



Distributed Generation Low Voltage Update Workshop

March 2021

Stay connected...



www.enwl.co.uk



2020-21 ICE Workplan Update

- Zero carbon Update
- Transition to DSO Update
- Accelerated Loss of Mains Programme (ALoMP)
- Flexible Connections Update
- 2020-21 ICE Commitments Overview

Future Business Planning

- ICE workplan 2021-22
- 2023-2028 Business Planning

Questions & Close

Meet the Team



Ami Mathieson

Incentive on Connections
Engagement Manager



Helen Seagrave

Community & Local
Energy Manager



Hannah Sharratt

Stakeholder engagement
& Regulatory Manager



Martin Edmundson

Head of Business
Connections



Keith Evans

DSO & Smart Grid
Engineering Manager

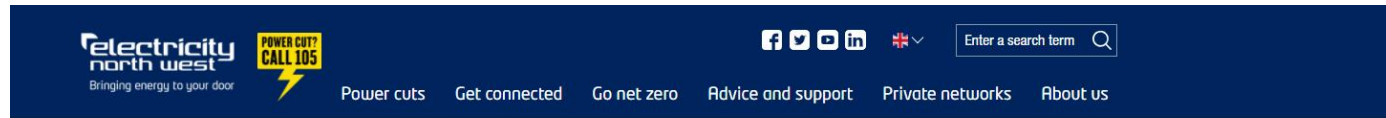


Brian Hoy

Head of Market
Regulation

GoNetZero – Online Information hub





[Home](#) > [Go net zero](#)

Go net zero

In 2019, the UK became the first country in the world to declare a climate emergency, and passed laws to bring greenhouse gas emissions to net zero by 2050. Net zero means balancing carbon dioxide emissions with carbon removal, or simply eliminating carbon dioxide emissions altogether. It's also known as 'carbon neutral'.



You and your business

Top tips, tailor-made for your home or your business. Find out how you can reduce your energy bills and help the North West achieve net zero carbon.

[Read more](#) →



Ways to go net zero

Find out more about energy efficiency measures and low carbon technologies such as electric vehicles, heat pumps, solar and wind power.

[Read more](#) →



Our plans to go net zero

Our ambitious plans set out a range of initiatives and investments which will ensure we take a significant step on the road to rapid decarbonisation.

[Read more](#) →

User testing



“That’s the one [website] I probably will go to for information I need and the next step will be right we’ve looked at all this, how is this tailored to our business”

M&W

“All the detail is there, it's just knowing about it..”

Hotel

“Now I’ve seen this myself, it will be a place of reference for anything local that we do, yeah.” **Gym**

“I think it’s good that it’s categorised into different specifics. You know, different types of business.” **M&W**

“I would say so, yeah [visit the website to find information I need]. It’d be like a go-to website, yeah. I’ve seen there’s everything there I would need, so yeah, definitely.” **Office**

“It’s nice and bright, and I did find it easy to navigate. I did keep wanting to go back to the Go Net Zero start again. I was going back to the bar across the top, which is the “power cuts get connected” etc. So much so that I went into everything from there and just scrolled down from there and went into the areas that I needed to get into” **Office**

Key messages for SMEs in our region



Measures to reduce
CO₂ emissions for the
food retail sector



Measures to reduce
CO₂ emissions for
hotels



Measures to reduce
CO₂ emissions for the
non-food retail sector



Measures to reduce
CO₂ emissions for
offices



Measures to reduce
CO₂ emissions for
warehouses and
factories



- Research for five SME sectors into 'Top 5 things to do now to decarbonise'
- Supporting research underway into sustainability credentials' affect on consumers' views
- Engagement campaign launch in Spring 21:
 - Existing business networks
 - GMCA's 'Nature at the heart of...' engagement campaign
- 'You and your business' section on our website with online connections guides
- Creation of online information hub – Launch Dec

Barriers to adoption of PV and EVs by big businesses





Benefits

ROI expected over 5-7 years
Counter to rising electricity costs
Part of carbon reduction strategy
Positive reputational impact
Efficient use of roof space/unused land
Increase in sustainable procurement
Opportunity for positive PR



Barriers

Planning process
Lack of trusted information and case studies
Landlord consent
Roof strength/reinforcement costs
Uncertainty over financing options
Myths and uncertainty over ROI and amount of sunlight needed



Benefits

Supports positive cultural change
Financial benefits if fleet is electrified
Business miles savings
Part of carbon reduction strategy – brand halo
Positive impact on employer brand – attracting and retaining talent



Barriers

Lack of trusted information over choice of chargers
Possible network reinforcement costs
Lack of awareness over EV owners' charging patterns
Lack of current EV demand

Any questions?



