

DEMAND RESPONSE EFFECT EVALUATION CONSIDERING TIME OF USE PRICE

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The contradiction between electricity supply and electricity demand becomes more and more serious with the rapid development of economy and the continuous increase of electricity consumption. Demand response could in a certain extent schedule the power in a scientific way and balance the electricity supply and demand. The improvement of response capacity of electricity demand on its price could be able to reduce users' electricity costs, cut down the electricity supply cost and the power load fluctuations. As a result, demand response effectively alleviates power shortages, improves the utilization of power resources, and get the purpose of reducing total cost, promoting the development and protection of the environment.

The specific implementation and development of Chinese demand response are still in its infancy now, and Time-of-Use(TOU) pricing is an important measure of it. In this paper, according to the method of Cost-benefit analysis, we establish the effect calculation model of demand response on the basis of the difference of users' electricity load before and after TOU implementation, which includes users' benefit, power grid benefit and environment benefit calculation. Then, through the calculation of a practical example, the effectiveness and feasibility of the model are demonstrated.