

Fault Ride Through Management in Renewable Power Park

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Abstract : This paper presents the management of the Fault Ride Through event within a Solar Farm during a grid fault. The modeling and simulation of a photovoltaic (PV) with battery energy storage connected to the power network will be described. The modeling approach and the study analysis performed are described. The model and operation scenarios are simulated using a digital simulator for different scenarios. The dynamic response of the system when subjected to sudden self-clearance temporary fault is presented. The capability of the PV system and battery storage riding through the power system fault and, at the same time, supporting the local grid by injecting fault current is demonstrated. For each case, the different control methods to achieve the objective of supporting the grid according to grid code requirements are presented and explained. The inverter modeling approach is presented and described.

Keywords : fault ride through, solar farm, grid code, power network

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