# Distribution Network Options Assessment (DNOA) Report November 2024

# **Celectricity**

Bringing energy to your door

Additional information: https://www.enwl.co.uk/dfes https://www.enwl.co.uk/ndp https://www.enwl.co.uk/future-energy/flexibility-hub/latest-requirement/

Stakeholder personas - focus on:

# **Distributed Generation Operators**

### **Battery Storage Operators**

How can these stakeholder personas use our DNOA?

Flexibility services	
<ul> <li>Understand current and future needs of DSO flexibility services across the region.</li> <li>Identify opportunities for additional revenues from their participation to flexibility markets.</li> </ul>	<ul> <li>Combine DNOA of understand when new connections.</li> <li>Identify strategic.</li> </ul>

Distribution Network Options Assessment (DNOA) Report



### What DSO support do these stakeholders want?

### Support in their planning and operations making informed decisions about energy market opportunities and connection of their assets to the distribution network.

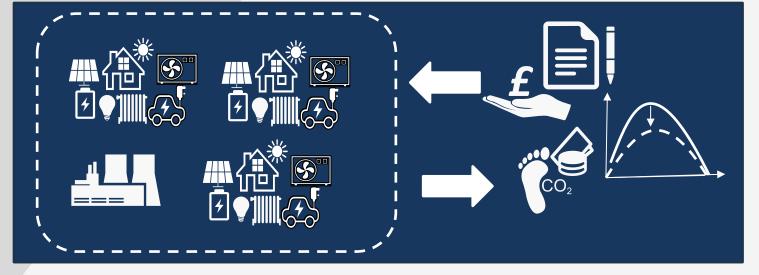
Reinforcement

decisions with the Network Development Plan to n and where capacity will be released to facilitate

c/optimal locations for new connections.



Additional information: <u>https://www.enwl.co.uk/dfes</u> <u>https://www.enwl.co.uk/ndp</u> <u>https://www.enwl.co.uk/future-energy/flexibility-hub/latest-requirement/</u>



Stakeholder personas - focus on:

#### What DSO support do these stakeholders want?

# Flexibility Aggregators Domestic and I&C Customers

### Inform investment and operational decisions while fostering customer-oriented initiatives on flexibility services.

#### How can these stakeholder personas use DNOA?

• Identify opportunities for revenues from their participation in DSO •	
<ul> <li>flexibility markets, informed by forthcoming uptakes of LCTs.</li> <li>Increase confidence in DSO flexibility services through increased</li> <li>transparency by combining DNOA with other DSO publications (incl.</li> </ul>	<ul> <li>Understand plant from fully exploiti</li> <li>Understand the exploiting of flexibility servior</li> <li>Understand DSO uptakes that in the capabilities.</li> </ul>

Distribution Network Options Assessment (DNOA) Report

#### Reinforcement

nned reinforcement to prevent network limitations ting resources/assets capabilities.

extent of energy bill savings through the deployment vices to defer more expensive network reinforcement. ) plans to release capacity that facilitates local LCT turn will unlock additional local flexibility service



Additional information: https://www.enwl.co.uk/dfes https://www.enwl.co.uk/ndp https://www.enwl.co.uk/future-energy/flexibility-hub/latest-requirement/ https://www.enwl.co.uk/about-us/regulatory-information/our-business-plan-2023-2028/businessplan2023-2028/

Stakeholder personas - focus on:

### **Local Authorities**

How can these stakeholder personas use DNOA?

	Flexibility services	
•	Inform Local Area Energy Planning (LAEP) and whole-energy system thinking with inputs to whole-system cost assessments. Understand social value from DSO planning through cost-efficient release of network capacity to facilitate local government plans. Identify opportunities for energy saving programmes and revenues from flexibility services.	Combine DNOA understand whe local government Combine DNOA understand the customers from lo

Distribution Network Options Assessment (DNOA) Report



### What DSO support do these stakeholders want?

### Promote and support targeted sustainable developments and initiatives in local plans.

#### Reinforcement

decisions with the Network Development Plan to n and where capacity will be released to facilitate plans for economic growth and decarbonisation. decisions with NDP and DNO business plans to timeline, cost savings and benefits for local ocal network investments.



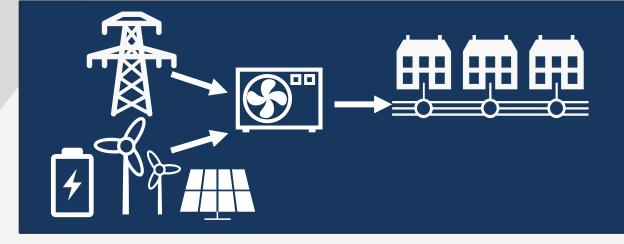
Stakeholder personas - focus on:

### **Network Operators / iDNOs**

#### How can these stakeholder personas use DNOA?

efficiency and sustainability.	Flexibility services	
	<ul> <li>implement innovative technology solutions to improve network</li> <li>efficiency and sustainability.</li> <li>Enhance data exchanges on flexibility services between network</li> </ul>	rk inform their plans • Enhance data e

