

Energy Management for Large Society by Using Renewable Energy Sources

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Abstract:For very long-time power outage, power interrupt and also unexpected routine of power line maintenance is of the major problem faced in industries, hospitals, office and residential areas whole over the world. For that case, this project provides an automatic operation of electrical power distribution system; the rapid and reliable transfer of the system from one power source to another during specific event such as power outage, power interrupt, routine power line maintenance to achieve the reliability of such system. And, sudden fluctuation in voltage is very big and serious problem in industries and home appliances and it causes losses in electrical circuits. These losses cause low power factor in the supply and by much amount of power is going to be wasted. These fluctuations may significantly impact the power quality as well as the reliability of other voltage controlling devices. Therefore, due to this fluctuation; much costly & precious equipment may get damaged. To avoid all over problems we design system for under over voltage protection, auto power switch between mains and solar power inverter. Here we are using different sensors like voltage sensor, current sensor, PIR and LDR sensor, fire sensor to give input to microcontroller. In this project we will use PIC 18f4520 microcontroller. All parameter will display on LCD display. To control switching between power sources as well as light, sprinkler, load we will use different relays.

Keywords:Renewable Energy, Microcontroller, 3-Phase Sensing, Solar Supply.

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