

## DolWin2

# ABB positions world's most powerful offshore converter platform in the North Sea



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## The world's most powerful offshore converter station in the North Sea

DolWin beta is today the world's most powerful offshore converter station in the North Sea. The 320-kilovolt converter station, housed on an offshore platform, has a 916 megawatts (MW) power transmission capacity, making it the world's most powerful installation of its kind, enough to power around 1,000,000 households with clean energy.

The wind farms will be connected with AC cables to an HVDC converter station installed on an offshore platform in the North Sea. The power they generate will be transmitted through a 45-km long DC sea cable system and a further 90-km long land cable to an HVDC onshore station at the grid connection point of Dörpen West.

The HVDC Light system used provides numerous environmental benefits, such as electrical losses of less than 1 percent per converter station, neutral electromagnetic fields and compact converter stations. HVDC Light technology is ideal for connecting remote wind farms to mainland networks without distance limitations or constraints on the grid.

ABB is responsible for system engineering including design, supply and installation of the offshore converter (including the platform), sea and land cable systems and the onshore converter station. The usage of underground cable systems minimizes environmental impacts.



### Main data

|                                      |  |
|--------------------------------------|--|
| Commissioning:                       | 2016 to transmission system operator TenneT            |
| Power rating:                        | 916 MW   |
| No of circuits:                      | 1  |
| AC Voltage:                          | 155 kV (Platform DolWin beta),<br>380 kV (Dörpen West) |
| DC Voltage:                          | ±320 kV  |
| Length of DC submarine cable:        | 2 x 45 km<br>(1 cable for plus and one for minus)      |
| Length of DC underground cable:      | 2 x 90 km  |
| Main reason for choosing HVDC Light: | Length of land and sea cables                          |
| Application:                         | Offshore wind connections                              |