Distribution Network Options Assessment (DNOA) Report



#### What DSO support do these stakeholders want?

### Support investment and operations to exploit cross-vector synergies and enhance whole-system thinking.

#### Reinforcement

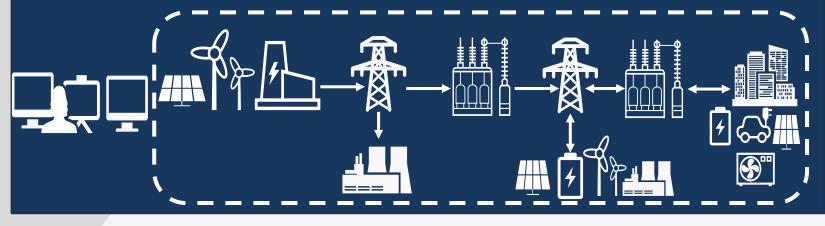
Jork constraints and planned reinforcement to better

exchanges on network reinforcement between es resulting in improved whole-system planning.



Additional information: https://www.enwl.co.uk/dfes https://www.enwl.co.uk/ndp https://www.enwl.co.uk/future-energy/flexibility-hub/latest-requirement/ https://www.enwl.co.uk/about-us/regulatory-information/our-business-plan-2023-2028/businessplan2023-2028/

### Stakeholder personas – focus on: **National Energy System Operator** (NESO)



### Inform whole-system planning coordination with a holistic and transparent view of the granular DSO planning and decision-making.

#### How can these stakeholder personas use DNOA?

	Flexibility services		
•	Understand current and future DSO flexibility service requirements at sub-regional and granular level. Enhance transparency in use of flexibility services in network planning and network investment. Inform NESO and RESP pathways with inputs to whole-system cost assessments (combined with information from DSO flexibility tenders).	•	Combine DNOA de Plan to understan the associated loca Combine DNOA d understand the t customers from loc

#### Distribution Network Options Assessment (DNOA) Report

#### What DSO support do these stakeholders want?

#### Reinforcement

ecisions with the DFES and Network Development nd when and where capacity will be released and cal drivers to inform RESP whole-system pathways. decisions with NDP and DNO business plans to timeline and cost savings and benefits for local cal network investments.



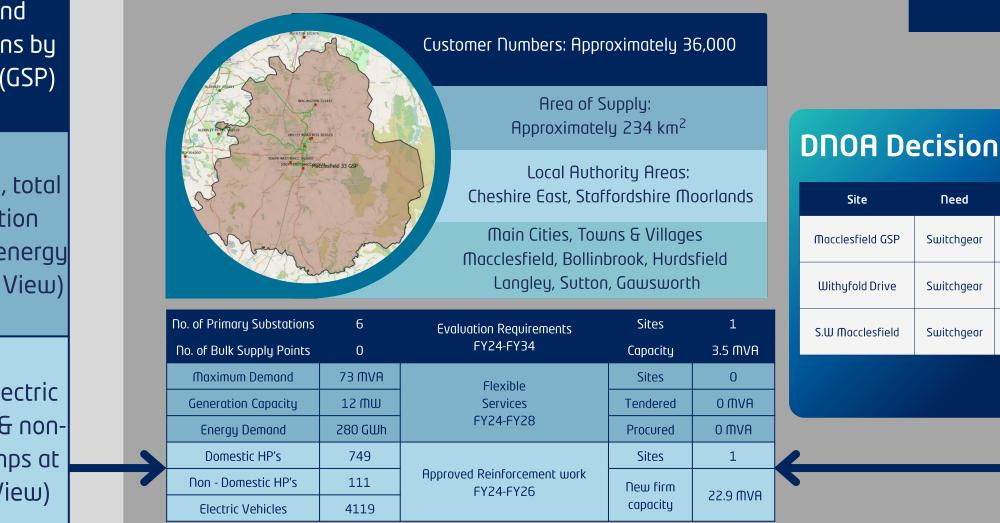
### <u>Report Structure</u>

Number of Bulk Supply Points (BSPs) and Primary Substations by Grid Supply Point (GSP)

Maximum demand, total installed generation capacity and total energy at GSP (FY24 Best View)

Total number of electric vehicles, domestic & nondomestic heat pumps at GSP (FY24 Best View)

#### **MACCLESFIELD GSP**



A common template for the reporting of data at each GSP substation has been developed. The boxes on the left provide an overview of the substations served from the GSP along with technical insights into the existing demand, generation and LCT uptake. The boxes on the right provide an overview of future evaluation requirements, quantities of flexible services tendered and procured. The DNOA decisions are based on the 2024 Network Development Plan (online available at: www.enwl.co.uk/ndp).

