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(57) Abstract :
ABSTRACT: Title: A Microgrid Energy Management System with Arduino Uno-Based Power Monitoring and Method Thereof The present disclosure proposes a microgrid energy management system (100) that optimizes energy production and consumption, thereby reducing energy costs and environmental impact. The proposed microgrid energy management system (100) develops low-cost Internet of Things (IoT)-based energy management for microgrid clusters. The microgrid energy management system (100) comprises plurality of microgrids (102A, 102B), a controlling unit (110), a GSM module (112), a display module (114), a utility grid (116), a two-channel relay module (118), a user device (126) and a network (128). The proposed microgrid energy management system (100) is reliable, safe and energy efficient. The proposed microgrid energy management system (100) recovers from outages quickly and improves uptime by avoiding unplanned outages. The proposed microgrid energy management system (100) enhances maintenance and extends life of electrical assets.

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