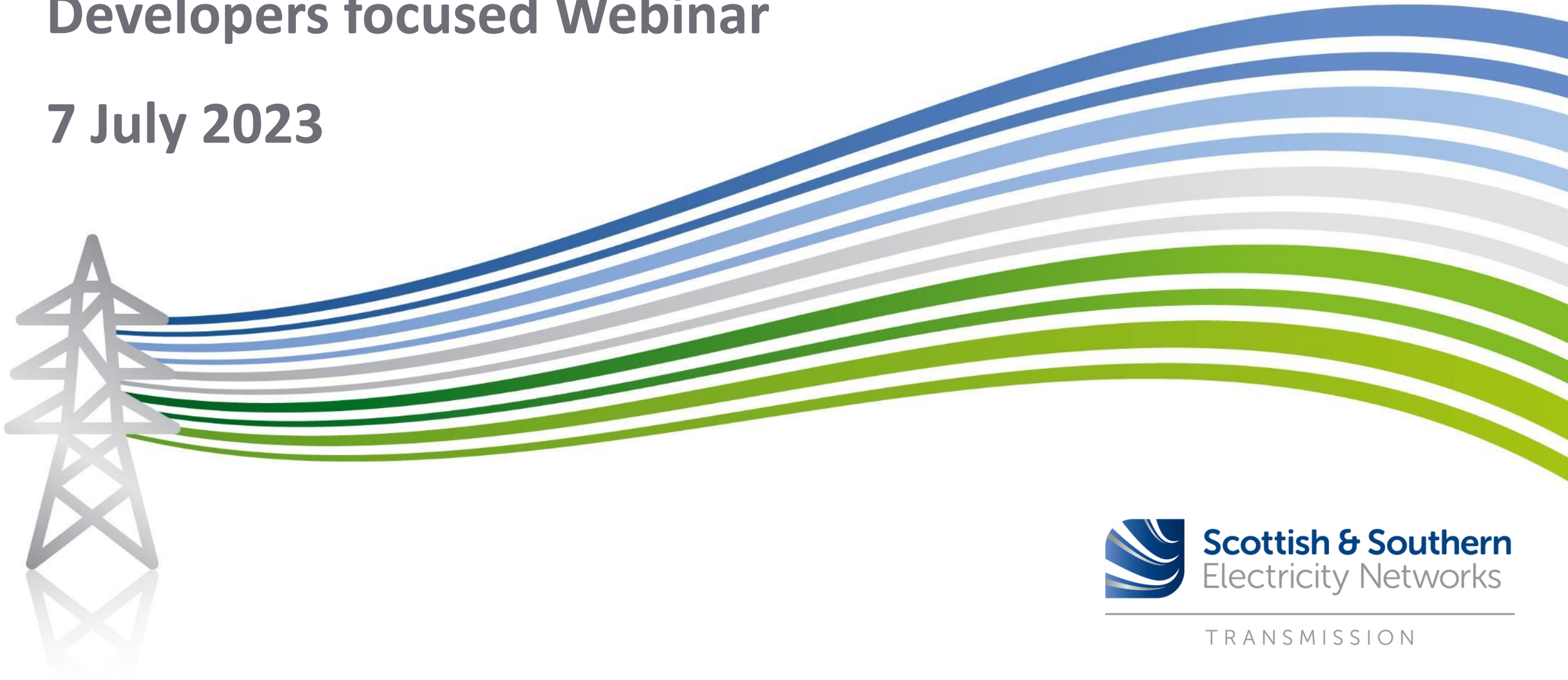
Shetland Future Energy Ambitions

Developers focused Webinar

7 July 2023



Scottish & Southern Electricity Networks

TRANSMISSION

Welcome & Introduction to SSEN Transmission

Nicola Ross - Stakeholder Engagement Manager

Agenda

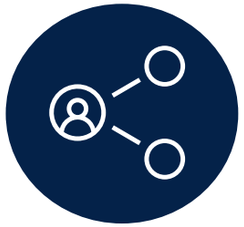
Welcome	13.30 - 13.45
Housekeeping : Nicola Ross, Stakeholder Engagement Manager	13.30 - 13.35
Introduction : Nicola Ross, Stakeholder Engagement Manager	13.35 - 13.40
Overview of SSEN Transmission	13.40 - 14. 10
Development / Delivery Overview: Grant Smith : Lead Project Manager – Offshore Delivery	13.40 - 13.50
Shetland Overview : Charles Mnyanjagha : System Planning & Investment Manager	13.50 - 14.00
Use of Future Energy Scenarios : Sarah Clark : Insights Analysis Engineer	14.00 - 14.10
Overview	14.10 - 14.40
Questionnaire Overview: Nisrine Kebir : Shetland Network Strategy Lead	14.10 - 14.30
Connection Process: Kirsty Dawson : Senior Customer Relationship Manager	14.30 - 14.40
Facilitated Q & A	14.40 - 15.00
Q & A : Nicola Ross, Stakeholder Engagement Manager	14.40 - 15.00

