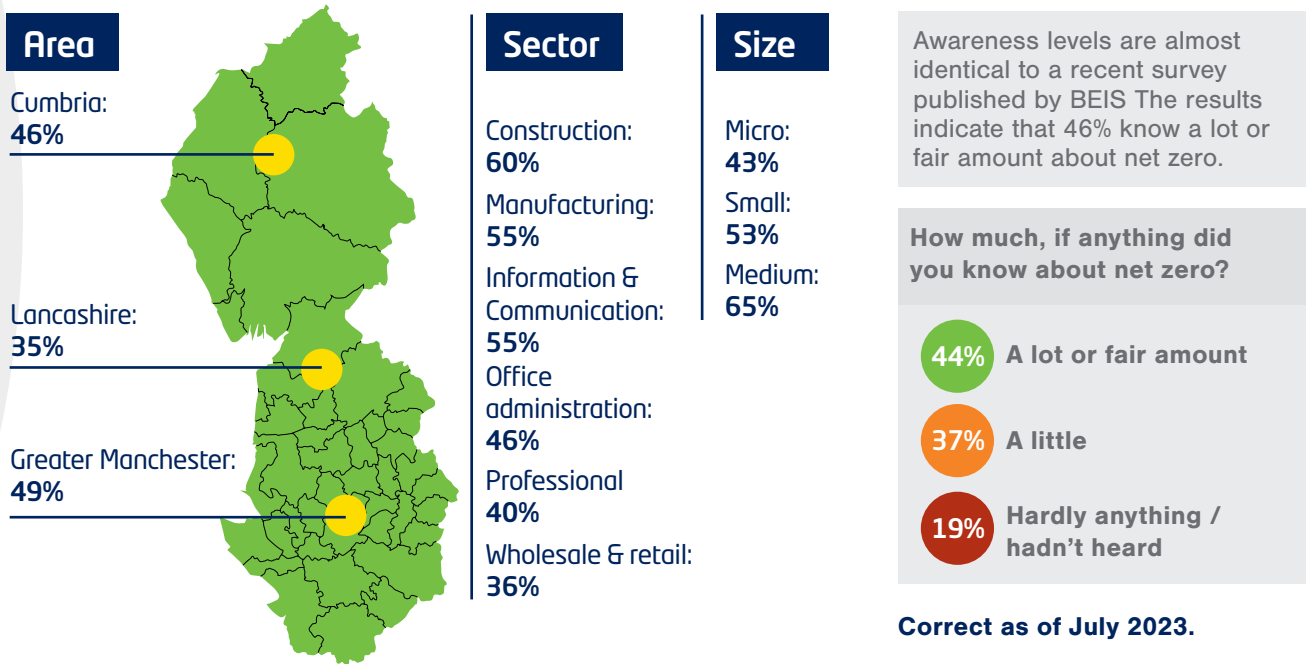
We do this via help and guidance on our Future Energy Hub, net zero events, for example the 'electric

vehicles experience' event that we delivered in collaboration with AMRC in Lancashire in October 2022, and by undertaking research and insight into the challenges, barriers and progress that customers are making so we can fully understand how we can best facilitate and support the transition.

Overall, knowledge about net zero appears to be highest amongst those working in the construction sector.



Scan the QR code to sign up to our Extra Care Register



We deliver for consumers



We support net zero delivery at pace - we are enabling this, leading by example in the decarbonisation of our own activities.

Leading by example

We are committed to reaching net zero as an organisation by 2038 by transforming our estate to be as energy efficient as possible and by using onsite and off-site generation to meet our energy demand. Our fleet is adopting electric vehicles and making it easier for colleagues to do the same with our sustainable transport policy.

We became the world's first 'carbon literate' power network operator after receiving bronze accreditation from the Carbon Literacy Project in 2019 and silver accreditation in 2022. We are now working towards gold accreditation.

Community and local energy

Community energy refers to local and community led projects or initiatives to reduce, manage, generate or purchase energy. This covers so much, from providing energy saving advice to installing solar panels, heat pumps and electric vehicle charging points.

As the name suggests, community energy projects are often run by local community groups. There are lots of different groups and organisations involved in community energy projects including local

authorities, housing associations, intermediary or advisory organisations and local businesses. Some local energy projects may have a commercial aspect but are also likely to benefit their local area and community. We have awarded almost £500K since the inception of the Powering our Communities Fund.



Scan the QR code to view the Powering our Communities Fund

Case Study: Low carbon community heat

This project will produce a feasibility study for how Calder Vale village can develop low carbon heating.

Calder Vale village is located on the edge of the Forest of Bowland on the River Calder.

This project has been inspired by the Chipping Low Carbon Heat project which is using a cluster approach and a shared ground source heat pump loops and wants to explore the feasibility of this approach for this community.

Electricity North West is supporting this project with a £15,000 Powering our Communities grant. The project is proposing a community-led approach to supporting a village scale transition to low carbon heat away from fossil fuelled energy supplies.

In addition to a feasibility report on low carbon heat options, this project will deliver extensive community engagement with the resident of the village.



Scan the QR code to find out all about community and local energy

Contacts and more information

For more information visit www.enwl.co.uk/stakeholderengagement
Stay connected...www.enwl.co.uk / 0800 195 41 41



Net Zero

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DSO

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Local area energy planning (LAEP)

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Flexible services

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Stakeholder Engagement and Responsible Business

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Scan the QR code to sign up to our stakeholder newsletter



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