For further information on anything covered today, please visit our webpage

www.enwl.co.uk/go-net-zero

Transition to DSO

“We will keep stakeholders informed on the transition of Distribution Network Operators (DNO) to carrying out enhanced Distribution System Operation (DSO) functionality”



Benefits of DSO transition



Improved customer experience

- Improved customer experience through sharing of best practice within the ENA Open Networks project



Efficiency savings

- Increase utilisation of networks assets allowing for efficiency savings



Whole system investment

- Improved whole system investment decisions through closer working relationships with other network providers



Low carbon economy

- Facilitating the transition to a low carbon economy.



Increased flexibility

- Allowing all customers the ability, independent of size, to participate in energy trading and balancing



Increased productivity

- Increased productivity as a result of developing new modelling tools, implementing new systems, and improved automation

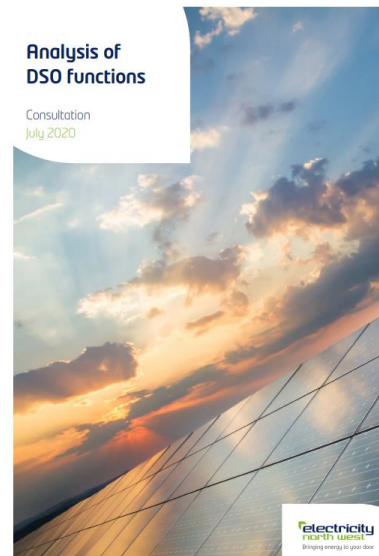
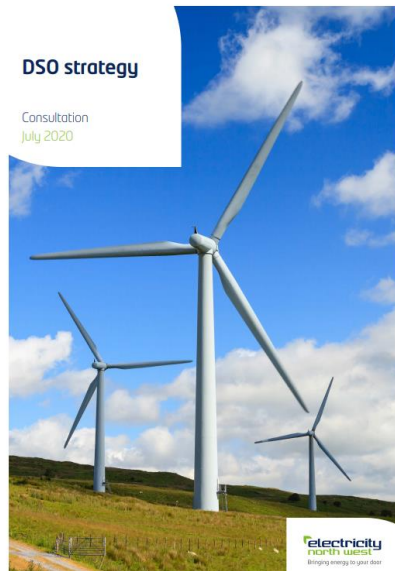
What have we done so far?



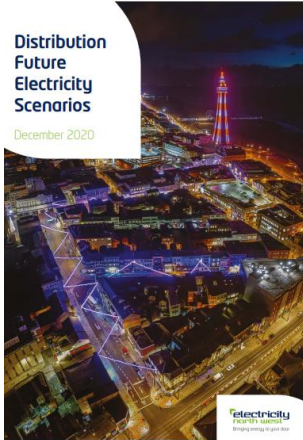
ENWL DSO consultations

- In May 2020 we launched 3 DSO related consultations.
- The feedback was broadly supportive of our DSO strategies
- We will now review the plans based upon feedback and re-publish
- The feedback will also be used to inform our ED2 business plans
- We are still open to more feedback

<https://www.enwl.co.uk/go-net-zero/our-plans-to-go-net-zero/dso/>

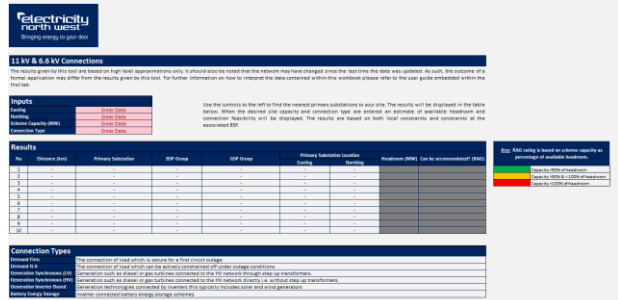


What have we done so far?



