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Bringing energy to your door



ENWL Lancashire Stakeholder Regional Event

2 November 2023

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Welcome

Paul Bircham

Safety Compliance and Markets Director

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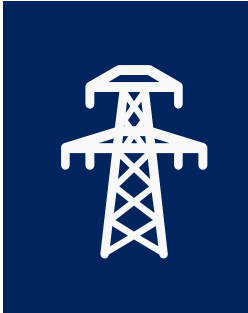


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Agenda



Welcome &
intro



Investing in
Lancashire



A new
strategic
framework
for
Lancashire



Panel
discussion



Break



Network
capacity and
connections
applications



Roundtable
discussion



Q&A and
feedback

If you would like to submit a question for our panellists feel free to complete one of the cards on the table.

We will also be taking questions from the floor during the session.



Safety moment – winter driving



Be aware of the change in season and what it brings
e.g., cold starts, ice, driving in the dark, low sunlight

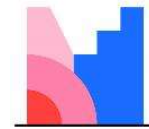
Housekeeping

Mentimeter polling



We want to find out more about you:

- Open web browser
- Head to www.menti.com
- Use the code **24383385** to access polling



Mentimeter



Or use QR code

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ENWL investment in Lancashire

Paul Bircham

Safety Compliance and Markets Director

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Here for the North West



- We're the North West's power network.
- Our overhead lines, underground cables and substations bring power to 5 million people in 2.4m homes and businesses.
- We invest billions of pounds in the region focusing on key areas of **safety; reliability; customer service** and **net zero**.

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



Number of customers 2.4m



Overhead lines 12,519km



Underground cables 44,872km



Submarine cables 23km

Total network length 57,415km

**POWER CUT?
CALL 105**

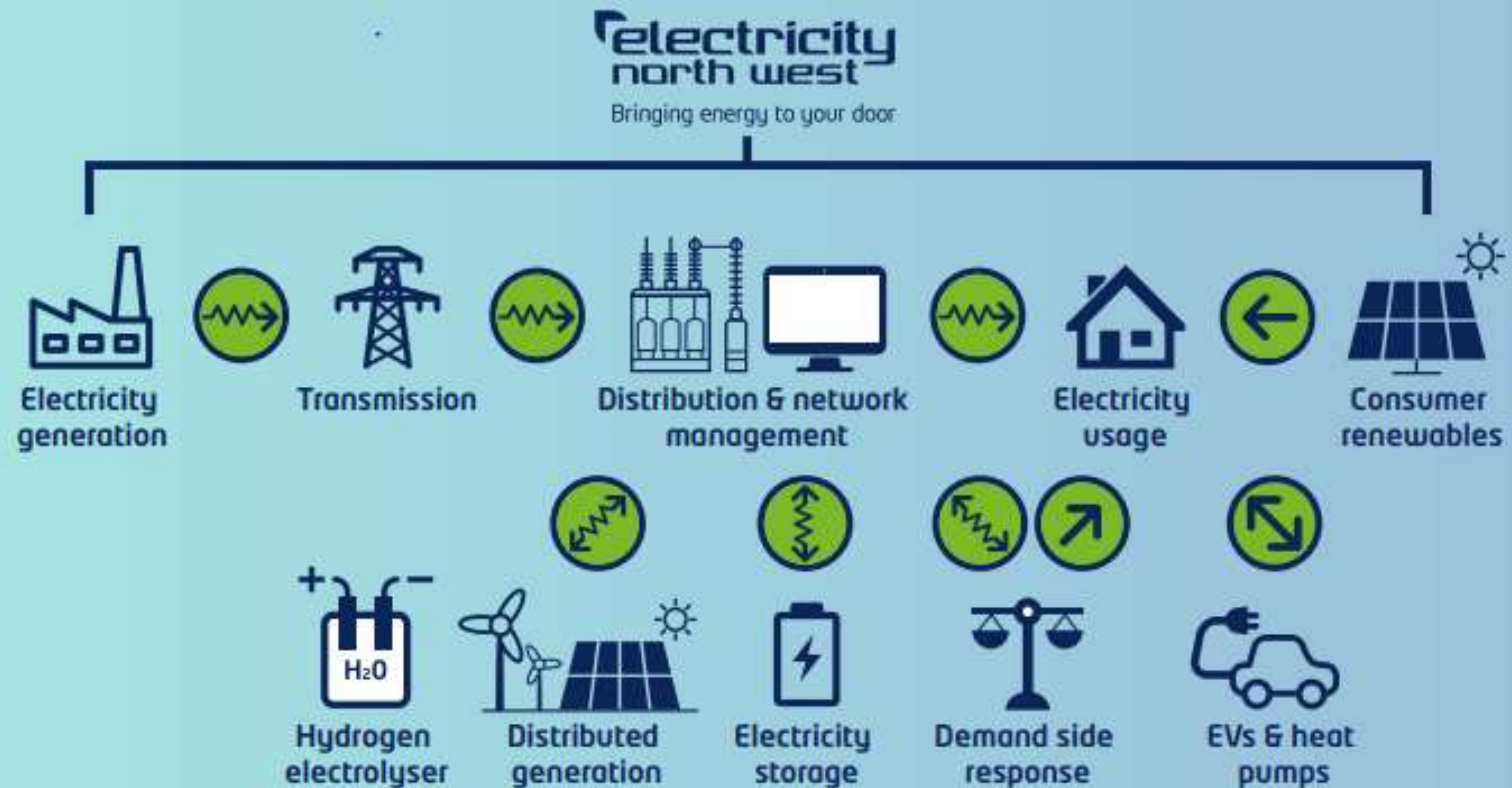
Our role is changing...

The way households and businesses use electricity, and the way it is generated, transported and traded, is changing rapidly.

These changes require us to be more proactive and adaptable in network management and develop new types of relationships with our stakeholders.



What was once simple and one directional, is now more complex and multi-directional



Our commitment to the North West between 2023-2028 (RIIO-ED2)



Vision: Leading the North West to Net Zero

We will deliver at least a 9/10 level of customer service and provide additional support to electricity users in vulnerable circumstances and fuel poverty



Customer

We will remain one of the world's most reliable networks, reducing the number of power cuts and the average time people are without power by 20%



Network

We will drive the transition towards local Net Zero targets, through distribution system operation, following a path to making our own operations Net Zero by 2038



Net Zero

We'll invest over £2billion in the network between 2023 and 2028



Our investment in numbers

**OVER
£2bn**

we'll invest over £2bn
in the network from
now to 2028

**OVER
£1m** we'll invest
more than £1m
per day into
the network

18,000

we developed our plans with input from
over 18,000 customers and stakeholders

**OVER
93%** we aim to
increase our
customer
service scores
to over 93%

£123

Our part of your electricity bill will
remain low (around £120 per year)

20%

we aim to keep power
flowing by reducing
customers' time
without power by 20%

£33m
in Lancashire

increasing
capacity at 11
substations
across Blackpool,
Preston, Lytham
St Annes,
Rossendale,
Bacup, Tarleton,
Nelson,
Burscough Bridge
and Clitheroe

- Majority of plan funded including bespoke funding
- Uncertainty mechanisms to secure additional funding

£32m
in Greater
Manchester

reinforcing the
network at key
locations
including new
cabling and
substations

£40m
in Cumbria

to replace
154km of
overhead lines
in the county
over the next
five years

Regional investment benefitting the North West



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 in the future. 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
800km

Estimated
Completion
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
Completion
March 2028

Dig, Fix and Go

A bespoke incentive mechanism that aims to drive a transformational change to reduce the disruption our emergency street works cause to our customers and stakeholders. This is a proposal formed and led by our customer and stakeholder feedback. Reducing disruption by accelerating emergency street works to below 5 days on average.

