

The random varying loads and their impacts on the performance of smart grids

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Description	This paper applies simple model of load profile by using a minimum number of the probability variables to explore the impacts of time varying loads on the smart network losses and voltage profiles. For this purpose, three scenarios are taken into considerations. These scenarios of loads include the loads without deviation, the random loads at fixed probability factor, and random loads at variable probability factor. 86-node distribution network in Turkey has been chosen in this study. This study yields, when the load deviations and their distribution probability increase, the losses increase, and the nodes' voltage decreases.
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