

# Design of a Transient Stable Droop Controller for Inverter Interface Devices

***Abstract***—Current Microgrids normally have two modes of operations: grid-connected mode and stand-alone mode. In the stand-alone mode, the control of the inverter-interface devices is of critical importance due to the wide use of such power electronic technology. Droop control serves as an advantageous control scheme because of its independence from relying on complicated and expensive communication devices. This paper presents a design of a transient stable droop controller. Simulations show that the controller is able to maintain system stability during the transition when the load changes.

***Index Terms***—Droop control, inverter interface, transient stable

\*For poster session