CLAIMS

1. A method, comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

determining the threshold value for limiting the restricted service, wherein determining the threshold value comprises:

obtaining an ambient temperature at the service site; and

calculating the threshold value based at least in part on the ambient temperature;

determining if a consumption level at the service site exceeds the threshold value;

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, temporarily turning off electricity at the service site; and

after a period of time, automatically reconnecting service to the service site.

2. A method, comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

disaggregating the electricity supplied to the service site to recognize one or more appliances;

obtaining an ambient temperature at the service site;

calculating the threshold value based at least in part on the ambient temperature and to exclude operation of at least one recognized appliance;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site.

3. A method, comprising: determining that electricity supplied to a service site is restricted;

obtaining an ambient temperature at the service site;

calculating a threshold value based at least in part on the ambient temperature;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site based on actions comprising:

disaggregating the electricity supplied to the service site to recognize one or more appliances;

determining that an appliance from among the one or more appliances is not included in a listing of allowed appliances; and

based on the determining, turning off electricity at the service site.

4. The method of claim 1, additionally comprising:

waiting for a period of time;

reconnecting electricity to the service site;

measuring a second consumption level;

determining if the second consumption level exceeds the threshold value; and

if the second consumption level exceeds the threshold value, then turning off electricity at the service site.

5. The method of claim 1, additionally comprising:

waiting for a period of time;

determining an update of the ambient temperature;

determining a second threshold value based at least in part on the update of the ambient temperature;

reconnecting electricity to the service site;

determining a second consumption level;

determining if the second consumption level exceeds the second threshold value; and

if the second consumption level exceeds the second threshold value, then turning off electricity at the service site.

6. The method of claim 1, wherein:

the consumption level comprises:

a peak consumption level lasting less than a minute; and

a sustained consumption level lasting over a minute; and

the threshold value comprises:

a first value to be compared to the peak consumption level; and

a second value to be compared to the sustained consumption level.

7. The method of claim 1, wherein determining the threshold value additionally comprises:

setting the threshold value based at least in part on time of day; and

adjusting the threshold value at least once in a 24-hour period.

8. A network device for use in an electricity system, comprising:

a processor;

one or more memory devices in communication with the processor; and

statements defined in the one or more memory devices and executable by the processor, wherein execution by the processor performs actions comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

determining the threshold value for limiting the restricted service, wherein determining the threshold value comprises:

obtaining an ambient temperature at the service site; and

calculating the threshold value based at least in part on the ambient temperature;

determining if a consumption level at the service site exceeds the threshold value;

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, temporarily turning off electricity at the service site; and

after a period of time, automatically reconnecting service to the service site.

9. A network device for use in an electricity system, comprising:

a processor;

one or more memory devices in communication with the processor; and

statements defined in the one or more memory devices and executable by the processor, wherein execution by the processor performs actions comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

disaggregating the electricity supplied to the service site to recognize one or more appliances;

obtaining an ambient temperature at the service site;

calculating the threshold value based at least in part on the ambient temperature and to exclude operation of at least one recognized appliance;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site.

10. A network device for use in an electricity system, comprising: a processor; one or more memory devices in communication with the processor; and

statements defined in the one or more memory devices and executable by the processor, wherein execution by the processor performs actions comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

obtaining an ambient temperature at the service site;

calculating the threshold value based at least in part on the ambient temperature;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site based on actions comprising:

disaggregating the electricity supplied to the service site to recognize one or more appliances;

determining that an appliance from among the one or more appliances is not among a listing of allowed appliances; and

based on the determining, turning off electricity at the service site.

11. The network device as recited in claim 8, wherein the networked device comprises:

an electricity meter; or

a headend device.

12. The network device as recited in claim 8, wherein the actions additionally comprise:

waiting for a period of time;

reconnecting electricity to the service site;

measuring a second consumption level;

determining if the second consumption level exceeds the threshold value; and

based on the second consumption level exceeding the threshold value, turning off electricity at the service site.

13. The network device as recited in claim 8, wherein the actions additionally comprise:

waiting for a period of time;

determining an update of the ambient temperature;

determining a second threshold value based at least in part on the update of the ambient temperature;

reconnecting electricity to the service site;

determining a second consumption level;

determining if the second consumption level exceeds the second threshold value; and

if the second consumption level exceeds the second threshold value, then turning off electricity at the service site.

14. The network device as recited in claim 8, wherein the consumption level and the threshold value are each based at least in part on factors comprising:

a sustained consumption level; and

a peak consumption level.

15. The network device as recited in claim 8, wherein determining the threshold value additionally comprises:

setting the threshold value based at least in part on time of day; and

adjusting the threshold value at least once in a 24-hour period.

16. One or more non-transitory computer-readable media storing computer-executable instructions that, when executed by one or more processors, configure a computing device to perform actions comprising:

determining that electricity supplied to a service site is restricted;

determining a threshold value for limiting the restricted service, wherein determining the threshold value comprises:

obtaining an ambient temperature at the service site; and

calculating the threshold value based at least in part on the ambient temperature;

determining if a consumption level at the service site exceeds the threshold value;

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, temporarily turning off electricity at the service site; and

after a period of time, reconnecting service to the site responsive to a resident-initiated reconnection attempt.

17. One or more non-transitory computer-readable media storing computer-executable instructions that, when executed by one or more processors, configure a computing device to perform actions comprising:

determining that electricity supplied to a service site is restricted;

disaggregating the electricity supplied to the service site to recognize one or more appliances;

obtaining an ambient temperature at the service site;

calculating a threshold value based at least in part on the ambient temperature and to exclude operation of at least one recognized appliance;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site.

18. One or more non-transitory computer-readable media as recited in claim 16, additionally comprising:

waiting for a period of time;

reconnecting electricity to the service site;

measuring a second consumption level;

determining if the second consumption level exceeds the threshold value; and

based on the second consumption level exceeding the threshold value, turning off electricity at the service site.

19. One or more non-transitory computer-readable media as recited in claim 16, additionally comprising:

waiting for a period of time;

determining an update of the ambient temperature;

determining a second threshold value based at least in part on the update of the ambient temperature;

reconnecting electricity to the service site;

determining a second consumption level;

determining if the second consumption level exceeds the second threshold value; and

if the second consumption level exceeds the second threshold value, then turning off electricity at the service site.

20. One or more non-transitory computer-readable media storing computer-executable instructions that, when executed by one or more processors, configure a computing device to perform actions comprising:

determining that electricity supplied to a service site is restricted to power less than a threshold value;

obtaining an ambient temperature at the service site;

basing the threshold value at least in part on the ambient temperature;

setting the threshold value to include only electrical loads for uses comprising:

heating a residence at the service site, wherein the heating is based on the ambient temperature;

charging cellular telephones used by residents of the residence; and

operating domestic lighting at the residence;

determining if a consumption level at the service site exceeds the threshold value; and

based on the consumption level exceeding the threshold value, and based on the electricity supplied to the service site being restricted, turning off electricity at the service site.