Distribution Network Options Assessment (DNOA) Report

#### The DNOA decisions

eed	Tendered for Flex	Signposted for Flex	DNOA Recommendation
chgear	×	X	Reinforce
chgear	$\checkmark$	X	Reinforce
chgear	×	×	Load Transfer

Quantities of sites which will be evaluated (flexible services vs reinforcement) over the next 10 years (capacity taken at FY34)

Ouantities of tendered and procured flexible services as currently published (tenders accumulated from FY24-FY28)

Quantities of approved reinforcement work on sites where flexibility services were not available



### **BREDBURY GSP**



No. of Primary Substations	23	Evaluation Requirements	Sites	6	Long
No. of Bulk Supply Points	4	FY24-FY34	Capacity	56 MVA	
Maximum Demand	256 MVA		Sites	4	Ма
Generation Capacity	41 ጠሠ	Flexible Services FY24-FY28	Tendered	151.2 MVA	Rom
	1456 GWh			0 (0.1 MVA	
Energy Demand			Procured	contract	Longsig
				pending)	
Domestic HP's	2979		Sites	0	Vernon I
Non - Domestic HP's	421	Approved Reinforcement work FY24-FY26	New firm	0 MVA	
Electric Vehicles	12959		capacity		

#### Distribution Network Options Assessment (DNOA) Report

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
ern Gateway (New Primary)	Transformer	×	×	Reinforce
Moss Side	Transformer	$\checkmark$	X	Flexibility
Levenshulme	Transformer	X	X	Reinforce
Heaton Moor	Transformer	X	$\checkmark$	Load Transfer
Heaton Norris	Transformer	X	$\checkmark$	Flexibility
Longsight	Transformer	X	$\checkmark$	Load Transfer
Marple	Transformer	$\checkmark$	X	Flexibility
Romiley	Transformer	X	$\checkmark$	Flexibility
_ongsight BSP	Transformer	X	$\checkmark$	Load Transfer
ernon Park BSP	Swithchgear	X	X	Reinforce



### **CARRINGTON GSP**



No. of Primary Substations	17	Evaluation Requirements	Sites	4
No. of Bulk Supply Points	4	FY24-FY34	Capacity	6.5 MVA
Maximum Demand	235 MVA	Flexible	Sites	1
Generation Capacity	92 MW		Tendered	0 MVA
Energy Demand	1063 GWh	FY24-FY28	Procured	0 MVA
Domestic HP's	2302		Sites	1
Non - Domestic HP's	308	Approved Reinforcement work FY24-FY26	New firm	18 MVA
Electric Vehicles	10251		capacity	TO IIIVH

#### Distribution Network Options Assessment (DNOA) Report

### **DNOA Decision**

Trafford

iite	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
sen Road	Circuit	×	×	Load transfer
Park North	Transformer	X	×	Reinforce



### HARKER / HUTTON GSP GROUP (1/2)

Customer Numbers: Approximately 235,000	DNOA
HELERCOMODIA 609820 WREATER 605825 HILTONIND 609825 HILTONIND 609825	Site
SEATOR FOR STATE OF S	Conist
Local Authority Areas:	Alsto
Cumberland, Westmorland and Furness,	Morton Park
Lancaster, North Yorkshire, Northumberland	Easta
DANTON RECEIVED AND THE	Egrem
Carlisle, Penrith, Barrow-In-Furness, Workington, Whitehaven, Kendal	James
Workington, Whitehoven, Kehou	Kend

No. of Primary Substatio	ns 93	Evaluation Requirements	Sites	18	Newl
No. of Bulk Supply Point	is 10	FY24-FY34	Capacity	124 MVA	Seberg
Maximum Demand	577 MVA	Clavible	Sites	12	Whas
Generation Capacity	473 MW	Flexible Services	Tendered	341.8 MVA	
Energy Demand	2872 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	Wigto Askam &
Domestic HP's	6514		Sites	4	C 11
Non - Domestic HP's	994	Approved Reinforcement work FY24-FY26	New firm		Emble
Electric Vehicles	21501	ΓΙΖ4-ΓΙΖΟ	capacity	46 MVA	

#### Distribution Network Options Assessment (DNOA) Report

### **OA Decision**

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation		
Coniston	Interconnection	$\checkmark$	X	Flexibility		
Alston	Interconnection	$\checkmark$	X	Flexibility		
on Park & Pirelli	Transformer	X	$\checkmark$	Flexibility		
Easton	Interconnection	$\checkmark$	X	Flexibility		
Egremont	Transformer	X	$\checkmark$	Flexibility		
James St	Interconnection	X	$\checkmark$	Flexibility		
Kendal	Transformer	$\checkmark$	X	Flexibility		
Newby	Transformer	$\checkmark$	X	Flexibility		
Sebergham	Interconnection	$\checkmark$	X	Flexibility		
Whasset	Transformer	X	$\checkmark$	Flexibility		
Wigton	Switchgear	$\checkmark$	X	Flexibility		
kam & Dalton	Circuits	X	$\checkmark$	Flexibility		
Embleton	Switchgear	X	$\checkmark$	Flexibility		
Costiouss payt page						

