

# Meet the Argyll 275kv Strategy Project Team

## Dalmally Information Sharing Meeting

04 October 2021



TRANSMISSION

# Agenda

## Topic:

Welcome & Introductions

Overview of SSEN Transmission & Net Zero

The Argyll and Kintyre 275kV Strategy

Creag Dhubh – Dalmally 275kv Connection

Facilitated Q&A

## Speaker:

Jenni Minto – Member of Scottish Parliament for Argyll and Bute

Greg Clarke- Head of Corporate Affairs Transmission

Russell Stewart – Lead Development Project Manager

Paul McQuillan – Project Manager

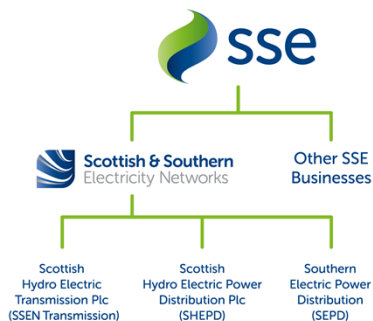
# Overview of SSEN Transmission & Net Zero

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Greg Clarke

Head of Corporate Affairs Transmission

# Who we are – SSEN Transmission



In total we maintain about 5,000km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O’Groats all the way to Boston in the USA. Our network crosses some of the UK’s most challenging terrain – including circuits that are buried under the seabed, are located over 750m above sea level and up to 250km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

## Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator Ofgem. Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

## What is the difference between transmission and distribution?

Electricity Transmission is the transportation of electricity from generating plants to where it is required at centres of demand.

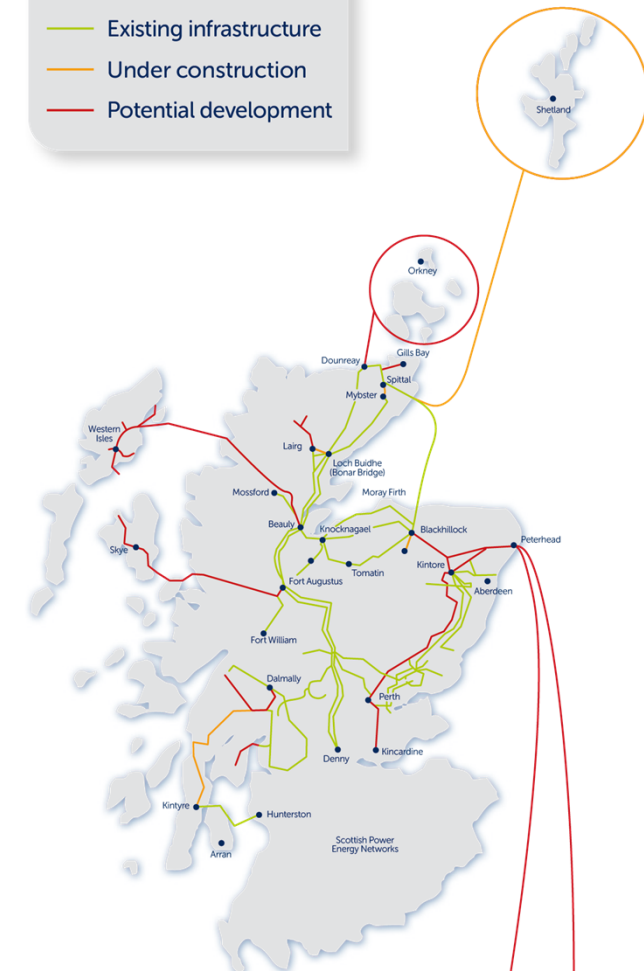
The Electricity Transmission network, or grid, transports electricity at very high voltages through overhead lines, underground cables and subsea cables.

Our transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plans.

The Electricity Distribution network is connected into the Transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

## Key

- Existing infrastructure
- Under construction
- Potential development





# A Network for Net Zero – Our 5 Year Business Plan

## Ambitious and Stakeholder-led Business Plan

- Five Clear Goals
- Delivers a pathway to net zero & greenhouse gas emissions reduction targets

## Approved by our Regulator Ofgem

- £2.8bn total expenditure agreed over the next 5 years
- All expenditure has a need which can be demonstrated now

