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Customer Connections *Agora*
21 July 2022

July Agora presented by

Matt Bent

GB Demand Manager

Agenda

Introduction

An Introduction to Charging – John Beezley

Holistic Network Review –

Q&A

Any questions please enter them in the chat. If we are unable to answer today we will provide a response at a future Agora.

Introduction

The Customer Connection Agora's look to:

Provide an opportunity to learn about a variety of subjects from Connection Processes, Connections related Code and Policy Changes , Network Operability, Operational Compliance, Security Statements Cancellation Charges, and more.

Increase the visibility of the Electricity Customer Connections team to our customers, stakeholders, and the wider electricity market.

Electricity Customer Connections provide updates via a short presentation as well as encouraging engagement and interaction via a monthly Question and Answer segment.

Customer Seminar

Generation

17th October - London

London



Answers Outstanding from June Agora: Securities and Cancellation Charges

This slide deck will be uploaded on the Customer Connections Events pages along with a recording of this session.

If security is less than liability, what happens if the customer bails? Do you come after the customer for the difference?

Yes, customer is always liable for the full cancellation charge regardless of what is being secured. Security is not drawn down on if the full cancellation fee is paid upon termination.

What is the “Cancellations Charge”?

The cancellation charge can also be described as the termination charge e.g. the charge that will fall due if the connection contract is terminated. This is made up of both the attributable and wider liability.

If I went on actual securities, can I change to fix later?

Yes, the default basis for securities is actual and you can fix at any point. However you are not able to change back to the actual basis once fixed.

How is the 'Trigger Date' defined and can it be moved?

Examples of how the trigger date is calculated is available in the agora material and in material available on the NGESO website. The trigger date is the point at which wider liabilities become applicable and also the point at which security requirements reduce. Once passed a customer cannot return to being pre-trigger, however the trigger date can be moved pre-trigger as long as a mod app to change the completion date is signed by 31st March in the applicable year.

Do securities still stay around after the connection is built and being used?
Why 25% for D and 10% for T?

Yes, there is a separate methodology for post commissioning securities.

Are there any areas left within the UK will not face wider securities?

No – the whole of GB is covered by a zonal tariff. Depending on the wider works within a particular area over the coming 4 years the zonal may well be £0.00, but there are no areas of the country excluded from wider securities.

Can spend profiles be provided as standard?

Spend profiles are available on request – NGENSO to look into the feasibility of providing these as standard.

How do securities work under a SOW/AppG where your contract is with the DNO? There is an existing reliance on the DNO to pass the statements on by there is nothing in the Code that requires the DNO to do this, is it just at the DNO's discretion?

Where no contract is held with NGENSO for embedded generation e.g. BEGA the DNO is responsible for passing on relevant securities for embedded generation.

John Beezley

Charging Analyst within the NGENSO Revenue Team

Oversees the production of Charging Appendices that make up the offer process

Responsible for Monthly and Ad hoc charges (One Off Works and Capital Contributions)

