CLAIMS

[Claim 1]

A power control system for performing power control such that a target power set for a group including a plurality of consumers is not exceeded, the system comprising:

a control information generation server that generates pieces of control information of equipment devices of the consumers; and

a control device that controls power usage of the equipment devices of the consumers in accordance with the generated pieces of control information, wherein

the control information generation server includes

generation means that sets, for each of predetermined time periods, limit values, each for power usage of one of the consumers included in the group, such that the target power of the group is not exceeded, and generating the pieces of control information, each for an equipment device of one of the consumers, including the limit values, and

transmission means that transmits the generated pieces of control information to the control device that controls the equipment devices of the consumers before a start of a time period in which control is performed by the control device, and

the control device includes

reception means that receives the pieces of control information of the equipment devices for each of the time periods, the equipment devices being to be controlled by the control device,

storage means that holds the received pieces of control information, and

control means that controls, for each of the time periods, the power usage of the equipment devices of the consumers in accordance with pieces of control information for the time period among the pieces of control information held in the storage means, wherein a total value of the limit values of the consumers used for each time period does not exceed the target power of the group.

[Claim 2]

The power control system according to claim 1, wherein the generation means of the control information generation server generates, for each predetermined unit period, the pieces of control information for a plurality of time periods included in the unit period,

the transmission means of the control information generation server transmits, before the unit period starts, the pieces of control information for each of the time periods in the unit period, and

the reception means and the storage means of the control device receive and hold, before the unit period

starts, the pieces of control information for each of the time periods in the unit period.

[Claim 3]

The power control system according to claim 1, wherein the generation means of the control information generation server sets limit values of the plurality of consumers included in the group for a time period such that a sum of differences, for consumers for which limit values are set to be higher for the time period than limit values for a time period immediately preceding the time period, between the limit values for the time period and the limit values for the time period immediately preceding the time period is not larger than a sum of differences, for consumers for which limit values are set to be lower for the time period than limit values for the time period immediately preceding the time period, between the limit values for the time period and the limit values for the time period immediately preceding the time period.

[Claim 4]

The power control system according to any one of claims 1 to 3, wherein the transmission means of the control information generation server transmits pieces of control information for respective equipment devices of the plurality of consumers included in the group regarding a time period to the control device that controls the

equipment devices to be controlled by using the pieces of control information, such that pieces of control information for decreasing limit values for the time period from limit values for a time period immediately preceding the time period are transmitted earlier than pieces of control information for increasing limit values for the time period from limit values for the time period immediately preceding the time period.

[Claim 5]

The power control system according to claim 4, wherein the transmission means of the control information generation server transmits the pieces of control information for decreasing the limit values for the time period from the limit values for the time period immediately preceding the time period, in descending order of an amount of decrease, and transmits the pieces of control information for increasing the limit values for the time period from the limit values for the time period immediately preceding the time period, in ascending order of an amount of increase.

[Claim 6]

The power control system according to any one of claims 1 to 3, wherein the transmission means of the control information generation server transmits pieces of control information for respective equipment devices of the plurality of consumers included in the group regarding a

time period to the control device that controls the equipment devices to be controlled by using the pieces of control information, such that the pieces of control information are sequentially transmitted for each of the consumers included in the group in an order in which, at a time point at which transmission of a piece of control information of a consumer among the consumers included in the group is completed, a total of limit values in all pieces of control information that have been transmitted so far is not larger than a total of limit values of corresponding consumers for a time period immediately preceding the time period.

[Claim 7]

The power control system according to any one of claims 1 to 6, wherein when pieces of control information for a time period are not received before the time period starts, the control means of the control device controls the equipment devices such that limit values in pieces of control information for a time period preceding the time period are not exceeded, the pieces of control information for the time period preceding the time period being held in the storage means.

[Claim 8]

A power control device included in a system for performing power control such that a target power set for a

group including a plurality of consumers is not exceeded, the power control device controlling power usage of an equipment device of a consumer in the group, the power control device comprising:

reception means that receives control information for an equipment device of each of the consumers included in the group for each of predetermined time periods, the control information including a limit value of power usage of the consumer, the limit value being set such that the target power of the group is not exceeded;

storage means that stores the control information received by the reception means; and

control means that controls, for each of the time periods, the power usage of the equipment device of the consumer in accordance with control information for the time period within control information stored in the storage means, wherein a total value of the limit values of the consumers used for each time period does not exceed the target power of the group.

[Claim 9]

The power control device according to claim 8, wherein when control information for a time period is not received before the time period starts, the control means controls the equipment device such that a limit value in control information for a time period preceding the time period is

not exceeded, the control information for the time period preceding the time period being held in the storage means.

[Claim 10]

A program for causing a computer for controlling a power control device included in a system for performing power control such that a target power set for a group including a plurality of consumers is not exceeded, the power control device controlling power usage of an equipment device of a consumer in the group, to function as:

reception means that receives control information for an equipment device of each of the consumers included in the group for each of predetermined time periods, the control information including a limit value of power usage of the consumer, the limit value being set such that the target power of the group is not exceeded; and

control means that controls, for each of the time periods, the power usage of the equipment device of the consumer in accordance with control information for the time period within control information stored in storage means that stores the control information received by the reception means, wherein a total value of the limit values of power usage of the consumers used for each time period does not exceed the target power of the group.