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Short Term Daily Storage Need Assessment for a Large PV Deployment Scenario - Preliminary Case Study for Republic of Moldova

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Abstract

The Paris Agreement framework and the new European Green Deal are asking for challenging high goal, while a 50 to 55% renewables target in 2030 is a technical achievement which needs to address many aspects of the power system operation. One of these challenges is about the stochastic behaviour of renewable sources (RES), e.g., PV s - and the match between PV production and power system consumption at national level. Electrical storage based on new technologies such as Li-Ion batteries are also gaining momentum. In this context, a simplified assessment of the storage need for coping with high RES penetration versus consumption match on a daily basis can give inputs for future preparations towards carbon-neutral energy sector. The paper is analysing the need of stationary storage systems which can mitigate the production - consumption match on a daily basis and with at target of 30 to 50 % of PV-based RES penetration, as a use-case for Republic of Moldova.

Keywords: renewable energy sources, green products, energy measurement, energy storage, power systems, renewable energy

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