Helps produce the Annual Charging Statement specific to Connections



Introduction to Charging



Please ask any questions in the meeting chat

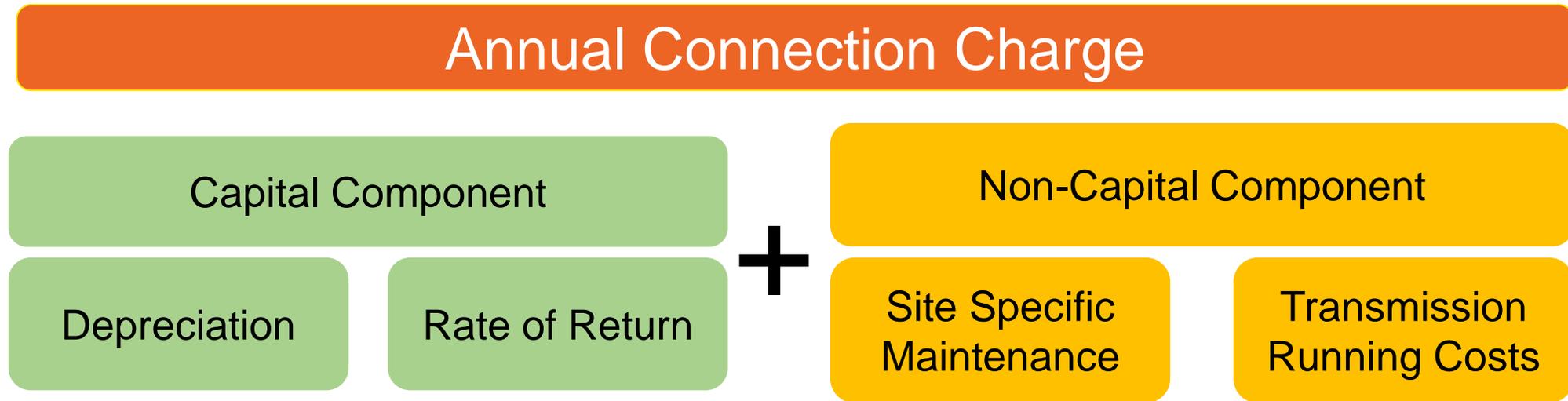
Connection Offer Process (Charging)



- The Transmission Owner provide the ESO with the cost of the connection asset, Gross Asset Value (GAV)
- We then apply our charging methodology to create a connection charge for customer offers as per CUSC / UoS Charging Statement
- Agreement Types: BEGA, BELLA, BCA
- Appendices A/B, B1 and D

Connection Charges

The **connection charge** is calculated annually and payable monthly. It's made up of the following elements:



- The Capital Component covers the lifespan of the asset
- Non Capital Component is payable for as long as the site is operational
- If you have a tertiary connection, the assets are reclassified as infrastructure and are not liable for connection charges.

Capital contributions

Capital Contributions are one-off charges. payments made by the user to pay all or some of the capital element of their connection

Capital contributions can be paid

- before commissioning;
- at the date of commissioning; or
- after commissioning

Example (assuming no inflation and a depreciation period of 40 years)

Capital Contribution	GAV	Annual charge at commissioning	Annual charge in year 2	Annual charge in year 10	Annual charge after 40 years	Total charges paid over 40 years
No capital contribution	£3,000,000	£310,350	£305,850	£269,850	£57,600	£8,904,000
100% in year 10	£3,000,000	£305,850	£305,850	£57,600	£57,600	£7,596,750
50% at commissioning	£3,000,000	£183,975	£181,725	£163,725	£96,225	£5,604,000
100% at commissioning	£3,000,000	£57,600	£57,600	£57,600	£57,600	£5,484,000

Connection charges

Annual Connection Charge Example

	Connection Cost	Net Asset Value	Capital Contribution	Depreciation	RoR	SSM	TRC	Annual Charge
	GAV	NAV	GAV+RoR	GAV/40	NAV*RoR	GAV*SSM	GAV*TRC	
Asset 1 - Standard	£1,000,000	£987,500	0%	£25,000	£59,250	£4,100	£14,700	£103,450
Asset 1 - Capital Contribution	£1,000,000		100%	-	-	£4,100	£14,700	£19,200

Acronyms

Gross Asset Value (GAV)

Total cost of asset including:

- Construction costs
- Engineering
- Interest during construction
- Liquidated damages premium

Net Asset Value (NAV)

Mid year depreciated GAV of the asset

Rate of Return (RoR)

Transmission Owner Rate of Return

Site Specific Maintenance (SSM)

Recovers a proportion of the cost and overheads with the maintenance activities.