Distribution Future Electricity Scenarios Documents

<https://www.enwl.co.uk/get-connected/network-information/dfes/>



Heat Mapping Tools

<https://www.enwl.co.uk/get-connected/network-information/heatmap-tool/>

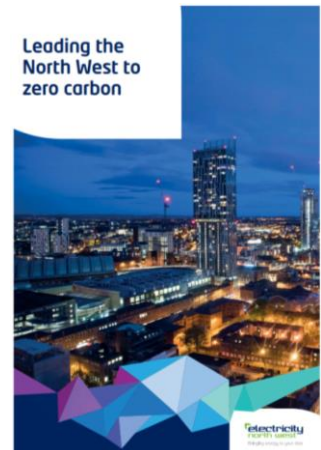


Flexible Services

<https://www.enwl.co.uk/go-net-zero/flexible-services/>

Carbon Plan

<https://www.enwl.co.uk/go-net-zero/our-plans-to-go-net-zero/leading-the-north-west-to-net-zero/>



What have we done so far?



Open Networks Project

- Standardised flexible services agreements and product naming
- Developed joint FES methodologies
- Developed and consulted upon new interactivity and queue management processes
- Developed heat mapping good practice
- Created a [DSO roadmap](https://www.energynetworks.org/creating-tomorrows-networks/open-networks) for UK's transition to DSO (including DNOs, TOs, ESO, ENA, BEIS, and Ofgem)



<https://www.energynetworks.org/creating-tomorrows-networks/open-networks>



ENA DSO Implementation Plan

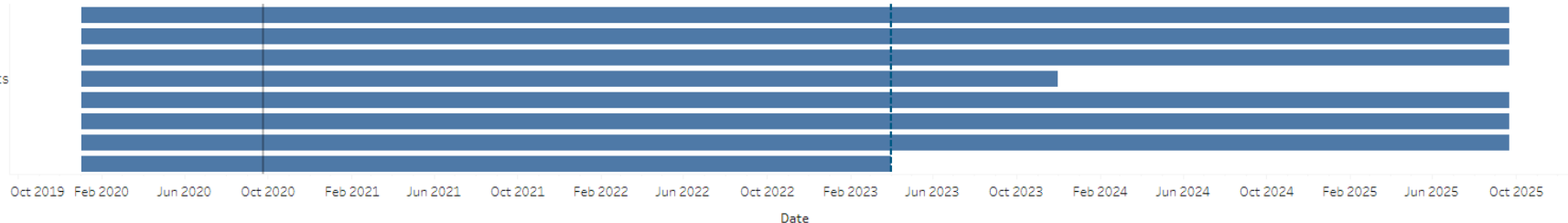
Purpose:

The aim of the DSO Implementation Plan visualisation is to provide visibility of actions and implementation of change for all electricity network and system operators that are required to progress the least regrets pathway to Distribution System Operation (DSO).

Time frame
Medium term

Function

1. System Coordination
2. Network Operation
3. Investment Planning
4. Connections and Connection Rights
5. System Defence and Restoration
6. Services and Market Facilitation
7. Service Optimisation
8. Charging



Developed by DNV-GL



- The development of operational IT systems for managing power flows (ANM)
- Establishment of a neutral market trading system to facilitate trading of flexible services in near real time.
- Establishment of a DSO control desk within the existing control centre
- Improving the quality and quantity of information available to stakeholders
- Updating of policies and procedures

- Offering a greater range of connections options with a range of flexibility
- Improving forecasting techniques, and publishing our data in the form of heat maps, DFES, and flexible services requests
- Developing enhanced modelling tools and techniques and introducing automated connections processes.
- Reducing ENWLs carbon emissions and encouraging others to do the same

Flexible Connections



Flexible connections



We currently offer:

System Normal Connection -

connection is disconnected or constrained when there is a First Circuit Outage affecting the circuit supplying the customer or the local network.

Export Limited Connection - where installed generation equipment has a greater export capability than agreed levels.

Flexible connections to come:

Timed Connection - capacity restricted within specific time periods

Import Limited Connection - where installed equipment has a greater import capability than agreed levels

Active Network Management -
control systems modify import
and/or export within agreed limits

Click for
More info

Accelerated Loss of Mains Change Programme (ALoMCP)





G59 requires UK Generation owners to install loss of mains (LoM) protection at their generation sites. This is to ensure that, following a fault that isolates sections of the distribution system to which they are connected from the rest of the electricity system, distributed generation does not form an autonomous power island with the remaining local demand.

The two most common forms of LoM protection are rate of change of frequency (RoCoF) relays and vector shift (VS) relays.

By September 2022 to comply with the latest requirements, it will be necessary to revise the LoM protection settings for all the existing non-type tested embedded generation fleet to:

Ensure that where rate of change of frequency (RoCoF) protection relays are used, as part of Loss of Mains protection, the applied setting should be 1Hz/s with a definite time delay of 500ms.

