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Patent Search

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Abstract:

ABSTRACT METHOD AND SYSTEM FOR IMPLEMENTING POWER GRID CONTROL OPERATIONS USING BIG DATA BASED ARTIFICIAL INTELLIGENCE (AI) TECHNIQUES The present invention provides an intelligent approach for managing and controlling operations of power grid. The present invention provides a method of managing and controlling operations of power grid using artificial intelligence (AI) technique comprising monitoring status of at least one source of electrical power to one or more components in the power grid, monitoring electrical usage at each of the one or more components in the power grid that receive electricity from the at least one source of electrical power, receiving control parameters for optimization of operation of each of the one or more components in the power grid, and managing electrical power usage by each of the one or more components in the power grid using AI model that forecasts status of the at least one source of electrical power and generates operational rules for each of the one or more components in the power grid.

Complete Specification

Claims:I/WE CLAIM:

1. A method of managing and controlling operations of power grid using artificial intelligence (AI) technique, comprising: monitoring status of at least one source of electrical power to one or more components in the power grid; monitoring electrical usage at each of the one or more components in the power grid that receive electricity from the at least one source of electrical power; receiving control parameters for optimization of operation of each of the one or more components in the power grid; and managing electrical power usage by each of the one or more components in the power grid using a artificial intelligence (AI) model that forecasts status of the at least one source of electrical power and generates operational rules for each of the one or more components in the power grid from historical values of the control parameters, the status of the at least one source of electrical power, and the electrical usage of each of the one or more components in the power grid.
2. The method of managing and controlling operations of power grid as claimed in claim 1, wherein managing electrical power usage comprises generating instructions based on a predictive machine learning model for managing the at least one source of electrical power and the components in the power grid, the predictive machine learning model forecasting status of the at least one source of electrical power, predicting demands by the one or more electrical devices for the electrical power, and predicting availability of the electrical power at the times the electrical power is demanded by the one or more components in the power grid.
3. The method of managing and controlling operations of power grid as claimed in claim 2, wherein the predictive machine learning model comprises a long short-term memory machine learning based prediction model that forecasts demand on the at least one source of electrical power by the one or more components in the power grid from historical data

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