0.41%

Transmission Running Costs (TRC)

Rates, operation, indirect overheads incurred by the transmission licensees

1.47%

Charging Appendices Example (Appendix A)

APPENDIX A
TRANSMISSION CONNECTION ASSETS/CONNECTION SITE

User: JB's Renewable Wind Farm Limited
Connection Site: Windy 1

Part 1 - Pre-Vesting Assets

<u>Description</u>	<u>Age</u> <u>(As at 01/04/2026)</u>	<u>Year</u>
There are no Pre-Vesting Assets associated with this agreement		

Part 2a - Existing Post-Vesting Assets

<u>Description</u>	<u>Age</u> <u>(As at 01/04/2026)</u>	<u>Year</u>
There are no Existing Post-Vesting Assets associated with this agreement		

Part 2b - New Post-Vesting Assets

<u>Description</u>	<u>Age</u> <u>(As at 01/04/2026)</u>	<u>Year</u>
66kV Feeder Connection 1	0	2026
66kV Feeder Connection 2	0	2026
Transformer 1 HV Bay	0	2026
Super Grid Transformer 1	0	2026
Transformer 1 LV Bay and 66kV Feeder cor	0	2026
Transformer 2 HV Bay	0	2026
Super Grid Transformer 2	0	2026
Transformer 2 LV Bay and 66kV Feeder cor	0	2026

Part 3a - Existing Energy Metering Systems (*)

<u>Description</u>	<u>Age</u> <u>(As at 01/04/2026)</u>	<u>Year</u>
There are no Existing Energy Metering Systems associated with this agreement		

Part 3b - New Energy Metering Systems (*)

<u>Description</u>	<u>Age</u> <u>(As at 01/04/2026)</u>	<u>Year</u>
FMS Non-elec	0	2026
FMS Non-elec	0	2026
FMS Elec	0	2026
FMS Elec	0	2026

Page 1

Key Points:

- Pre-vesting assets are assets that commissioned pre 1990
- Electronic assets usually have a 10/15 year depreciation where as Non Electronic have 40

Charging Appendices Example (Appendix B)

APPENDIX B
CONNECTION CHARGES/PAYMENT

User: JB's Renewable Wind Farm Limited
Connection Site: Windy 1

(1) Connection Charges

The Connection Charges set out below may be revised in accordance with the terms of this Bilateral Connection Agreement and/or the Construction Agreement and/or the CUSC and/or the Charging Statement.

Part 1 - Pre-Vesting Assets

There are no Pre-Vesting charges for this agreement

Part 2a - Existing Post-Vesting Assets

There are no Existing Post-Vesting charges for this agreement

Part 2b - New Post-Vesting Assets

For indication only, the Connection Charge for those assets installed after 31st March 1990 and as specified in Appendix A Part 2b will be at an annual rate for the period 01/04/2024 to 31/03/2025 of £807,155.97, in April 2020 prices, where

Rate of Return = 6.00 %

Transmission Costs

Part A Site specific maintenance element = £176,028.69
Part B Other transmission costs element = £631,127.27

Asset Values

Asset Description	Gross Asset Value
66kV Feeder Connection 1	£3,386,246.00
66kV Feeder Connection 2	£3,386,246.00
Transformer 1 HV Bay	£3,343,400.00
Super Grid Transformer 1	£4,027,262.00

