

Installing Photovoltaic Panels to Generate Optimal Energy in SPAV Hostel, Vijayawada

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Abstract : In this research paper, a procedure for installing and assessment of a solar PV plant to generate optimal solar energy SPAV hostel at Vijayawada city was analyzed. The hostel was experiencing power disruption and had a need for an unceasing energy source. The solar panel is one of the best solutions to obtain uninterrupted clean renewable energy for an institutional building as it neither makes din nor pollutes the atmosphere. The electricity usage per month was initially measured to discriminate the energy change. The solar array was installed with its financial and environmental assessment considering recent market prices. All the aspects related to a solar PV plant were considered for the feasibility and efficiency of PV plant near this site i.e., the orientation of the site, the size and shape of the terrace, the sun path were considered while installing panels. Various precautions were taken to intercept the factors which cause interference in energy generation, with respect to temperature, overshadowing, the wiring of panels, pollution etc. The solar panels were frequently installed, monitored and maintained properly to procure optimal energy output. Result obtained with the assessment of the proposed plant and deflation in the electric bill will show the maximal energy that can be generated in a month on that particular site.

Keywords : solar efficiency, building sustainability, PV panel, solar energy

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