Investment
annually
£5m

Average duration
emergency street
works
5.8 days

1 day reduction
benefit per
year
£21m

Investment examples in Lancashire by 2028



- £33m planned investment in Lancashire over the next five years across Lancashire

Examples:

Lancaster Substation

£7,000,000

65,000 customers supported

Asset replacement to improve reliability

Nelson Substation

£3,900,000

34,000 customers supported

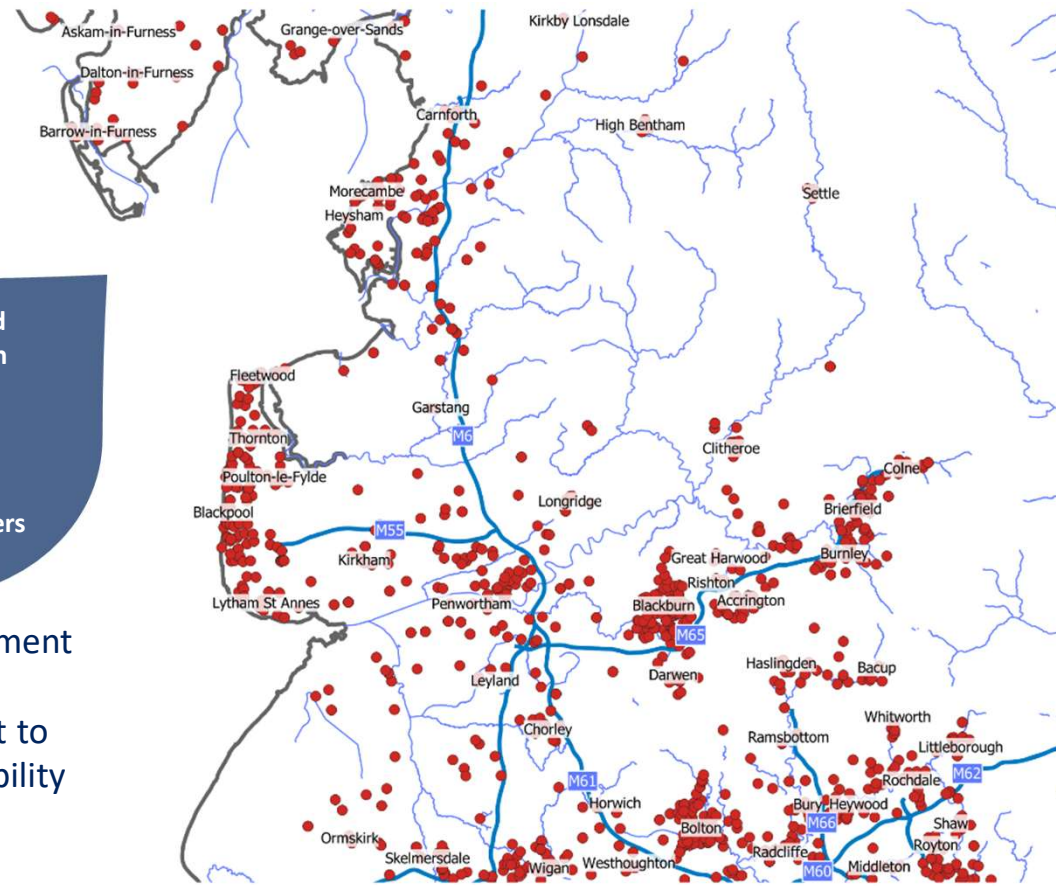
Replacing a grid transformer and oil filled cables with environmentally friendly solid cables

Blackburn and Lower Darwen Substation

£3,100,000

50,000 customers supported

Asset replacement and network reinforcement to improve reliability



Red dots indicate planned investment locations in ED2

Collaboration and strategic development - examples



- **Regular liaison with Lancashire Growth and Regeneration teams**
 - Samlesbury Aerospace Enterprise Zone Cuerdale Garden Village, Bailrigg Garden Village, Eden Project Morecambe, Lancashire Central and Blackpool Airport Enterprise Zone
- **Supporting Lancashire decarbonisation projects**
 - Electrification of bus depots, electric vehicle charging in car parks, Lytham Festival net zero plan, Samlesbury Hall decarbonisation and Carnforth Community Swimming Pool
- **Support for community and local energy projects – funding and support**
- **Lancashire Environment and Decarbonisation Group**
- **Local Area Energy Plans – inform our DFES.** Dedicated resources to help LA's deliver LAEPs
- **Flexibility Services – 121 sessions** to encourage the utilisation of LA assets



A trusted partner in the North West



Our investment will help deliver wider benefits to the region, supporting local regeneration and extending economic opportunities across the North West.

We also place a strong emphasis on training & skills and are a trusted employer across the North West. Our business plan will see us deliver up to 1000 new jobs between now and 2028 and take on more apprentices.

- We run a prestigious apprenticeship programme. Awarded with the 'North West Recruitment Excellence Award' at the National Apprenticeship Awards.'
- We frequently partner with colleges and schools across the region.
- In 2023 we recruited 33 new apprentices across engineering, IT and cyber security.
- Our 2024 apprentice programme opens in November.



What next?



ENGAGE

COLLABORATE

DELIVER



Simon Lawrence

**Director of Growth &
Regeneration**

Lancashire County Council



Invest in
Lancashire

A new Strategic Framework for Lancashire

LANCASHIRE 2050

A strategic framework for Lancashire

Our priorities will help Lancashire:

Economic prosperity

Succeed as a globally-recognised, competitive and sustainable economy, distinguished by its quality of life, connectivity and access to opportunities.

Transport and infrastructure

Become better-connected and accessible, with infrastructure that links opportunities to need, and travel choices that are safe, inclusive, affordable and low carbon.

Environment and climate

Meet our low carbon ambitions, promote clean energy and enhance our rich natural environment.

Housing

Deliver decent and affordable housing for every community. High quality housing will benefit existing residents, as well as attract and retain the people required to drive the economy over the long term.

Early years and education

Support all our children so they are ready to learn, achieve, and can access opportunity.

Employment and skills

Support people to develop skills throughout their lives and attract business to the county because of our high skilled workforce.

Health and wellbeing

Improve health, life chances and independence, so residents can live healthy lives and access quality care when they need it.

Communities and place

Build pride, belonging, and resilience in all our diverse communities and ensure people have a voice and stake in Lancashire's future.

How we will make it happen – our shared commitment to residents

As Local Authorities, this strategic framework represents our shared vision, priorities and intent. It will be endorsed through all our councils individually and will align with our own organisational plans.

But for this plan to work, every business, resident, community and public service has to have a stake in its success. That is why we commit to bringing together key partners to consider our plans, and we welcome the formal endorsement of this approach from many of them.

We will continue to work closely with a wide range of partners and engage closely with everyone as we develop the detail of our action plans.

With these priorities, we will make better decisions locally, we will make a more powerful case for extra tools, powers and resources to central government, and we will deliver on our shared ambitions.

28

Partners commit to:



Working collaboratively

We will work collaboratively on our collective priorities, sharing ideas, assets, skills and knowledge.



Cross cutting key themes

We will ensure our commitments to diversity and inclusion, reducing inequalities, and improving quality of life are addressed in each of our priority themes.

Listening to residents

We will be active listeners building our plans for Lancashire. Everyone will be able to contribute in shaping our shared future.

Being open and transparent

We will ensure decisions are made democratically and transparently, so residents can understand and progress can be seen.



