Claims

What is claimed is:

1. An electric meter including an edge computing device, which is associated with a premises, the electric meter configured for controlling a first load device associated with the premises via the edge computing device, and the premises located downstream of a distribution transformer, the electric meter comprising:

a communications module;

a first port for connecting the first load device to the electric meter; and

the edge computing device for communicating with a plurality of downstream edge computing devices located downstream of the distribution transformer and with a transformer edge computing device associated with the distribution transformer, comprising:

a processor; and

a memory for storing computer-readable instructions that when executed by the processor configure the edge computing device for:

sending load forecast information for the first load device and at least one second load device to the transformer edge computing device via the communications module;

receiving price interval data from the transformer edge computing device via the communications module, wherein the price interval data provides a forecasted price for each of a plurality of upcoming time intervals; and

based on the price interval data, controlling the first load device, so that:

when the price interval data includes low-cost time intervals, allowing the first load device to consume power and to operate using one or more normal operating parameters during the upcoming time intervals, and

when the price interval data includes high-cost time intervals, controlling the first load device to operate using one or more energy-saving operating parameters during the upcoming time intervals,

wherein the electric meter further comprises a second port for connecting a second load device associated with the premises to the electric meter, and wherein the edge computing device is further configured for:

after receiving price interval data from the transformer edge computing device, determining future pricing data, wherein the future pricing data corresponds to a plurality of time intervals after the upcoming time intervals; and

based on the future pricing data, controlling the second load device.

2. The electric meter of claim 1, wherein the first load device is an electric vehicle (EV) charger, and controlling the first load device to operate using one or more energy-saving parameters during the upcoming time intervals comprises reducing a charging rate of the EV charger from a current charging rate during the upcoming time intervals.

3. The electric meter of claim 1, wherein the edge computing device is further configured for:

receiving a user command providing instructions for controlling the second load device; and

based on the price interval data and on the user command, controlling the second load device, so that:

when the price interval data includes high-cost time intervals and the user command allows normal operation of the second load device, allowing the second load device to operate using one or more normal operating parameters during the upcoming time intervals.

4. The electric meter of claim 1, wherein the second port is further configured for connecting a distributed energy resource (DER) device associated with the premises to the electric meter, and wherein the edge computing device is further configured for:

when the price interval data includes high-cost time intervals, controlling the DER device to output power to an electric grid.

5. The electric meter of claim 1, wherein the edge computing device is further configured for sending information related to controlling the first load device to other electric meters located downstream of the distribution transformer.

6. The electric meter of claim 1, wherein the edge computing device is further configured for receiving a communication from the transformer edge computing device for controlling the first load device.

7. The electric meter of claim 1, wherein the price interval data is based in part on a rating of the distribution transformer.