

An Project Report on Advanced Load Shedding

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ABSTRACT

This project titled as “advanced load shedding.” The major motivation or an importance of this project is to save the power that are wasted. also, the closing of coal, gas, and nuclear plant we must save the power. This meter help to a middle-class family to take a benefit and the cost use for inverters. The system is using an Arduino controller for their work. whenever the consumer needs a power increment, we cannot cut the power we gave a limit. so that why they understand the using of power in a limit. This type of system is needed. To save the energy.

The purpose is to prevent a dangerous overloading of the generators or a general collapse of an electric power system. Also, a main purpose to transfer a power to a house to house.

In this project in future, we can use an iot or installed a Wi-Fi so can the government edit setting by a WIFI. Right now, the meters are very dumb. if the power is there use it or there is no power, we have lived without an electricity. For daily house hold work we need energy so from this project we can save the energy and stop the wastage of energy

Keywords: wifi,

Introduction

1.1 General

Now a days the loss of power or an electricity is rapidly happening. The shortage of power in summer they cut the power for 4 to 5 hours. in villages there is no light for 4 5 hours they use an inverter to store back up for a load shedding. The power they use for charge the battery is 80% there are too much losses in charging and discharging. and also, to repair the battery and change the battery in 2 to 3 years there a is cost that not easy to waste for a middle-class family, our motive is to reduced also they can use a daily power that they get from a inverter. We want to upgrade this system in future.

Six months back when we are deciding the topic there is Ukraine Russia war so in there is a shortage of energy. also, Russia is not sending petrol. But in India there is no shortage right now. but the population is increase so we must save the power. In Pakistan they started a load shedding for maximum 12 to 15 hours. every state or a country there is a shortage of raw material that we use for generate power. Solar also is good decision for future. but solar generate 25% and we need a 35%. in future we need more and more power for living.

In this project our aim is to save energy and fulfilled all requirement of everyone. Also, we are closing coal, nuclear, power plant that effect is on power shortage. Also right mow the meter we have its a dumb meter, so if the power is flow then use it, whenever there is no power then stay in dark. But future system is smart grid, if there ais a shortage then we gave a limit to a customer and fulfilled their needs.

So. From this system we gave power to needed one and save wastage powered

1.2 Objective of the study

Main objective is to reduce the wastage power and supply the power home to home. Main thing is to use power how much we need do not waste the power also the maximum use is also to minimize the cost that use for inverter battery charge.

2. Review of Literature

2.1 Review of literature

A. Martins, H. Jorge, J. Mota, R. Parrao and A. Gomes “A PC- Based simulation packed for supporting End user demand side management strategies”. IEEE trans on power system, vol. pwr6, no. 3 Aug 1991 -

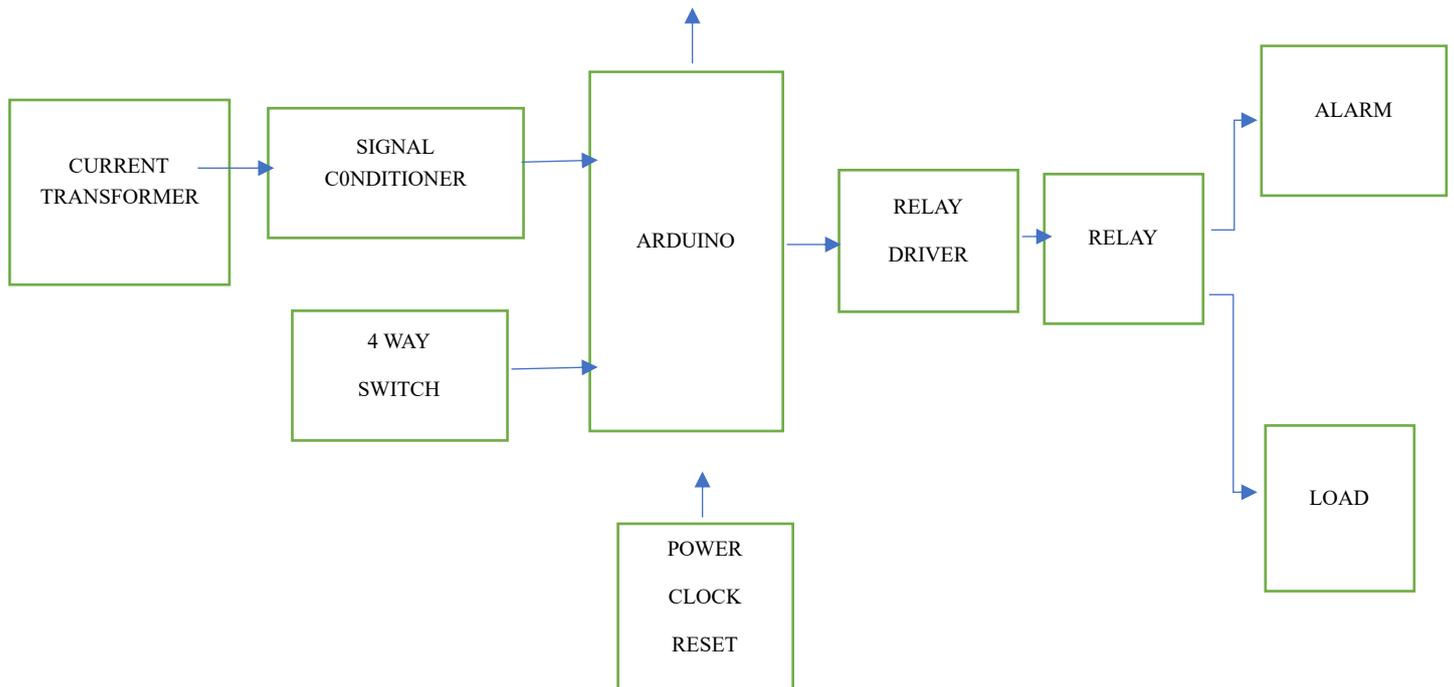
Maximum demand charges are widely used by utilities as one of the forums of implementing peak clipping in the context of demand side management. A MD meter is installed in consumer premises are necessary for determining the power demand value which is the basis for applying the demand charge. The MD is the maximum of the value so obtained, usually monthly recorded the length of the demand period is established by each utility according to its own criteria.

