عنوان مقاله:

Generating Unit Maintenance Scheduling for Reducing Market Power

محل انتشار:

بیست و ششمین کنفرانس بین المللی برق (سال: 1390)

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خلاصه مقاله:

This paper proposes a novel approach for maintenance scheduling of generating units in restructured power systems. In this approach each generating company schedules its maintenance activity with the target of maximizing benefit from selling energy in the market. On the other side, Independent System Operator (ISO) coordinates maintenance schedule of generating units with the aim of reducing Market Power. Market Power may appear when ISO is forced to buy some amount of power produced by a GENCO to satisfy network constraints. This situation may not arise in normal operation of a system, but it is highly probable when the system load level is high and several units are out of service. Market power can lead to market inefficiency and cause market prices to increase abnormally. Thus maintenance scheduling of generating unit with the aim of reducing market power can reduce average market prices. Maintenance coordination procedure is presented to satisfy both system reliability and producers' benefit. Finally, this new approach is applied on IEEE-RTS test system.

کلمات کلیدی:

Maintenance Scheduling, Market Power, ISO, Power Producer