The Wintrack pylon

An innovative solution for new high-voltage lines
TenneT has developed a new type of high-voltage pylon known as the Wintrack pylon. This innovative design replaces the existing lattice tower and significantly reduces the so-called ‘magnetic field zone’. Thanks to the Wintrack concept, optimum use can be made of the space available around high voltage lines.
About TenneT

In its capacity as electricity transmission operator, TenneT monitors the reliability and continuity of the electricity supply. TenneT keeps a close watch on societal and technological developments, and wherever possible, we try to anticipate them by developing and implementing improvements in electricity transmission.

About the Wintrack pylon

• Innovative new pylon
• Minimalist design
• Unobtrusive presence in the landscape
• Smaller magnetic field zone
• Flexible in use
• Low maintenance

Design

Each Wintrack pylon consists of a pair of poles from which the high-voltage wires are suspended. To the eye the slender, tapering poles appear as separate visual elements. Their basic, minimalist design creates ‘visual calm’. As a result, the pylons can be integrated effectively into a range of landscapes. They are also easy to maintain thanks to their smooth surfaces.
Smaller magnetic field zone

By suspending the wires as close together as possible, the magnetic field zone can be reduced in size by more than 60 percent. This makes it possible to construct new electricity connections in a responsible way, with minimal impact on the landscape and local residents.
Combining lines

The Wintrack design also offers the option of combining multiple electricity connections on one and the same pylon. For instance, existing 150 kV lines can be combined with new 380 kV lines so that fewer pylons will have to be erected. Thus, the new pylon ensures an optimal balance between security of supply and integration into the landscape.
Three types of Wintrack pylon

Standard Wintrack pylon
Two 380 kV lines suspended from pylon

Four-circuit Wintrack pylon
Four 380 kV lines suspended from pylon

Combination pylon
150 kV line and 380 kV line suspended from pylon

The pylon height and the distance between pylons may vary depending on the route.
TenneT is Europe’s first cross-border grid operator for electricity. With approximately 20,000 kilometres of (extra) high voltage lines and 36 million end users in the Netherlands and Germany we rank among the top five grid operators in Europe. Our focus is to develop a Northwest European energy market and to integrate renewable energy.

Taking power further