



# **Effects of Time-Of-Use Demand Response Programs Based On Logarithmic Modeling for Electricity Customers and Utilities in Smart Grids**

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## **Abstract**

The focus of this paper is logarithmic modeling of time-of-use programs (TOU) as most prevalent priced-based DRPs. In this way, nonlinear behavioral characteristic of elastic loads is considered which causes to more realistic modeling of demand response to TOU rates. In order to evaluation of proposed model, the impact of running TOU programs using proposed logarithmic model on load profile of the peak day of the Iranian power system in 2007 is investigated.

## **Keywords**

Demand Response programs; Elasticity; Time-of-use programs

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