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(54) **DUAL-MODE COMBINED CONTROL METHOD FOR MULTI-INVERTER SYSTEM BASED ON DOUBLE SPLIT TRANSFORMER**

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(57) **ABSTRACT**

A dual-mode combined control method for a multi-inverter system based on a double split transformer is provided. For an extremely-weak grid, the method provides the dual-mode combined control method for a multi-inverter system based on a double split transformer. According to the method, the equivalent grid impedance at a point of common coupling (PCC) of one grid-connected inverter (GCI) in the multi-inverter system based on the double split transformer is obtained with a grid impedance identification algorithm, and the system sequentially operates in a full current source mode, a hybrid mode, and a full voltage source mode according to a gradually increasing equivalent grid impedance, thereby effectively improving the stability of the multi-inverter system based on the double split transformer during variation of the strength of the grid. The method ensures that the system can still operate stably in the extremely-weak grid.