

CLAIMS

1. A method for predicting power consumption, comprising:

5 acquiring a reference variable generated by an electric device in a history time period, the reference variable comprising a discrete reference variable and a continuous reference variable, the discrete reference variable being collected according to a preset duration in the history time period, and the continuous reference variable being continuously collected in the history time period;

10 acquiring a variable characteristic by extracting a characteristic of the reference variable with a power consumption prediction model, wherein the power consumption prediction model is obtained by training a sample reference variable marked with sample power consumption, the sample reference variable comprising a sample discrete variable and a sample continuous variable; and

15 acquiring predicted power consumption in a target time period by predication with the power consumption prediction model based on the variable characteristic, the target time period and the history time period having a corresponding relationship.

2. The method according to claim 1, wherein acquiring the variable characteristic by extracting the characteristic of the reference variable comprises:

20 acquiring a discrete variable characteristic by extracting a characteristic of the discrete reference variable with the power consumption prediction model;

acquiring a continuous variable characteristic by extracting a characteristic of the continuous reference variable with the power consumption prediction model; and

25 acquiring the variable characteristic by referring to the discrete variable characteristic with the continuous variable characteristic.

3. The method according to claim 2, wherein acquiring the discrete variable characteristic by extracting the characteristic of the discrete reference variable with the power consumption prediction model comprises:

30 acquiring a normalized discrete variable by performing data normalization on the discrete reference variable within a first preset data range with the power consumption prediction model;

building a discrete characteristic matrix corresponding to the normalized discrete variable; and

acquiring the discrete variable characteristic corresponding to the discrete reference variable by calculation by referring to the discrete characteristic matrix.

4. The method according to claim 3, wherein acquiring the normalized discrete variable
5 by performing data normalization on the discrete reference variable within the first preset data range with the power consumption prediction model comprises:

acquiring the normalized discrete variable by mapping the discrete reference variable to the first preset data range with the power consumption prediction model.

10 5. The method according to claim 3, wherein the discrete reference variable comprises at least one of a time reference variable, a season reference variable and a holiday reference variable;

the time reference variable comprises a date corresponding to the history time period;

the season reference variable comprises a season corresponding to the history time period;

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the holiday reference variable comprises nature of a holiday corresponding to the history time period.

6. The method according to claim 2, wherein acquiring the continuous variable
20 characteristic by extracting the characteristic of the continuous reference variable with the power consumption prediction model comprises:

acquiring a normalized continuous variable by performing data normalization on the continuous reference variable in a second preset data range with the power consumption prediction model;

25 building a continuous characteristic matrix based on the normalized continuous variable;
and

acquiring the continuous variable characteristic corresponding to the continuous reference variable by calculating the continuous characteristic matrix.

30 7. The method according to claim 6, wherein acquiring the normalized continuous variable by performing data normalization on the continuous reference variable in the second preset data range with the power consumption prediction model comprises:

acquiring the normalized continuous variable by mapping the continuous reference variable to the second preset data range with the power consumption prediction model.

8. The method according to claim 6, wherein the continuous reference variable comprises at least one of a temperature reference variable, a power consumption reference variable and a humidity reference variable;

- 5 the temperature reference variable indicates temperature in the history time period;
 the power consumption reference variable indicates total power consumption in the history time period; and
 the humidity reference variable indicates air humidity in the history time period.

- 10 9. An apparatus for predicting power consumption, comprising:

 an acquiring module, configured to acquire a reference variable generated in a history time period, the reference variable comprising a discrete reference variable and a continuous reference variable, the discrete reference variable being collected according to a preset duration in the history time period, and the continuous reference variable being continuously
15 collected in the history time period;

- an extracting module, configured to acquire a variable characteristic by extracting a characteristic of the reference variable with a power consumption prediction model, wherein the power consumption prediction model is obtained by training a sample reference variable marked with sample power consumption, the sample reference variable comprising a sample
20 discrete variable and a sample continuous variable; and

 a predicting module, configured to acquire predicted power consumption in a target time period by prediction with the power consumption prediction model based on the variable characteristic, the target time period and the history time period having a corresponding relationship.

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10. A computer device, comprising a processor and a memory storing at least one instruction, at least one program, at least one code set or instruction set therein, wherein the at least one instruction, the at least one program, the at least one code set or instruction set, when loaded and executed by the processor, causes the processor to implement the method for
30 predicting power consumption according to any one of claims 1 to 8.

 11. A computer-readable storage medium storing at least one instruction, at least one program, at least one code set or instruction set therein, wherein the at least one instruction, the at least one program, the at least one code set or instruction set, when loaded and executed

by a processor, causes the processor to implement the method for predicting power consumption according to any one of claims 1 to 8.