

Powering Scotland Towards Net Zero

Denny to Wishaw Network Upgrade



Introduction

Scotland is a world leader in the fight against climate change.

Our country has a target of Net Zero greenhouse gas emissions by 2045 – meaning that Scotland's contribution to climate change will end, definitively, in one generation.

We are in the middle of a transformation, with the electricity we use increasingly coming from greener, cleaner sources, as many new renewable generators replace older fossil-fuelled power stations.

At the same time, demand for electricity will grow rapidly over the next few years, with electric vehicles replacing petrol and diesel, and increased electrification of heating, industry and transport networks.

This huge change means we need to upgrade Scotland's transmission network, so we can get this increasing amount of electricity from where it is produced to the homes, businesses, hospitals and public services that need it.

Our upgrade work includes reinforcing the network through Scotland's Central Belt, between Denny and Wishaw. This leaflet tells you about our plans, where to find more information, and how you can give us your views.



Existing 132kV overhead line crossing the Antonine Wall

Why is this project needed?

The electricity transmission network in central Scotland was first built in the 1920s. Since then it has grown and evolved to meet the region's industrial needs and serve its expanding population.

Today, the existing electricity network in Falkirk and Lanarkshire includes overhead lines operating at 275kV (275,000 volts) and 132kV (132,000 volts), which transport electricity through the region and also serve local communities through Grid Supply Points (GSPs) at Bonnybridge, Cumbernauld, Easterhouse, Newarthill, Coatbridge and Wishaw.

SP Energy Networks (SPEN) is responsible for the transmission and distribution of electricity in central and southern Scotland. We have an obligation to maintain, operate and invest in our network to secure a safe, reliable, and economic service for current and future customers.

Our planning work with National Grid ESO (Electricity System Operator) has identified that, for the UK to meet its Net Zero

carbon emissions targets, the transmission network in central Scotland needs to be capable of transporting more green electricity from Scotland to England and Wales.

To achieve this extra capacity, we need to reinforce the network between Denny and Wishaw. This includes a new north-south overhead transmission line between Bonnybridge and a point near Glenmavis, to link up existing overhead lines, allowing the additional green electricity to flow between them and on to the wider transmission network.



Existing Bonnybridge 132kV and 275kV substations

What does the project involve?

The Denny to Wishaw Network Upgrade Project includes new infrastructure, and some changes and reinforcements to existing infrastructure, including:

- Construction of a new double circuit 275kV / 400kV overhead line, running north-south from Bonnybridge 275kV substation to a point near Glenmavis in North Lanarkshire, where it will connect to the existing 275kV overhead line (known as XX Route) that runs between the Easterhouse and Newarthill 275kV substations;
- Work at Bonnybridge 275kV Substation to terminate the new Bonnybridge to Glenmavis overhead line;
- Upgrading one side of the existing overhead line (known as ZG route) between Denny North and Bonnybridge substations from 275kV to 400kV; and
- Moving the upgraded 400kV circuit from the 275kV substation to the 400kV substation at Denny.

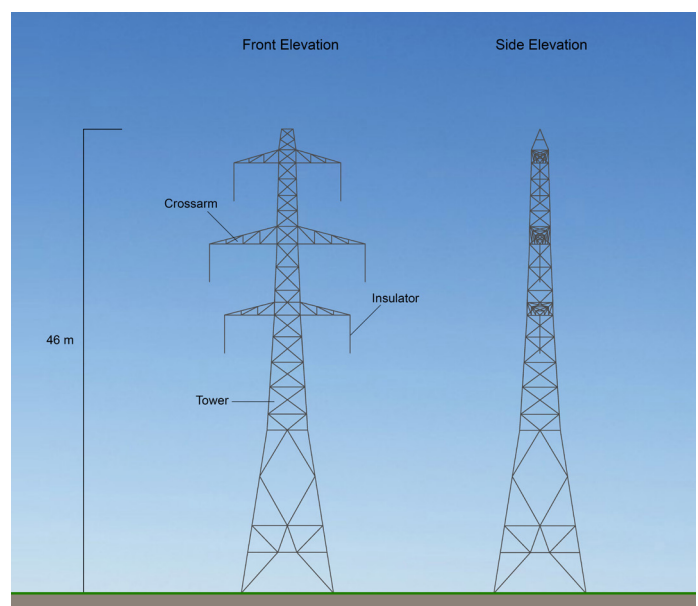
We will also need to upgrade some other overhead lines in the region from 275kV to 400kV, but these will be subject to a separate consultation in due course.

