

Liverpool City Region Combined Authority

Response to OFGEM RIIO – 3

Call for Evidence re: Business Plans for 2026-2031

LCRCA welcome the opportunity to respond to this OFGEM consultation but remain concerned at the pace of change to enable greater electrification in line with our ambitions to be one of the first regions in the UK to decarbonise, largely through electrification.

Purpose

This response is issued by **Liverpool City Region Combined Authority** (LCRCA) in relation to the OFGEM consultation on the RIIO – T3 Business Plan submitted by National Grid Electricity Transmission (NGET).

Response due by 10 February 2025.

[Call for Evidence on the Electricity Transmission, Gas Transmission and Gas Distribution Business Plans for RIIO-3](#)

National Grid T3 Business Plan - [Homepage | RIIO-T3](#)

Introduction

LCRCA is the MCA for Halton, Sefton, St Helens, Knowsley, Liverpool and Wirral Local Authority Areas, with a combined population of over 1.6 Million, led by Mayor Steve Rotherham.

LCRCA have a published five-year climate action plan (5YCAP) approved in July 2023, and targeting attaining Net Zero by 2040. Our current Corporate Plan (link below) developed following Mayoral elections in May 2024, is now aspiring to meet 2035 decarbonisation of our buildings, industrial and transport sector activities in Liverpool City Region (LCR).

[Corporate-Plan-2024-28.pdf \(liverpoolcityregion-ca.gov.uk\)](#)

The Liverpool City Region (LCR) is at the centre of the North-West Plans for decarbonisation that were summarised in the £208 Bn Net Zero North West Investment Prospectus (linked below) and shared with Government

[NZNW Economic Investment Prospectus \(netzeronw.co.uk\)](#)

The LCRCA ambition to attain Net Zero was developed on aligning to the Customer Transformation scenario of the Future Energy Scenarios, with a bias toward electrification, and assumes early adopter actions across the region. The approach is migrating to an electricity engagement pathway in line with Future Energy scenario 2024. Net Zero will only be attained in Liverpool City Region by halving overall energy use – eradicating the use of [unabated] fossil fuels. To attain this in 2035, significant increase in capacity and connection is required in the NGET Transmission System and in the SP Energy Networks distribution Systems.

Role Of Mayoral Combined Authorities (MCA)

The ability for leading MCAs, such as Liverpool City Region Combined Authority to assist in the mission-led delivery of Net Zero was proposed to the Secretary of State, DESNZ in the MCA roundtable on 5 Dec 2024. This includes MCA's targeting the attainment of Net Zero well before 2050, as first movers. This needs to be enabled by differentiated thinking by OFGEM, NGET and other utility providers in working to the same pace – and not restraining the ability of MCAs to assist in the energy transition.

Background

The LCRCA Corporate plan and 5-year climate action plan, look at the supply, demand and consumption of energy and the need for decarbonisation across three sectors (or pillars) – these are buildings, industry and transport.

Clean Energy Supply

Our regional clean energy supply pathway includes significant portfolios of development:

- tripling offshore wind production off Liverpool with the addition of Awel y Mor, Mona, Morgan and Morecambe Offshore Wind Farms – these will add to the 13 operational wind farms off the North-West coast.
- Establishing the UK's leading industrial decarbonisation cluster through the HMG Track 1 HyNet scheme and then expanding low carbon Hydrogen and CCuS through Track 1 Extension schemes.
- Exploring the potential for around 250 MW of Green Hydrogen to accelerate transport and industrial decarbonisation in areas of LCR that will not be served by the HyNet production, transport and storage system in the next ten years.
- Developing the giga-watt scale Mersey Tidal (range) project to serve the growing demand for electrical heat and transport in the port city region of Liverpool.

The current LCR electrical demand is around 6 TWh annually and this is expected to double to around 12 TWh, with a corresponding significant decrease in fossil fuel use from current levels of c23 TWh.

LCR is at the centre of the North-West Transmission Grid, but generally served by a 275 kV system, and is generally a net exporter of electricity – including substantial flows to the Midlands.