You can raise questions via Slido throughout the webinar - using the information below:

Join at Slido.com
#ShetlandFuture

To alert us of technical issues please email nicola.1.ross@sse.com

Handling feedback and information



Everybody in SSEN Transmission works hard to encourage and demonstrate transparency around our projects, proposals and plans. All information and content in today's presentation, provided by us, can be shared with others outside of this engagement.

However, feedback gathered during today's engagement will not be associated with you specifically. As one of our contributing stakeholders, we may publish your feedback in any reports or submissions we subsequently produce, but we will anonymise this.

Instead of quoting specific stakeholders, we will describe the origin of feedback using broad categories, such as "Customer" or "Landowner" as examples. We will also take care to avoid 'jigsaw identification'.

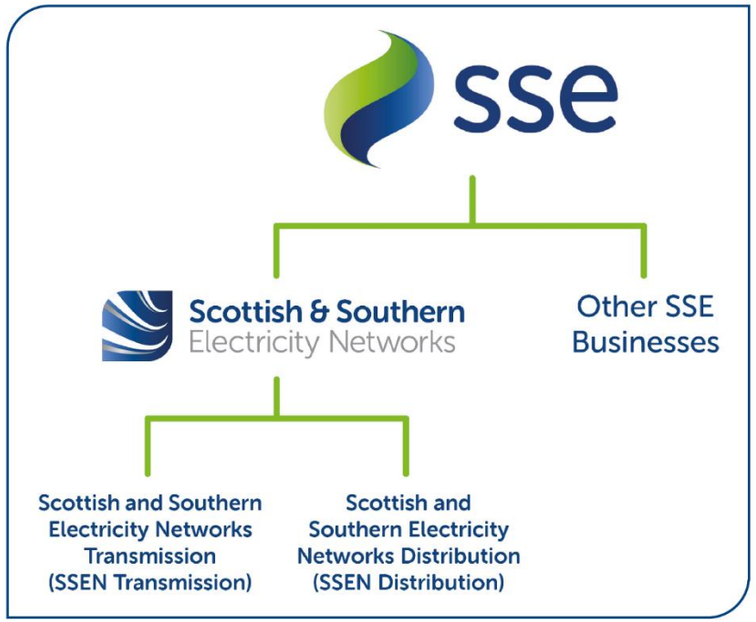
Thank you in advance for your honest feedback and constructive participation.