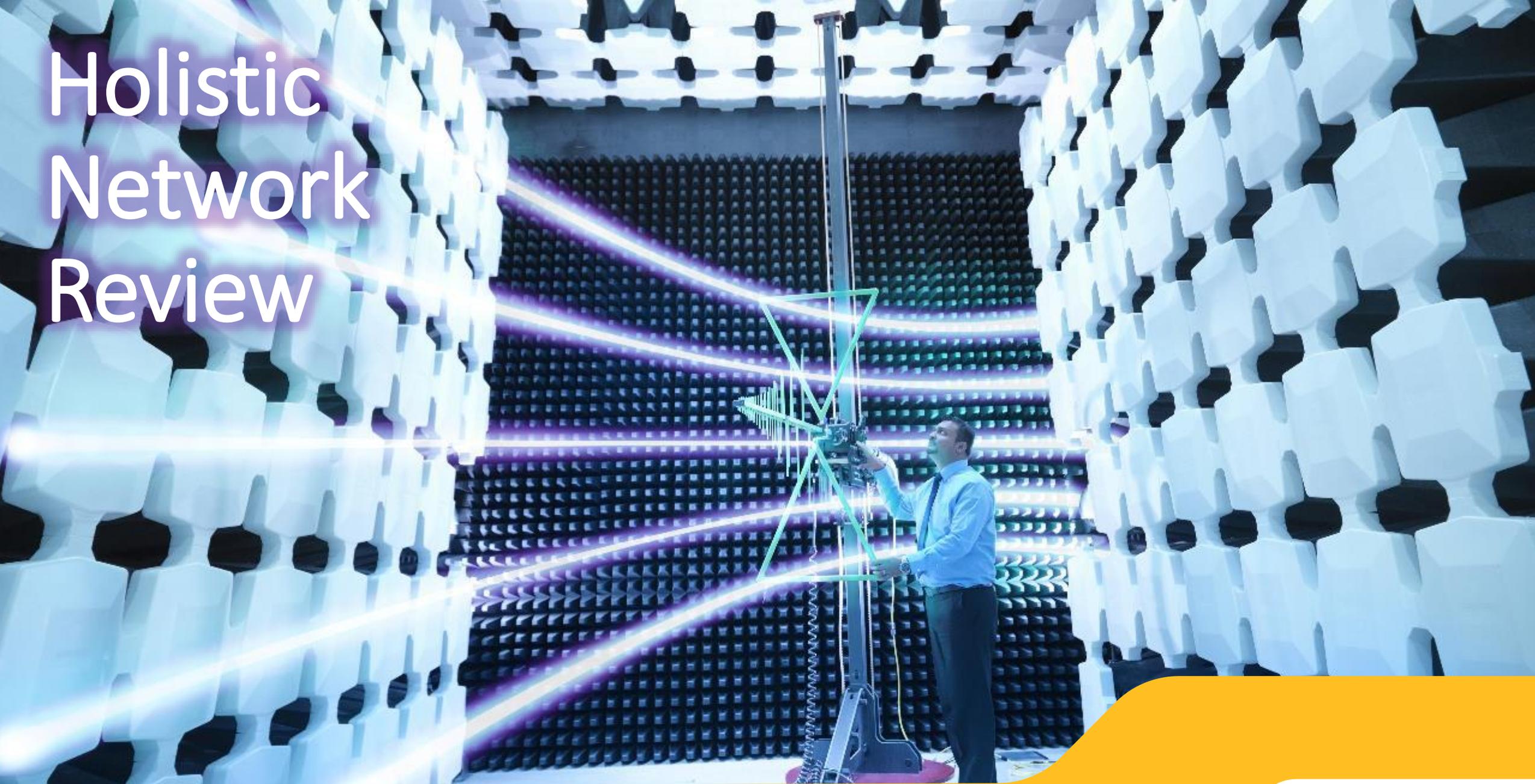
Key Points:

- You are invoiced monthly for the annual charge
- Each year we re-issue your Connection Charging Appendices with your revised connection charge

Michael Oxenham

Policy Development Manager (Offshore)

Holistic Network Review



Please ask any questions in the meeting chat

Pathway to 2030 Holistic Network Design

Connects **offshore wind** and **transports** the electricity generated to where it will be used.

