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Abstract:
Integration of large-scale grid-tied wind farm (WF) has been rising since the last decade. Most of the WF are built using squirrel cage induction generator (SCIG). In this paper, an analysis has been done on the hybrid power system model contained of conventional power plants and SCIG. The analysis has been done on different parameters of the grid system, i.e., voltage, active, and reactive power, and frequency. Real wind speed data is applied in this work to make realistic response. Simulation has been conducted using PSCAD/EMTDC software.

Keywords: Wind energy, SCIG, hybrid power system