

Managing electric flexibility from Distributed Energy Resources: a review of incentives for market design

C. Eid; P. Codani; Y. Perez; J. Reneses Guillén; R.A. Hakvoort

Abstract-

In many electric systems worldwide the penetration of Distributed Energy Resources (DER) at the distribution levels is increasing. This penetration brings in different challenges for electricity system management; however if the flexibility of those DER is well managed opportunities arise for coordination. At high voltage levels under responsibility of the system operator, trading mechanisms like contracts for ancillary services and balancing markets provide opportunities for economic efficient supply of system flexibility services. In a situation with smart metering and real-time management of distribution networks, similar arrangements could be enabled for medium- and low-voltage levels. This paper presents a review and classification of existing DER as flexibility providers and a breakdown of trading platforms for DER flexibility in electricity markets.

Index Terms- Demand side management; Power markets; Demand response; DR; Demand flexibility; Distributed Generation; DG

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 Renewable & Sustainable Energy Reviews, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Eid, C.; Codani, P.; Perez, Y.; Reneses, J.; Hakvoort, R.A. "Managing electric flexibility from Distributed Energy Resources: a review of incentives for market design", Renewable & Sustainable Energy Reviews, vol.64, pp.237-247, October, 2016.