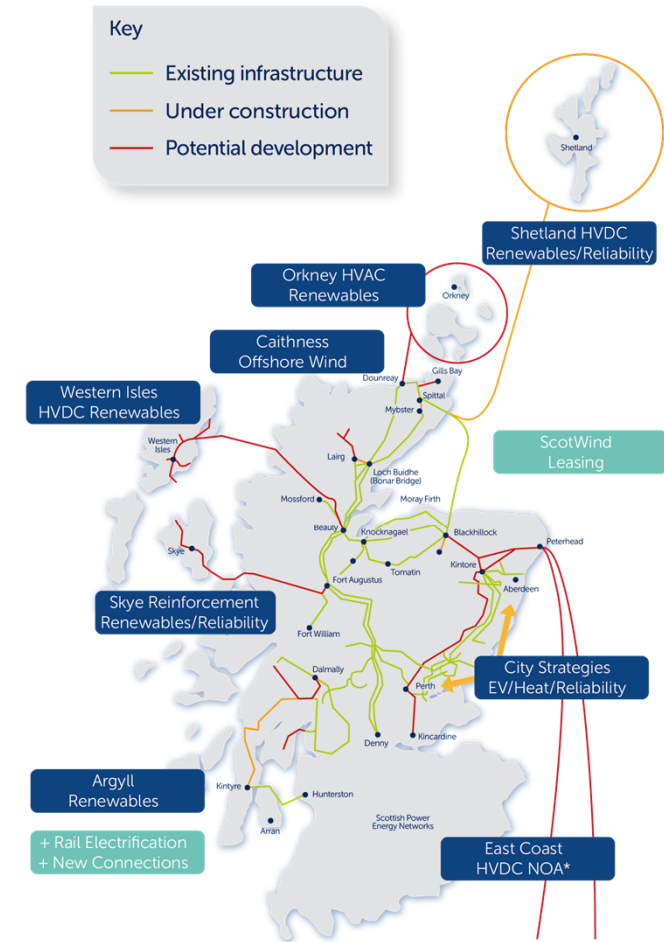
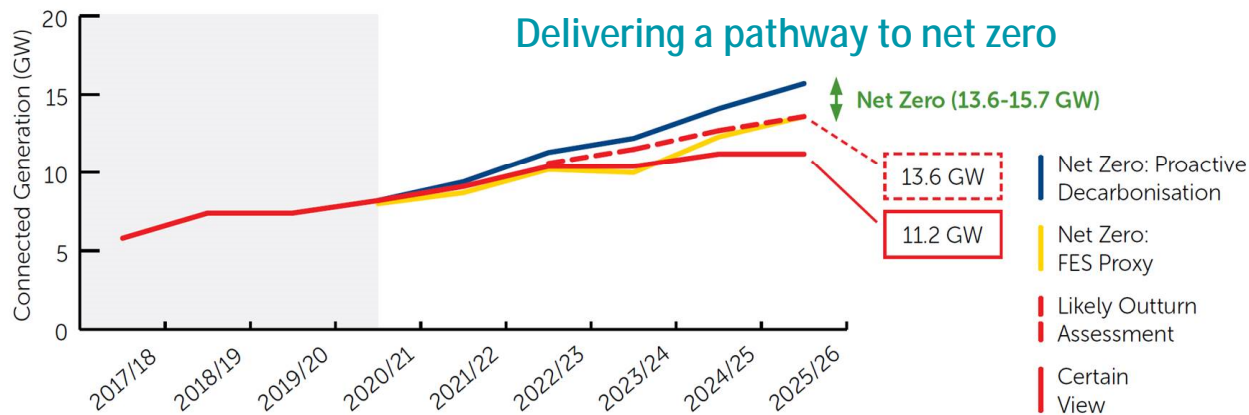
## Dealing with Uncertainty

- Mechanism for increasing expenditure when the need becomes more certain
- This could increase total investment to over £4bn over the price control period
- Includes Argyll 275kV strategy



# Delivering a pathway to net zero

## Net zero emissions pathways for generation connected in the north of Scotland (GW)





# The Argyll and Kintyre 275kV Strategy

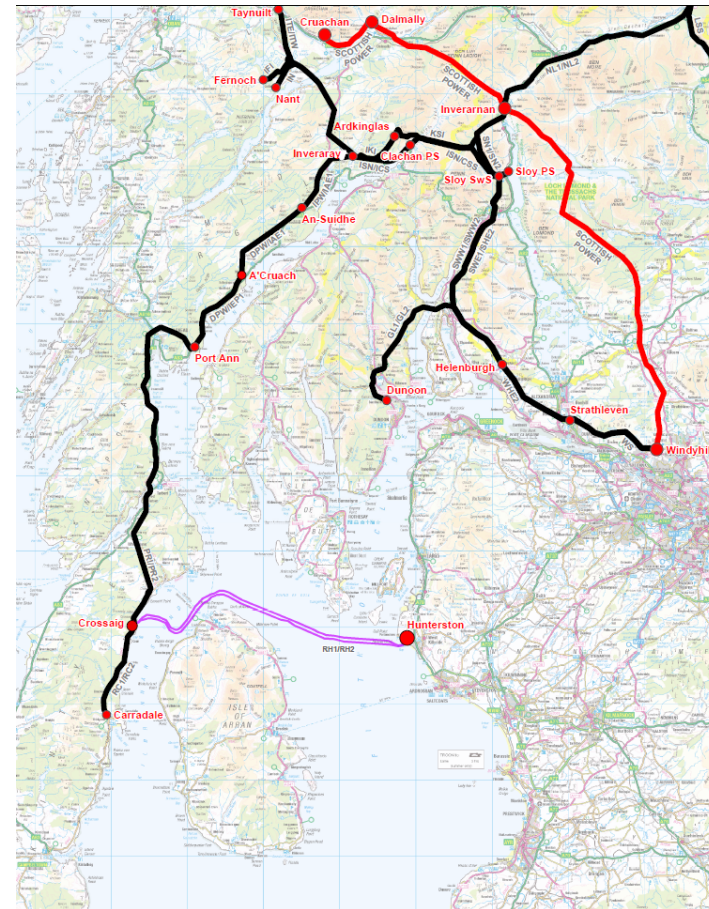
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Russell Stewart