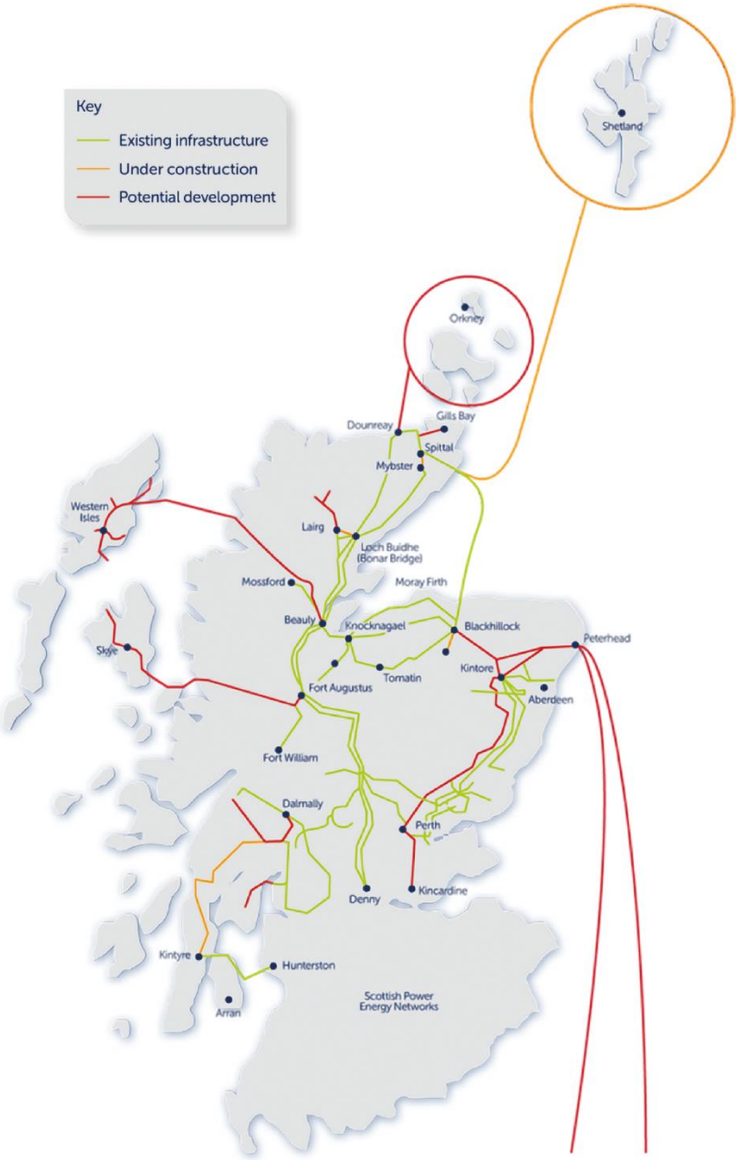
SSEN Transmission

We are SSEN Transmission, the trading name for Scottish Hydro Electric Transmission.

Following a minority stake sale which completed in November 2022, we are now owned 75% by SSE plc and 25% by Ontario Teachers' Pension Plan Board.

We are responsible for the electricity transmission network in the north of Scotland, maintaining and investing in the high voltage 132kV, 220kV, 275kV and 400kV electricity transmission network.





Development / Delivery - Programme Overview

Grant Smith - Lead Project Manager

Transmission infrastructure currently planned on Shetland

Project name	Stage	Size	Completion dates
Shetland HVDC link	Delivery	600 MW	2024
Kergord 132kV infrastructure	Delivery	-	2024
Gremista Grid Supply Point (GSP)	Delivery	47.8MW	2025
Kergord-Yell 132kV	Development	-	2027
Shetland ANM Scheme	Development	-	2027
Mossy Hill WF	Development	48 MW	2027
Beaw Field WF	Development	72 MW	2027
Energy Isles WF	Development	120.3 MW	2027

Shetland HVDC

Overview

- Project Assessment: Submitted in Nov 2020, Determined in Nov 2021
- Link enables Shetland renewables, enhances future supply security
- Principal driver: Connecting renewables to oversubscribed link - approximately 700MW contracted for connection
- Shetland-GB connection for the first time, supporting future supply security


NKT Victoria in Weisdale Voe

Status

- Noss Head Switching Station energized June 2023
- 157km of 260km offshore cable installed
- Kergord, HVDC and AC equipment installed
- Kergord, HVDC and AC testing ongoing
- Final offshore campaign starts July 2023
- Kergord commissioning in Q3 2023
- Connection date: July 2024, on schedule


Drone footage taken by Shetland Flyer of the Kergord HVDC Station.

Gremista Grid Supply Point

The Link from UK Network to the Shetland Network

- Ofgem submission Jan 2023
- S37 now approved and conditions being actively discharged
- OHL, UGC and GSP contractors all appointed
- Pre Mobilisation activities in place
- Key Q2/Q3 activities:
  - Gremista site handover Aug 2023
  - UGC works start July 2023
  - OHL construction start post condition discharge
  - Helicopter operations OHL will then commence

Kergord to Yell

- Project connection date: 2027
- Demand connection driven by Wind Farm connection dates in 2027
- Route corridor design freeze: Summer 2023
- Route community consultation: Late 2023
- Planning submission: Early 2024
- Yell Switching Station community consultation: Completed in 2021 and May 2023
- Ongoing marine survey

Marine Corridor Landfall - Cul Ness

Marine Corridor Landfall - Firth Ness

Overview on the current Shetland Network

Charles Mnyanjagha - System Planning & Investment Manager

Shetland Overview

Background:

- Shetland is not currently connected to the GB electricity transmission network
- Shetland relies entirely on local generation, and supply-demand balance is managed locally
- Shetland's electricity is currently generated by two fossil-fuel power stations, Lerwick Power Station and Sullom Voe Terminal, while Renewable Generators contribute to the remaining supply
- SSEN Distribution owns and operates the network in Shetland

Shetland Overview

Enduring Solution:

- A new HVDC Transmission Link is currently under construction, connecting Shetland to the GB electricity network
- This connection will be complete in 2024 and will reduce Shetland's dependence on fossil-fuel generation
- The current solution includes retaining Lerwick Power Station (LPS) for backup purposes and introducing a Fault Ride Through (FRT) capability
- The FRT capability ensures uninterrupted power supply after a fault on the Transmission link, to allow time for the Lerwick Power Station to start generating power for the island

