

Peak Shaving in Microgrids Using Hybrid Storage

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Abstract : In this contribution, we focus on the technical and economic aspects of using hybrid storage in microgrids for peak shaving. We perform a feasibility analysis of hybrid storage consisting of conventional supercapacitors and chemical batteries. We use multiple real-life consumption profiles from various industry-oriented microgrids. The primary purpose is to construct a digital twin model for reserved capacity simulation and prediction. The main objective is to find the equilibrium between technical innovations, acquisition costs and energy cost savings

Keywords : microgrid, peak shaving, energy storage, digital twin

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