



Scottish & Southern
Electricity Networks



Fort Augustus - Fort William

Overhead line refurbishment project

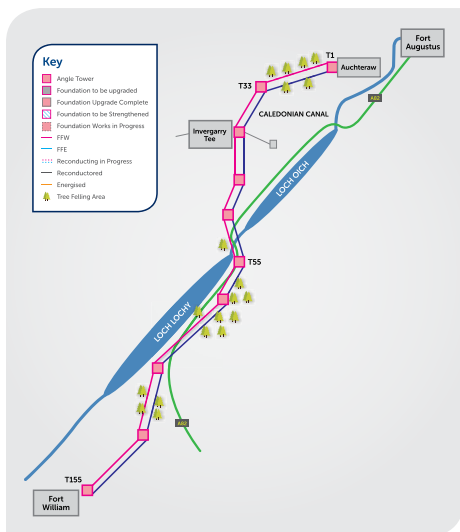
Scottish and Southern Electricity Networks (SSEN), operating as Scottish Hydro Electric Transmission plc under licence, is responsible for maintaining and investing in the electricity transmission network in the north of Scotland



The overhead steel tower line which runs between Fort Augustus Substation (Auchterawe) and Fort William Substation (Achintee Road) was constructed in 1955 and is operated at 132,000 volts.

The line passes through Invergarry, North and South Laggan, along Loch Lochy, to the west of Spean Bridge then in parallel with the A82, through Torlundy and to Fort William.

We are now investing in the network to fully refurbish the towers and replace the existing wires (conductors) between August 2017 and Summer 2020. The new wires will be capable of carrying increased amounts of electricity whilst ensuring the security of demand.



The overhead line operates at
132,000 volts

1955

The line was originally constructed

The main construction elements required to refurbish the line include:



Access

To access the towers, we will use a variety of methods including construction of access tracks, use of existing tracks, laying trackway panels on favourable terrain or by foot. New access tracks to towers will only be required where the foundations need to be refurbished. We will agree any access requirements with the relevant landowners before commencing works.

To allow for future maintenance or emergency repair works, we are proposing to retain new access tracks in key locations. We will apply for these permanent tracks through the Highland Council Planning Department.



Out with the old and in with the new

The existing conductor is made using aluminium wrapped around a steel core. The replacement conductor we will use is the 'Monte Carlo' - Aluminium Conductor Composite Core (ACCC).

The ACCC is made using aluminium wrapped around a carbon fibre core - the change means the conductor will be twice as strong as the steel, 70% lighter and able to carry twice the amount of power. The line will still be operated at 132,000 volts following the refurbishment.

Tower refurbishment

Our principal contractor, Balfour Beatty, has undertaken extensive assessments of the existing line and examined steel work, condition of fixtures and also the condition of the foundations. Teams of highly skilled linesmen will carry out the required refurbishments to the steelwork and foundations ahead of replacing the conductors.



Tree cutting

We have identified five main areas along the line where tree felling will be required to minimise the potential of any damage to the lines.

Replacing the conductors

To ensure a consistent supply of power to Fort William throughout the refurbishment works, we will turn off (de-energise) one side of the tower line and keep the other side live. The linesmen will then prepare the line to be removed before using winches to remove the existing conductor. The same winches are used to pull the new conductor into place. The linesmen will refurbish the north side of the line from Fort William to Fort Augustus then begin work on the south side.

The linesmen will work on sections of the line varying between 3km and 6km at any time. Working areas will in place at each end to position winches and other essential equipment. Eleven working areas will be retained for future maintenance or emergency requirements. They will remain flat and accessible and will be reinstated to blend with their surroundings.

Between
3km and 6km
will be worked
on at any time





5

areas have been selected for tree felling



Working with the community

The existing line passes through populated areas, crosses public highways, railway lines and sails over the Caledonian Canal.

To ensure that our work has as little impact as possible on the lives of those living and working in the area, we will utilise protection systems such as scaffolding and netting to keep people safe and allow main travel routes to stay open.

During some operations, we will position staff in locations to help with information, provide reasonable instruction and ultimately aim to keep members of the public safe.



Tower replacement

Through assessment, we have identified four towers to be replaced. The replacement towers will be the same character and construction as the existing structures. To maintain power supplies in Fort William, we will construct temporary circuits, on wood poles, to bypass the towers. The temporary diversions will be removed when the new towers are in place.



Programme of Activity

The project will be active from summer 2017 until May 2020. The main activities and timescales are detailed below.

Please note that dates are subject to change:



Access works

Aug 2017 - Jun 2018



Install temporary bypass circuits

Oct 2017 - Dec 2017



Tower Refurbishment

2017 - 2019



Stringing (west side)

Mar 2018 - Oct 2018



Stringing (east side)

Mar 2019 - Oct 2019



Reinstatement and restoration

Mar 2019 - May 2020



Tree cutting

Summer 2017 -
Feb 2018



If you would like further information about the project please contact our Communities Team Manager:

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