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(54) **CONTROL UNIT FOR CONTROLLING A FLOW OF ELECTRICAL ENERGY BETWEEN ONE OR MORE ELECTRICAL ENERGY REPOSITORIES AND A POWER GRID**

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ABSTRACT

A method is disclosed for controlling flow of electrical energy between electrical energy repositories each coupled to a respective internal load and a power grid, the method comprising charging the electrical energy repositories based on a set of parameters using energy drawn from the power grid to charge the electrical energy repositories, to a respective first threshold level of energy indicated by the set of parameters, controlling a flow of energy to the power grid using the set of parameters, wherein energy is drawn from any of the electrical energy repositories in a first period between a respective first time, indicative of when the respective first threshold level of energy is reached, and a respective second time, indicative of when energy is expected to be drawn from the one or more electrical energy repositories to the respective internal load, wherein the set of parameters is determined using a trained model.

