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 first prediction unit that performs prediction on power usage of each consumer included in the group over each of predetermined time periods;

a limit value setting unit that sets a limit value of power usage for each consumer, based on a prediction result obtained by the first prediction unit such that a total value of power usage of the consumers does not exceed the target power for each of the time periods;

a second prediction unit that predicts, within a current time period, power usage of the consumers included in the group over the current time period, based on actual results of power usage of equipment devices of the consumers included in the group over a time period preceding the current time period;

a control device that controls the power usage of the equipment devices of the consumers, based on predicted values of the power usage of the consumers over the current time period, the predicted values being obtained by the second prediction unit, such that the limit values of the power usage of the consumers for the current time period are not exceeded; and

wherein the control device is arranged to receive control information transmitted from a server.

[Claim 2]

The power control system according to claim 1, wherein the first prediction unit performs the prediction on the power usage, based on at least history information related to past operation of the equipment devices of the consumers, and

the second prediction unit predicts the power usage over the current time period, based on information on an operating status of the equipment devices of the consumers within the current time period.

[Claim 3]

The power control system according to claim 1, wherein the control device controls the power usage of the equipment devices of the consumers over the current time period so as to suppress a change over time in the power usage of the equipment devices of the consumers over the current time period.

[Claim 4]

The power control system according to claim 1, wherein the control device controls the power usage of the equipment devices of the consumers so as to suppress a change in the power usage of the equipment devices of the consumers before and after the current time period is switched to a time period subsequent to the current time period, based on the limit values of the power usage for the time period subsequent to the current time period, the power usage of the consumers over the current time period, and the predicted values of the power usage of the consumers over the current time period.

[Claim 5]

The power control system according to claim 4, wherein, when the prediction result obtained by the first prediction unit and the predicted values obtained by the second prediction unit satisfy a predetermined condition, the control device performs control on the equipment devices of the consumers such that the limit values of the power usage of the consumers for the current time period are exceeded.

[Claim 6]

The power control system according to claim 5, wherein the control device performs control on the equipment device of one consumer among the consumers

such that the limit value of power usage of the one consumer for the current time period is exceeded, by decreasing the limit value of power usage of an other consumer among the consumers when the other consumer has power usage less than the limit value of the power usage of the other consumer and

increasing the limit value of the power usage of the one consumer by an amount by which the limit value of the power usage of the other consumer is decreased.

[Claim 7]

A program for causing a computer for controlling a system for performing power control such that a target power set for a group including a plurality of consumers is not exceeded, to function as:

a first prediction unit that performs prediction on power usage of each consumer included in the group over each of predetermined time periods;

a limit value setting unit that sets a limit value of power usage for each consumer, based on a prediction result obtained by the first prediction unit such that a total value of power usage of the consumers does not exceed the target power for each of the time periods;

a second prediction unit that predicts, within a current time period, power usage of the consumers included in the group over the current time period, based on actual results of power usage of equipment devices of the consumers included in the group over a time period preceding the current time period;

a control device that controls the power usage of the equipment devices of the consumers, based on predicted values of the power usage of the consumers over the current time period, the predicted values being obtained by the second prediction unit, such that the limit values of the power usage of the consumers for the current time period are not exceeded; and

wherein the control device is arranged to receive control information transmitted from a server.