High frequency resonance of wind turbine generator

In addition to resonance of MMC and wind turbines with overhead transmission lines, the paper also identifies several other modes of high-frequency resonance, including resonance between ...

With the expansion of clean energy, wind penetration into power networks is also increasing. Accordingly, the occurrence of high-frequency resonance (HFR) when connecting doubly ...

Abstract: With more and more doubly fed inductor generators (DFIG) connected to the grid, high frequency resonance may occur due to the interaction between DFIG wind turbines and ...

Dynamic behavior of offshore wind turbines is examined under varying wave amplitudes and frequencies. This study presents a high-fidelity hydroelastic framework for analyzing the ...

A dynamic phenomenon known as LCL resonance is often neglected when stability analysis is carried out for grid-forming (GFM) control schemes by wind turbine systems, due to its high frequency.

This paper presents methods to model and solve high-frequency resonance problems in HVDC and wind power systems. Control and digital PWM delays are identified as a common root cause for such ...

It is common to encounter high-frequency harmonic resonance (HFHR) problems when cables interact with wind turbine generators (WTGs). The HFHR may threaten the safe and stable ...

Abstract: This paper addresses a modeling and analysis methodology for investigating the stochastic harmonics and resonance concerns of wind power plants (WPPs).

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