

SYSTEM AND METHOD OF ENERGY SUPPLY CHAIN MANAGEMENT AND OPTIMIZATION THROUGH AN ENERGY VIRTUAL TWIN

ABSTRACT

An energy supply chain management and optimization system comprises an energy system comprising a plurality of inter-connected micro-grids connected to at least one macro-grid. The energy system connects to one or more cloud servers comprising at least one processor and memory storing computer code which, when executed by the at least one processor, implements a persistent virtual world system mapped according to the real world and comprising a plurality of virtual objects including at least one virtual replica of a corresponding real world element. The memory further stores a decentralized energy management system connected to the persistent virtual world system, comprising at least an energy control system configured to, through the virtualization of reality in the persistent virtual world system, digitally control energy flows based on data received from the energy system, and an energy market platform enabling energy aggregation and exchange between energy-related devices. Methods thereof are also disclosed.

FIG. 1