Ensure that vector shift (VS) protection technique should be removed where it is in use

Remove LoM protection from all generation except synchronous and DFIG where a suitable RoCoF setting cannot be made without additional investment.

Get involved



Expected to:

Check your
LoM settings



Encouraged to:

Check if you
qualify?



Apply
through the
ENA portal



Liaise with
DNO/IDNO



Commit to a
date for
change



Receive
acceptance



Make the
change



Submit the
evidence



Get paid

Window 7 open until the 11th May 2021

Applications can be made at:
<https://www.ena-eng.org/ALoMCP/>

For help and assistance please contact:
ALoMCP@enwl.co.uk

Further information can be found at:
<https://www.enwl.co.uk/get-connected/network-information/accelerated-loss-of-mains-change-programme/>

2020-21 ICE Workplan Update



ICE 2020-21 Workplan Performance



➤ We will provide guidance on the application process.	✓ Complete
➤ We will communicate with our stakeholders on Engineering Recommendation G98 & G99 requirements for the connection of generation equipment.	✓ Online event November 2020 ✓ Online event January 2021
➤ We will continue to target improved customer satisfaction.	✓ 95% average customer satisfaction obtained by Q3
➤ We will provide updates on activity to support the transition to green energy and the wider green economy	✓ Online event November 2020 ✓ Update today
➤ We will provide stakeholders with the opportunity to receive detailed briefings on industry level changes	✓ G5-5 Policy briefing
➤ We will improve access to Network Information	✓ Complete – NAV training material available on website
➤ We will improve information available on battery storage.	✓ Improvements to webpage



➤ We will clarify the process followed when connecting LV generation.	✓ Complete
➤ We will keep stakeholders informed on the transition of Distribution Network Operators (DNO) to carrying out enhanced Distribution System Operation (DSO) functionality	✓ Online workshop November 2020 ✓ Update today
➤ We will endeavour to offer alternative flexible connections solutions to customers where it is appropriate to do so.	✓ Complete
➤ We aim to outperform the regulatory standard by providing quotes on average in 22 working days (compared to the guaranteed standard of 35 working days)	➤ Year to date average of 23 working days
➤ We will strive to improve our Time to Connect for DG LV connections where on site works are required.	➤ No applicable projects so far this year.



➤ We will continue to offer opportunities for stakeholders to engage with us.	➤ Complete
➤ We will engage with community & local energy stakeholders.	➤ Complete
➤ We will continue to communicate with our stakeholders.	➤ 3 x quarterly newsletters plus specific communications delivered to our distribution list

Any comments please contact ice@enwl.co.uk

We would love to hear your feedback, please get in touch with either Ami or Hannah should you have anything to discuss after the session.

Future Business Planning : ICE Workplan Development 2021-22



Proposed ICE Commitments for 21-22



Commitment / Action	Proposed Outcome
We will continue to target improved customer satisfaction.	We will continue to target high customer satisfaction (85% overall satisfaction), using quantitative and qualitative measures.
We will keep stakeholders informed on the transition of Distribution Network Operators (DNO) to carrying out enhanced Distribution System Operation (DSO) functionality	We will keep stakeholders informed on our transition to incorporate enhanced Distribution System Operation functionality (DSO).
We will provide stakeholders with the opportunity to receive detailed briefings on industry level changes	We will provide briefings for stakeholders following announcements on the proposed changes to charges through Ofgem's significant code review.
We will continue to offer opportunities for stakeholders to engage with us.	Offer a minimum of 3 engagement opportunities across webinars and workshops. We will also provide surgery sessions to meet our stakeholders needs, targeting all are held within 10 working days.
We will continue to communicate with our stakeholders.	Issue regular updates on ICE Commitments to registered stakeholders
We will engage with community & local energy stakeholders.	We will host a minimum of 3 engagement opportunities and we will issue quarterly Newsletters for our Community & Local Energy Stakeholders.
We will continue to target our Time to Quote	We aim to outperform the regulatory standard by providing quotes on average in 22 working days (compared to the guaranteed standard of 35 working days)
We will provide updates on activity to support the transition to green energy and the wider green economy	Provide regular updates on our Leading the North West to Zero Carbon Plan. We will share learning from our case studies, eg our zero carbon buildings.

Any
comments?

Are these the
right
commitments
?

