

Keynote

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Title of Presentation

Impacts of Power Electronics based Renewable Power Plants in Power Systems

Abstract

Power systems are in transition as a part of Green Transition. Power Electronics become more and more significant in modern power grids, e.g., the interfaces of renewable power generators, energy storages, various electrical equipment and electrical vehicles. High Voltage Direct Current transmissions, Flexible Alternating Current Transmission Systems etc. Are used high voltage and large networks. Traditional fossil fuel sourced synchronous generators are gradually being replaced by power electronic interfaced renewable power plants. The main characteristics of power systems will be largely affected, even dominated by power electronics and renewable energy sources.

The speech will brief the developments of renewable energy power plants and power electronic systems, describe their technical features and challenges to power systems, present some recent research work related to power electronic based renewable power plants to address the challenges..



About the presenter

Zhe Chen

Dr Chen received his Ph.D. degree in Power and Control, from University of Durham, England, he has been a full Professor with the Department of Energy Technology, Aalborg University, Denmark since 2002.

Professor Chen is the leader of Wind Power System Research program at the Department of Energy Technology, Aalborg University. His main current research interests are wind energy, power electronics, power system and modern energy systems. He has led many international and national research projects and has more than 800 technical publications. He is a panel member and a review expert for many international funding organizations.

Dr Chen is a member of editor boards of many international journals, including Associate Editor of the IEEE Transactions on Power Electronics, Subject Editor (wind turbine control) of IET Renewable Power Generation, etc. He is a Fellow of IET, a Chartered Engineer in the U.K., a Fellow of IEEE, a member of Danish Academy of Technical Sciences.