#### ...Continues next page



### HARKER / HUTTON GSP GROUP (2/2)

## **DNOA** Decision

Site	Need	Tendered for Flex	Signposted for Flex	[ Recom
Gillsrow	Interconnection	$\checkmark$	X	Fle
Newbiggin on Lune	Interconnection	$\checkmark$	X	Fle
Yealand	Interconnection	$\checkmark$	X	Fle
Carlisle BSP	Transformer	X	X	Re
Kendal BSP	Transformer	X	X	Re
HDA 1 & 2	Switchgear	X	X	Re
Leyland National	Switchgear	X	X	Re
Bowaters	Switchgear	X	X	Re
Stainbure & Siddick BSP	Transformer	X	X	Re

...Continued

Distribution Network Options Assessment (DNOA) Report

#### DNOA nmendation

- exibility
- exibility
- exibility
- einforce
- einforce
- einforce
- einforce
- einforce
- einforce



### HEYSHAM GSP



No. of Primary Substations	9	Evaluation Requirements	Sites	5
No. of Bulk Supply Points	2	FY24-FY34	Capacity	35.3 MVA
Maximum Demand	110 MVA	Flexible	Sites	1
Generation Capacity	68 MW	Services	Tendered	20.7 MVA
Energy Demand	569 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA
Domestic HP's	1297		Sites	0
Non - Domestic HP's	192	Approved Reinforcement work FY24-FY26	New firm	0 MVA
Electric Vehicles	4611		capacity	UIIIVH

#### Distribution Network Options Assessment (DNOA) Report

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
Claughton	Interconnection	$\checkmark$	×	Flexibility
Lancaster	Switchgear	$\checkmark$	X	Reinforce
Woodhill Lane	Interconnection	$\checkmark$	X	Flexibility
Lancaster BSP	Transformer	X	$\checkmark$	Flexibility



### KEARSLEY GSP (1/2)



No. of Primary Substations	37		Sites	17	
No. of Bulk Supply Points	7	Evaluation Requirements FY24-FY34	Capacity	153.2 MVA	Cheetho
Maximum Demand	510 MVA	Flexible	Sites	1	Bedfo
Generation Capacity	116 ጠሠ	Services	Tendered	23.1 MVA	
Energy Demand	2754 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	Chambe
Domestic HP's	6143		Sites	2	Crown
Non - Domestic HP's	809	Approved Reinforcement work FY24-FY26	New firm	147 MVA	
Electric Vehicles	22914		capacity	147 11101	

#### Distribution Network Options Assessment (DNOA) Report

### **DNOA Decision**

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
derick Road BSP	Transformer	✓	×	Flexibility
Trinity	Switchgear	×	X	Reinforce
Bolton BSP	Switchgear	×	X	Reinforce
Bury BSP	Switchgear	×	X	Reinforce
erton Town Centre	Circuit	×	X	Reinforce
Barbara St	Circuit	×	X	Reinforce
Cheetham Hill	Switchgear	$\checkmark$	X	Reinforce
Bedford	Transformer	X	×	Load Transfer
Chamberhall	Circuit	X	X	Reinforce
Crown Lane	Switchgear	✓	×	Load Transfer

#### ...Continues next page



### KEARSLEY GSP (2/2)

### **DNOA Decision**

#### ...Continued

Site	Need	Tendered for Flex	Signposted for Flex	Re
Frederick Road	Transformer	$\checkmark$	X	
Harwood	Interconnection	X	$\checkmark$	
Robert Hall	Transformer	X	X	
Westhoughton	Switchgear	X	X	
Radcliffe BSP	Transformer	X	$\checkmark$	
Atherton BSP	Transformer	X	X	
Westhoughton BSP	Transformer	X	X	

