IMPACT ANALYSIS CONFIGURATION OF PHOTOVOLTAIC PANELS FOR INTERNAL POWER LOSSES

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ABSTRACT Series-parallel configuration of panels Photovoltaic Power Plant is determined in several ways. The most important are the electrical requirements for voltage and input current of the inverter coupling to the energetic grid. The distribution of panels results from the shape surface, cable management capabilities, and spatial location of elements such as connection, inverter, and energy storage. The study analyzed the impact of the distribution of individual parameters of photovoltaic panels on the own losses of power. It has been shown that the method of selection of the parameters according to individual panels and the panels in the serial and parallel branches has influence the losses, and thus influences the efficiency of the power plant. Simulation studies were carried out using the module developed by the authors of PVP CAD MATLAB.

Keywords: Photovoltaic power plants, power losses in photovoltaic panels