

Barriers to the implementation of response options aimed at mitigating the impact of wind power on electricity systems

L. Olmos Camacho; R. Cossent Arín; E. Lobato Miguélez; T. Gómez San Román

Abstract-

Increasing shares of renewable energy in transmission and distribution grids are significantly changing the way electricity systems must function. While these technologies offer great opportunities to fight climate change and reduce Europe's dependency on foreign energy sources, their successful integration poses significant challenges. This article identifies and discusses a set of barriers that have been identified by market parties, European institutions and partners in the European project RESPOND. According to the research findings, main barriers to be overcome include the lack of incentives for generation from some technologies to be installed and participate in markets (both renewable and required conventional generation acting as a back-up), lack of participation of renewables in ancillary services markets, lack of conventional generation and demand providing flexibility to the system, difficulty to carry out required reinforcements to the transmission grid both at local and at regional level, inefficiency of existing network congestion management schemes, as well as well-designed transmission and distribution network charges and lack of incentives for distribution system operators to implement Active Network Management practices in the operation and planning of their networks

Index Terms- Response options; Barriers; Networks; Markets; Demand; Generation

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 Wind Energy, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Olmos, L.; Cossent, R.; Lobato, E.; Gómez, T. "Barriers to the implementation of response options aimed at mitigating the impact of wind power on electricity systems",

Barriers to the implementation of response options aimed at mitigating the impact of wind power on electricity systems, vol.14, no.6, pp.781-795, September, 2011.