Buildings

Our regional plan for Buildings includes ;

- Decarbonising our 250 public buildings across the LCRCA and six LA's estate
- Working across the wider 'One Public Estate' and 3,500 buildings in LCR
- Working to decarbonise our residential sector with over 720,000 dwellings
- Looking to meet new build targets in the region of 70,000 in next decade
- Working with Commercial and Business sector to progress Heat Networks

Industry

Our regional plan for Industry is based on a combination of fuel switching, carbon capture and electrification and includes;

- Creating new Hydrogen Pipelines for energy intensive industries such as Glass in St Helens
- Adding Carbon capture to EFW plants and other difficult to address facilities
- Addressing electrification in industry sectors where practical, especially across large industrial estates and clusters such as Kirkby, Halewood, Bromborough and Runcorn
- Using our Freeport and Brownfield sites for new industries across manufacturing and data centres

Specific Response to Consultation

General

We welcome the increased engagement with National Grid Electricity Transmission (NGET) in the last two years, and since June 2023 we have held four specific meetings related to the Transmission System in Liverpool City Region (LCR).

NGET are engaging and starting to recognise the developments that are planned in LCR, but the challenges of realising the energy transition and our ambition to meet Net Zero by 2035 are not represented in the current Business Plan for 2026-2031.

1. Pace and Scale of North-West activity in NGET Business Plan

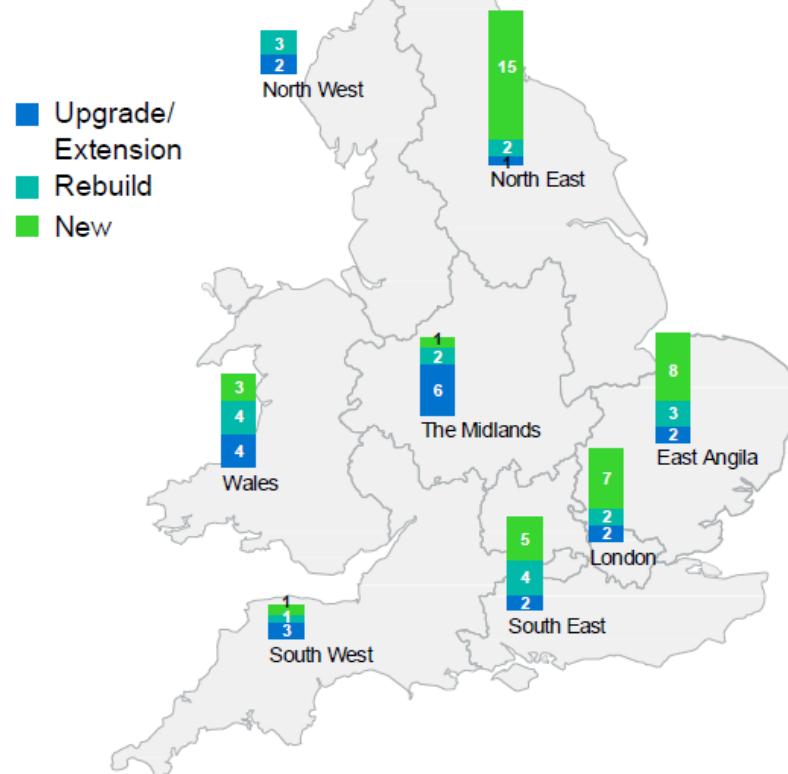
KEY THEME - There is insufficient investment in T3 to enable the MCA ambitions of Liverpool and Manchester, and the wider North-West Area of Cheshire, Lancashire and Cumbria to be attained, in terms of development and transition to Net Zero through electrification.

1A. Overall investment in RIIO-T3

The NGET T3 business plans show around £1.3 Bn of the planned £35 Bn spend to be allocated to works in the North-West, (page 11) - too little for a region of around 10 m people, of which LCR is 16%. The map below shows that there are no new substations planned and only 5 subject to upgrade/rebuild. This will not meet our ambitions for decarbonisation for 2035.

Substation investment by network region

(Number of substations undergoing major activity)



1B. Major Energy Supply Projects in North-West

NGET T3 plan does not fully take account of existing and new generation.

The transmission capacity in North-West must be capable of dealing with existing generation, including the recently announced life extension of the nuclear power stations at Heysham, past 2025 and 2027, as these stations will now operate longer. This was not known at the time of T3 submission.