Lancashire 2050



Lancashire County Council Defining Strategies



Economic Development Strategy - Current



4 Enterprise Zones

- **Samlesbury**
- **Warton**
- **Hillhouse**
- **Blackpool Airport**



Major Employment Site Concentrations

- **Central Lancashire**
- **Heysham Gateway**
- **East Lancs M65 corridor**
- **West Lancashire employment sites**



Major City & Town Centre Employment Concentrations

- **Preston**
- **Lancaster**
- **Blackburn**
- **Burnley**
- **Blackpool**



Housing Concentrations

- **Central Lancashire**
- **East Lancashire**
- **Fylde Coast**

Economic Development Strategy - Future

Developing Enterprise Corridors

- North-South
- East Lancashire
- Fylde Coast

Growing Business Clusters

- Digital & cyber at Lancaster
- Port & related activity at Heysham Gateway
- Advanced manufacturing & cyber corridor in East Lancs
- Office/Tech at Preston Station Quarter
- Logistics in Central & West Lancashire
- Energy, data & chemicals in the Fylde Coast

Strategic Development Pipeline & Associated Infrastructure

- Work underway to identify next phase activity

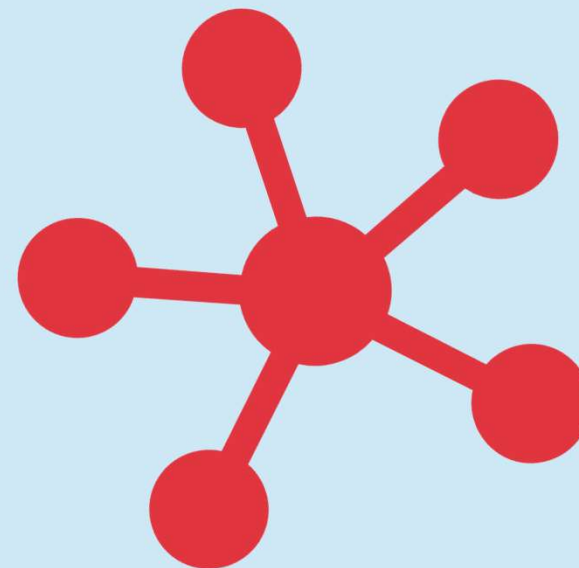


Illustration of Lancashire Development Activity



- A** Eden Project Morecambe/Frontierland
- B** Lancaster Canal Quarter
- C** Heysham Gateway, Lancaster
- D** Transforming Preston/The Harris Quarter/
Preston Station Quarter
- E** Farington Cricket Campus
- F** Lancashire Central
- G** Samlesbury Enterprise Zone
- H** Blackburn Business Innovation District
- I** A Dynamic New Darwen
- J** Burnley Town Centre and Canalside Masterplan/
University of Central Lancashire Burnley Campus
- K** Blackpool Airport Enterprise Zone
- L** Talbot Gateway
- M** Blackpool Central
- N** Hillhouse Enterprise Zone
- O** Springfields

Transport Strategy

Rail

- Recent electrification of Blackpool-Manchester line
- Ongoing project development for new electrical infrastructure

Local Electric Vehicle Infrastructure (LEVI) projects

- £10.1m for local, low power, on-street charging infrastructure
- Stage 2 application April 2024
- To focus on locations & number/type of chargepoints
- Pilot project to trial lamppost integrated chargepoints

Electric buses

- Blackpool DfT “ZEBRA” funding to replace most of fleet.
- ZEBRA next round bid being explored to expand provision



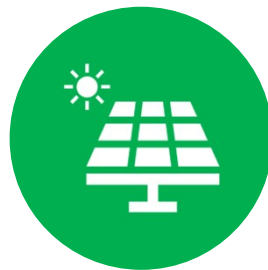
Integrating Low Carbon & Sustainability into Economic Growth



- **Environment & Climate** is one of the 8 priority themes of **Lancashire 2050 Framework**.

“Lancashire will be recognised as a place where low carbon businesses can invest and thrive.”

- **LCC Environment and Climate Strategy** in place, setting the County Council’s agenda until 2025.
- Desk-based study ongoing on potential **opportunities for renewables** across the LCC Estate



- **Low Carbon Feasibility study** to explore opportunities on LCC **strategic sites**
- **Renewables / De-carbonisation opportunity study**



60,000 new low carbon jobs projected by 2050.

Showcasing Example Lancashire Sites



Lancashire Central



Lancashire Central is a multi-million pound strategic employment site that sits at the heart of the county's long-term economic strategy.

Perfectly located next to the M65 and M6, and a short distance from the M61, the 100+ acre site has the potential to generate up to 5,600 full time jobs, and create significant opportunities for both existing and new businesses.

Key features include:

- Significant new local employment spaces for offices, industrial, storage and distribution uses, and R&D
- Commercial uses such as retail (foodstore and car showroom)
- Food and drink outlets (including family dining)
- Leisure and Wellbeing (including gym/ creche, health centre, pharmacy)
- Up to 116 new homes set in a natural landscape adjacent to existing residential housing.

Major investments will also be made to improve road, pedestrian and cycle access.

This includes new walking and cycle routes which will connect to existing traffic-free networks.

Environmental infrastructure, which will support the health, wellbeing and sustainability agendas, includes trees and shrub planting, improved green space, ponds and other water features.

Size of site: 100+ acres

Location: Land south west of Farington, PR5 6EG

Connectivity: Located at the western termination of the M65; 3 minutes drive to Junction 29, M6 5 minutes drive to Junction 9, M61 15 minutes drive to Preston/ 20 minutes to Blackburn. The site has good access to public transport links

Scheme value: Local economic boost up to £390 million per year

Planning status: Outline Planning application submitted - awaiting determination

Promoter: Lancashire County Council/ Maple Grove Developments



Samesbury Enterprise Zone

Innovation Hub of Innovation, and Disruptive R&D

Of significance, Samesbury enables transformational the whole of Lancashire.

Advanced manufacturing and research-led robotics and future primed to become vation, Industry 4.0 R&D.

the heart of an anchor emerging se include the pages 14-15), on District (pages it Lancashire

Home to BAE Systems and AMRC North West

The site is adjacent to BAE Systems' aircraft engineering campus, creating an excellent opportunity for potential aerospace and future flight supply chain businesses. BAE Systems' Samesbury facility also includes its Academy for Skills and Knowledge and a skills and training hub which produces over 170 apprentices and graduates each year.

Another Samesbury Enterprise Zone occupier is the £25m Advanced Manufacturing Research Centre North West. The AMRC North West provides innovation support to Lancashire's advanced manufacturing businesses, giving them access to advanced technologies which help drive improvements in productivity, performance and quality.



Connect with the North West Cyber Corridor

In October 2021, the Government announced that the National Cyber Force (NCF) HQ would be sited in the Samesbury area. As a result, it is anticipated that Samesbury Enterprise Zone will become home to a major cyber cluster, coinciding with the existing cyber strengths of Manchester's GCHQ operations, Lancaster University's world-class cyber R&D, and UCLan's applied cyber expertise, via a new North West Cyber Corridor.

A New Innovation Cluster

Lancashire County Council and the Lancashire Enterprise Partnership are exploring opportunities to create a cross-sector Innovation Centre based at the Enterprise Zone site. An initial feasibility study has been undertaken with further options appraisals taking place during 2023. Supported by the presence of BAE Systems, AMRC North West, and the NCF, and with a focus on SMEs, this could act as a driver for Lancashire's overarching R&D ecosystem and innovation economy.

A Developer-Ready Site

Extensive enabling works and infrastructure investment has resulted in utility provision across the Enterprise Zone site, meaning it

is ready for build-out and occupation. For properties (circa 500,000 sq ft) have already been constructed and are fully operational.

The next proposed stage is the development of site-specific ancillary facilities along starter units (2,000 - 5,000 sq ft). Work potential target completion date of 2024. Design work has been undertaken on ancillary facilities, and delivery methods are being explored.

Size of site: 120 acres (66 acr development ready)

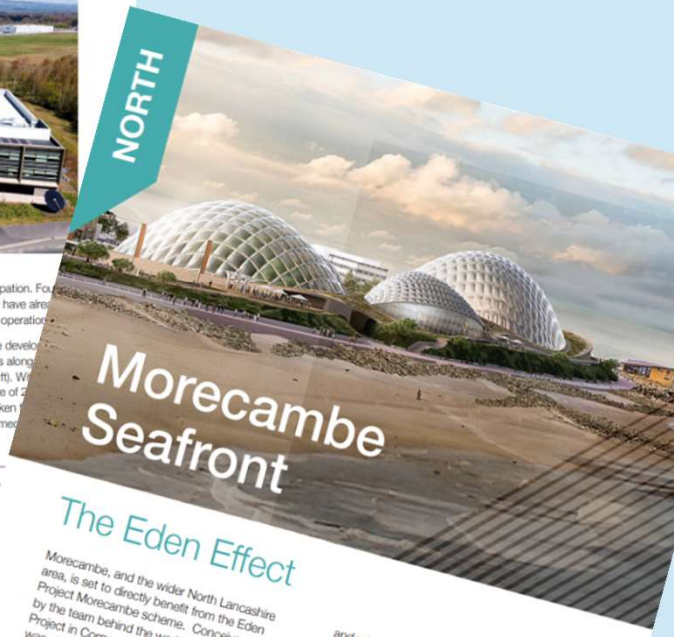
Location: Sir Frederick Pag

Connectivity: A purpose-built connects the site to the A67 the A677 to the south. Easy access by car to J1 (7 minutes), Preston (20 minutes) and Lancashire. The site is also access Blackburn and Burnley.

