SP Energy Networks

Powering Scotland Towards Net Zero

Tealing to Kincardine Upgrade Project: Mossmorran Substation Extension

Scotland is producing more clean, green energy than ever before, and we need to strengthen the transmission network so we can get it to the homes, schools and businesses that need it.

Renewable energy is replacing older fossil-fuelled power stations. At the same time, demand for electricity is growing through increased electrification of heating, industry and transport networks, and electric vehicles are replacing petrol and diesel.

The UK and Scottish Governments are committed to increasing the use of renewable energy and have targets to achieve net-zero greenhouse gas emission by 2045 in Scotland and 2050 in the UK.

This huge change means we need to upgrade Scotland's electricity transmission network, so we can get this increasing amount of energy from where it's produced to where it's needed.

To help make this happen we need to increase the voltage of overhead lines in Fife from 275,000 volts (275kV) to 400,000 volts (400kV), and extend Mossmorran substation, near Cowdenbeath, to strengthen the electricity transmission network and guarantee secure energy supplies for the future.

This leaflet tells you about our plans, where to find more information, and how you can give us your views.

Why do we need to extend Mossmorran substation?

Much of the electricity transmission network in Scotland is between 50 and 100 years old. It has grown and evolved to meet industrial needs and serve the expanding population, but the network in central Scotland will soon be at full capacity – unable to accommodate all the clean, green renewable energy we will all need in future.

More onshore and offshore wind farms, solar energy and battery storage are connecting to the power network and we need to increase the voltage of the overhead lines in this area from 275kV to 400kV, in keeping with the wider electricity transmission network, so we can get the energy from where it's produced to where it's needed.

In order to increase the voltage and network capacity we need to replace the two existing 275kV transformers at Mossmorran substation – which are 62 and 41 years old – with four new 400kV transformers.

The new Mossmorran substation will have a key role in enabling Scotland and the UK to meet Net Zero emissions targets while ensuring that power flows efficiently through the system in central Scotland.

What will happen at Mossmorran?

Before we can switch off the old transformers, we need to extend the substation site so we can install the new 400kV transformers and equipment and connect them to the network.

This is because the old transformers are essential to keep the lights on and the power flowing while we put the new substation in place.

The proposed new Mossmorran substation will have similar equipment to SPEN's Kilmarnock South substation, pictured on the front of this leaflet.

We are still developing detailed plans, but the project will include:

- A new 400kV SF6-free Gas Insulated Switchgear (GIS) substation building, which will house electrical switchgear, plant and ancillary equipment
- Four 400/132kV transformers
- SF6-free GIS double busbar to connect the switchgear to each circuit
- Space for additional transformers to be installed in future
- Internal access roads and vehicle parking
- Drainage and mitigation (for example, landscaping)
- A new steel palisade fence and internal fencing around the live compound to ensure safety and security.
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Overhead line changes

We will need to make minor alterations to the existing overhead lines at Mossmorran to connect them to the new substation, as shown on the plan in this leaflet.

At the moment, the overhead lines cross the site for the proposed new substation. We plan to put up two temporary masts so we can divert the overhead lines away from the site, removing three existing towers (pylons) and allowing us to build the new substation.

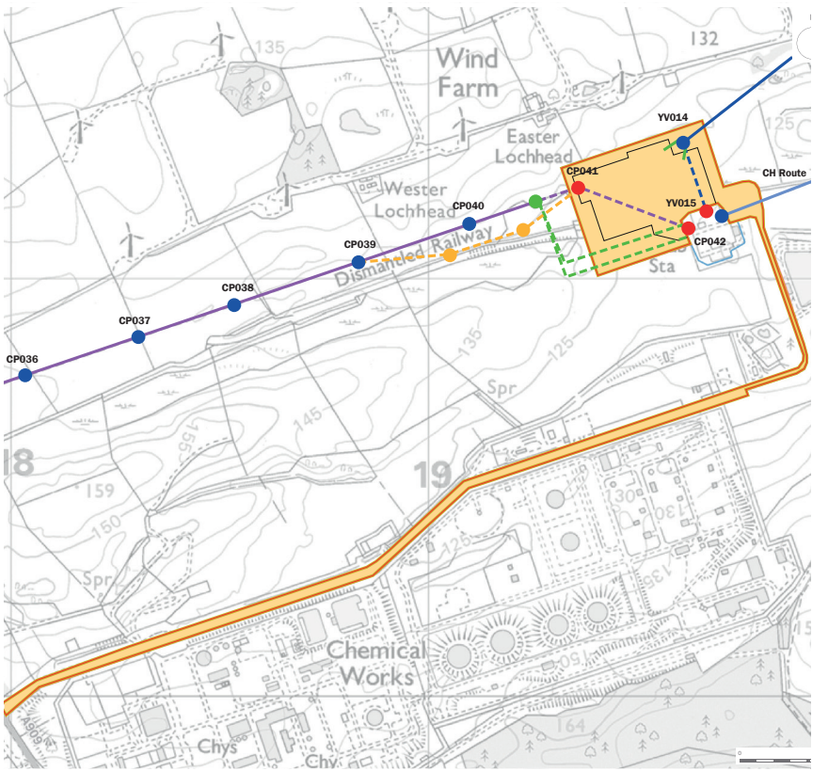
We will then need to put up two new towers to connect the new substation to the network before removing the temporary masts and line diversion.

