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(71)**Name of Applicant :**
1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY
Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
(72)**Name of Inventor :**
1)POOJA SHARMA
2)MADHU

(57) Abstract :
The invention discloses an AI-guided model (100) for real-time energy grid management, comprising data acquisition units (101), AI processing engine (102), prediction module (103), load balancing module (104), fault detection system (105), renewable integration interface (106), and control feedback system (107). The model optimizes load distribution, forecasts demand, integrates renewable sources, and isolates faults autonomously. By employing machine learning and reinforcement learning, the invention ensures grid stability, sustainability, and efficiency while reducing outages, transmission losses, and operational costs.

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