

Time-based pricing and electricity demand response: existing barriers and next steps

C. Eid; E. Koliou; M. Vallés Rodríguez; J. Reneses Guillén; R.A. Hakvoort

Abstract-

Interest in Demand Response (DR) is increasing due to its potential to improve reliability and save costs for electricity systems. DR can provide a sustainable and cost-effective option for supply balancing, especially in a scenario with more volatile inflows from renewable energy sources. End-users can be incentivized to provide DR through time-based pricing in general and dynamic pricing in particular. This paper provides a theoretic framework and practice-oriented review of the status of DR in Europe, outlining the major challenges currently hampering further DR development. Important challenges involve the split-incentive issue for investments in enabling technologies, traditional market rules for flexibility that favor large generation units and the need for electricity market and network operation coordination.

Index Terms- Smart grid; Demand side management; Tariffs

Due to copyright restriction we cannot distribute this content on the web. However, clicking on the next link, authors will be able to distribute to you the full version of the paper:

[Request full paper to the authors](#)

If your institution has an electronic subscription to Utilities Policy, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Eid, C.; Koliou, E.; Vallés, M.; Reneses, J.; Hakvoort, R.A. "Time-based pricing and electricity demand response: existing barriers and next steps", Utilities Policy, vol.40, pp.15-25, June, 2016.