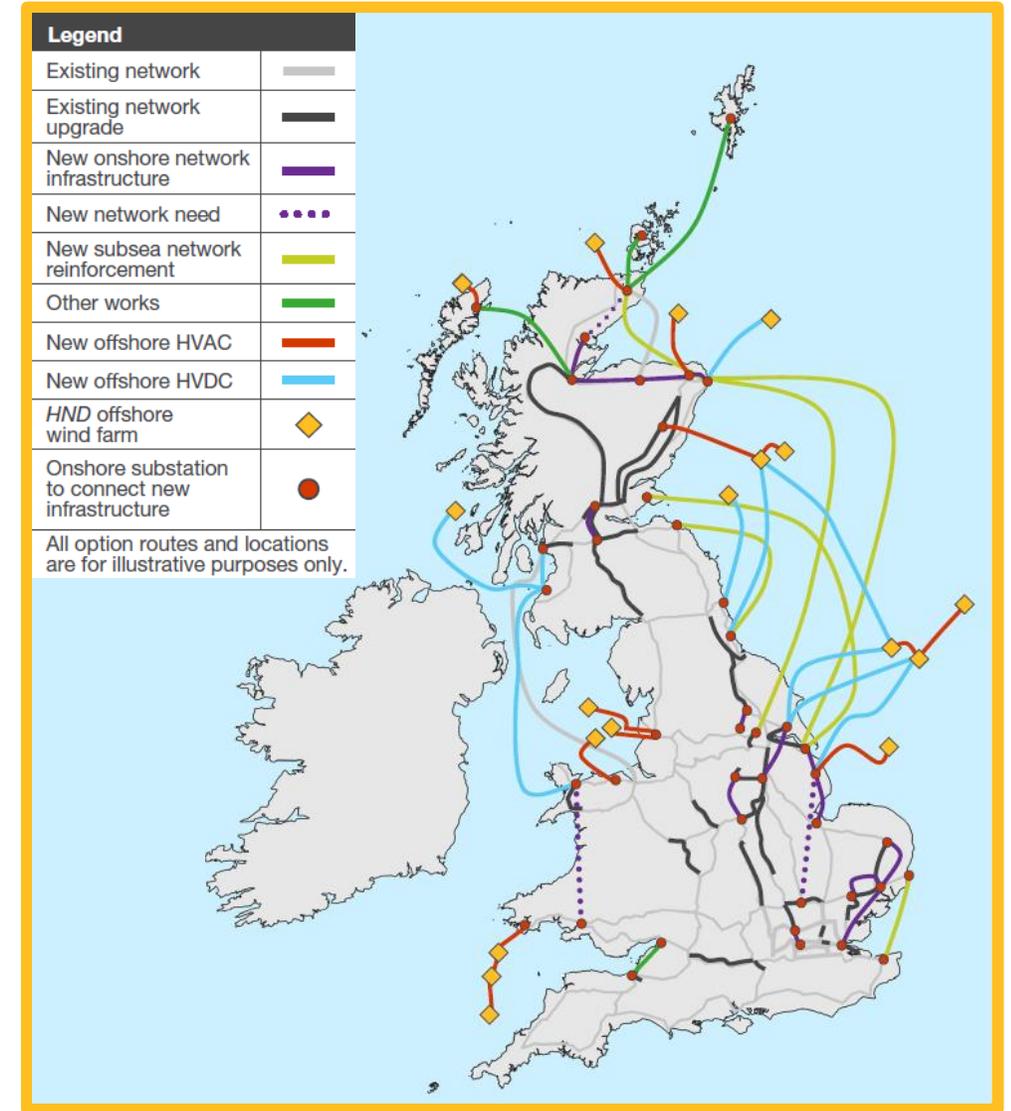
Helps to **unlock 50 GW of offshore wind by 2030** when combined with wind further advanced in its development.

Moves towards a more **centralised, strategic network planning** that is critical for delivering affordable, clean and secure power, as we journey towards our net zero future.



