

عنوان مقاله:

Maintenance scheduling of power units in a restructured power system using MPEC approach

محل انتشار:

ششمین کنفرانس مهندسی برق و الکترونیک ایران (سال: 1393)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Yearly maintenance scheduling of power generating units is an important scheduling problem that has to be solved within a restructured power system. Solving period of this problem usually is a one year basis. In this paper, a bi-level approach is used to solve maintenance scheduling problem. The upper level of this bi-level problem represents the profit maximization of power units owned by a generation company (GENCO) while the lower level problem represents the market clearing process. This means that a GENCO wants to maximize its own profit in a market and due to the participation of other producers in it, the market should be cleared and the independent system operator (ISO) establishes the desired security level. The bi-level problem is formulated as a mathematical program with equilibrium constraints (MPEC) using the primal-dual formulation. Various case studies are conducted using the IEEE .reliability test system (RTS) and the obtained results are compared

کلمات کلیدی:

Preventive maintenance scheduling, Mathematical program with equilibrium constraints (MPEC), Market environment, Generation company (GENCO) Nomenclatures

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