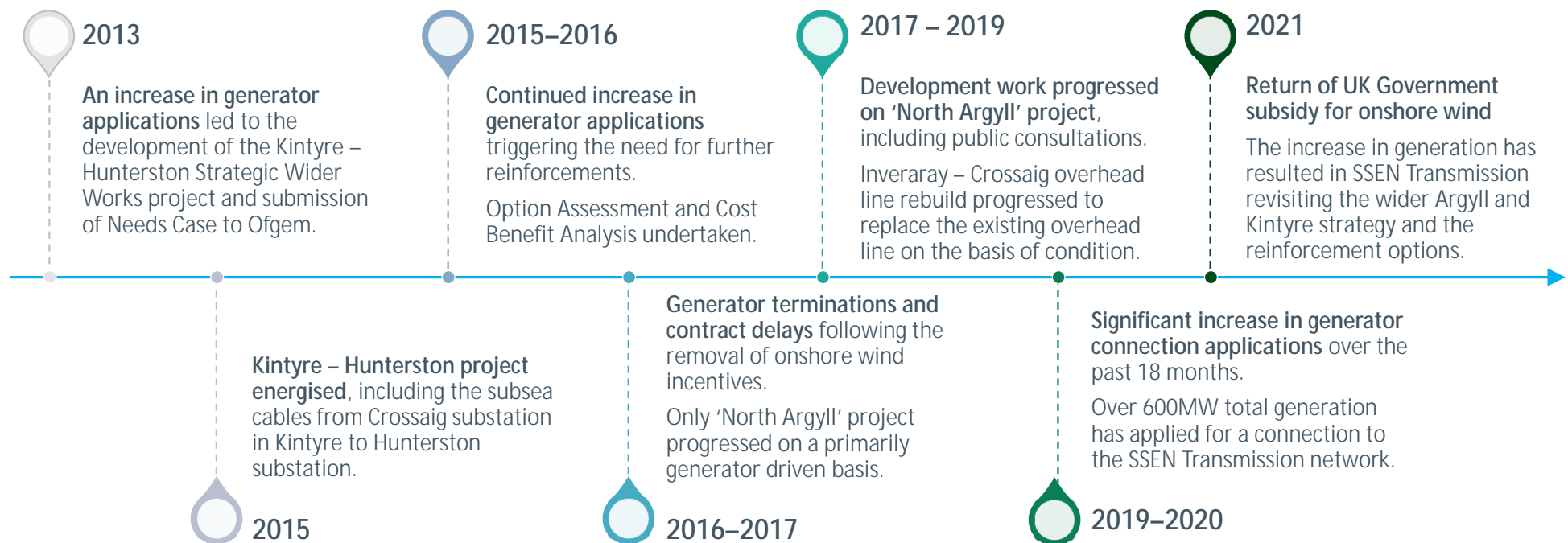
Lead Development Project Manager

# Argyll and Kintyre Network

- Ø Original network constructed over 60 years ago - designed to transmit electricity to consumers in rural areas of low-density population
- Ø Recent reinforcement works on this network have been driven by an increase in renewable generation and the asset condition of the existing network
- Ø Export from Argyll and Kintyre network is via three 132kV overhead line circuits in the north to Sloy, and via two 220kV subsea cable circuits in the south to Hunterston (Scottish Power)
- Ø The 275kV double circuit overhead line in the area (in red) is owned by Scottish Power



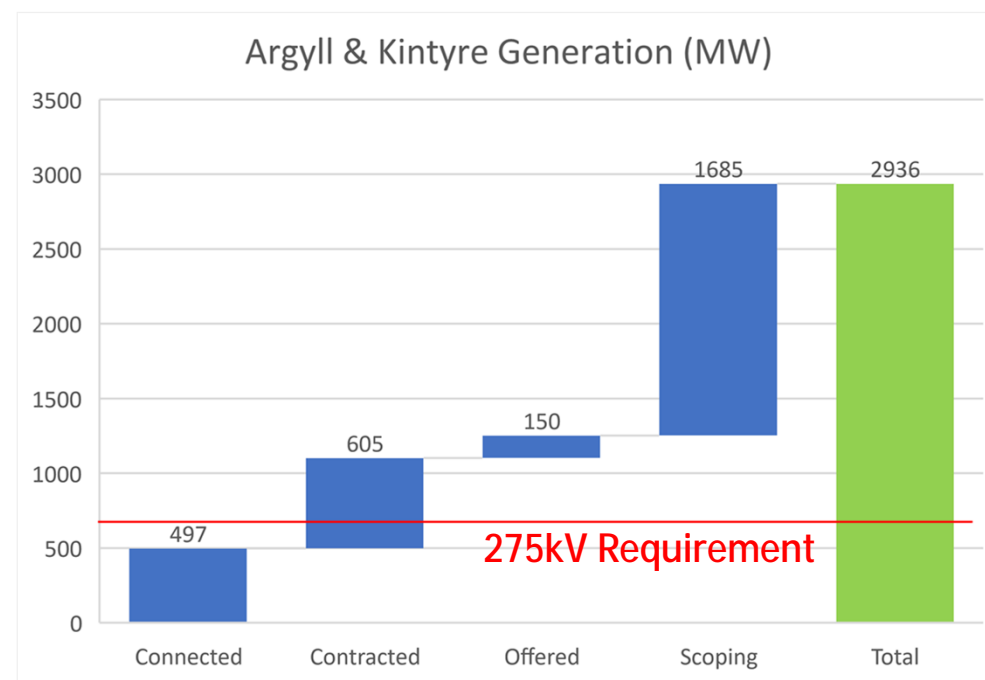
# Argyll and Kintyre – Background



# Argyll and Kintyre – Need for Reinforcement

The need for further reinforcement beyond that already under construction is being driven by new renewable generation, predominantly onshore wind

- Generation in the area has fluctuated since 2015 due the renewable energy subsidies available and then the subsequent removal for new projects in 2017
- The renewed push for renewable energy has seen a significant and sustained increase in applications and scoping generation in the past 12-18 months
- Capacity of existing Transmission network is insufficient to accommodate increased generation seeking connection
- Reinforcement is required to develop a network for net zero
- **If all this generation was to connect, potential for 6X the current generation connected in Argyll**