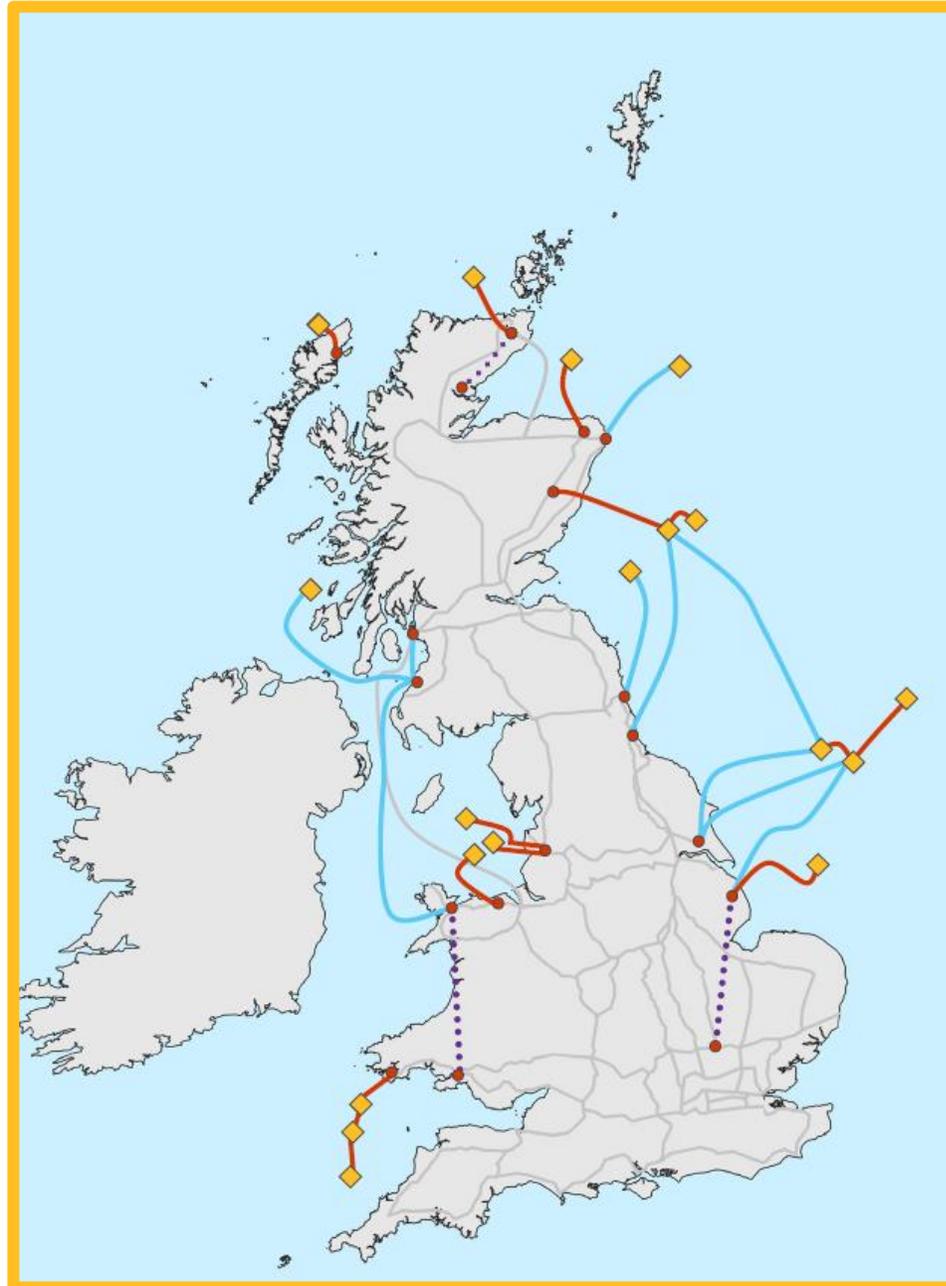
Holistic Network Design

- Establishes new offshore connections between different onshore regions.
- Identifies and distinguishes onshore transmission projects that are required to facilitate the 2030 ambitions.
- Reduces the impact on the seabed by a third smaller footprint of cables coming to shore than the radial design.
- Additional network capacity increases the availability of offshore wind on the system by 32 TWh over 10 years from 2030 compared to the radial design – equivalent of powering 10 million homes for an entire year.



Holistic Network Design

- Connects all 18 in scope offshore wind farms (23 GW).
- 15 landing points.



HND Connection Contract Update Steps

We are currently working with the TO's on the connection contract updates following the HND. Key items required to enable connection contract updates are:

TO Connection Studies

- Regionally identified required works for the HND will be broken down to specific works for each generator in scope

