

To tackle this challenge and enhance the dynamic response of HuGs, PID based model reference adaptive control (MRAC), for the synchronous generator (SG) is applied in this paper. Also, the ...

Pintaldi et al. used model predictive control (MPC) for the solar thermal energy storage cooling system and achieved a 10% reduction in energy consumption [18]. Kumar and ...

The electrical simulation focused on controlling the energy flux on a main DC link, where the power of the storage devices was regulated by the PID and MLP neural network ...

Continuous-time robust frequency regulation in isolated microgrids with decentralized fixed structure u-synthesis and comparative analysis with PID and FOPID ...

Thermal energy storage (TES) is recognized as a well-established technology added to the smart energy systems to support the immediate increase in energy demand, ...

PID controller is introduced into a latent heat thermal energy storage unit to compose a coupling system in order to control the discharging performance. Outlet temperature of the working fluid ...

Research papers Load frequency control of connected multi-area multi-source power systems using energy storage and lyrebird optimization algorithm tuned PID controller ...

In this paper, a load frequency control (LFC) strategy of hybrid energy storage based on fractional order proportion integral derivative (FOPID) is proposed to solve the ...

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The main innovation and contributions of this study are depicted as follows: Optimal design of renewable micro-grid controllers which includes a photovoltaic (PV) source, ...

Energy storage element is a precious solution presented to combat the non-desirable transient conditions on

load frequency and power sharing. Among different storage ...

The hybrid renewable generation energy system in this study includes a photovoltaic source, wind turbine, and battery storage, which are connected to a point of ...

Due to the increasing and variable load demands, fluctuations occurring in the performance of AGC is a major issue regarding power system (PS) frequency stability. To deal ...

In recent times, owing to environmental concerns and energy sustainability, the world community is witnessing the emergence of microgrid structures, predominantly ...

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