#### Distribution Network Options Assessment (DNOA) Report

#### DNOA ecommendation

Flexibility

Flexibility

Load Transfer

Reinforce

Load Transfer

Reinforce

Reinforce



### **KEARSLEY LOCAL GSP**



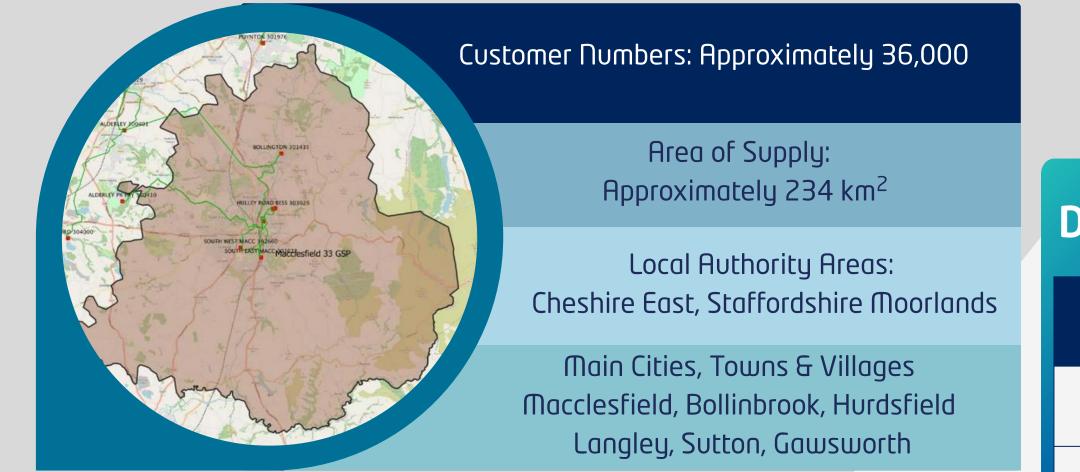
No. of Primary Substations	11	Evaluation Requirements	Sites	3
No. of Bulk Supply Points	0	FY24-FY34	Capacity	11.2 MVA
Maximum Demand	106 MVA	Flexible	Sites	1
Generation Capacity	25 MW	Services	Tendered	3.9 MVA
Energy Demand	628 GWh	FY24-FY28	Procured	0 (1.1 contract pending) MVA
Domestic HP's	1515		Sites	1
Non - Domestic HP's	165	Approved Reinforcement work FY24-FY26	New firm	22.9 MVA
Electric Vehicles	5396		capacity	22.5 11101

#### Distribution Network Options Assessment (DNOA) Report

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
Little Hulton	Interconnection	$\checkmark$	X	Reinforce
Moss Lane	Switchgear	$\checkmark$	X	Flexibility
Hill Top T11 & T12	Switchgear	×	X	Load Transfer



### **MACCLESFIELD GSP**



No. of Primary Substations	6	Evaluation Requirements	Sites	1	
No. of Bulk Supply Points	0	FY24-FY34	Capacity	3.5 MVA	
Maximum Demand	73 MVA	Flexible	Sites	0	
Generation Capacity	12 ጠሠ	Services	Tendered	0 MVA	
Energy Demand	280 GWh	FY24-FY28	Procured	0 MVA	
Domestic HP's	749		Sites	1	
Non - Domestic HP's	111	Approved Reinforcement work FY24-FY26	New firm		
Electric Vehicles	4119		capacity	22.9 MVA	

#### Distribution Network Options Assessment (DNOA) Report

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Withyfo

S.W Maa

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
sfield BSP	Switchgear	×	×	Reinforce
old Drive	Switchgear	~	×	Reinforce
icclesfield	Switchgear	X	×	Load Transfer



### PADIHAM GSP

#### Customer Numbers: Approximately 130,000

#### Area of Supply: Approximately 630 km<sup>2</sup>

Local Authority Areas: Hyndburn, Ribble Valley, Burnley, Rossendale, Pendle, North Yorkshire Main Cities, Towns & Villages Nelson, Settle, Clitheroe, Haslingden, Bolton By Bowland, Huncoat

	No. of Primary Substations	28	Evaluation Requirements	Sites	8	
	No. of Bulk Supply Points	4	FY24-FY34	Capacity	14.9 MVA	Ribblesdale T
	Maximum Demand	216 MVA	Clavible	Sites	5	
Ī	Generation Capacity	93 MW	Flexible Services	Tendered	116.4 MVA	Spring Co
	Energy Demand	1322 GWh	FY24-FY28	Procured	0 (1.3 contract pending) MVA	
	Domestic HP's	2083		Sites	1	Great Ha
	Non - Domestic HP's	428	Approved Reinforcement work FY24-FY26	New firm		Dalaaa
	Electric Vehicles	10942		capacity	0 MVA	Nelson

#### Distribution Network Options Assessment (DNOA) Report

### **DNOA Decision**

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
Bolton by Bowland	Interconnections	$\checkmark$	X	Flexibility
Settle	Interconnections	$\checkmark$	X	Flexibility
Flat Lane	Interconnections	$\checkmark$	X	Flexibility
Peel St	Interconnections	$\checkmark$	X	Flexibility
Church	Interconnections	$\checkmark$	X	Flexibility
Ribblesdale T13 & T14	Transformer	X	$\checkmark$	Flexibility
Spring Cottage	Switchgear	X	X	Reinforce
Great Harwood	Switchgear	X	X	Reinforce
Nelson BSP	Switchgear	X	X	Reinforce



### PENWORTHAM EAST GSP ROCHDALE SGT 1



Customer Numbers: Approximately 167,000

Area of Supply: Approximately 493 km<sup>2</sup>

Local Authority Areas: Hyndburn, Preston, Wyre, Blackburn with Darwen, Ribble Valley

