

Electrical Installations of a Sustainable Social Hub Integrating PV and EV Charging Station

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Abstract:

With the ongoing environmental awareness and the need for more energy-saving solutions, the increasing demand for sustainable infrastructure in Egypt is becoming essential. This graduation project proposes the design of a social hub area that integrates a gas station with small commercial buildings and retail stores. The project incorporates a rooftop photovoltaic (PV) installation and an electric vehicle (EV) charging system, promoting sustainability and energy efficiency. Utilizing established codes and standards for sizing and component selection, the design aims to reduce energy consumption while meeting customer expectations. A small-scale maquette of the social hub will be developed to visualize its layout and demonstrate all technical specifications of the project.