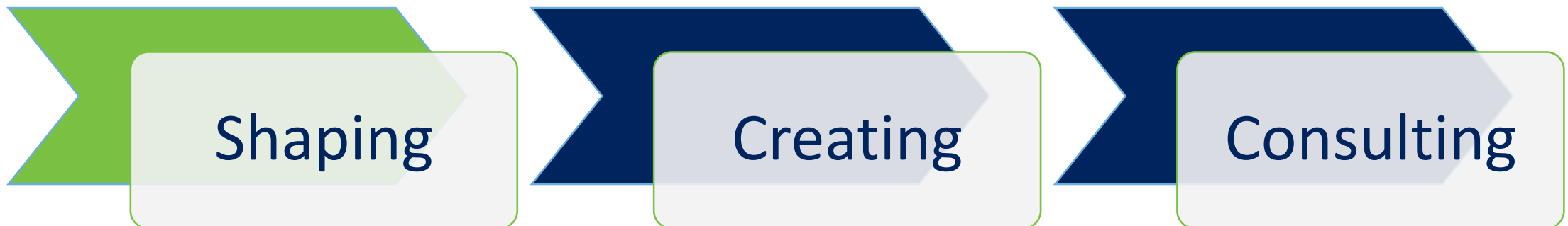
Have we
missed
something?

Future Business Planning : 2023-28 Business Plans (RIIO-ED2)





- We have published our strategy for [Major Connections](#) where we are seeking your views to inform our future approach.
 - Do you have any views on our current performance against the baseline expectations?
 - If there are any areas where you think we need to improve, do you have any specific suggestions on what we should do?
 - What do you consider best practice, perhaps from your engagement with other network companies?
 - Do you agree that this is a sensible and appropriate approach?
- We are engaging with our stakeholders to Shape our Major Connections Strategy, then Create our plans and finally Consult to capture any final refinements.





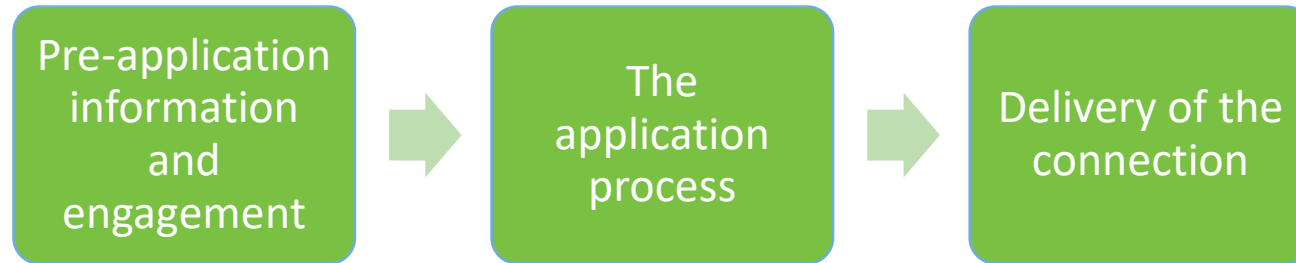
- Ofgem set out its requirements for DNOs to develop and submit ‘major connections strategies’ in its ‘Sector Specific Methodology Decision’ in December 2020:
 - *The DNO’s strategy will need to set out the activities the DNO plans to undertake to improve the services provided to major connections customers in RIIO-ED2.*
 - *Major connection customers include those connections customers in market segments where there is an absence of effective competition (ie they have not passed the Competition Test).*

Demand	Low Voltage	High Voltage	Extra High Voltage	Extra High Voltage & above
Distributed Generation	Low Voltage	High Voltage & above		
Unmetered	Local Authority	PFI	Other	

- *To ensure that DNOs deliver best practice in the provision of non-contestable activities, DNOs’ strategies should capture these activities, even where these have passed the Competition Test.*



- As part of its Sector Specific Methodology Decision, Ofgem set out three high level principles that largely cover the three stages of connections activity:



- **Principle 1:** Support connection stakeholders prior to making a connections application by providing accurate, comprehensive and user-friendly information.
- **Principle 2:** Deliver value for customers by ensuring simplicity and transparency through the applications process.
- **Principle 3:** Facilitate the delivery of timely and economical connections that meet customers' needs.

A list of Baseline expectations are defined under each Principle

Baseline Expectations – Deeper dive



Principle 1 - Support connection stakeholders prior to making a connections application by providing accurate, comprehensive and user-friendly information

Provide access to up to date and relevant information to enable a connection stakeholder to decide whether, and where, to connect to the distribution network. This should include, but not be limited to, graphical network records that show the location, size and type of assets.

