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Matlab/Simulink Simulation of Solar Energy Storage System

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Abstract : This paper investigates the energy storage technologies that can potentially enhance the use of solar energy. Water electrolysis systems are seen as the principal means of producing a large amount of hydrogen in the future. Starting from the analysis of the models of the system components, a complete simulation model was realized in the Matlab-Simulink environment. Results of the numerical simulations are provided. The operation of electrolysis and photovoltaic array combination is verified at various insulation levels. It is pointed out that solar cell arrays and electrolysers are producing the expected results with solar energy inputs that are continuously varying.

Keywords : electrolyzer, simulink, solar energy, storage system
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