Convex Relaxations of Chance Constrained AC Optimal Power Flow

Venzke, Andreas; Halilbasic, Lejla; Markovic, Uros; Hug, Gabriela; Chatzivasileiadis, Spyros

Published in:
IEEE Transactions on Power Systems

Link to article, DOI:
10.1109/TPWRS.2017.2760699

Publication date:
2017

Document Version
Publisher's PDF, also known as Version of record

Comments and Corrections

Correction to "Convex Relaxations of Chance Constrained AC Optimal Power Flow"

Andreas Venzke, *Student Member, IEEE*, Lejla Halilbasic, *Student Member, IEEE*, Uros Markovic, *Student Member, IEEE*, Gabriela Hug, *Senior Member, IEEE*, and Spyros Chatzivasileiadis, *Member, IEEE*

In the article [1], there is a typo in the equation in (45) in (Section III.D). The correct formula should read:

$$N_{\mathrm{s}} \geq \frac{1}{\epsilon}\frac{e}{e-1}\left(\ln\frac{1}{\beta}+2n_W-1\right) \tag{45}$$

In addition, the statement in (Section III.V) that the approximation of the joint chance constraint with individual chance constraints with the same maximum allowable violation probability ϵ is "conservative" is incorrect. In fact, the maximum of the observed individual chance constraint violation probabilities only provides a lower bound on the joint chance constraint violation probability.

Reference

[1] A. Venzke, L. Halilbasic, U. Markovic, G. Hug, and S. Chatzivasileiadis, "Convex relaxations of chance constrained AC optimal power flow," *IEEE Trans. Power Syst.*, vol. 33, no. 3, pp. 2829–2841, May 2018.

Andreas Venzke, Lejla Halilbasic, and Spyros Chatzivasileiadis are with the Department of Electrical Engineering, Technical University of Denmark, 2800 Kongens Lyngby, Denmark (e-mail: avenzke@gmx.net; lhal@elektro.dtu.dk; spyros.chatz@gmail.com).

Uros Markovic and Gabriela Hug are with the Power Systems Laboratory, ETH Zurich, 8092 Zurich, Switzerland (e-mail: markovic@eeh.ee.ethz.ch; ghug@ethz.ch).

Color versions of one or more of the figures in this article are available online at https://ieeexplore.ieee.org.

Digital Object Identifier 10.1109/TPWRS.2020.3011092