Scheme value: £3/

Planning status: £ Order in place w/ decision process

Promoter: Lanx International - f



Morecambe Seafront

The Eden Effect

Morecambe, and the wider North Lancashire area, is set to directly benefit from the Eden Project Morecambe scheme. Conceived by the team behind the world-famous Eden Project in Cornwall, the 36-acre development was given the green light by Government in March 2023, along with £50m of Levelling Up funding, to allow work to commence on the £100m project.

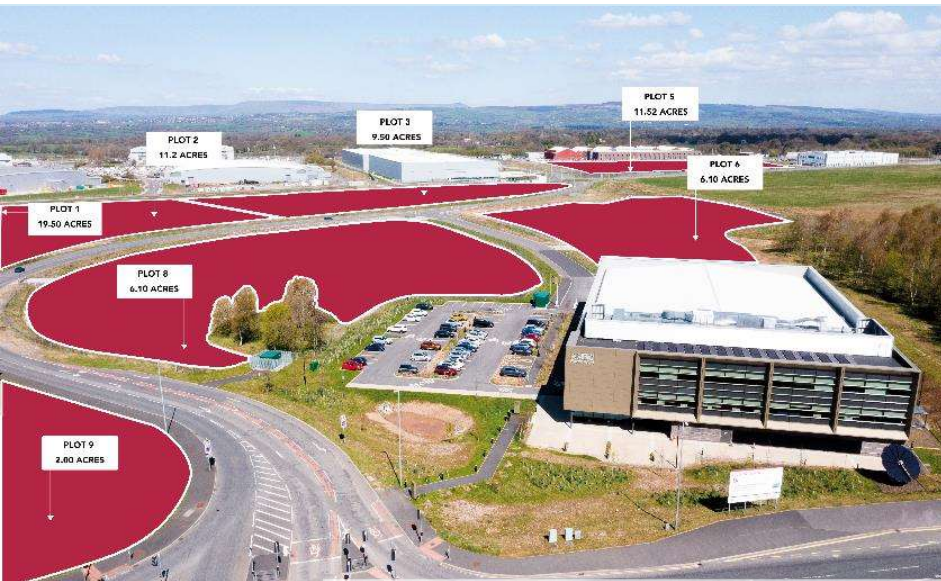
Described as a destination which 're-imagines Morecambe as a seaside resort for the 21st Century', it will be a ticketed tourist attraction. Focusing on the key themes of education, ecology, wellbeing and community, Eden Project Morecambe will combine indoor and outdoor experiences that directly link to the internationally significant natural environment of Morecambe Bay.

Being less than two hours travel time from most of the North's main conurbations.

and with a local catchment area of ten million people, Eden Project Morecambe is anticipated attracting up to 750,000 visitors a year. It is also expected to help create over 1,250 jobs, and inject £150m GVA per year into the North West economy.

Adjacent to the famous art deco Midland Hotel, and near to the 125-year-old Winter Gardens theatre, the Frontierland development site, and many other commercial sites and business districts, it is anticipated that Eden Project Morecambe will accelerate new property-led regeneration, creating significant throughout the resort - and far beyond - in the process.

More information at edenproject.com/new-est-



Samlesbury Enterprise Zone - Aerial

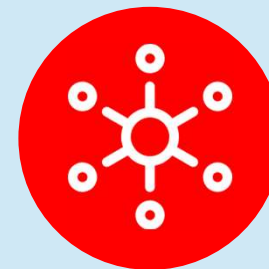


Samlesbury Enterprise Zone

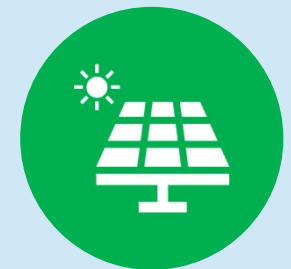
- **Internationally significant** site attracting substantial investment.
- Strong **public-private partnership** with BAE Systems and Electricity North West Limited.



Potential for over 3,000 high value jobs



1.5m sq ft for cyber, high-tech, R&D, innovation, robotics & advanced manufacturing sectors



Feasibility study to explore low carbon & sustainability opportunities on the site.

National Cyber Force HQ at Samlesbury

Government investment to create UK's biggest cyber hub

NW Cyber Corridor - linking NCF to Lancaster University, UCLan and GCHQ in Manchester

At the heart of the UK's Cyber Ecosystem, generating a £5bn boost to the regional economy

Will create thousands of new jobs directly/thousands more across the supply chain

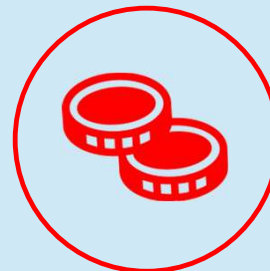
Putting Lancashire at the forefront of the UK's cyber ambitions





Lancashire Central

One of the most strategically located North West sites.



£220m mixed-use employment site



Up to 3,000 jobs created



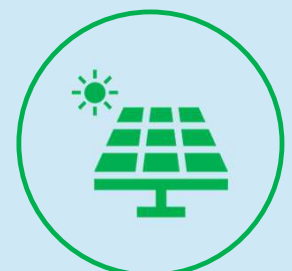
Delivery Partnership with Maple Grove Developments



1.5m sq ft of commercial floorspace & 210 residential units



Local economic boost of up to £390m per annum



Feasibility study to explore low carbon opportunities on site.

Eden Project Morecambe

- Government's flagship project of the second round of the UK Government's Levelling Up Fund. **Awarded £50m.**
- **World-class visitor attraction** inspiring natural world connection.
- **Centre of Excellence for environmental research, sustainability & education** in partnership with Lancaster Uni & others.
- **Major regeneration driver** for Morecambe, Lancashire's Fylde Coast and the wider North West region.



**£100m investment
of public and private
sector funding**



**100's of jobs created &
new supply
chain opportunities**



Eden – Artist Impression

Preston Station Quarter Regeneration

Vision, Masterplan & Regeneration Framework

- Transforming the gateway to the city and sub-region.

Preparing for the Potential of HS2

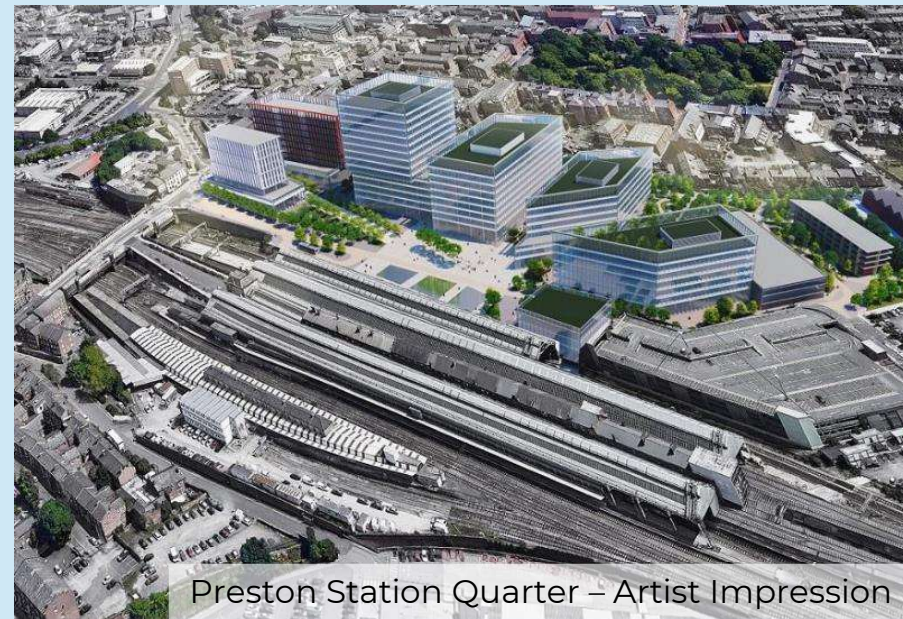
- Harnessing growth potential of major future commercial investment.