Network Asset Viewer (NAV) available on [website](#) which is an intuitive system designed to reflect the current structure of our network and provide data access which is more easy to navigate through.

Communicate a clear connections process for all customers. This should include providing clarity of DNO, customer and third-party responsibilities. This should also include providing clarity on how issues that arise can be raised and resolved.

Simple process guidance on [website](#)
Step by step guidance provided in webinar, slides and recording [HERE](#)
Project specific pre-application support available on [request](#)

Baseline Expectations – Deeper dive



Principle 1 - Support connection stakeholders prior to making a connections application by providing accurate, comprehensive and user-friendly information

Provide clear explanations of the types of connection products available, the associated costs of each and the information that would need to be provided by the customer to make an application. Where appropriate, this should also include the provision of general information on the potential implications for a customer's connection offer if they change their own requirements, if other customers are seeking to connect in the same area or if they do not accept an offer within its validity period.

Details of options and requirements on website, as well as average costs within the Connection Charging Methodology [here](#).

Provide support and help to customers through appropriate channels which should include, but not be limited to, connections surgeries.

Key contacts available for queries on the website. Project specific 'surgery sessions' available on [request](#)

Have robust processes in place to proactively engage with stakeholders. This should include how the DNO plans to both identify and address connections issues.

Proactive communications for stakeholders who have expressed an interest in receiving information. Engagement through Workshops, expert panels, webinars and bilateral engagement detailed in [ICE reports](#)

Baseline Expectations – Deeper dive



Principle 2 - Deliver value for customers by ensuring simplicity and transparency through the applications process

Have clear and simple customer application process, which accounts for the particular needs of different groups of customers and which can be shaped by the parties involved. This should include, but not be limited to, providing options for how customers can apply for new connections and ensure these are clearly communicated.

Provide tailored communication plans to suit different customer needs, including the provision of specified points of contact during the application process. This should include the provision of various channels through which customers can access support or help.

Provide customers with clear connection quotation cost breakdowns, listing out the cost components and any assumptions used in the formulation of a connections offer.

Simple process guidance on website
Step by step guidance provided in webinar, slides and [recording HERE](#)
Key contacts available for queries on the website.
Project specific 'surgery sessions' available on request ([HERE](#)).

Planner available once application has been received to provide tailored support to your needs.
Project specific 'surgery sessions' available on request ([HERE](#)).

Cost breakdown provided in quotes, further information available on our website [HERE](#)



Principle 2 - Deliver value for customers by ensuring simplicity and transparency through the applications process

Have processes in place to help customers identify how they could make changes to their connection requirements, that would meet their needs and allow them to get connected more quickly or cheaply

Planner made available at all stages pre application, application and delivery to assist with getting stakeholder connected as quickly and cheaply as possible.

Provide guidance that explains to customers the criteria to allow an DG connection to be made to ensure compliance with relevant Engineering Recommendations (G98/G99).

General & detailed guidance provided on website, including dedicated [EREC G98/G99](#) guidance pages. Multiple webinar recordings also available on the EREC G98/G99 pages and [here](#)



Principle 3 - Facilitate the delivery of timely and economical connections that meet customers' needs

Provide tailored communication plans to suit different customer needs, including the provision of specified points of contact during the delivery process. Ensure various channels are available for customers to access support or help.

Communication throughout project delivery tailored to the stakeholders needs. Specific points of contact provided (eg Design Engineer / Construction Coordinator) throughout connections process.

Complete any cost reconciliation in a timely manner.

Written confirmation of changes are discussed with the customer and issued with any cost reconciliation being dealt with in a timely manner.

Breakout Rooms



- Discuss your experiences with ENWL
- If there are any expectations rated 'not met', why do you think this is?

- Suggestions for improvements

Room 1 hosted by **Martin**

Room 2 hosted by **Hannah**

Room 3 hosted by **Brian**



- Develop Connections Strategies for relevant market segments
 - **Distributed Generation at Low Voltages**
 - Unmetered Other
 - Non-contestable works
- Host further engagement to Create and then finally Consult on our Strategies.



Non-contestable

Shaping

Creating

Consulting

Any questions?





- Please give us your honest feedback either email [ICE](#) or leave your feedback in the chat



- Presentation slides will be available via our [website](#) shortly.



- Future events, including webinars are available [here](#)
- Don't forget to get in touch with us at ICE@enwl.co.uk
- Thank you for your attendance.