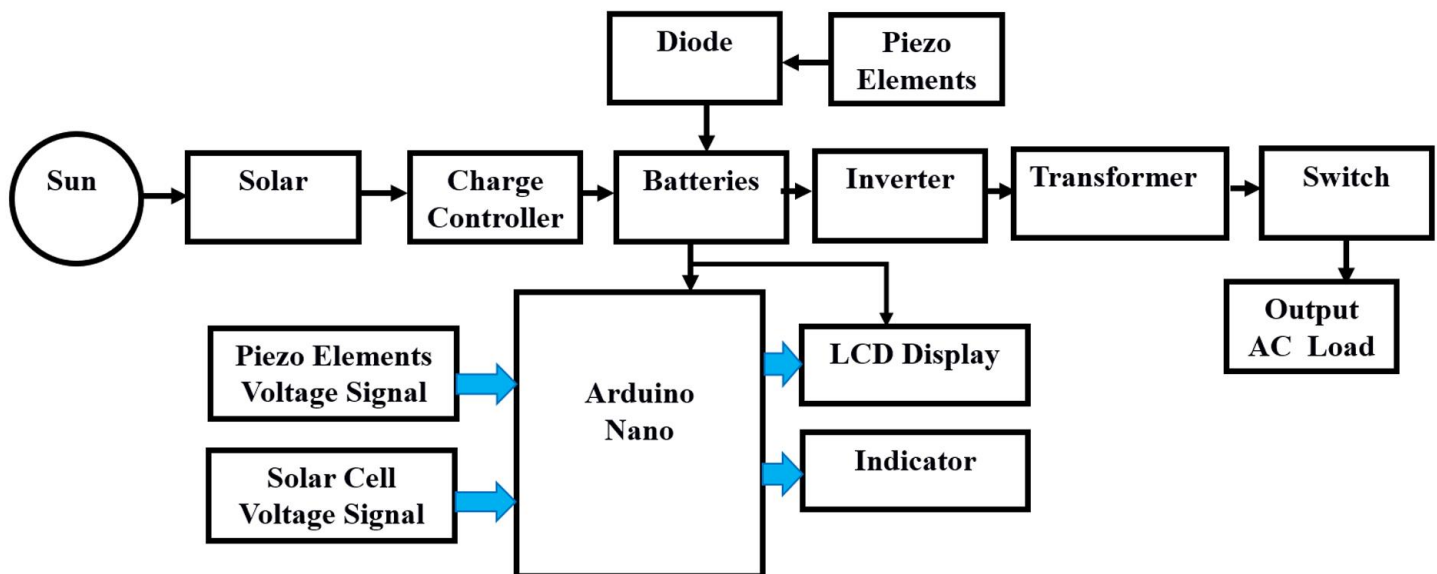


## Solar And Piezo Battery Charging Hybrid Power System

### About This Project:

Our project is Solar Piezo Hybrid Power Charging System. The solar energy in the form of solar radiation. There are two function of our project one of them solar charging system & another one piezo elements power generation system. The piezoelectric transducers work on the principle of piezoelectric effect. When mechanical stress or forces are applied to some materials along certain planes, they produce electric voltage. The voltage output obtained from these materials due to piezoelectric effect is proportional to the applied stress or force. Battery is charged with power from solar and piezo elements. That power produced DC to AC Current by an inverter circuit. Later, a step up power transformer is converted to a high voltage AC & it through a load. The signals of solar and piezo voltages shows the amount of voltage being produced & it showing a LCD display. This Project implements an efficient way to power generation system, using solar power. Solar energy system is used to collect maximum power from sun. This proposal is to use the solar panels implemented in this project more efficiently and to carry out a realistic experimental approach to enhance the solar output power to a significant level and piezoelectric energy harvesting circuit. In this project, piezoelectric-based energy harvesting technology is applied to generate electricity from mechanical stress (vibrations). Using piezoelectric material to harvest vibration energy from humans walking, machinery vibrating, or cars moving on a roadway is an area of great interest, because this vibration energy is otherwise untapped. Since movement is everywhere, the ability to capture this energy cheaply would be a significant advancement toward greater efficiency and cleaner energy production.

### Block Diagram:



**Figure: Block Diagram of Solar and Piezo Battery Charging Hybrid Power System**

### Required Instrument:

- Arduino.
- Piezo Elements.
- LCD Display.
- Solar.
- MOSFET.
- CD4047 IC.
- Battery.
- LED.
- Transformer.
- Diode.
- Capacitor.

### Advantages:

- Dual Power Generation System
- The System Easy TO Use.
- Our designing system very Cost Effective.
- Save Our Power of Grid.
- Creation the Employment.
- Very high frequency response.
- Self-generating, so no need of external source.

### Applications: **ZerOne Projects**

The project has a major application in **Project Solutions.**

- The project has a major application in
- This system can be used in Rural Area where the power is not available.
- Widely can be used in Shopping Mall.
- Bus, Train airport any station can be used.

**N.B:** *Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.*

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