Dynamic Model Reduction of Offshore Wind Power Plants

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Extracted from:

https://www.dnv.com/to2030/technology/wind-energy-going-offshore.html

The large-scale offshore wind farms are playing a significant role to achieve reduction of greenhouse gas emission. In the same time, the increasing number of power electronic based wind turbines in offshore wind farms has drawn much attention on its control and stability issues. However, the existing reduced order models fail to cover the asymmetric impedance characteristic of power cables and are incapable of adequately characterizing dynamics of offshore wind farms under large disturbances such as severe grid faults and loss of a large generation. Our goal is to develop dynamic model reduction methods for offshore wind power plants during large disturbance.

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