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(54) **SYSTEMS AND METHODS FOR PARALLELING 3-WIRE AND 4-WIRE 3-PHASE ACTIVE HARMONIC FILTERS**

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(57) **ABSTRACT**

Aspects of the disclosure include a power system comprising at least one three-wire active harmonic filter (AHF) configured to be coupled to, and provide compensation current to, a three-phase load, at least one four-wire AHF configured to be coupled to, and provide compensation current to, the three-phase load, and a controller configured to determine a total compensation current to provide to the three-phase load, the total compensation current including a zero component and a non-zero component, determine an output capacity of the at least one three-wire AHF and the at least one four-wire AHF, calculate a current-compensation ratio based on the output capacity of the at least one three-wire AHF and the at least one four-wire AHF, and control the at least one four-wire AHF to provide at least a portion of the non-zero component of the total compensation current to the three-phase load based on the current-compensation ratio.