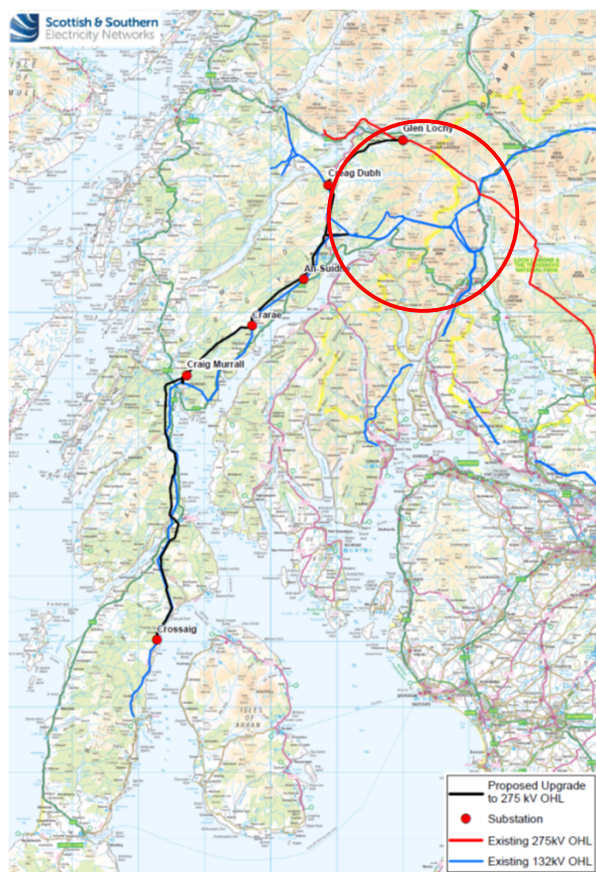
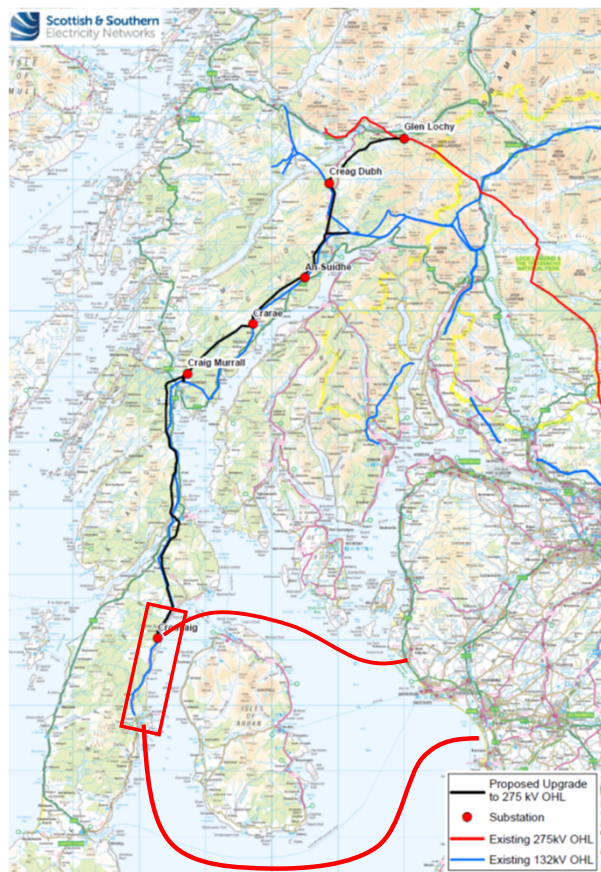


Contract for Difference (CfD)- current UK government support for delivery of low carbon electricity generation



# Argyll and Kintyre – Considered Options

Options considered to increase the capacity of the network in order to accommodate new wind farm connections



In refreshing the options assessment, options beyond the current preferred option were developed.

Routes through the Loch Lomond and Trossachs National Park were discounted prior to the Cost Benefit Analysis (CBA) for several reasons.

Additional options considering subsea have been discounted via the CBA.

# Argyll and Kintyre – 275kV Scheme Scope

## Our Preferred Option

### 1. Creag Dhubh – Dalmally 275kv Connection

- Construction of a new substation at Creag Dhubh connected by approx 14km of new Overhead Line to Scottish Power's 275kV Dalmally-Windyhill Overhead Line

### 2. Creag Dhubh – Inveraray 275kv Overhead Line

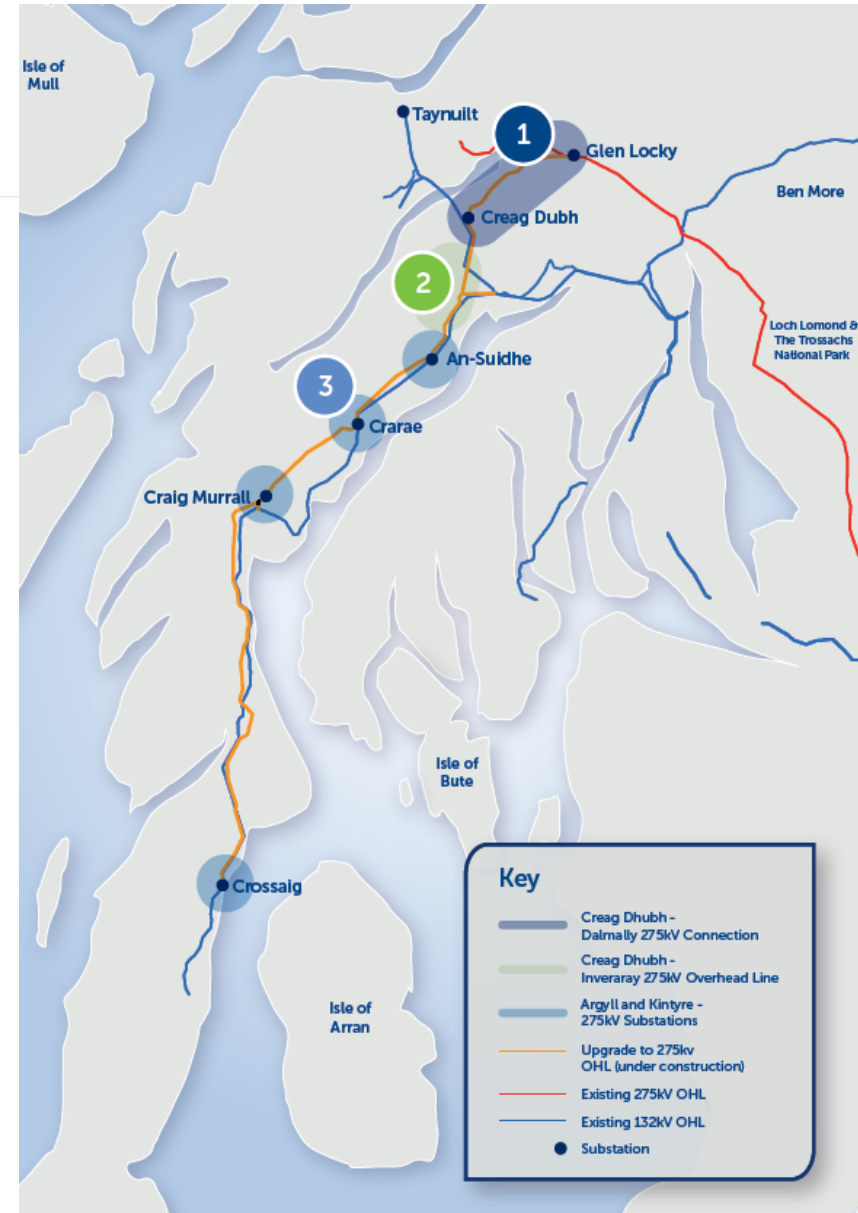
- Construction of approximately 10km of new Overhead Line between Creag Dhubh and a tee point on the existing Inveraray-Crossaig Circuits

