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(54) Title: AI-BASED ENERGY EDGE PLATFORMS, SYSTEMS, AND METHODS

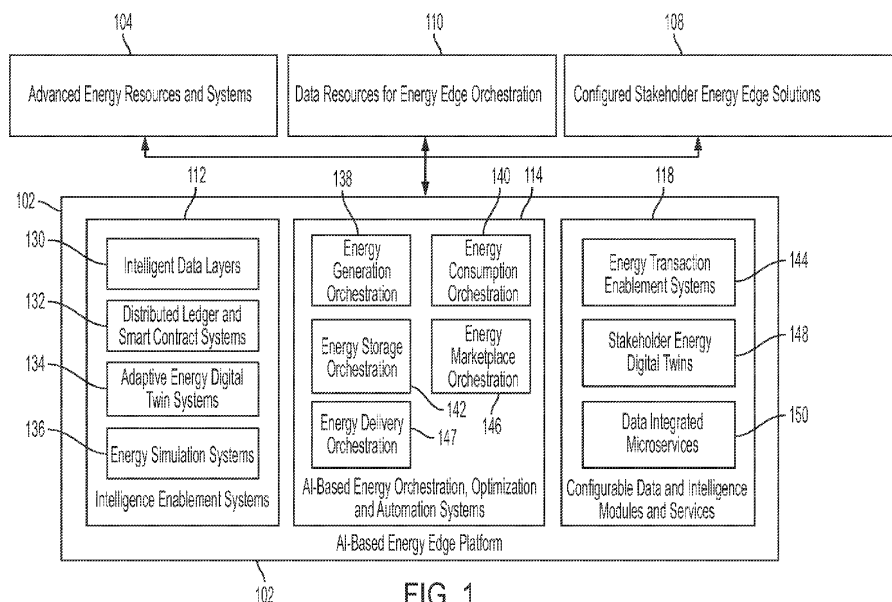


FIG. 1

(57) Abstract: An AI -based energy edge platform is provided herein with a wide range of features, components and capabilities for management and improvement of legacy infrastructure, coordination, and orchestration with distributed systems to support important use cases for a range of enterprises. An AI -based energy edge platform may include a graph neural network including a set of nodes respectively representing at least one distributed energy resource (DER) and a set of edges respectively interconnecting the set of nodes, wherein each edge represents at least one energy - related feature among at least two nodes of the set of nodes. The platform may incorporate emerging technologies to enable ecosystem and individual energy edge node efficiencies, agility, engagement, and profitability. Embodiments may forecast, plan for, and manage the demand and utilization of energy in greater distributed environments. Embodiments may employ intelligent provisioning, data aggregation, and analytics to leverage energy market connection, communi-

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