**AUTO POWER SUPPLY CONTROL FROM 4 DIFFERENT SOURCES: SOLAR, MAINS, GENERATOR & INVERTER TO ENSURE NO BREAK POWER**

**ABSTRACT**

The main objective of this project is to provide uninterrupted power supply to a load, by selecting the supply from any source out of 4 such as mains, generator, and inverter and solar automatically in the absence of any of the source. The demand for electricity is increasing every day and frequent power cuts is causing many problems in various areas like industries, hospitals and houses. An alternative arrangement for power source is a must.

In this project uses four switches to demonstrate the respective failure of that power supply. When any of the switches is pressed it shows the absence of that particular source, switches are connected to microcontroller as input signals. A microcontroller of 8051 family is used. The output of microcontroller is given to the relay driver IC, which switches appropriate relay to maintain uninterrupted supply to the load. The output shall be observed using a lamp drawing power supply from mains initially. On failure of the...
mains supply (which is actuated by pressing the appropriate switch) the load gets supply from the next available source, say an inverter. If the inverter also fails it switches over to the next available source and so on. The current status, as to which source supplies the load is also displayed on an LCD. As it is not feasible to provide all 4 different sources of supply, one source with alternate switches are provided to get the same function.

**BLOCK DIAGRAM**
HARDWARE REQUIREMENTS:

- 8051 series Microcontroller, Relay Driver IC, Relays, LCD, Lamp, Push Buttons, Transformer, Diodes, Voltage Regulator, Crystal, LEDs, Capacitors, Resistors.

SOFTWARE REQUIREMENTS:

- Keil compiler

- Languages: Embedded C or Assembly