### 3. Argyll and Kintyre 275kV Substations

- Construction of new An Suidhe and Crarae substations
- Maintaining connection to the Port Ann Grid Supply Point
- Construction of the Craig Murrail substation
- Construction of a new substation in the vicinity of the existing Crossaig substation

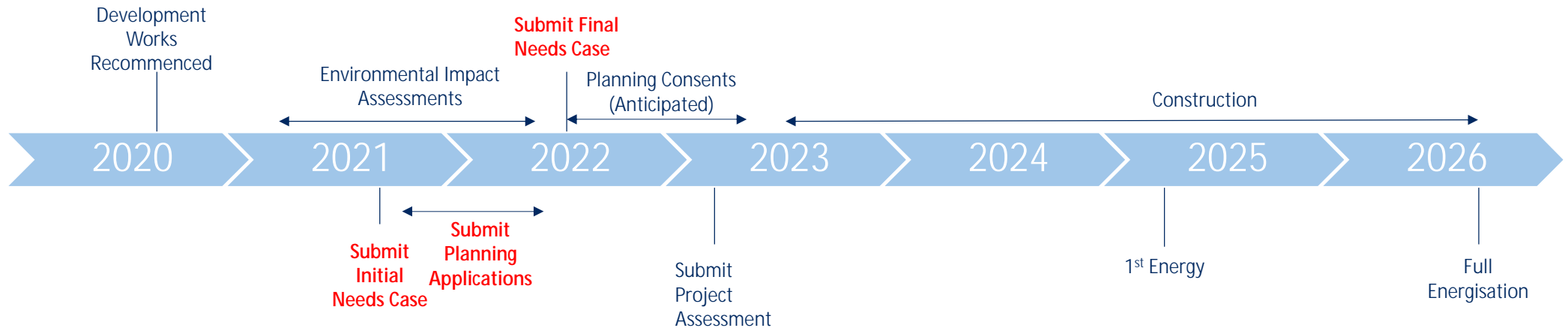
## Customer Connections

Additional Overhead Line infrastructure and substations are to be constructed to connect wind generation along the route





# Argyll and Kintyre – Scheme Programme



Opportunities for stakeholders to provide formal representation to consenting bodies and regulator



# Creag Dhubh – Dalmally 275kV Connection

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Paul McQuillan

Development Project Manager

# History of Creag Dhubh – Dalmally 275kV Connection



# Consultation – You said, We did



## 2017 – 2018 Initial Undergrounding Cable Feasibility Study



During Route Options consultation, **the community requested we consider undergrounding the line in Dalmally due to visual impact in the Strath of Orchy and concerns over proximity to residences in Stronmilchan.**



**We carried out an initial Cable Feasibility Study** investigating potential underground cabling routes in Dalmally.

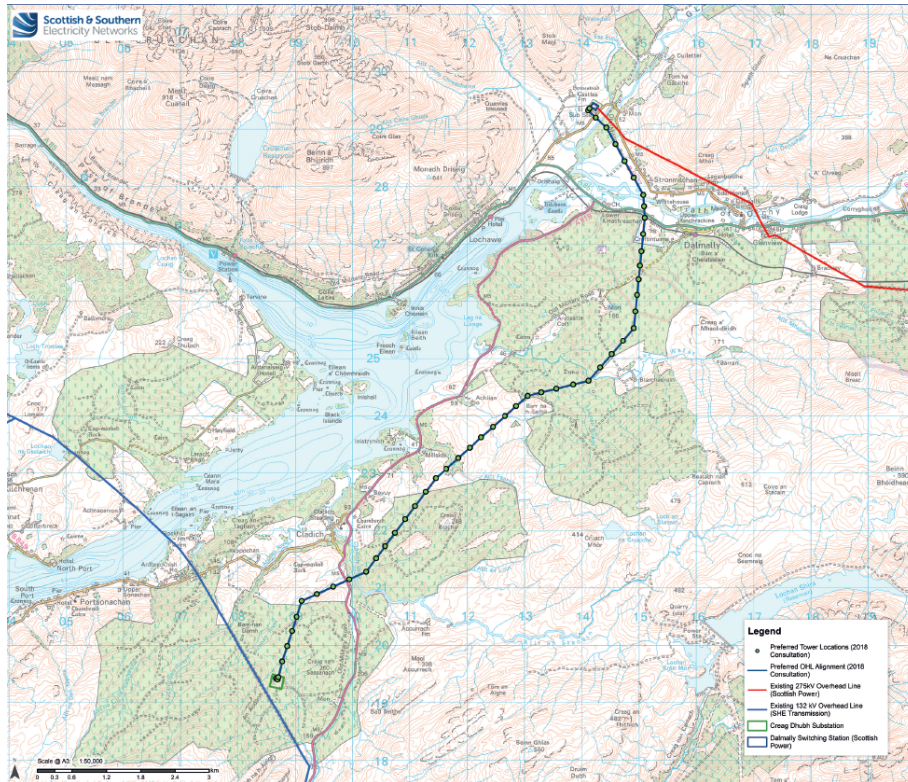
Findings were presented in January 2018 at a G&I CC meeting.

Three Underground Routes were considered:

1. Alongside the A85 and B8077 approaching Dalmally substation from the west.
2. The original Route of the OHL approaching Dalmally substation from the south.
3. Cabling to east beyond Glenview then parallel to the existing OHL approaching Dalmally substation from the east.