Unlocking Development

- Opening up a key quarter of Preston City Centre for regeneration.
- Attracting Government departments to the North West.



HS2 – Artist Impression



Preston Station Quarter – Artist Impression

Farington with Lancashire Cricket

Bringing Lancashire Cricket back into the heart of the County, backed by the England & Wales Cricket Board.



£15m+
Investment



Elite Sports
Facility &
Infrastructure



Strategic
Relationship with
Lancashire Cricket



Extensive
Community &
Educational
Benefits



Farington Cricket Facility – Artist Impression



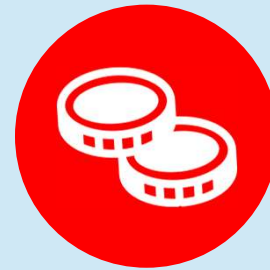
New M55 Junction 2 - Aerial



Preston Western Distributor - Aerial

City Deal

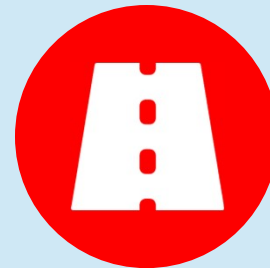
Public sector funded infrastructure-led development leveraging millions of private sector investment.



£575m Preston, South Ribble & Lancashire City Deal



Over 17,000 new homes and 20,000 new jobs



£207m Preston Western Distributor road scheme & new M55 Junction 2 - now open



Strategic Relationships - developers, constructors, local authorities

Transforming Cities Fund



£24.4m

New Cottam Parkway Railway Station



£14.8m

Friargate/Ringway improvements - pedestrianisation & cycle paths / junction & crossing points / bus priority measures

£3.5m

Innovative technology package

LCC & ENWL – Working Together

Support for ENWL

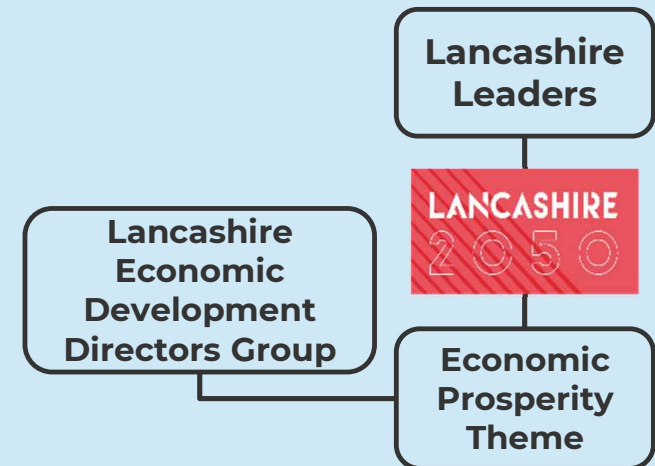
- ENWL Business Plan 2023-2028
- Stakeholder / Economic Growth / Environmental & Sustainability Advisory panels
- Promoting ENWL funding opportunities

ENWL / LCC projects

- SAEZ & AMRC projects / Lancashire Central / Eden
- Major Employment Sites Low Carbon study & opportunities

Public Sector working together

- Strong Governance
- Strategic Development Pipeline & Infrastructure Planning
- Energy generation projects in development across Lancashire



Challenges & Opportunities

- **Identifying opportunities with ENWL**
 - Introducing Low Carbon interventions & support
- **Securing power**
 - Overcoming long-lead in times
- **Developing County-wide energy plans**
 - Enabling/ensuring investment & delivery
 - Energy system decarbonisation via Local Area Energy Plans.
- Bridging the **viability gap for Heat Networks**
- Keeping up with **EV charger demand & identifying locations.**
- **Electric bus** - range anxiety / dead time whilst charging



How We Can Work Better Together

- **Co-ordinate / align programmes to mitigate fuel poverty**
- **Facilitate better connections to our Innovation Assets**
 - Universities developing world class technology / AMRC North West testing low carbon technology
- **Supporting ENWL on;**
 - Decarbonisation project pipeline
 - Distribution Future Electricity Scenario (DFES)
- **Supporting EV chargepoint infrastructure**
 - Identifying suitable sites/ensuring grid connection
- **Exploring opportunities to support apprenticeships**
 - via Lancashire's Skills & Employment Hub
- **Minimising disruption to the highways network**
 - Co-ordinate with Highways Authority network activity



electricity
north west

Lancashire
County
Council



LANCASHIRE

2050

Lancashire is already the largest non-city region economy in the North.
With a multi-billion pound development pipeline coming on stream across the county, now is the time to invest.

Visit us at stand K34 // InvestinLancashire.com



electricity
north west

Bringing energy to your door



Network development

How we incorporate local plans into our network planning

Christos Kaloudas

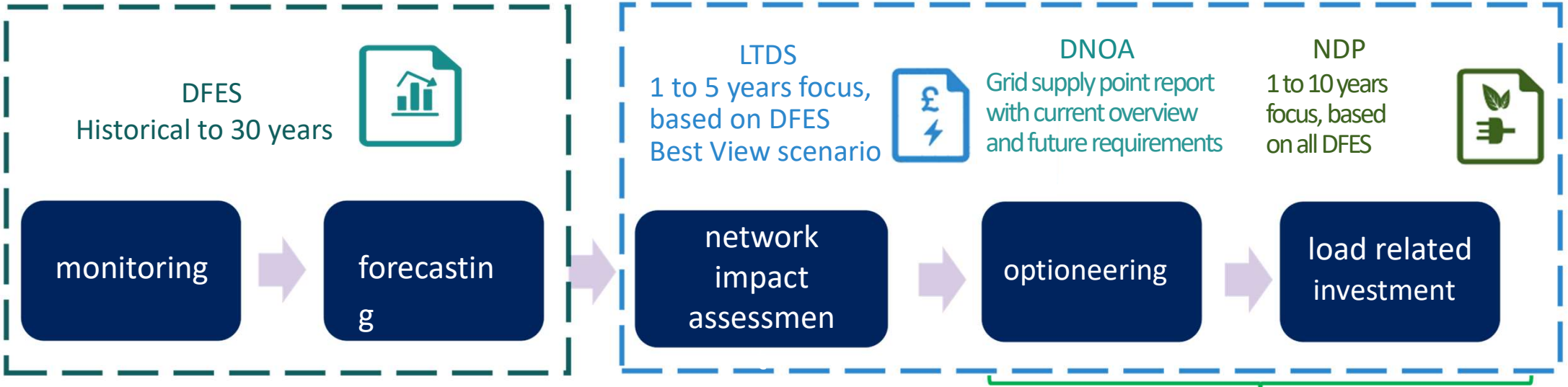
Capacity Strategy Lead (DSO)

Stay connected...



www.enwl.co.uk

Our load related investment process & associated publications



Commercial/market opportunities through our flexibility service tenders

Step 1:
better understand
our network

Step 2:
establish network capacity
needs

Step 3:
promote flexible
& innovative
solutions

Step 4:
develop our network
in the right place & at
the right time using
the optimal solutions

