

国家重点基础研究项目

安全约束经济调度建模及应用

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摘要:

安全约束经济调度(security constrained economic dispatch, SCED)已成为国内外研究热点。以系统总能耗最小为目标,建立了SCED数学模型,该模型未考虑机组开停费用,将非线性约束线性化后利用线性规划方法求解该模型。算例结果验证了SCED模型及求解方法的有效性。最后制定了日前和日内调度计划编制流程。

关键词:

Modeling and Application of Security Constrained Economic Dispatch

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Abstract:

Security constrained economic dispatch (SCED) is widely applied in power generation and dispatch home and abroad. Taking minimization of total energy consumption in power system as objective, a SCED model is built, in which the start-up and shut-down cost of units is not taken into account, and by means of linearization of non-linear constraints the proposed model is solved by linear programming method. Results of calculation example verify the effectiveness of the proposed SCED model and the solution method. Finally, the flowchart to draft day-ahead and inter-day dispatching schedule is given.

Keywords:

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