Main Cities, Towns & Villages Preston, Blackburn, Darwen, Bamber Bridge

No. of Primary Substations	31	Evaluation Requirements	Sites	6	
No. of Bulk Supply Points	4	FY24-FY34	Capacity	40.3 MVA	Craggs Row
Maximum Demand	303 MVA	Flexible	Sites	1	
Generation Capacity	153 ጠሠ	Services	Tendered	40.8 MVA	Moor
Energy Demand	1663 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	Preston 6
Domestic HP's	3100		Sites	0	
Non - Domestic HP's	500	Approved Reinforcement work FY24-FY26	New firm		
Electric Vehicles	13384		capacity	0 MVA	

Distribution Network Options Assessment (DNOA) Report

### **DNOA Decision**

Catterall I

Lower Do

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
Waterworks	Interconnections	✓	X	Flexibility
arwen BSP	Switchgear	$\checkmark$	X	Reinforce
ມ & Bushell St	Transformer	X	X	Load Transfer
orside	Transformer	$\checkmark$	X	Reinforce
n East BSP	Switchgear	$\checkmark$	X	Flexibility



## PENWORTHAM WEST GSP - STANAH GSP GROUP (1/2)



Hall C	14	Sites	Evaluation Requirements	45	No. of Primary Substations
Higher L	93.8 MVA	Capacity	FY24-FY34	7	No. of Bulk Supply Points
	3	Sites	Flexible	432 MVA	Maximum Demand
Moss Side <del>ሬ</del> ያ	25.6 MVA	Tendered	Services FY24-FY28	207 ጠሠ	Generation Capacity
	0 MVA	Procured		2254 GWh	Energy Demand
Bowl	1	Sites	Approved Reinforcement work FY24-FY26	5483	Domestic HP's
		New firm		771	Non - Domestic HP's
	0 MVA	capacity		23422	Electric Vehicles

#### Distribution Network Options Assessment (DNOA) Report

### **DNOA Decision**

ite	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
ssall	Interconnections	$\checkmark$	X	Flexibility
am BSP	Switchgear	X	X	Reinforce
ny Bay	Interconnections	$\checkmark$	X	Reinforce
ey South	Transformer	$\checkmark$	X	Flexibility
Cross	Switchgear	×	X	Load Transfer
- Walton	Interconnections	$\checkmark$	X	Reinforce
- Seven Stars	Circuit	$\checkmark$	X	Flexibility
J Lane	Switchgear	X	X	Load Transfer

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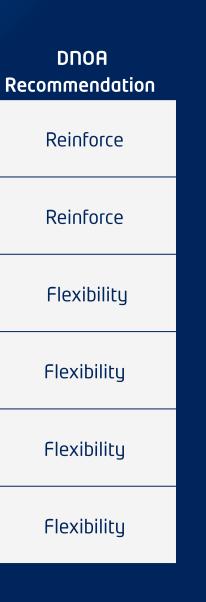
### PENWORTHAM WEST GSP - STANAH GSP GROUP (2/2)

### **DNOA Decision**

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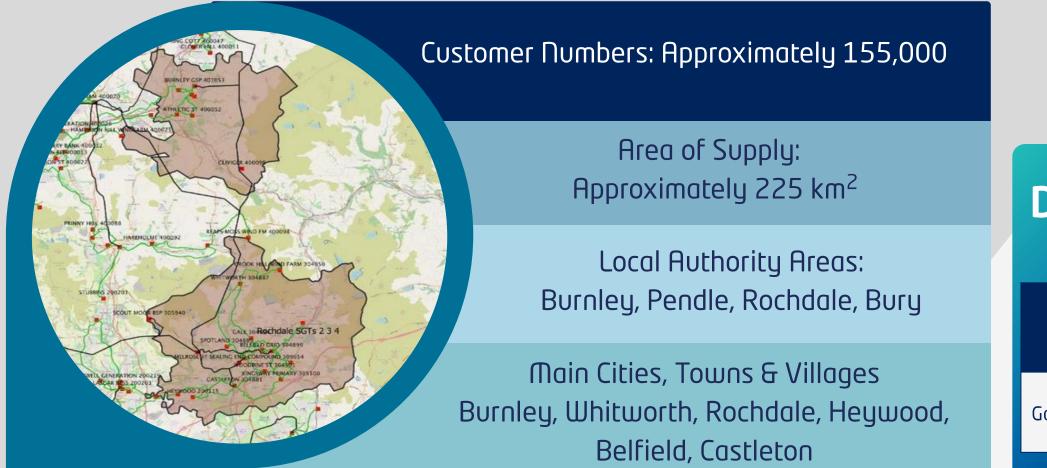
Site	Need	Tendered for Flex	Signposted for Flex	
Hanging Bridge	Interconnections	×	X	
Tarleton	Transformer	×	×	
Blackpool BSP	Switchgear	×	$\checkmark$	
Leyland BSP	Circuit	×	✓	
Peel BSP	Transformer	X	$\checkmark$	
Wrightington BSP	Switchgear	X	~	