What else is involved in the Tealing to Kincardine Upgrade Project?

The purpose of the project is to increase the voltage of overhead lines from 275kv to 400kV between Tealing, near Dundee (in the Scottish and Southern Energy Networks area) and Kincardine (in the SP Energy Networks area), to allow more clean, green energy to flow through the network.

To make this happen, SP Energy Networks needs to extend the substations at Mossmorran, near Cowdenbeath, and Westfield, near Ballingry. We will also need to connect two existing overhead lines to each other north of Kincardine, to improve the efficiency of the network.

You can find full details on our project website.

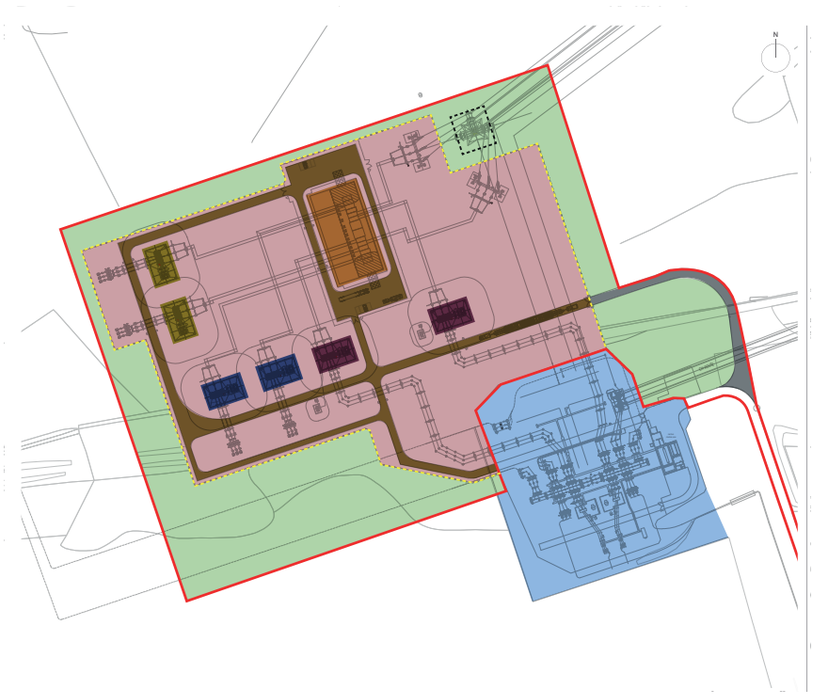


Proposed overhead line changes

- Site boundary
- Mossmorran Substation Extension
- Indicitive Substration Fenceline

SPT OHL Transmission Infrastructure

- CP OHL Route to be Retained
- CP OHL Route to be Removed
- YV OHL Route to be Removed
- YV OHL Route to be Removed
- New Spans from YV OHL to Mossmorran Substration Extension
- New Underground CP Route Connection
- CH OHL Route to be Retained
- Existing CP/CH/YV/OHL Towers to be Retained
- Proposed CP OHL Towers
- Existing CP/YV OHL Towers to be Removed
- Temporary CP Mast Locations
- Temporary CP OHL Route



Potential substation layout

- Site boundary
- Existing Mossmorran Substration
- Proposed Mossmorran Substration Extension Area
- Transformers
- Contracted Transformers
- Future Transformers
- Control Building
- Proposed Access Points
- Internal Records
- Area Reserved for Mitigation and Drainage Requirements
- New/Altered OHL Lattice Towers
- Indicative Substation Fenceline

SP Energy Networks

We want to hear your views

Our public consultation runs until Friday 30 August 2024.

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.

Please come along to our public exhibitions where you can see our plans in more detail and ask questions of the project team:

Tuesday 30 July, 2pm to 7pm:
Benarty Centre, Flockhouse Avenue, Ballingry, KY5 8JH

Wednesday 31 July, 2pm to 7pm:
Crossgates Royal British Legion, 60 Main Street, Crossgates, KY4 8DY

You can find more information and project documents on our project website, where you can also 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.

What happens next?

Following the first round of consultation we will develop detailed designs for the substations, including locations for buildings, access routes and working areas. We will publish a report summarising the feedback received and how this has influenced our proposals.

We will carry out a detailed Environmental Impact Assessment, and hold further consultation, before we finalise our proposals and submit planning applications under the Town and Country Planning (Scotland) Act 1997 (as amended) to Fife Council.

We will also need to submit applications to the Scottish Government Energy Consents Unit, under Section 37 of the Electricity Act 1989, for the proposed changes to the overhead lines and uprating in voltage.

At this stage, your comments are not representations to the planning authority. When we submit applications for development consent in the future, you will be able to make formal representations at that stage.

How to contact us

Email: **tkup@communityrelations.co.uk**
You can call us **free of charge** on: **0800 470 2376**
You can write to us **free of charge** at: **FREEPOST SPEN TKUP**

You can find more information about the project on our website:
www.spenergynetworks.co.uk/pages/tkup_project.aspx