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(54) **ENERGY STORAGE APPARATUS, ENERGY STORAGE APPARATUS CONTROL METHOD, AND PHOTOVOLTAIC SYSTEM**

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This disclosure provides an energy storage apparatus, an energy storage apparatus control method, and a photovoltaic system. The energy storage apparatus includes: a plurality of battery clusters, a plurality of conversion units, a start unit, and a controller. The controller includes a plurality of control units. The start unit is configured to: after receiving a start signal, control a control switch in at least one battery cluster to close, to start a control unit corresponding to the battery cluster. The control unit is configured to: determine, based on a state of the control switch in the battery cluster, whether a black start mode is on; and when determining that the black start mode is on, control a DC-DC converter in the corresponding conversion unit to release electric energy stored in a battery pack in the corresponding battery cluster, to energize a direct current bus.

