Modeling the management of microgrid equipped with PV panels and battery; resolution using McKean Forward-Backward Stochastic Differential Equations

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We describe the mathematical modeling and the numerical resolution of the optimal management of the electricity consumption of a building equipped with solar panels and battery. The storage facilities help to smooth the load on the large public grid. The optimal battery control is related to solving a McKean FBSDE. Some numerical experiments are supporting the study.

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