

IMPACT OF UNSCHEDULED INTERCHANGES ON ELECTRICITY PRICING

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ABSTRACT

Electricity markets of many countries, which are in developing phase, are facing problems like frequency fluctuations, generation deficiency and their performance is very sensitive to small disturbances. Operation of such power system is a challenging task and innovative strategies are required to get rid of these problems. Power utilities of India have introduced new tariff mechanism, Availability Based Tariff (ABT), to overcome these problems of power system. ABT has a component linked to the frequency of power system known as Unscheduled Interchange (UI) charge. This new mechanism has brought significant changes in operating strategies of power system. The Unscheduled Interchange (UI) charge is an important component of ABT mechanism which has been included to regulate frequency of power system. In this thesis impact of UIs on pricing of electricity are analyzed. To understand the benefit from unscheduled interchanges a power system having four generators is simulated in MATLAB SIMULINK and profit earned by each generator following UI rates and according changing their power schedules is evaluated.