Contracted generation & demand background on Shetland

- **688 MW contracted generation**
- **452 MW contracted Demand** (excluding station back feed supply)

<u>The 600 MW HVDC link is fully subscribed</u>

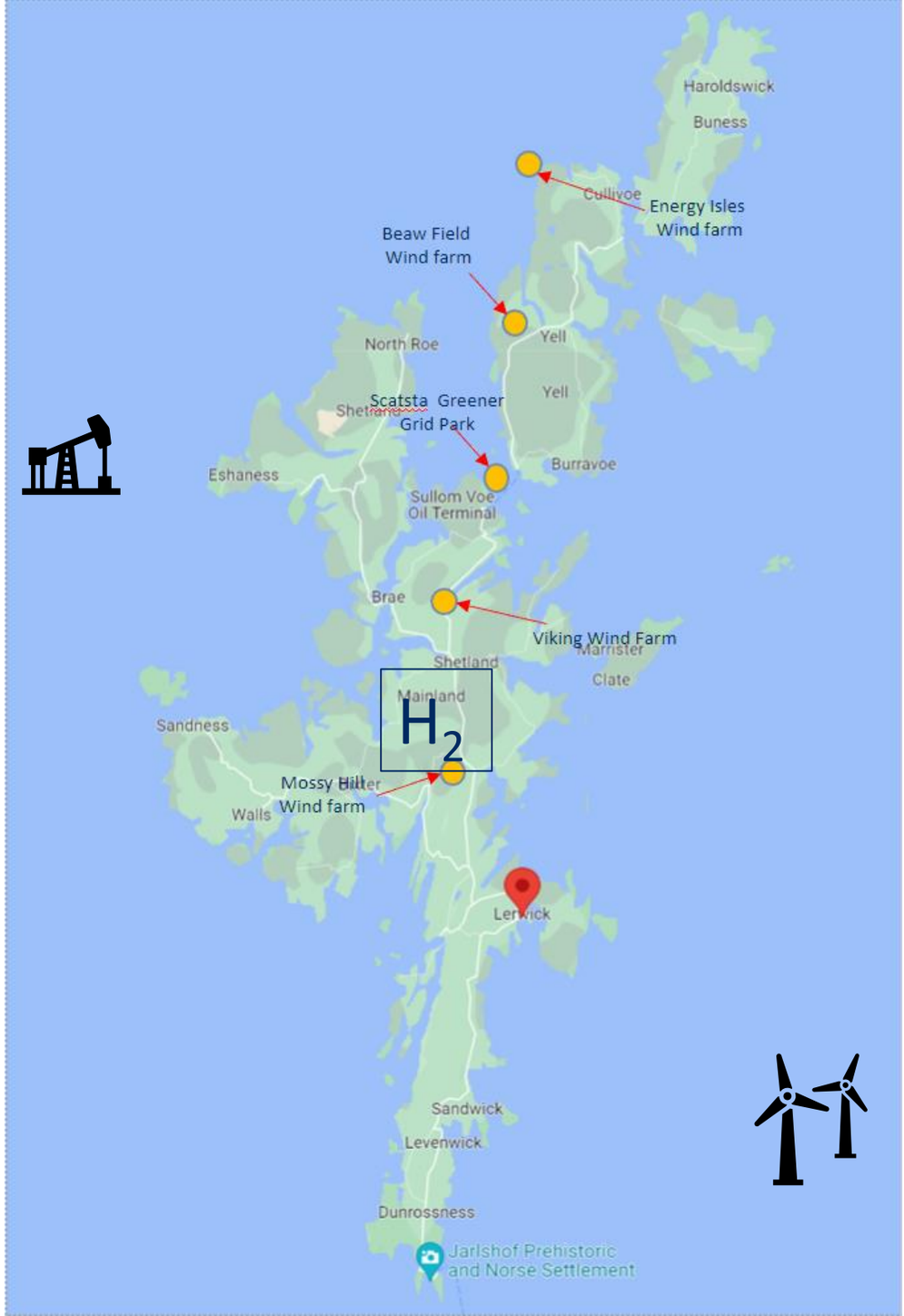
Use of Future Energy Scenarios

Sarah Clark - Insights Analysis Engineer

Use of Future Energy Scenarios

Shetland 'Future Energy Scenarios'

- Scenarios help to support the development of the network in the context of future uncertainty
- Scenarios will show potential energy generation and demand in Shetland for Transmission and Distribution
- Scenarios will guide the construction of the network
- Questionnaire responses will contribute to developing the scenarios
- Capturing stakeholders' requirements and plans are crucial for designing an accommodating network



