

Modernization Solutions for the Trolleybus Traction Stations in the Chisinau Municipality

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<https://doi.org/10.1109/EPE56121.2022.9959805>

Abstract

The paper presents the current status and modernization of DC traction stations for powering trolleybuses. Most of the traction stations are over 50 years old and have a rigid structure, obsolete rectification equipment, and require colossal maintenance costs. Flexible power circuit structures, efficient electrical and electronic equipment, automated digital control systems, reactive energy compensation and trolleybus braking energy recovery have been proposed to modernise traction stations. The proposed modernization solutions will allow to increase the operating functionality and energy efficiency by about 30%, compatibility with the supplier's electricity grid, reduction of operating costs of trolleybus traction stations.

Keywords: reactive power, renewable energy sources, voltage measurement, power measurement, energy measurement, trolleybuses, traction station, power converters

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International Conference and Exposition on Electrical And Power Engineering (EPE)

20-22 October 2022, Iasi, Romania

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