

# High frequency wind power source in base station





## Overview

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High-frequency oscillation is one of the critical issues threatening the stability of modular multilevel converter (MMC) based high-voltage direct current (HVDC) system. A new 2 kHz high-frequency oscillation h.

Does a wind farm-side MMC station have a high-frequency oscillation mechanism?

This paper investigates the high-frequency oscillation mechanism of wind farm-side MMC station during no-load charging process. First, the harmonic state space (HSS) model of a wind farm-side MMC station is established. In addition to the leakage inductance, the stray capacitance is considered in the converter transformer model.

Does stray capacitance affect high-frequency oscillation of wind farm-side MMC station?

Apart from the time delay of MMC, the stray capacitance of converter transformer makes a significant contribution to the high-frequency oscillation. This paper investigates the high-frequency oscillation mechanism of wind farm-side MMC station during no-load charging process.

What is 2 kHz high-frequency oscillation in wind farm-side MMC-HVDC project?

A new 2 kHz high-frequency oscillation has occurred in the wind farm-side MMC station of Rudong wind farm integrated MMC-HVDC project of China during no-load charging process. The mechanism of this high-frequency oscillation is different to previous ones.

Does high-frequency resonance occur in wind and PV power systems?

High-frequency resonance has also been observed in wind and PV power systems, although there has been no public report to our knowledge. Typically, this type of resonance is at lower frequencies than those found in MMC-based HVDC systems due to the relatively longer delay in large turbine converters.



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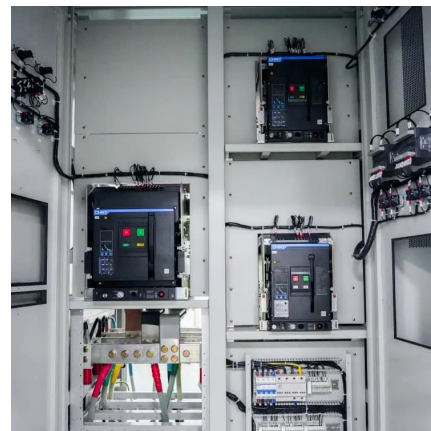
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