CLAIMS

1. A thermal storage air conditioner comprising:

a thermal storage circuit (61) to which a thermal storage tank (62) is connected, the thermal storage tank (62) accumulating a thermal storage medium;

a refrigerant circuit (11) to which an indoor heat exchanger (27) is connected, the indoor heat exchanger (27) cooling a room through evaporation of a refrigerant;

a receiving section (101) which receives a signal; and

a control section (100) which switches an operation by controlling the thermal storage circuit (61) and the refrigerant circuit (11) based on the signal received in the receiving section (101), wherein

the control section (100) implements

a utilization cooling operation in which the thermal storage medium absorbs heat from the refrigerant and in which the refrigerant evaporates in the indoor heat exchanger (27), when the receiving section (101) receives a first signal indicating a request for reduced use of power during a simple cooling operation in which the room is cooled by the refrigerant evaporating in the indoor heat exchanger (27) without exchanging heat with the thermal storage medium, and

a cooling and cold thermal energy storage operation in which the refrigerant absorbs heat from the thermal storage medium and in which the refrigerant evaporates in the indoor heat exchanger (27), when the receiving section (101) receives a second signal indicating a request for accelerated use of power during the simple cooling operation, so that more power is consumed than in the simple cooling operation .

2. The thermal storage air conditioner of claim 1, wherein

a thermal storage heat exchanger (37) in which heat is exchanged between the

refrigerant and the thermal storage medium is connected to the refrigerant circuit (11),

the thermal storage medium is a thermal storage material in which a clathrate hydrate is generated at a temperature higher than 0°C, and

the refrigerant circuit (11) is configured to evaporate the refrigerant in the indoor heat exchanger (27) and the refrigerant in the thermal storage heat exchanger (37) at a same evaporation temperature in the cooling and cold thermal energy storage operation.

3. The thermal storage air conditioner of claim 1 or 2, wherein

the thermal storage tank (62) has a rated thermal storage capacity greater than a thermal storage capacity required to maintain the utilization cooling operation for a predetermined period of time at a rated cooling capacity.

4. The thermal storage air conditioner of claim 3, wherein

the predetermined period of time is one hour.