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(54) **HIERARCHICAL CONTROL OF UTILITY-SCALE, INVERTER-BASED GENERATION OF ELECTRIC POWER**

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(57) **ABSTRACT**

The present disclosure relates generally to systems, methods, and apparatus for hierarchical control of utility-scale, inverter-based generation for mitigation of generation variability and responsive provisions of ancillary services. Such systems may include one or more processors, computer-readable media, and executable instructions which, if executed at the processors, configure the system to determine, at a first control layer, an inverter maximum power potential for a set of inverters, to determine, at the second control layer, an initial combined power output associated with the set of inverters and to determine a power support level and to transmit, from the second control layer to a third control layer, an indication of the power support level. The executable instructions may also configure the system to determine a first net power request, and to transmit, from the third control layer to the second control layer, an indication of the first net power request.