step down the voltage from "medium voltage" to the consumer voltage (such as 120V). The consumer voltage may then be used by the consumer.

[0006] One or more power companies may manage the power grid, including managing faults, maintenance, and upgrades related to the power grid. However, the management of the power grid is often inefficient and costly. For example, a power company that manages the local distribution network may manage faults that occur in the feeder circuits or on circuits, called lateral circuits, which branch from the feeder circuits. The management of the local distribution network often relies on telephone calls from consumers when an outage occurs or relies on field workers analyzing the local distribution network.

[0007] Power companies have attempted to upgrade the power grid using digital technology, sometimes called a "smart grid." For example, more intelligent meters (sometimes called "smart meters") are a type of advanced meter that identifies consumption in more detail than a conventional meter. The smart meter may then communicate that information via some network back to the local utility for monitoring and billing purposes (telemetering).

[0008] Even with these advances in the power grid, the analytics and communications for the power grid are complex. A power company may have multiple systems, such as an energy management system (which may analyze load-sharing, and issue commands accordingly), outage management system (which may analyze outages, and issue commands accordingly), demand response system, billing system, etc. These multiple systems may interact with one another, complicating the management of the power grid. Further, these multiple systems may act as multiple sources that issue commands to various targets within the power grid. The multiple systems often communicate in different formats, complicating the communication. Therefore, a need exists to better manage the analytics and communication of the multiple systems within the power grid.

BRIEF SUMMARY

[0008a] According to an aspect, there is provided a central power grid authority for managing at least a part of a power grid and for communicating with a plurality of meter data management systems and with a plurality of headend systems, the meter data management systems generating commands and the headend systems communicating with one or more meters, the central power grid authority comprising:

a gateway layer comprising a plurality of input connector routines and a plurality of output connector routines, the plurality of input connector routines comprising at least one separate input connector routine for communicating with each of a plurality of source systems that send data to the central power grid authority, the source systems comprising the plurality of meter data management systems or the plurality of headend systems that send data to the central power grid authority, the plurality of output connector routines comprising at least one separate output connector routine for communicating with each of a plurality of target systems, the target systems comprising the plurality of meter data management systems or the plurality of headend systems that receive data from the central power grid authority; and

a core layer in communication with the gateway layer, the core layer comprising a plurality of core adapters, the core adapters for performing a one-to-one translation of communications from the plurality of source systems to the plurality of target systems.

[0009] According to embodiments, a central management authority for a system, such as a power utility system, is disclosed. The central management authority communicates with a plurality of meter data management systems and with a plurality of headend systems, the meter data management systems generating commands and the headend