CLAIMS

1. A vehicle charging apparatus comprising:

a plurality of chargers for charging one or more vehicles; and

a charge control unit that is configured to control charging current to each of the plurality of chargers, wherein

the charge control unit is configured to:

set a threshold of a charge amount to determine a priority order for the vehicles to be charged;

perform control by giving priority to the charging of a vehicle having the charge amount equal to or less than the threshold over a vehicle having a charge amount that exceeds the threshold;

obtain received power information from an external power system via a smart meter and control vehicle charging such that a received power does not exceed a standard value; and

stop charging a vehicle when the charging current actually supplied from the charger is smaller than a command value of the charging current instructed by the charging control unit for a predetermined period.

2. The vehicle charging apparatus according to claim 1, wherein

the charge control unit is configured to perform a control to reduce the magnitude of charging current when the received power is predicted to exceed the standard value, starting from the vehicle having the charge amount that has exceeded the threshold.

3. The vehicle charging apparatus according to claim 2, wherein

the charge control unit is configured to allocate the priorities in descending order of the charge amounts in a group of the vehicles having the charge amount that has exceeded the threshold, and to reduce the magnitude of the charging current starting from the vehicle with a lowest priority in the group.

4. The vehicle charging apparatus according to claim 2, wherein

the charge control unit is configured to allocate the priorities in order of length of charging period in a group of the vehicles having the charge amount that has exceeded the threshold, and to reduce the magnitude of charging current starting from the vehicle with a

lowest priority in the group.

5. The vehicle charging apparatus according to any one of claims 1 to 4, wherein

the charge control unit is configured to increase the magnitude of charging current when the received power falls below the standard value, starting from the vehicle having the charge amount equal to or less than the threshold.

6. The vehicle charging apparatus according to claim 5, wherein

the charge control unit is configured to allocate the priorities in descending order of the charge amounts in a group of the vehicles having the charge amount equal to or less than the threshold, and to increase the magnitude of the charging current starting from the vehicle with a highest priority in the group.

7. The vehicle charging apparatus according to claim 5, wherein

the charge control unit is configured to allocate the priorities in order of length of charging period in a group of the vehicles having the charge amount equal to or less than the threshold, and to increase the magnitude of the charging current starting from the vehicle with a highest priority in the group.