What will the new overhead line look like?

The new overhead line will be carried on steel lattice towers (pylons). The towers will have three arms on each side, and each arm will carry a set of conductors (wires).

This is because there will be a circuit on each side of the towers, and each circuit has three sets of wires. The towers are made of galvanised steel. They are grey in colour and become duller in appearance after about 18 months.

The towers have a standard height of 46 metres, but can go up to 63 metres where required to ensure electrical safety clearance to the ground. They are placed approximately 300 metres apart, but the exact distance between them will vary depending on the landscape and any obstacles such as roads, rivers and railway lines.



Our preferred route

SPEN has been working with environmental consultants to identify potential routes for the new overhead line between Bonnybridge and the existing Easterhouse-Newarthill overhead line near Glenmavis.

We appraised each option for its impact on a range of criteria including local views, the character of the landscape, biodiversity, forestry, cultural heritage and flood risk and other land uses.

Our preferred route (a swathe of land within which an overhead line could be installed), is the one that we believe achieves the best balance between our technical requirements and minimising the impact on the environment and the people, who live, work and enjoy spending their time in the area.

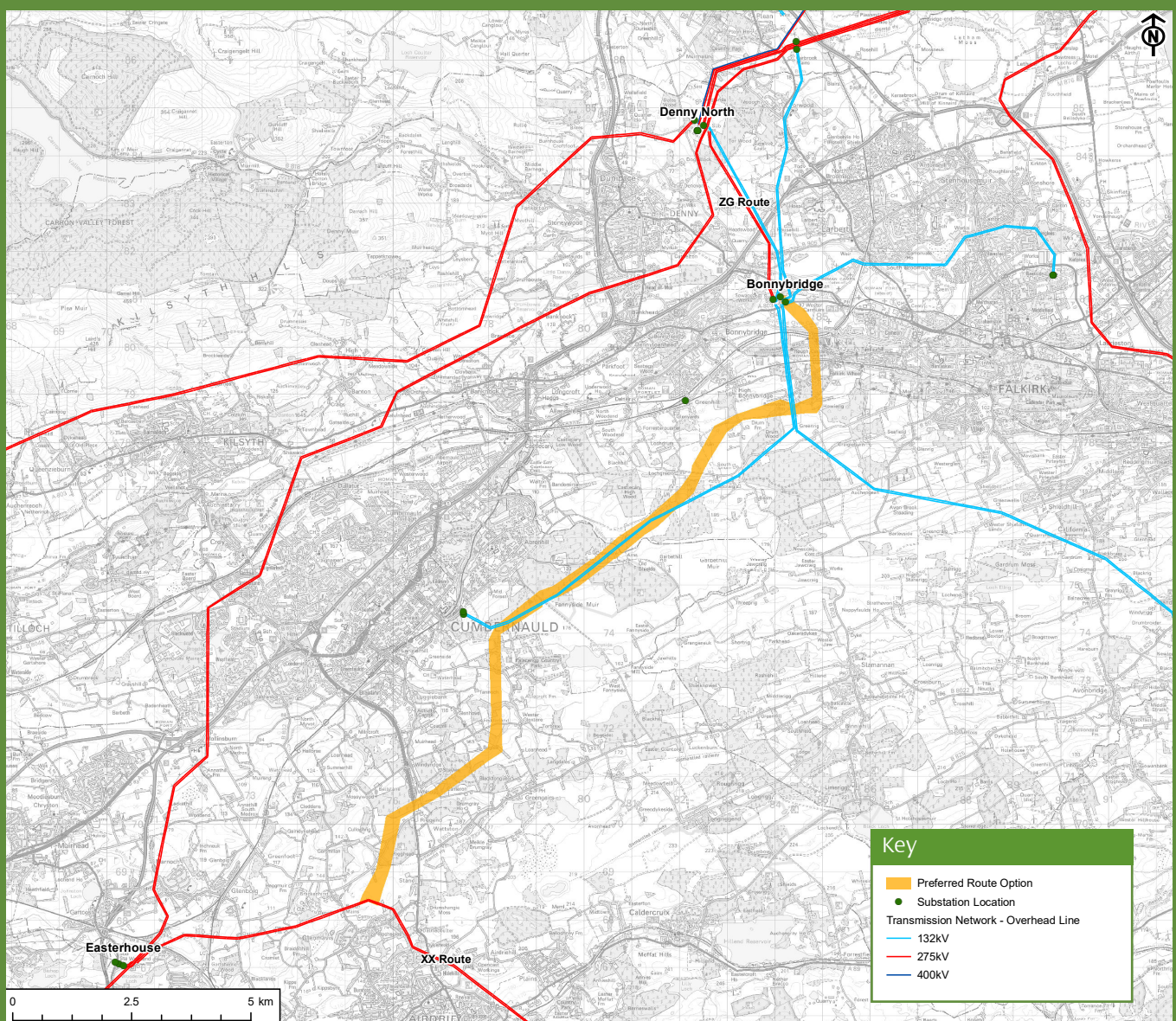
Our preferred route (see map below) leaves Bonnybridge substation and crosses the Antonine Wall at a location that minimises potential effects on the World Heritage Site.

