

## DYNAMIC MODELLING OF MICROGRIDS

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### ABSTRACT

The interconnection of small, modular generation and storage technologies at the MV and LV distribution level have the potential to significantly impact power system performance. In this paper models of the main micro-generation sources are described. In particular, the models of Microturbines, Fuel Cells, Photovoltaic Systems and Wind Turbines, are described. In addition basic models of their power electronic interfaces are given. The above models have been integrated in a simulation platform able to represent the steady state and dynamic behavior of three phase networks. The simulation tool, which is developed in the framework of the EU funded MICROGRIDS project, is used to define and evaluate operational and control strategies for the microgrid paradigm.