

Emerging best performing option: Connect two existing 220 kV overhead lines and increase voltage to 400 kV

Description

This option would use existing route corridors and infrastructure (like lines and towers) as much as possible to create a 400 kV overhead line (OHL) between Dunstow substation and Woodland substation. A route corridor is a 'path' through the land that is approved and used to transfer energy. Two existing 220 kV circuits would be used for this option.

They are:

- Gorman – Maynooth 220 kV circuit; (blue line in the study area)
- Dunstow – Maynooth (2) 220 kV circuit. (green line in the study area)

The towers and conductors on the existing circuits would be replaced or modified so they could handle a higher capacity and voltage (400 kV). This option will also need new towers at some points along the route. The next board illustrates the difference between the current towers and the towers they could be replaced with.

At the moment, the Gorman and Dunstow circuits connect into Maynooth.

If we were to create a new circuit from Dunstow to Woodland, we would need to connect the two existing circuits outside the Maynooth station.

We would also need to modify the Gorman-Maynooth 220 kV overhead line circuit to add a 'turn in' to the Woodland station.

This would create two new circuits into the Woodland station:

- A Gorman-Woodland circuit connected at 220 kV;
- A circuit heading towards Maynooth from Woodland at 400 kV.

This new section going south from Woodland to Maynooth would be used for the 220 kV to 400 kV increased voltage option.

The Dunstow-Maynooth (2) circuit is currently connected at 220 kV in Dunstow station. We would need to modify it to connect to the 400 kV busbar at Dunstow station. A busbar is a common connection point for several power lines.