Distribution Network Options Assessment (DNOA) Report





### **ROCHDALE SGTs 2 3 4**



No. of Primary Substations	17	Evaluation Requirements	Sites	1
No. of Bulk Supply Points	4	FY24-FY34	Capacity	3.9 MVA
Maximum Demand	201 MVA	Flexible	Sites	1
Generation Capacity	107 ጠሠ	Services	Tendered	84.8 MVA
Energy Demand	931 GWh	FY24-FY28	Procured	0 MVA
Domestic HP's	1760		Sites	1
Non - Domestic HP's	290	Approved Reinforcement work FY24-FY26	New firm	
Electric Vehicles	7575		capacity	22.9 MVA

#### Distribution Network Options Assessment (DNOA) Report

Nort Gateway (f Subst

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
thern (New Primary station)	Transformer	×	×	Reinforce



### **SOUTH MANCHESTER GSP**



No. of Primary Substations	27	Evaluation Requirements	Sites	4
No. of Bulk Supply Points	4	FY24-FY34	Capacity	16.9 MVA
Maximum Demand	309 MVA	Flexible	Sites	0
Generation Capacity	65 MW	Services	Tendered	0 MVA
Energy Demand	1581 GWh	FY24-FY28	Procured	0 MVA
Domestic HP's	3647		Sites	0
Non - Domestic HP's	461	Approved Reinforcement work FY24-FY26	New firm	0 MVA
Electric Vehicles	11580		capacity	

#### Distribution Network Options Assessment (DNOA) Report

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
West Didsbury BSP	Switchgear	X	X	Reinforce
Moss Nook BSP	Switchgear	×	×	Reinforce
Withington	Transformer	X	X	Load transfer
Whalley Range	Switchgear	X	$\checkmark$	Load transfer



### **STALYBRIDGE GSP**

talubrido

#### Customer Numbers: Approximately 216,000

Area of Supply: Approximately 575 km<sup>2</sup>

Local Authority Areas: Manchester, Oldham, Tameside High Peak, Stockport, Derbyshire

Main Cities, Towns & Villages Buxton, Glossop, Hyde, Stalybridge, New Mills, Droylsden, Ashton

_	

Sil

Mayfield (Ne

Ardu

Eastle

Opens

Queer

Bradf

Droylsd

No. of Primary Substations	28	Evaluation Requirements	Sites	6	
No. of Bulk Supply Points	6	FY24-FY34	Capacity	44.9 MVA	
Maximum Demand	357 MVA	Flexible	Sites	4	
Generation Capacity	117 ጠሠ	Services	Tendered	169.1MVA	
Energy Demand	1901 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	
Domestic HP's	3963		Sites	0	
Non - Domestic HP's	546	Approved Reinforcement work FY24-FY26	New firm		
Electric Vehicles	15137		capacity	0 MVA	

#### Distribution Network Options Assessment (DNOA) Report

### A Decision

te	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
Iew Primary)	Transformer	X	X	Reinforce
wick	Transformer	~	X	Flexibility
lands	Transformer	$\checkmark$	X	Reinforce
Ishaw	Transformer	$\checkmark$	X	Load Transfer
n Park	Transformer	$\checkmark$	X	Reinforce
ersley	Transformer	$\checkmark$	X	Flexibility
Jford	Switchgear	X	X	Reinforce
len BSP	Switchgear	×	X	Reinforce



### <u>WASHWAY FARM / KIRKBY GSP</u>

		Customer Numbers: Approximately 74,000		DNOA Decision					
			Area of Supply: Approximately 204 km <sup>2</sup> Local Authority Areas: Uigan, St Helens, West Lancashire Main Cities, Towns & Villages Ormskirk, Skelmersdale, Scarisbrick, Orrell, Wigan		Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
		Wigan, S			Skelmersale	Switchgear	X	X	Reinforce
					Skelmersdale BSP	Switchgear	X	X	Reinforce
					Wigan BSP	Transformer	✓	X	Flexibility
No. of Primary Substations No. of Bulk Supply Points	12 3	Evaluation Requirements FY24-FY34	Sites Capacity	6 18.3 MVA	Green St T11	Transformer	~	×	Load Transfer
Maximum Demand	185 MVA		Sites	1	Kitt Green	Transformer	X		Flexibility
Generation Capacity	98 MW	Flexible – Services	Tendered	26.2 MVA			<b>^</b>		
Energy Demand	903 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	Upholland	Transformer	X	$\checkmark$	Flexibility
Domestic HP's	1854		Sites	0			l		

No. of Primary Substations	12	Evaluation Requirements	Sites	6	Green
No. of Bulk Supply Points	3	FY24-FY34	Capacity	18.3 MVA	
Maximum Demand	185 MVA	Clavible	Sites	1	Kitt C
Generation Capacity	98 MW	Flexible Services	Tendered	26.2 MVA	
Energy Demand	903 GWh	FY24-FY28	Procured	0 (0.1 contract pending) MVA	Upho
Domestic HP's	1854		Sites	0	
Non - Domestic HP's	231	Approved Reinforcement work FY24-FY26	New firm		
Electric Vehicles	7341		capacity	0 MVA	