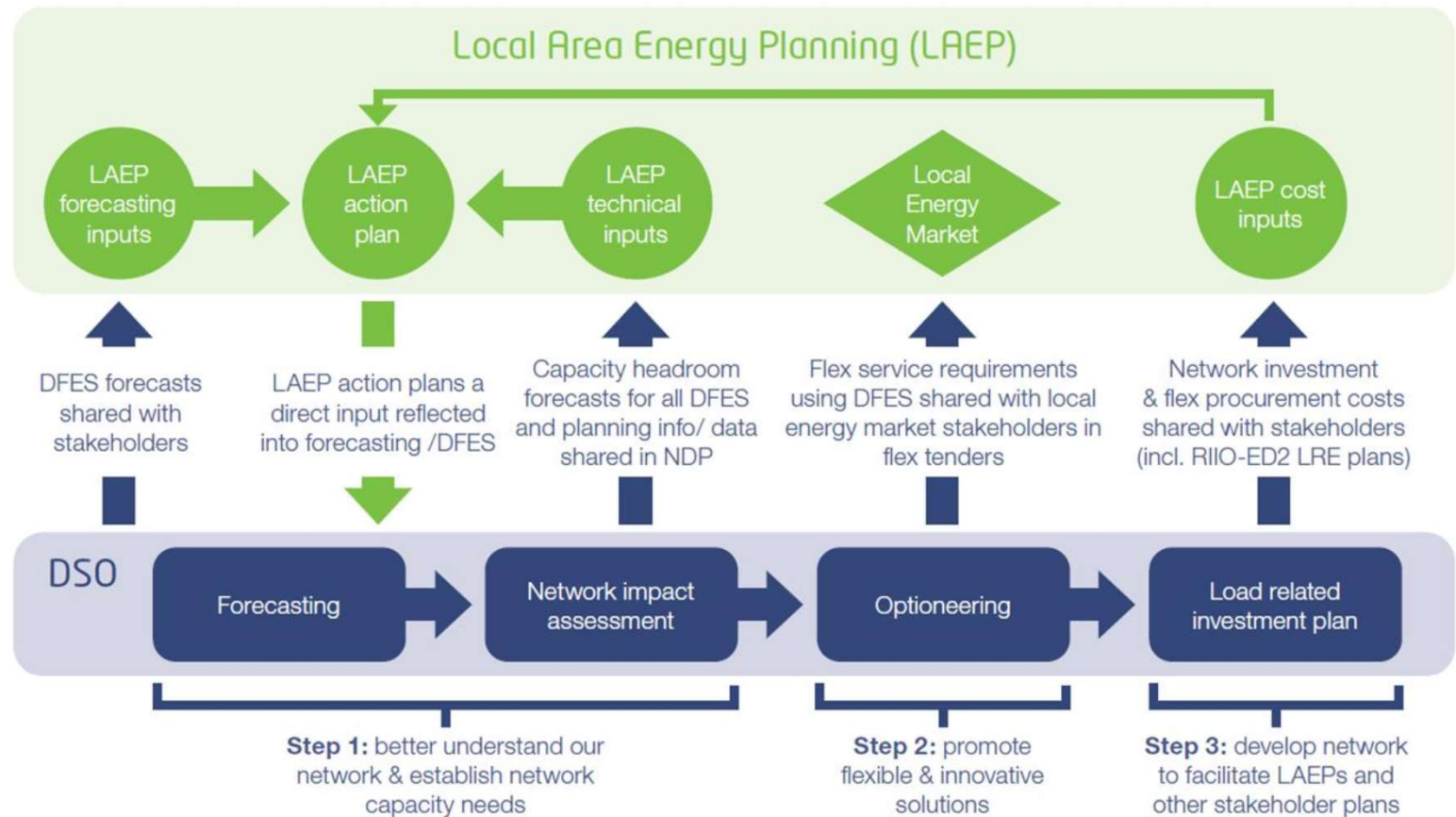
LAEP interactions with our Network Planning process



Local Area Energy Planning (LAEP) is a process to achieve Net Zero at minimum cost by maximizing the regional potential. It takes into account all aspects of the energy system (energy supply & demand, transport, heating, local industry, the environment).

The main objective of LAEP is to provide a clear action plan for efficient and economical decarbonisation in a local area.

INTERACTIONS OF LAEP WITH DFES AND DSO PLANNING

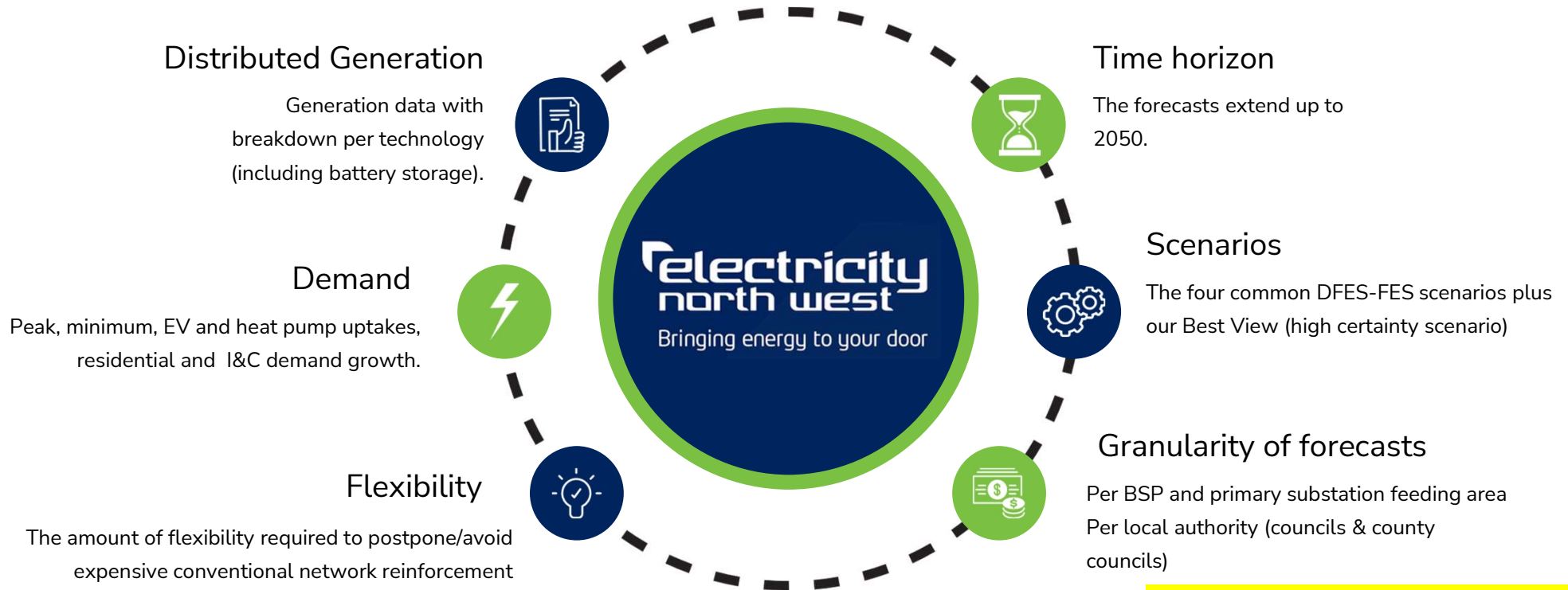




- **What is different in Lancashire compared to GM LAEP process?**
 - ✓ GM used ES Catapult studies as their LAEPs, ENW can support Lancashire LAEPs with data provision & technical insights. But we also support any process, ie currently supporting Lancaster & ESC LAEP process
- **Why is it important for LAs to share LAEP and other plans before applying for network connection?**
 - ✓ network capacity released within LAEP / local plan timeline
 - ✓ cost-efficient network investment, not piecemeal network expansion → lower energy bills to customers
- **What is different in RIIO-ED2? (our regulatory 2023-2028 period)**
 - ✓ lower connection charges (access SCR charges): higher connections activity expected
 - ✓ access to funding for all DNOs through uncertainty mechanisms → to facilitate well justified LAEPs and other mature local plans

key takeaway: early engagement on LAEPs and other local plans can facilitate them in timely and cost-efficient manner

DFES workbook at a glance



Lancashire data - granularity: at county council level, per council and more granular per primary substation feeding area

Peak demand forecasts – longer term trends



50% increase by 2038

In our **BV** scenario we envision a 50% increase in peak demand by 2038.

EV, HP and Connection

The top three factors affecting the long term peak demand growth in our area are EVs, heat pumps and demand connection activities.

The sharp increase in **LW** after 2030 and **CT** after 2036 is due to increased adoption of heat pumps in a world where hydrogen is not used for widely for domestic heating.

The drop post 2045 is due to efficiency measures.

All DFES forecasting data accessible online at: www.enwl.co.uk/dfes



Network planning

We currently use DFES to inform network planning across our Extra High Voltage (132 to 33kV) networks. We also produce forecasts to inform network planning at High Voltage (11 and 6.6kV) and Low Voltage (0.4kV) networks. Moving forward we will expand DFES to cover all voltage levels.