The significant addition of new Offshore Wind capacity in the North-West, around 4GW, through projects that are well developed and will be part of the forthcoming CFD Allocation Rounds to achieve Final Investment Decisions. The four projects are in advanced stages of DCO and imminent for Investment and construction start in next two years and hence demonstrate significant additional supply that will come on-line by 2030. A sample of the evidenced projects is attached as Table 1.

The programme for Scot Wind and the need for an additional 4GW of onshore transmission capacity on the west of the UK – through the North-West – is also expected.

Recent studies have also indicated around 2 GW of solar capacity could be developed in next 5-10 years in North-West. The first project is now identified at Frodsham at 100 MW.

Green Hydrogen in the region of 8GW for the North-West and at least 250 GW in LCR has also been identified in Net Zero North West Studies by Equans.

Table 1. – Indicative major projects in North-West - Liverpool City region.

NZNW Theme	Marine Technology (Others)	Project	Developer	Scale Turbines / MW /MT (Estimate)	DCO status	Status Date
	TECHNOLOGY	Project	DEVELOPER	SCALE		
13	Offshore Wind	Awel y Mor	RWE	Up to 50 - 750 MW	Granted	Sep-23
13	Offshore Wind	Mona	BP - EnBW	Up to 96 - 1500 MW	Statutory Consultation	Jun-23
13	Offshore Wind	Morgan	BP - EnBW	Up to 96 - 1500 MW	Statutory Consultation	Jun-23
13	Offshore Wind	Morecambe	COBRA - Flotation	Up to 35 - 480 MW	Statutory Consultation	Jun-23
13	Offshore Wind	Moor Vannin	Orsted	Up to 1400 MW	Scoping Submitted	Oct-23
11	Tidal Range	Mersey Tidal	LCRCA	Up to 28 - 700 MW	Early Development	May-24
11	Tidal Range	Mostyn Sea Power	Mostyn Sea Power	Up to 16 - 300 MW	Early Development	May-24
11	Tidal Range	Wyre	Natural Energy Wyre	Up to 8 - 150 MW	Early Development	May-24
11	Tidal Range	Morecambe	Northern Tidal Power Gateway	Up to 132 - 4,000 MW	Early Development	May-24
11	Tidal Range	North Wales Coastal Lagoon	North Wales Tidal Energy & Coastal Protection Ltd (NWTE)	Up to 100 - 2500 MW	Early Development	May-24
1	CCUS	HyNet	ENI		Pipeline DCO Granted	Mar-24
1	CCUS	Peak Cluster	Spirit / Progressive		Early Development	Apr-24
13	OSW FLOW#1	TBC	TBC	500 MW	PDA Site Not identified	May-24
Grid	Grid Onshore Connector	Western Link 3	NG - routed on land through Mersey Ring	4,000 MW	Early Development	May-24
Grid	Grid Offshore Connector	Western Link 2	NG / SHE	2,000 MW	Early Development	May-24
Grid	Interconnector	Maresconnect	Irish Private Co	750 MW	Early Development	May-24
Grid	Offshore Wind Decom	Burbo Bank	Orsted	90 MW	Decom c. 5 years or P2X	May-24
	Solar	Frodsham	Cubico	100 + 50 MW		May-24

This typical table of supply side activity was previously provided by LCRCA in the response to the t-CSNP2 consultation by OFGEM in 2024.

The studies in growth of energy supply opportunities that were included the Green Energy Task Force report, for Liverpool City Region. Manchester and Cheshire are generally not enabled in T3 business plan.

1C. Mersey Ring Upgrade (MRU)

NGET T3 plan does not plan for the delivery of the upgrade of the current 275 kV circuits to Grid Supply Points in LCR to 400 kV and does not include provision that any imminent Super Grid Transformer (SGT) replacements in the period will include an additional 400 kV primary tapping to allow MRU circuits to be ‘turned in’ to existing Grid Supply Points in the future.

The need for extensive works around Liverpool City Region is important to allow National Transmission and regional energy flows to be accommodated as we strive for Net Zero in 2035.