#### Distribution Network Options Assessment (DNOA) Report



### <u>Whitegate GSP</u>



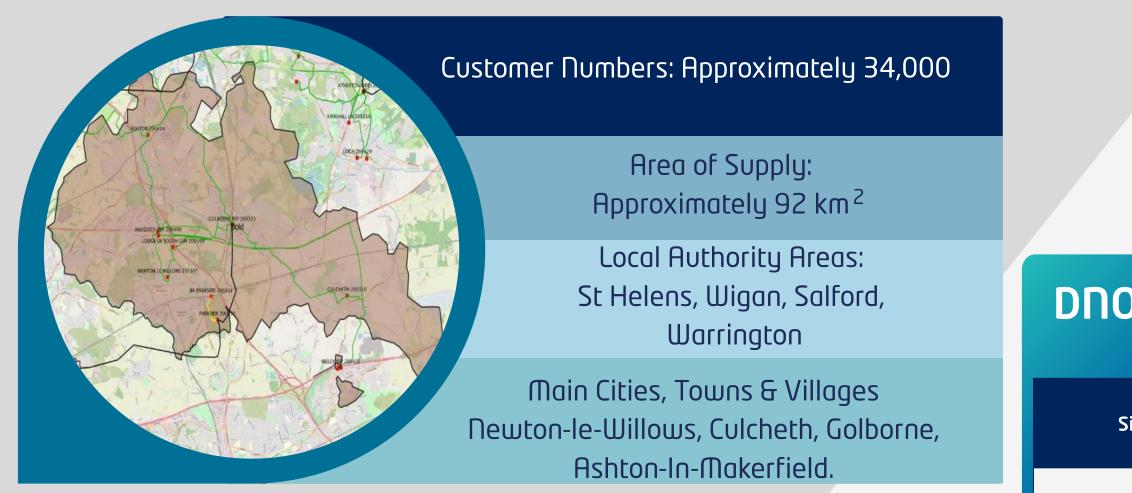
No. of Primary Substations	23	Evaluation Requirements	Sites	6	HNCOOLS I IO T1
No. of Bulk Supply Points	4	FY24-FY34	Capacity	25.9 MVA	
Maximum Demand	257 MVA	Flexible	Sites	2	Ancoats N
Generation Capacity	70 MW	Services	Tendered	0 MVA	
Energy Demand	1277 GWh	FY24-FY28	Procured	1.4 MVA	Black
Domestic HP's	3113		Sites	0	
Non - Domestic HP's	415	Approved Reinforcement work FY24-FY26	New firm	0 MVA	Chaddert
Electric Vehicles	8719		capacity		

#### Distribution Network Options Assessment (DNOA) Report

Site	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
yton BSP	Switchgear	×	X	Reinforce
īreenhill	Switchgear	×	X	Reinforce
non Street	Switchgear	X	X	Reinforce
s North T11 & T12	Transformer	X	$\checkmark$	Flexibility
its North T14	Transformer	×	$\checkmark$	Flexibility
3lackley	Transformer	×	$\checkmark$	Flexibility
lderton BSP	Transformer	X	$\checkmark$	Flexibility



### Bold (Golbourne BSP)



No. of Primary Substations	5	Evaluation Requirements	Sites	2
No. of Bulk Supply Points	0	FY24-FY34	Capacity	6.7 MVA
Maximum Demand	83 MVA	Flexible	Sites	0
Generation Capacity	49 MW	Services	Tendered	0 MVA
Energy Demand	395 GWh	FY24-FY28	Procured	0 MVA
Domestic HP's	799		Sites	0
Non - Domestic HP's	87	Approved Reinforcement work FY24-FY26	New firm	0 MVA
Electric Vehicles	3882		capacity	UTIIVH

#### Distribution Network Options Assessment (DNOA) Report

iite	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
1/A	N/A	N/A	N/A	N/A



### **RISLEY GSP**



No. of Primary Substations	1	Evaluation Requirements	Sites	1
No. of Bulk Supply Points	0	FY24-FY34	Capacity	1 MVA
Maximum Demand	15 MVA	Flexible	Sites	0
Generation Capacity	6 ጠሠ	Services	Tendered	0 MVA
Energy Demand	79 GWh	FY24-FY28	Procured	0 MVA
Domestic HP's	82		Sites	0
Non - Domestic HP's	21	Approved Reinforcement work FY24-FY26	New firm	0 MVA
Electric Vehicles	628		capacity	

#### Distribution Network Options Assessment (DNOA) Report

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Risley (Ge

iite	Need	Tendered for Flex	Signposted for Flex	DNOA Recommendation
(Demand)	Circuit	×	$\checkmark$	Flexibility
ieneration)	Switchgear	X	X	Reinforce