DFES with a planning purpose

Our load related investment is mainly driven by our Distribution Future Electricity Scenarios (DFES), which have a mainly planning purpose

HV and LV planning

Optimised planning by releasing only the required capacity where and when needed.



EHV planning

Focus on wider area planning to optimise investment by increasing efficiencies and avoiding piecemeal network expansion.

LV services

Unlooping of LV services to facilitate domestic EV charging and heat pumps to the end customers.

Network Development Plan



Network Development 2022

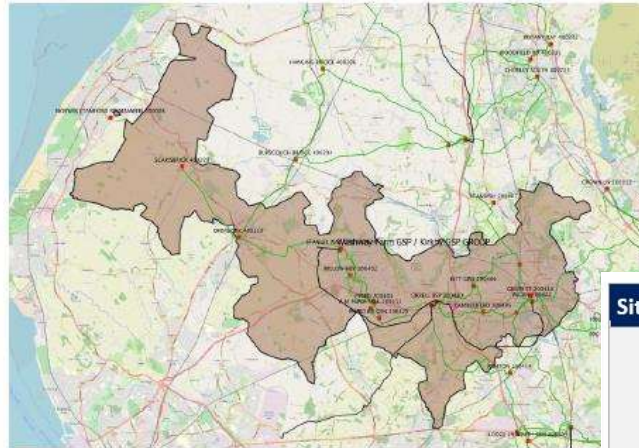
Strategic Planning, DSO Directorate

March 2022



Brin 15 Washway Farm / Kirkby GSP

GSP Summary 3 BSPs 12 Primaries



Washway Farm GSP / Kirkby GSP Group supplies approximately 74,000 customers across the Lancashire region of the network. Washway Farm GSP takes its supply from National Grid network via 2 x 180MVA SGTs. Kirkby GSP which is a SPManweb site affords supply to ENI 240MVA SGT. The GSP group feeds into three BSPs and 12 Primary Substations. The Peak is currently 154MVA.

Intervention Overview

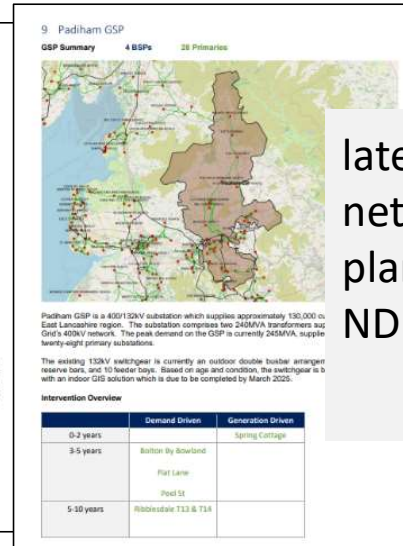
	Demand Driven	Generation Driven
0-2 years		Skelmersdale Primary Skelmersdale BSP
3-5 years		
5-10 years	Ashton (Golborne) Green St T11 Upholland Wigan BSP	

*In 2023 we updated the workbook element of the plan

- Report broken down by Grid Supply Point feeding area. This is the connection point from Transmission to Distribution
- Here we detail the high level solution for increase capacity including a review of the flexible requirements

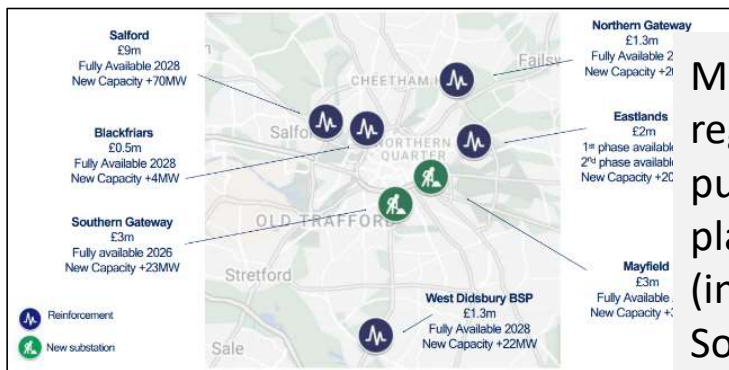
Site Name	Need	Asset Solution	Flex Plan Location
Upholland	FC first exceeded in FY29	7.4MVA spare capacity on <u>Pimbo</u> primary	Dynamic response required
	1.6MVA exceedance of FC by FY31	Lay new HV Interconnector from Upholland to <u>Pimbo</u>	
X- 352531		~4km 300 AI XLPE cable to transfer demand	Max Flex Required at 2051 - Winter Peak
Y- 404369		Start date: FY28 Completion: FY29	MVA
			Best View 5.2
			Consumer Transformation 16.0
			Steady Progression 4.2
			Within 5km of X and Y coordinates

Lancashire development plan – focus on EHV network



latest view of our network development plan for Lancashire in NDP 2022

All NDP reports & data accessible online at: www.enwl.co.uk/ndp



MCR development plan the first regional development plan published in early FY24. Lancashire plan to be published later in FY24 (incl. Blackpool airport enterprise, South Lancs network reinforcement to support business development)

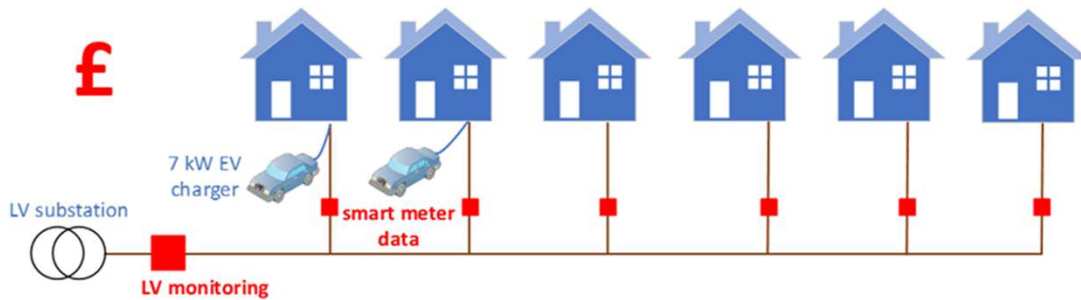
key takeaways:

- early LAEP engagement → release network capacity where & when needed
- coordinated network development → reducing customer energy bills & avoiding expensive piecemeal network expansion
- Lancashire development plan currently drafted and to be online available within current financial year

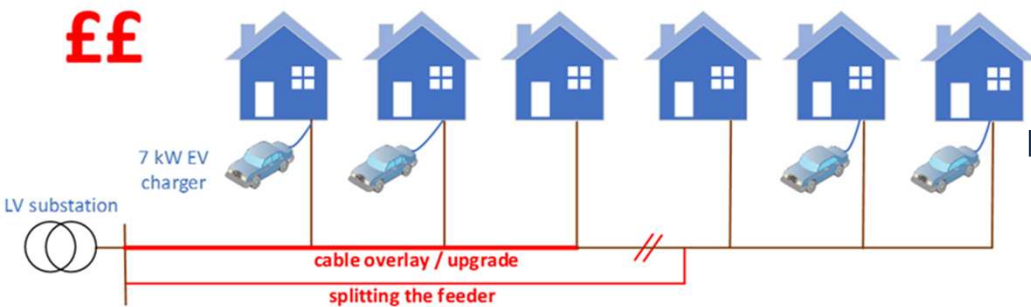
Network Planning at lower voltages



typical underground LV network



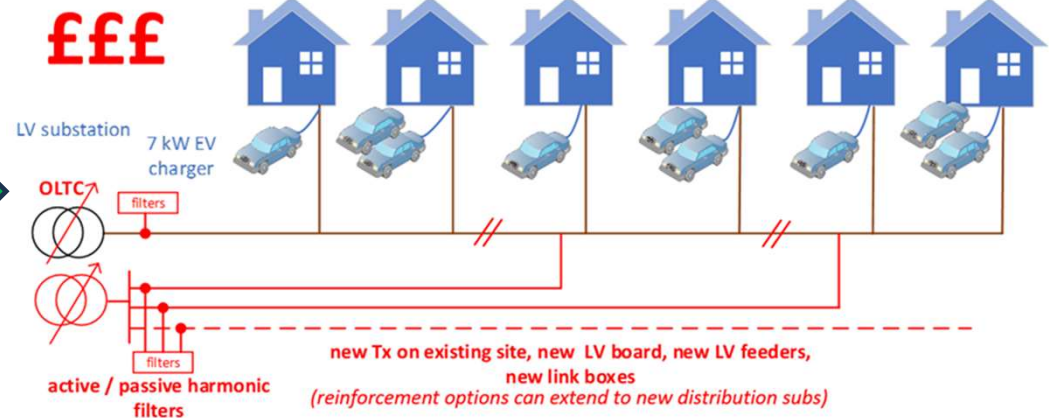
typical underground LV network



key takeaways:

- LV monitoring critical to optimise network planning, ie release capacity only where & when required (to cover 95% of customers at just under half secondary subs by 2028)
- planning optimisation: capacity released in cost efficient way to meet only the expected demand growth

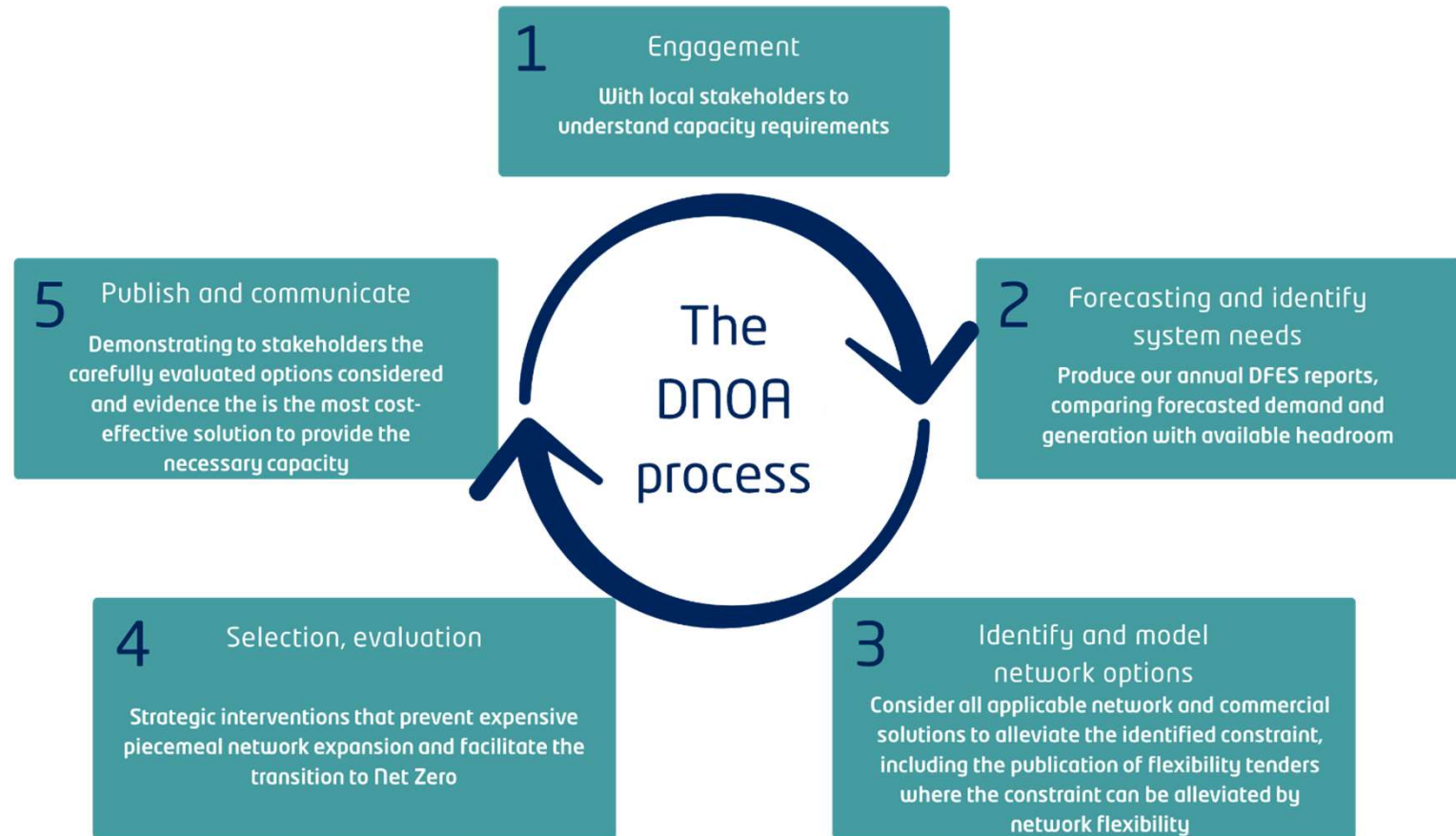
typical underground LV network



Distribution Network Options Assessment Overview



We will soon publish our first annual DNOA document. This will then be refreshed each September throughout RIIIO- ED2



Questions



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Panel discussion

Helen Norris

*Stakeholder Engagement and Responsibility
Framework Manager*

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Break

50



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Connections and the application Process

Steffan Jones

Head of Connection Quotations

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Structuring the team to meet the needs of our customers



Planning

- **PACE Team**

Pre-Application Support | Surgery Sessions | Initial Scheme Development

Contract

- **Quotations Team**

Network Study | Estimate & Quotation | Acceptance & Contract

Build

- **Delivery Team**

Design & Procurement | Installation | Commissioning & Energisation

Importance of strategic relationships & early engagement



- ENWL will be developing relationships with key stakeholders across a number of teams
 - DSO, Customer, Community and Connections for example
- Key is early engagement so that we can ensure that your journey through to Connections is efficient, occurs at the right time for your project and sets up the Connections Process to delivery on your scheme needs
- Every scheme is unique, and we will look to provide a Customer Journey tailored to your needs. To do this we need to start that process while there is sufficient time to understand what that journey needs to look like
- **The earlier you engage the better** – we can then develop ideas and potential solutions ahead of formal applications. Tailoring the application(s) to best deliver the overall scheme
- Our Quotations Team is split into specialist teams that provide expertise across all sectors of Connections, covering for example; large scale generation, commercial demand, secondary or local network connections and LCT
- We are currently developing a LCT function within our PACE Team focused on the LA/HA stakeholder group

Managing capacity and the grid



- There are constraints on the network and the volume and scale of applications is growing both for demand and generation
- However:
 - Only generation schemes with an installed capacity of 1MW or greater require National Grid consent.
 - Demand schemes currently don't require National Grid consent (at a scheme level)
- LCT at small scale is not impacted by current Transmission / Grid constraints
- It can, however, have an impact on the local network and we may need to undertake enabling or reinforcement works ahead of your scheme being completed



Quick review of the connections process



- There are defined process we need to follow
 - Unless you fall in to “connect & notify” processes, you will need to submit an application – either for a new connection to the network or to modify an existing one
 - This will result in a formal offer that will need to be accepted in order to progress
 - An offer is typically valid for 6 months, but this can change under certain situations
 - We will not undertake any works until have instructed us to proceed (accepted)
- Our processes are in place to ensure we treat everyone fairly
 - We cannot deviate from our processes or our licence obligations
 - We cannot enter in to “commercial negotiations”
 - We can ensure that your Connections journey is tailored to your scheme and support you in that journey
- Engage earlier, ahead of your application, to maximise the opportunities to get the most optimal solution

Roundtable discussion





- What do you consider to be the key areas where ENWL can support you in your transition to LCTs/net zero?
- Have you had any experiences with other DNOs or utility providers that you think are examples of exceptional service?

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Your feedback

Stay connected...



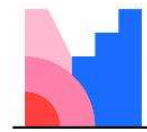
www.enwl.co.uk

Mentimeter polling



We really value your feedback:

- Open web browser
- Head to www.menti.com
- Use the code **7549992** to access feedback polling



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Or use QR code

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Thank you

Contact us: stakeholderengagement@enwl.co.uk

Stay connected...



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