Questionnaire Overview

Nisrine Kebir - Shetland Network Strategy Lead

Questionnaire overview

- We want our scenarios to be driven by local knowledge
- Questionnaire intended to form the basis of an objective developer view
- Helping us understand future development:
  - Total MW of projects that may emerge - *the envelope*
  - The timescales of these projects - *the when*
  - The location of these projects - *the where*
  - Potential twinkle in the eye projects - *the if*
- All technologies – wind, battery, hydrogen
- By using the questionnaire, we aim to gain insights into your needs and preferences, enabling us to proactively design a network that can effectively cater to those needs

Next Steps

- All responses provided in the questionnaire will be confidential to SSEN Transmission
- The analysis derived from the questionnaire will be shared exclusively with Ofgem and Electricity System Operator (ESO)
  - No specific project details shared
  - Broad themes shared with Ofgem
  - No specific projects detailed in the scenarios
- We are hoping to receive all questionnaire feedback by the **14th of July 2023**
- Link to the questionnaire

Connection Process

Kirsty Dawson - Senior Customer Relationship Manager

Overall Connection process

Pre-Application

Initial conversations between the relevant parties

Application Submission

Submission of your application along with the relevant data to the ESO

CUSC Offer Period

The 3 month period between your clock started application and the issue of an offer by the ESO

Offer Review Period

The 3 month period between the issue of your offer and the offer expiry date

Continuous Engagement

Ongoing engagement with your ESO Connections Contract Manager (CCM) throughout the life of your project

- Customers apply for connections through the ESO
- For connections in North of Scotland, the ESO work with us to process connection applications
- We have 5 working days to declare application competent or not
- Upon declaring application competent and fee is paid, the clock starts
- From Clock start, we have 60 days to issue a draft offer and 74 days to issue final offer to the ESO
- The ESO is required to issue an offer to the customer 3 months from clock start
- The customer has 3 months to accept the offer

nationalgridESO

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Application Fee examples

Distribution <50MW

Zone and Host TO		SHET1
MW		49.9
Base		21,300
Application Type	Embedded Generation New Application	100%
		£21,300.00
Application Fee (VAT Not Included)		£21,300.00
VAT (20%)		£4,260.00
Application Fee (VAT Included)		£25,560.00

Demand <100MW

Zone and Host TO	SHET1
MW	99
Application Type	New Supply Point
Rate	100%
Application Fee Base	£44,300.00
Application Fee Cost	£44,300.00
VAT (20%)	£8,860.00
Application Fee (VAT Included)	£53,160.00

Demand =>100MW

Zone and Host TO	SHET1
MW	100
Application Type	New Supply Point
Rate	100%
Application Fee Base	£58,250.00
Application Fee Cost	£58,250.00
VAT (20%)	£11,650.00
Application Fee (VAT Included)	£69,900.00

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Application Fee examples

Transmission >50MW - Onshore

Zone and Host TO		SHET1
MW		150
Base		29,100
Application Type	New Application	100%
		£29,100.00
Application Fee (VAT Not Included)		£29,100.00
VAT (20%)		£5,820.00
Application Fee (VAT Included)		£34,920.00

<100MW	29,100
100MW-249MW	29,100
250MW-1800MW	36,600
>1800MW	56,950

Transmission Offshore

Zone and Host TO		SHET1
Application Type	New Application	100%
		£98,850.00
Application Fee (VAT Not Included)		£98,850.00
VAT (20%)		£19,770.00
Application Fee (VAT Included)		£118,620.00

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Transmission Pre - app & Working Together process

- Acknowledgement email sent to all D and T applications
- If identified as being required, a call may be offered around day 55.
- Email to confirm offer issued

New Project/no contracted position with ESO

- Request a Pre-Application Call - https://ssen-transmission.co.uk/Pre-Application/)
- ESO Connections Portal - https://nationalgrideso.my.site.com/cpp/s/login/

Existing Project/contracted position with ESO

- Ongoings communications with the SSEN Transmission Team
- Kirsty Dawson, Senior Customer Relationship Manager – kirsty.dawson@sse.com

Join at Slido.com
#ShetlandFuture

Questions

slido

Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

Next Steps

The slide pack will be available on www.ssen-transmission.co.uk in the next few days

If you have any further questions, you can contact us at Transmission.Stakeholder.Engagement@sse.com

Thank you for taking time to join our webinar on Shetland's Future Energy Ambitions

Your feedback is important and helps us improve our stakeholder engagement and ensures this meets our stakeholders needs. You can do this using the link below or by scanning the QR code on the screen:

https://forms.office.com/e/iQHh2WxiHy

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