Based on the constraints identified we stated our intention to continue to develop the overhead line solution.

# March 2018 Preferred OHL Alignment Public Consultation



This Preferred OHL Alignment received significant opposition in the March 2018 Consultation with many stakeholders, particularly the local community, strongly opposing the preferred tower positions, citing landscape and visual concerns, where the overhead line crosses the Strath of Orchy.

# Consultation – You said, We did

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## 2019 Detailed Constructability assessment of Undergrounding Options



During the Preferred Alignment consultation, the **majority of feedback received was in objection to the preferred overhead line alignment**, citing landscape and visual concerns as the proposed OHL crossed the Strath of Orchy. Stakeholders requested an underground cable, as they considered it to be the best way to achieve the aim of no new towers in the Strath of Orchy, and the associated negative landscape and visual effects.



In response to stakeholder requests for an underground cable, SHE Transmission completed detailed engineering constructability assessments and an environment assessment of the possible underground cable options in 2019.

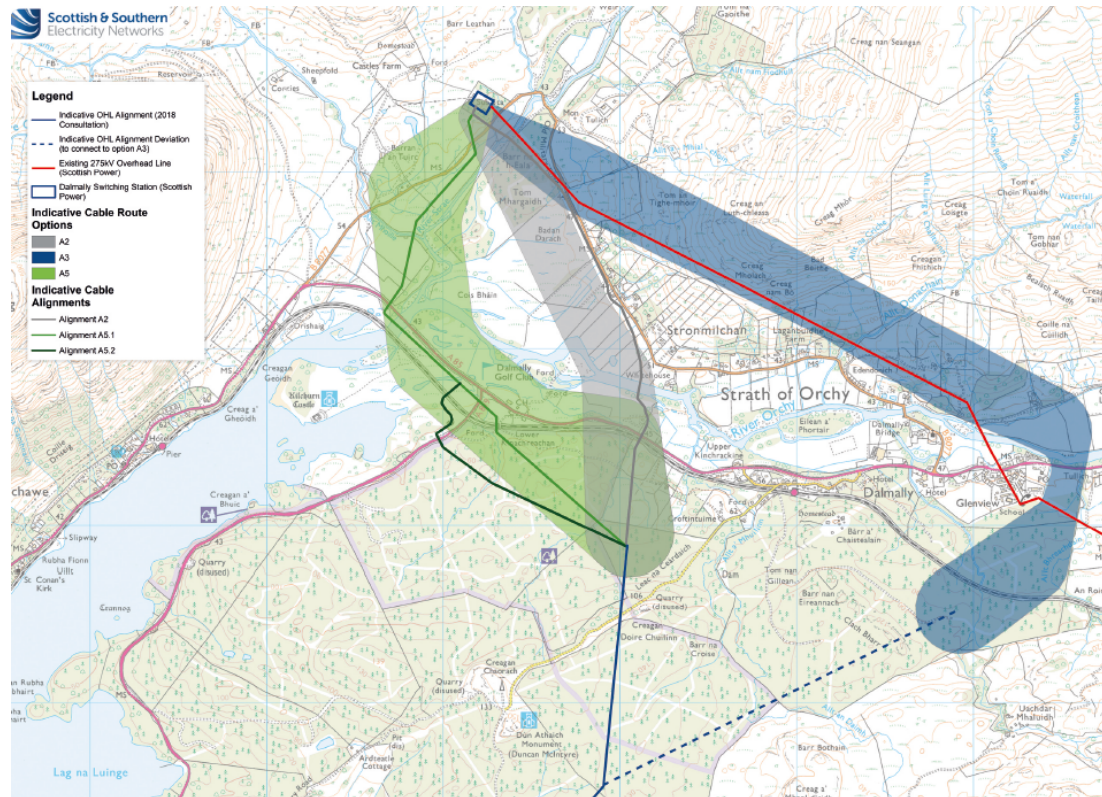
A Contractor led assessment identified two potentially feasible cable options in response to landscape and visual concerns, by avoiding an OHL crossing the Strath of Orchy.

This assessment of cable options identified the following high-risk issues of concern: infrastructure (road, railway) crossings; flooding; terrain; peat deposits and gaining access for works.

Work in or near the water environment has the potential to result in significant adverse impacts and works within an active flood plain require special consideration due to the potential for pollution during flood events.



# Undergrounding Options – 2019



# Consultation – You said, We did



## 2020 Alternative Options Consultation



The cable options would mitigate the potential landscape and visual effects of an OHL in the Strath of Orchy; but would introduce new, and potentially significant adverse effects on the environment, due to construction in an area of high flood risk and associated pollution risks. We identified an alternative connection location to the east of Dalmally. In September 2020, we presented our original preferred option from 2018 (**Option 1**), the undergrounding options (**Option 2**) and the new alternative overhead line option (**Option 3**) for consultation:



- 0% of consultation responses indicated **Option 1 (our preferred solution from 2018)** as preferred
- 38% selected **Option 2 (undergrounding)** as preferred
- 24% selected **Option 3 (new alternative OHL option)** as preferred
- 38% did not select an option