This includes the strategically important upgrade of the Mersey Ring circuit upgrades (currently operating at 275 kV) and identified as MRU1 and MRU2 that was included in the ESO tCSNP2 report

The case for the Mersey Ring circuit upgrades is related to technical operational constraints and the need for increased capacity both as part of the National Transmission System, to handle North – South flows from ScotWind, and to recognise the lack of capacity for electrification at the three Grid Supply Points (GSP) that feed the northern side of the Mersey in LCR (namely Kirkby, Rainhill and Lister Drive), and the ability then to release capacity on the south side of the Mersey at Birkenhead GSP.

We recognise that the ESO published plan indicates that MRU1 and MRU2 projects were deemed low maturity but feel that this is now significantly out of date, and that the understanding on the need for change has progressed significantly, given the discussions LCRCA have held with ESO, NGET and SPEN MANWEB, to demonstrate the evolving development and deployment situation in LCR and the North-West.

We think that the T3 plan must provide for more capacity in LCR and the North-West to accommodate the Net Zero ambitions and then change in nuclear generation lifetimes.

Conclusion

To attain the rapid growth in clean energy supply and growth of electrification in transport, buildings and industry to support the economies of the North-West, then we urge the acceleration of plans for upgrading the Mersey Ring to 400 kV at the earliest opportunity.

We encourage that all current planned works include the facility for 400 to 275 kV connection at day one to prevent the need for a second major outage / access window in the future.

Pace and Scale of Development activity in LCR and North West

KEY THEME - There is insufficient investment in T3 to enable the MCA ambitions of Liverpool and Manchester, and the wider North-West Area of Cheshire, Lancashire and Cumbria to be attained, in terms of development and transition to Net Zero through electrification.

2A. LCR Spatial Development Strategy

Liverpool City Region Combined Authority have drafted and consulted on a Spatial Development Strategy (SDS) which in over 200 pages describes the development vision for the next two decades. This is the first SDS outside of Greater London.

[Towards a Spatial Development Strategy](#)

LCRCA expect the NESO, NGET and DSO/DNO to work together to ensure that the development and growth ambitions of Liverpool City Region are understood as requirements and horizons for capacity change are well scoped and understood by all parties.

LCRCA have now started to meet directly with the NGET, with SPEN MANWEB present, to ensure that the Spatial Development Strategy (SDS) for Liverpool City Region and major development projects (clean energy supply, new residential properties to 70,000+) etc are fully visible.

Our regional plan for decarbonisation is developing with discrete areas of new development and of retrofit and these will impact directly to the capacity of Primary substations, 132 kV and current 275 kV substations in a way that so far has not been anticipated by the NESO, NGET or DNO.

Conclusion - The T3 plan is deficient in citing the LCRCA SDS or other detail scenarios that are available and in essence is likely to lead to a lack of pace or lag in electrical systems that have capacity and connection to attain the ambitions set out by the Mayor and Chief Executives.

2B. Development ambition impact to Demand and Additionality on wider investments

Liverpool City Region

LCRCA working with our six Local Authorities and with the wider North-West region are looking to develop new assets and decarbonise existing assets at pace.

The current ED2 distribution system control period, for SP Energy Networks MANWEB in the LCR area, is providing only 30 MVA of new capacity. This is less than we expected or needed, when confirmed, for the Net Zero target of 2040, that existed at the time of Award.

We have worked with SP Energy Networks to provide detail of our LCR development plans for the next decade, and this is summarised later in Table 2. The additional demand equates to between 1 and 3 GW in the next decade.

The highly optimistic view of new connections, generally demand driven, at nearly 3 GW is based on a summary overview of LCR region wide, and our plan for interventions in buildings, residential, transport and industrial sectors. This 3 GW enables the journey to Net Zero 2035.

Place and Buildings

In the development of LCR as a place, the public building and housing sectors have over 800 MW of future connections that may appear through;

- A number of major developments such as Liverpool Waters, Wirral Waters, Liverpool North,
- Our portfolio of new build housing,
- The retrofit of public buildings, including public building decarbonisation and heat networks
- The retrofit of social housing across Warm Homes programme

As an example - Liverpool Waters (residential, Everton FC, etc) is likely to trigger a major 132 kV, 2 x 66 MVA given the primary (33 kV) and 11 kV - it is not clear how this will be achieved given the current capacity at Grid Supply Points, and the mismatch in dates and information in the SPEN ED3 plans and NGET T3 plans.

