## **Study and Importance of Distributed Generation**

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## **ABSTRACT**

Power System stability involves the study of the dynamics of the facility under disturbances. Power system stability is the ability of an electric power system, for a given initial operating condition, to return to normal or stable operation subjected to physical disturbance, with most system variables bounded. Transient Stability can be caused by lightning, power switching on the lines, household appliances drawing too much power in either your or your neighbor's homes, strong winds causing lines to clash, trees touching the road, vehicle accidents involving power lines, or birds or other animals on the lines. Electricity demand forecasts from the basis for supply planning at the central and state level. In India, electricity demand forecasts are the basis for supply planning at the central and state levels. In India, this exercise is carried out once in every few years as the Central Electricity Authority's (CEA), Electric Power Survey (EPS). Distributed Generation is an approach that employs small-scale technologies to provide electricity on the brink of the highest power users. Distributed Generation plays a crucial role within the electricity paradigm of the planet. In Idia also DG in the form of renewable energy resources contributing to the Indian power sector, Renewable energy technologies that are site responsive for wind turbines, geothermal energy production, solar systems (photovoltaic and combustion), and some hydro-thermal plants. The Indian government is giving more support and introducing different new schemes for encouraging DG systems.

Keywords: Stability, Power Demand, DG

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