

## **Evaluation of modeling and simulation complexity on studying the impacts of electrical vehicles fleets in distribution systems**

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**Abstract:** Evaluations of possible grid impacts from electric vehicles have been published extensively during the past years. Different parameters and assumptions of simulation models are used in these studies. In this work it is investigated if the evaluations of grid impacts can be affected by simulation parameters and modeling complexity. Possible consequences from varying simulation parameters are analyzed at a worst case scenario and randomly generated charging scenarios. For evaluation of minimal voltages or grid losses, smaller time steps and more sophisticated models lead to more precise results. These findings will be used in upcoming works on real time simulator design, for defining study scenarios and choosing proper simulation models.

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