Economic dispatch of DC microgrids

In this paper, we propose a nonlinear programming model that represents the problem of economic dispatch of DC microgrids with a high penetration of renewable generators and energy ...

Building upon these foundations, this study develops a bi-level robust optimization model for MMG economic dispatch to optimize the energy management system of microgrids under the ...

However, in the actual operation of microgrids, various challenges are frequently encountered, including losses in transmission lines, ramp rate limitations of ...

Abstract--This study investigates the economic dispatch and optimal power flow (OPF) for microgrids, focusing on two config-urations: a single-bus islanded microgrid and a three-bus grid-tied microgrid.

This paper presents a fully distributed finite-time control strategy to optimize the load power dispatch of islanded DC microgrids (MGs) in a finite-time manner.

The economic dispatch problem (EDP) of microgrids operating in both grid-connected and isolated modes within an energy internet framework is ...

Uncertainties of intermittent renewables and complexities of load demands bring challenges to the optimal operation of the microgrid. This paper proposes a fully distributed method ...

Maintaining a high-quality power supply and cost-effective operation is significant for microgrids. This paper investigates the optimization problem of ...

This paper introduces a distributed control approach for optimizing the operation of islanded DC microgrids (µGs), accounting for cyber delays and network failures. Initially, an ...

In comparison to conventional DC voltage droop strategies, our novel droop controller is able to achieve load

sharing (even in presence of actuation constraints) or an optimal economic generation dispatch.

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