Mobility (or Transport)

In driving the decarbonisation of Transport, including the growth (modal shift) of public transport and active travel, then over 500 MW of new connections may appear through;

- New Battery Electric Vehicles for Bus and cars
- DFT- led City Region Sustainable Transport Solutions (CRSTS)
- Heavy Duty Vehicles
- Maritime decarbonisation as a port city region
- Aviation as a regional airport

Industry (and data centres)

In driving the decarbonisation of industry, we are anticipating three major changes to ensure survival of existing industry and growth and prosperity of new industry. These are;

- Fuel switches to low carbon Hydrogen
- Carbon Capture
- Switch to electrification

The development of industry in LCR is estimating around 1500 MW of new connections may appear via;

- Delivery of HyNet – already supported through £21 Bn of DESNZ funding
- New development of Industrial sites as per our SDS plan
- Retrofit and electrification of industrial facilities in major clusters.
- Data Centres and AI knowledge development

Note – LCR have recently constructed a 200 km high-speed data network known as LCR connect to improve connectivity across the region, and link into the transatlantic fibre network that connects into LCR.

We welcomed the visit of OFGEM Chair and Chief Executive to LCR on 27 Jan 2025 to understand the development of industrial clusters

Conclusion - The T3 plan is deficient in planning works and activity that support the holistic development and future system needs of LCR. The development ambition across buildings, transport and industry that will drive major new capacity requirements in the Grid Supply Points at Kirkby, Lister Drive, Rainhill, Frodsham and Birkenhead.

We would also note that central Government programmes for industrial decarbonisation, such as HyNet, and for Ai and Data clusters need to be facilitated by NGET T3 plan.

M W Land

7 February 2025

Table 2. – Indicative development across demand sectors in Liverpool City region.

Sector	Project Name	Description	Certainty (R/A/G)	Grid Ref	Estimate of Total power
Public Sector Buildings	PSBD Retrofit	Energy Transition Projects for LCR Public Sector buildings			200
Public Sector Buildings	New Facilities	New Public Estate Buildings and facilities by 2035			30
Public Sector Buildings	New Solar	UKIB loan funding scheme for rooftop solar on council buildings			50
Commercial Development	Town Centre schemes	Town Centre redevelopment across LCR			50
Housing	Social Landlord Retrofit	Part of 200k houses			200
Housing	Social Landlord New	New 10k property build			
Housing	Private Landlord Retrofit	Part of 200k houses			
Housing	Private Landlord New	New 5k property build			
Housing	Private Owner Retrofit				
Housing	Private Owner New	New 70k property build			200
Housing	Major developments	Developments above 1k homes			100
Housing	Heat Networks	50 Schemes for 2035 - others in PSB			10
Transport	Bus Total - Depot Retrofit	1000 bus fleet to B-EV			120
Transport	Rail Stations New	4 New stations			12
Transport	Rail Stations New	Skelmersdale			
Transport	Rail Stations New	Headbolt Lane			
Transport	Rail Stations New	Baltic			
Transport	Rail Stations New	Carr Mill			
Transport	Rail Stations New	Woodchurch			
Transport	Rail Stations New	Woodchurch			
Transport	Rail Stations New	Daresbury			
Transport	Rail Stations Retrofit				
Transport	Rail system extension	upto 10 new Feeder stns			30
Transport	CRSTS1 other	27 schemes			30
Transport	CRSTS2 other	30 schemes			100
Transport	CRSTS 3 ff	30 schemes			100
Transport	New EV Chargers	LEVI Phase 1			15
Transport	New EV Chargers	LEVI extension scope (hubs)			45
Transport	New EV Chargers	ORCS			15
Transport	Aviation	B-EV adaption			50
Transport	Maritime	Shore to Ship and decarbonisation			20
Industrial	Solar	Sites currently restrained			10
Industrial	Retrofit and Transition	Emerging Plan			300
Industrial	New	Sites as per SDS and Data Centres			730
Industrial	New Green Hubs	Electrolyser sites			200
Industrial	Major Transition	Current Intensive User sites - NZNW			300
LCRCA TOTAL	ALL SITES IN DEVELOPMENT	All sites moving as early as possible			2917
		Low Case			1166.8
		Mid Case			1458.5
		High Case			2333.6