

S1-0 Vision of Bulk Wind Power Grid Integration in China

Liangzhong Yao, State Grid Electric Power Research Institute, Nanjing, China

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Abstract

This presentation mainly discusses current situation of wind power development in China, and its impact on transmission grid. Different from other countries, wind farms developed in China have the features of very large scale in power level and centralized in sites (i.e. over 10GW on each site), distributed in areas over eight China regions, and remote with long transmission distance to load centres, etc. These have resulted in many planning and operation problems for transmission system operators. The presentation discusses main technical issues and challenges of bulk wind power grid integration and their impacts on grid operation and stability, and then reviews general technical solutions to deal with these issues and challenges. The presentation also presents the measures and practices taken by SGCC to maximize the capability of bulk wind power grid integration. These include the integrated wind power forecasting and control, wind farm grid code compliance for connection, and on-line grid stability control, etc. Finally, the future plan for developments of both onshore and offshore wind farms in China, and their grid integrations and transmission system reinforcement requirements are discussed.