



MODELING AND SIMULATION OF A SUPERVISION AND MANAGEMENT SYSTEM OF HYBRID ENERGY SYSTEMS FOR THE PANTANAL REGION

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Abstract: This work developed a modeling for simulation of a supervising and management system for hybrid energy systems. The modeling uses many renewable energy sources and a battery bank. The developing was done using MATLAB/SIMULINK[®]. The main objective is to attend the demand of the Pantanal Study Base (BEP) of the Federal University of Mato Grosso do Sul only with renewable energy sources. So, scenarios of typical days and a one year scenario were developed to verify the behavior of the battery bank. It is possible verify how dimensioning of the number of solar panels and of the battery bank can influence the project development, increasing the number of equipments and financial costs. First, hybrid energy systems and renewable energy sources are briefly presented. Then the model is described. Following, how the demand curve was obtained is presented, and the dimensioning of the number of solar panels and the number of batteries of the battery bank. Finally, results obtained with the modeling of the system are presented.

Keywords

Hybrid energy systems, renewable energy sources and demand curve.

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