[CLAIMS]

[Claim 1]

An electrical charging/discharging controller mounted on a vehicle that runs by performing power transmission and reception to and from substation equipment through an overhead wire to control electrical charging/discharging of a power storage device connected to a load capable of generating regenerative electrical power, the electrical charging/discharging controller comprising:

a peak cut power calculation unit configured to calculate transmission peak cut power that is power transmittable to the overhead wire, the transmission peak cut power being power exhibiting monotonic non-increase with respect to a resistance value of the overhead wire between the vehicle and the substation equipment; and

a peak cut unit configured to charge the power storage device with power of a difference between the regenerative electrical power generated by the load and the transmission peak cut power calculated by the peak cut power calculation unit when the regenerative electrical power is equal to or more than the transmission peak cut power.

[Claim 2]

The electrical charging/discharging controller according to Claim 1, wherein the transmission peak cut power is power obtained by multiplying an electrical current obtained by dividing a difference between a maximum pantograph point voltage at which no regeneration cancelation of the load occurs and a voltage applied to a regenerative resistor of the substation equipment by a resistance value of the overhead wire exhibiting monotonic ~~decrease~~ increase with respect to the distance between the vehicle and the substation equipment, by the maximum pantograph point voltage at which no regeneration cancelation of the load occurs.

[Claim 3]