

# DC of wind power source in base station





## Overview

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How is wind power collected and transmitted to onshore converter station?

Finally, the wind power is collected by DC transformers and transmitted to onshore converter station by HVDC line. In the proposed coordinated control strategy, DC voltage is chosen as the medium to transmit frequency information. The variation of onshore grid frequency is reflected in the HVDC voltage by the ISC of REC.

What is a DC wind turbine system?

The system mainly consists of three parts: the DC wind turbines, the DC transformers, and the onshore REC. The DC turbines are built up with directly driven permanent magnetic and AC/DC converter. Usually, its output DC voltage is 30–60 kV. A cluster of DC turbines is parallel connected to the low-voltage side of a DC transformer.

What is the output DC voltage of a wind turbine?

Usually, its output DC voltage is 30–60 kV. A cluster of DC turbines is parallel connected to the low-voltage side of a DC transformer. The high-voltage sides of DC transformers are connected to a DC bus (usually  $\pm 150$ –500 kV). Finally, the wind power is collected by DC transformers and transmitted to onshore converter station by HVDC line.

What is a typical offshore all-DC wind farm?

A typical offshore all-DC wind farm is shown in Fig. 1. The system mainly consists of three parts: the DC wind turbines, the DC transformers, and the onshore REC. The DC turbines are built up with directly driven permanent magnetic and AC/DC converter. Usually, its output DC voltage is 30–60 kV.



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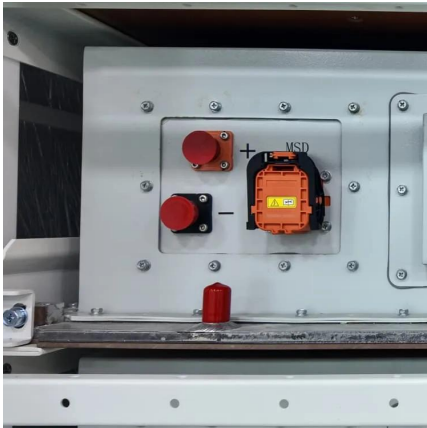
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