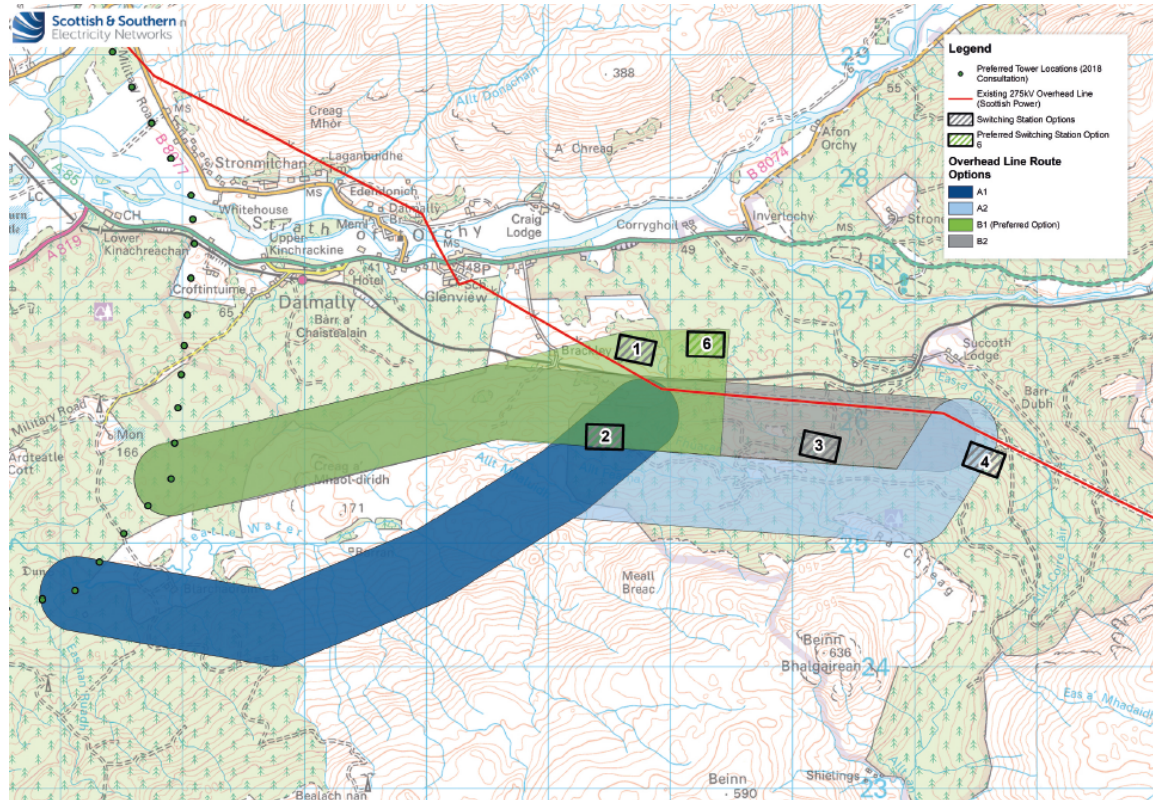


Community feedback favoured **Option 2**, but taking account of feedback from statutory stakeholders in relation to potential pollution issues to Loch Awe **we confirmed our preferred option as Option 3.**

This addresses a number of concerns local community members raised about the visual and cumulative impacts of connecting to the existing network in the Strath of Orchy and avoids the significant risk of pollution to Loch Awe during cable installation and during operational use in the flood plain at the head of Loch Awe.



# Glen Lochy Routes – September 2020



# Consultation – You said, We did



## Summer 2021 Consultation

Following the announcement of Option 3 (Glen Lochy) as the preferred Route option, we consulted on the possible overhead line Alignment options alongside the proposed location of Glen Lochy Switching Station in July 2021.

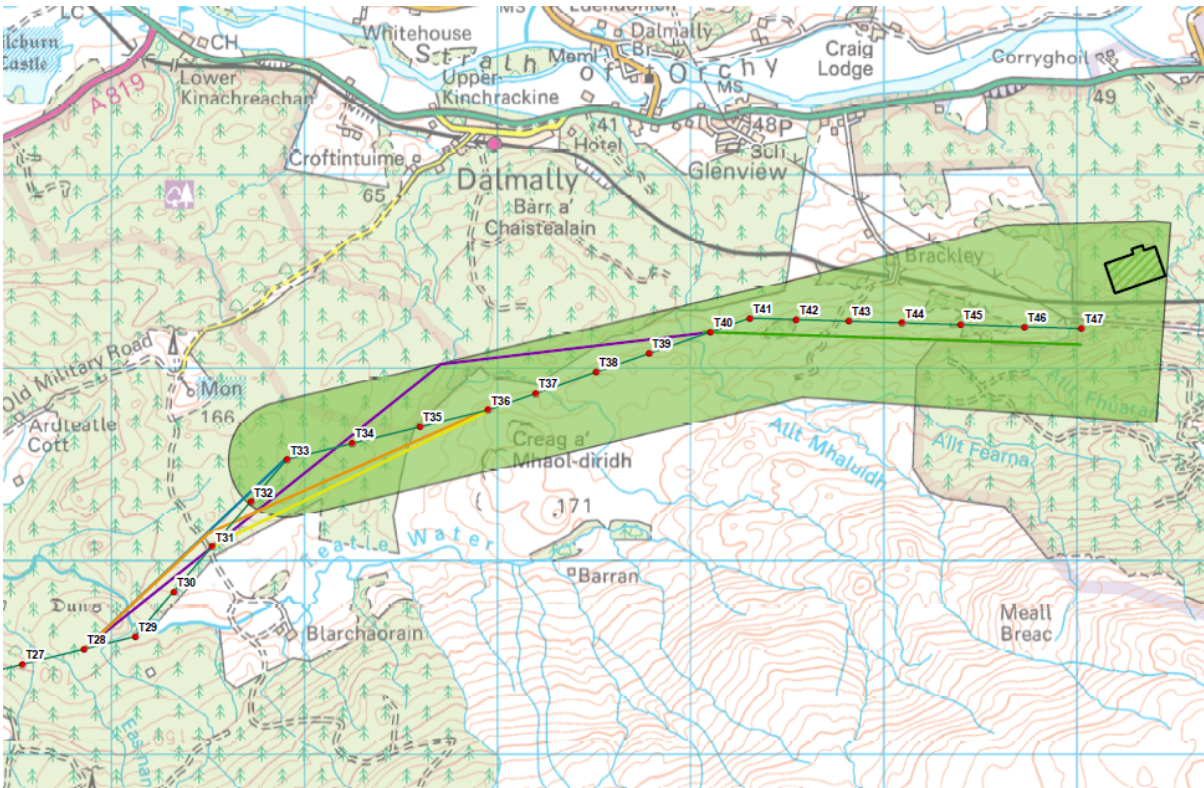


- The local community submitted 97 emails/letters and 104 feedback forms in response to the consultation
- Within the feedback forms, over 90% didn't agree with the preferred overhead line alignment, but not provide an indication of their alternative preferred option out of the 5 alternative alignments presented
- The vast majority of feedback was not specifically in relation to the options presented, but in rejection to any additional infrastructure at Dalmally.
- Concerns cited included adverse effects on housing and tourism, no advantages for the local community, a lack of justification of the project need.



