

# Why and how we build electrical powerlines

Enbridge has committed to achieving net-zero greenhouse gas (GHG) emissions from our operations by 2050<sup>1</sup>. Since 2018, we have made significant progress in reducing our absolute emissions by 20%. We continue to look for ways to achieve our emissions reduction targets and combat climate change, and that covers planning and execution of all our projects.

One way we're doing that is proposing to electrify compressor units in our existing natural gas pipeline systems to reduce GHG emissions.

## Electric-powered compressor units

Traditionally, compressor units have used natural gas turbines. These units push the natural gas through the pipeline system.

By using electricity instead of natural gas to power these compressor units, GHG emissions will be prevented. These electric-driven compressor units will also be quieter and require less maintenance work compared to gas-driven units.

## Powerlines

To power these electric-driven compressor units, electrical powerline infrastructure will be required.

Enbridge will follow stringent regulatory and safety requirements in building electric powerline infrastructure.

## Constructing powerline infrastructure

### Pre-construction



1

### Planning the powerline route

Environmental studies and engagement with potentially affected groups and individuals are conducted to determine the best possible powerline route. To minimize disruptions to the environment and local community impacts, the least impactful route is chosen, following existing linear infrastructure – such as roads or other pipeline right-of-ways – to the greatest extent possible.

2

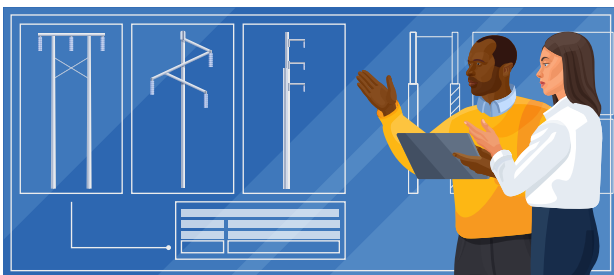
### Electrical powerline infrastructure design

After the route and required voltage are determined, engineers lay out the powerline design, which includes the details of the tower or pole, high-voltage cable or conductor size and foundation.

3

### Permitting and approvals

Necessary environmental and land permits are needed from municipalities and regulators.



<sup>1</sup> GHG emissions included within our targets are from assets over which we have operational control (Scope 1 and Scope 2 emissions). Projected reductions of GHG emissions intensity and absolute emissions is relative to the 2018 baseline year. Absolute emissions.

## Construction



4

### Powerline right-of-way and access road clearing

Vegetation clearing is necessary to create the powerline right-of-way (ROW) and to construct access roads. Following regulatory and safety requirements, the ROW requires a clearing of about 30 – 40 metres from each side of the powerline. Access roads are needed to enter the powerline site and ensure it can be maintained during operations.



5

### Foundation installation and pole erection

Excavation is required to lay down the foundation for the powerline poles. Once foundation is set, the poles are then erected.

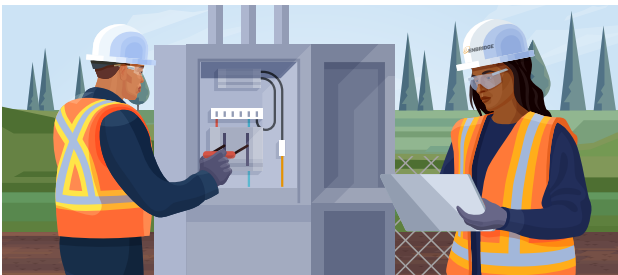


6

### Conductor stringing

High-voltage cables, called conductors, are strung on the erected poles. They must be securely fastened to the poles and are strung under the proper tension.

## Post-construction



7

### System integration and powerline testing

The new powerline infrastructure is integrated with the existing electric power system, and undergoes thorough testing to ensure it meets all operational and safety requirements.



9

### Site clean-up and restoration

The construction site is cleared of debris and the disturbed areas, including vegetation and habitat, are restored as much as possible.



8

### Hand over to a public utility company

After construction, Enbridge may turn over the functioning powerline infrastructure to a public utility to own and operate.