present embodiment, the microgrid 1 constitutes a self-sustaining power system that independently generates and consumes power.

[0014]

The microgrid 1 may be connected to a power system comprising a load via the power transmission and distribution network 6. In this case, a switch (not illustrated) may be provided between the microgrid 1 and the power system. The switch is switchable between a closed state and an open state. When the switch is in the open state, the microgrid 1 and the power system are disconnected, and the microgrid 1 constitutes a self-sustaining power system. When the switch is in the closed state, the microgrid 1 and the power system 3 are connected.

[0015]

Each of the storage batteries 5 may be, for example, a lithium-ion battery, a NAS battery, a redox flow battery, or the like. Other types of storage batteries 5 may be used.

[0016]

The storage battery control system 10 comprises an integrated controller 11 and a plurality of power conditioning systems (PCSs) 12.

[0017]

The integrated controller 11 manages the plurality of PCSs 12. The integrated controller 11 controls the storage battery control system 10. The integrated controller 11 may be configured as any of, for example, a community energy management system (CEMS), an area energy management system (AEMS), a building and energy management system (BEMS), and the like. The integrated controller 11 comprises a calculator unit, a communicator, and the like. The calculator is a CPU or the like, and performs calculation for realizing the function of the integrated controller 11 described above. The communicator performs wireless or wired communication with each PCS 12. For

the active power P and the reactive power Q from the inverter INV, are input to the control device C. The measured value Qmeasure and the measured value Pmeasure are measured by, for example, a measuring instrument attached to a power line to which power is supplied.

[0039]

The control device C calculates a deviation dQ of the reactive power Q by the subtractor. The deviation dQ is a difference between the command value Qref and the measured value Qmeasure. The control device C outputs a difference value obtained in the subtractor by subtracting, from the command value Qref, a signal value obtained by the zero-order hold ZOH on the measured value Qmeasure, as the deviation dQ, to the control block B11.

[0040]

The control block B11 performs Qv control. The control block B11 is an example of a “Qv controller”. In the example of this drawing, the control block B11 is described as “two-stage gain”. In addition, a closed-loop system control system that can be expressed by a transfer function of output/input from the control block B11 corresponding to the “Qv controller” to the control target may be referred to as a “Qv control system”.

[0041]

The control block B11 calculates the amplitude deviation such that the deviation dQ approaches 0. The control block B11 calculates an amplitude deviation in which the deviation dQ approaches zero by performing feedback control such as PI control, for example. The amplitude deviation here is a difference between the amplitude Vv of the AC voltage output from the inverter INV to the control target and the rated voltage Vm.

[0042]