

Transmission expansion planning under consideration of uncertainties in facility implementation times for regulatory purposes

R.S. de Sa Ferreira; C.L.T. Tancredo Borges; L.A. Nobrega Barroso

Abstract-

We propose a transmission expansion planning methodology that explicitly considers uncertainty in facility implementation times for regulatory purposes, to ensure that the decisions about what transmission facilities to build and when to initiate their implementation are correctly made. The resulting expansion plan is optimally adjusted to (or protected from) these uncertainties and, therefore, implementation delays. The approach is based on mixed integer linear programming and applied to a case study.

Index Terms- Transmission System; Expansion Planning; Uncertainties; Implementation Time

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 you institution has a electronic subscription to Electric Power Systems Research, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Ferreira, R.S.; Borges, C.L.T.; Barroso, L.A. "Transmission expansion planning under consideration of uncertainties in facility implementation times for regulatory purposes", Electric Power Systems Research, vol.197, pp.107325-1-107325-9, August, 2021.