It passes east of Rough Castle, using dips in the landscape and screening provided by existing trees to reduce visibility in the landscape.

The preferred route then passes west of the Slamannan Plateau Special Protection Area (SPA) and crosses Palacerigg Country Park. We can't avoid crossing the park because of the need to avoid the SPA and nearby homes on the edge of Cumbernauld, but we will use the landscape and mature trees to screen the new line from views as much as possible.

The preferred route then avoids the Community Growth Areas and planned development north of Airdrie and east of the A73, before terminating at a point near Glenmavis where it joins on to the existing Easterhouse-Newarthill overhead transmission line.

You can find full details of the preferred route and the alternatives we considered, our routing strategy and the findings of our options appraisal process, in the Routeing and Consultation Document on our project website.



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Public consultation

Our public consultation runs from **Monday 24 May to Monday 21 June 2021**

SPEN attaches great importance to the effect our work may have on the environment and local communities. We want to hear what local people think about our plans, to help us develop the project in the best way.

The Covid-19 pandemic means that we can't hold public exhibitions in the usual way, but we will be holding a series of online presentations and discussions where local people can find out more and ask detailed questions of our project team.

All project documents are on our project website, where you can also register to join an event and fill in an online feedback form.

If you don't have internet access, you can call our Freephone number to ask any questions you may have, or request a personal call back from a member of the project team. We can also send you a paper feedback form and a Freepost envelope so you can complete it and return it to us free of charge.



Existing 132kV route south of Bonnybridge substation

What happens next?

Following this first round of consultation we will develop a detailed design and alignment for the new overhead line, including locations for towers, access routes and working areas. We will publish a report summarising the feedback received in this first round of consultation and how this has influenced our proposals.



We will then carry out a detailed Environmental Impact Assessment and hold a second round of public consultation, so that people can give us their views on the detailed route alignment.



After considering feedback received in the second round of consultation, we will finalise our proposals and submit applications for consent to the Scottish Ministers.



The Scottish Ministers will then hold a final round of statutory consultation before making any decision on our applications.

How to contact us

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