Two-stage stochastic day-ahead optimal resource scheduling in a distribution network with intensive use of distributed energy resources - DTU Orbit (09/11/2017)

Two-stage stochastic day-ahead optimal resource scheduling in a distribution network with intensive use of distributed energy resources

The integration of renewable sources and electric vehicles will introduce new uncertainties to the optimal resource scheduling, namely at the distribution level. These uncertainties are mainly originated by the power generated by renewables sources and by the electric vehicles charge requirements. This paper proposes a two-state stochastic programming approach to solve the day-ahead optimal resource scheduling problem. The case study considers a 33-bus distribution network with 66 distributed generation units and 1000 electric vehicles.

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