Contract & Legal Updates

- Changes are required to standard contract documentation and agreements

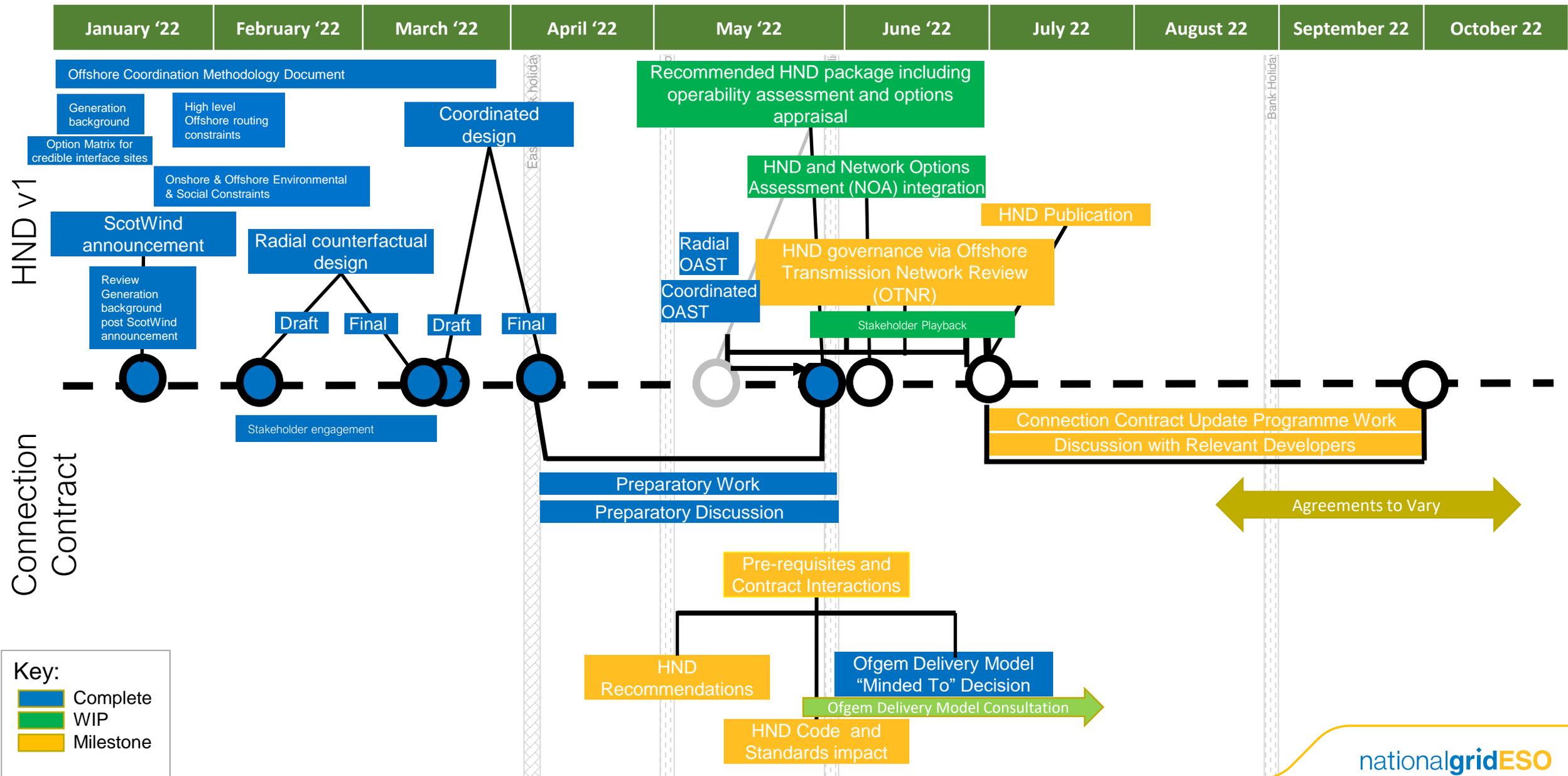
Asset Classification

- A decision is required on who will be responsible for building which offshore assets within the HND. This piece of work is being led by Ofgem with the ESO supporting

Ofgem Delivery Model Decision

- A decision from Ofgem on the delivery models following their Pathway to 2030 consultation will help in form the connection offers

HND v1 and Connection Contract Update Programme



Next Steps

- Work with the TO's and other stakeholders to develop a more detailed connection offer update programme
- Work with Ofgem to support the Asset Classification for the Holistic Network Design
- Continue to regular engagement with key stakeholders

Q&A

Feedback



Please ask any questions in the meeting chat

nationalgridESO

Please take the time to give us some feedback on today's Agora



Thank you

Next Customer Connections Agora
17th August 2022

Please ask any questions in the meeting chat

nationalgridESO