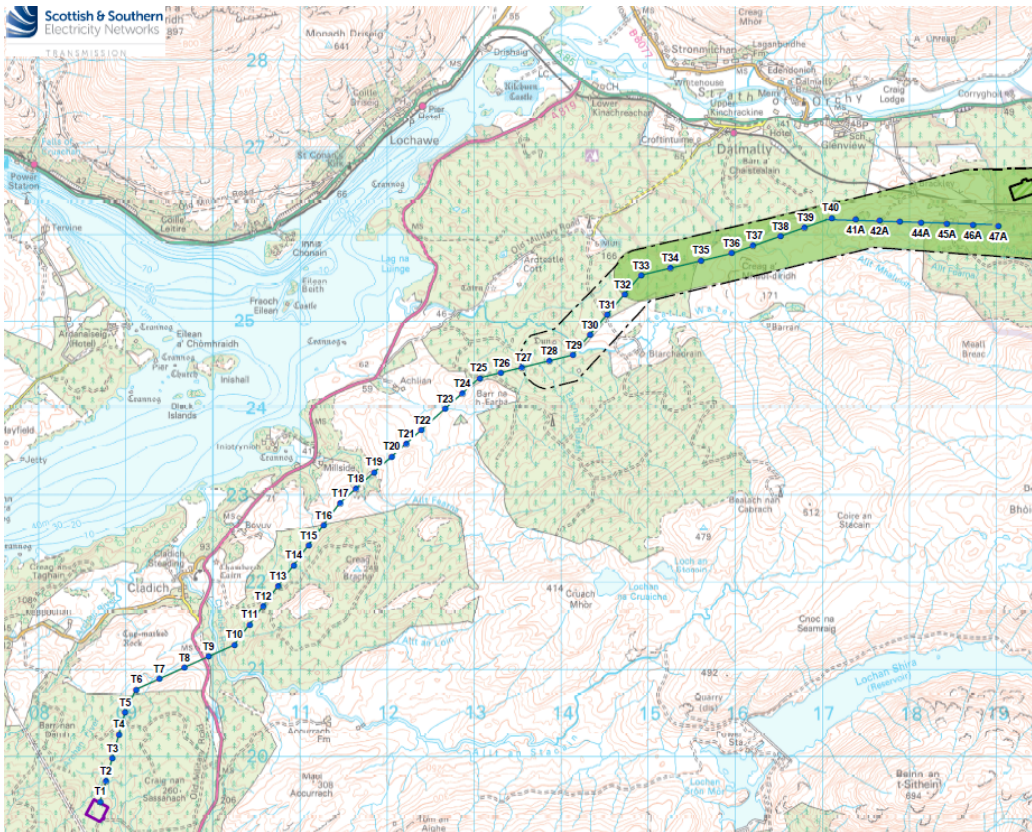
The consultation and selection of the preferred Glen Lochy option, to avoid the Strath of Orchy, concluded in November 2020 with the publication of the Report on Consultation. Whilst we are eager to continue to address concerns, the Glen Lochy option continues to be progressed as the preferred option to avoid the effects of crossing the Strath of Orchy either by OHL or by cable.

# Glen Lochy Alignments – August 2021





# Preferred Alignment



# Glen Lochy Switching Station Update

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- Following discussion with Scottish Power, it has been concluded that the SSEN Transmission required network capacity could be achieved with a direct connection between the overhead lines using a Junction Tower.
- It is proposed that we will not submit plans for the switching station at Glen Lochy.
- We are in the process of finalising the design and the location of the Junction Tower with Scottish Power, to enable the connection in place of the switching station.
- This will be confirmed in our Report on Consultation, due this month.
- Details of the location of the Junction Tower, maps and visualisations will also be included in the Report on Consultation and feedback on this proposal from the community is encouraged.

# What's Next - Planning Applications



| Application  | Intended Submission Period | Consenting Body                          |
|--|----------------------------|--|
| Creag Dhubh – Dalmally Overhead Line (Section 37)  | November 2021              | Scottish Government Energy Consents Unit |
| Creag Dhubh Substation (Town and Country Planning) | November 2021              | Argyll and Bute Council                  |

- Transmission overhead lines are subject to submission to the Scottish Government Energy Consent's Unit to which representations can be made directly
- Substations however are submitted directly to the local planning authority, in this instance, Argyll and Bute Council
- We will ensure you are made well aware of when applications are submitted and how you make representations
- Planning Application for Glen Lochy Switching Station is not proposed at this time

# Community Benefit



As a regulated company, we must be mindful of the GB bill payer and are unable to offer monetary benefits in the same ways as windfarms; such as Community Benefit Funds

Our typical Community Benefit currently centres around:

- Contract opportunities for local contractors and hospitality
- Volunteering days
- Works with local schools; STEM, Graduate Programmes and Career talks, Electrical Safety
- Biodiversity Net Gain around the new infrastructure
- Ad-hoc opportunities for donation of materials, expertise or labour when required and feasible

We're currently looking at ways we can offer additional benefits which would ensure a lasting legacy for local communities and would love to hear your views as we engage further on this.

## Examples

Around 100,000 bed nights in local accommodation during Caithness – Moray project

Working with Tarbert and Skipness Community Council on local development programme, sharing contacts and advice

Caithness –Moray; 217 local people employed in rural north of Scotland

Painting, re barking, power washing playground of Inveraray Primary prior to children returning to school

Team worked with contractors Balfour Beatty to help the Inveraray Community Council install the village's Christmas lights

# Questions and Answers Session