S. Lee, C. Wikins, “A practical approach to appliance load control analysis : A water heater case study” . IEEE trans. on Power Apparatus and System, Vol. PAS-102, no.4 April 1983-

Maximum demand control is one of the end user options for implementing demand side management side practical. It is accomplished by installing a controlling device that sheds and restore supply to certain load, chosen by end user.

3. Methodology

3.1. Block Diagram



3.3 Block Diagram Explanation

- For the project create a block diagram, for logic implementation we use a micro controller it has every thing for automation we use Arduino because it is nowadays famous also user friendly. we easily power up
- Next power, clock and reset in every controller we need this basic requirement.
- Controller takes the input we have to analysis this input so we use current transformer

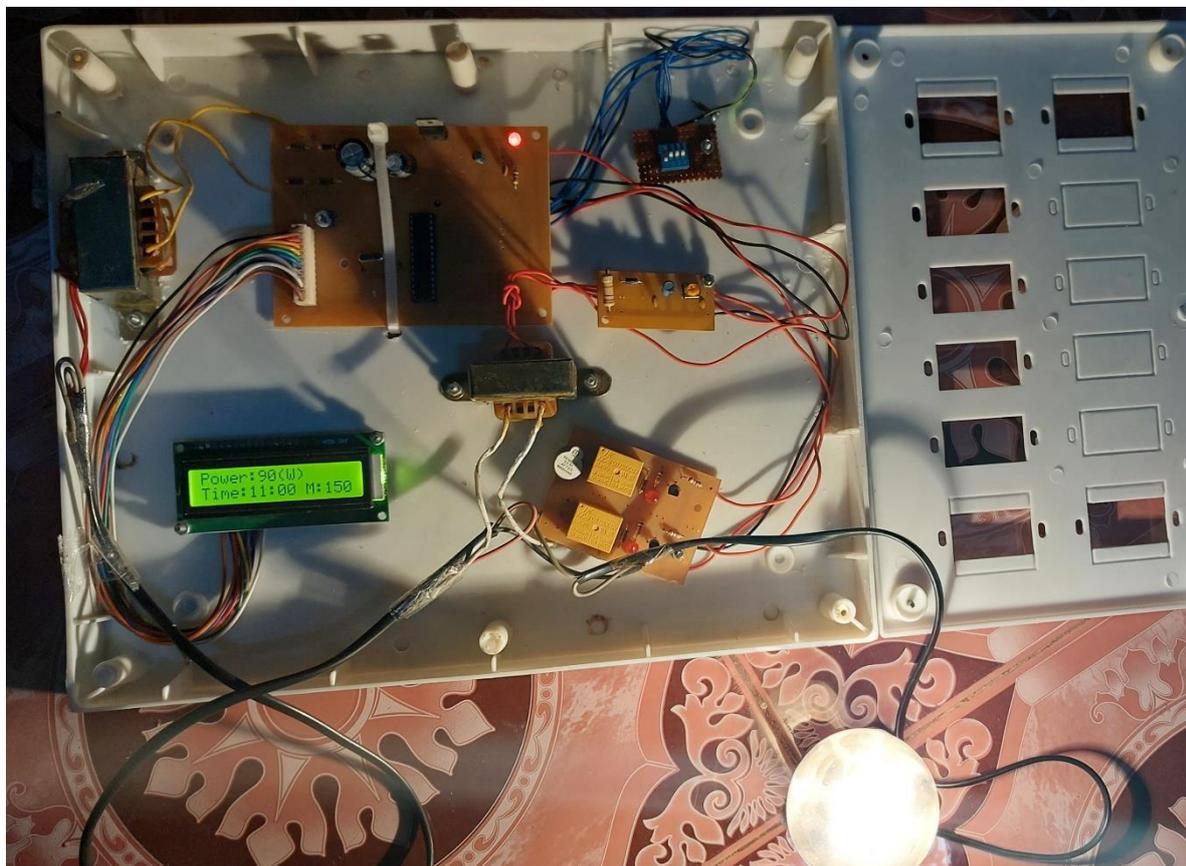
- For current, clock, load display we use LCD
- Input is current but the controller needs voltage for that we use signal conditioner
- We use a 4-way switch for limit
- Use relay for cut the contact
- Use a clock for peak hour selection

3.4 Advantages

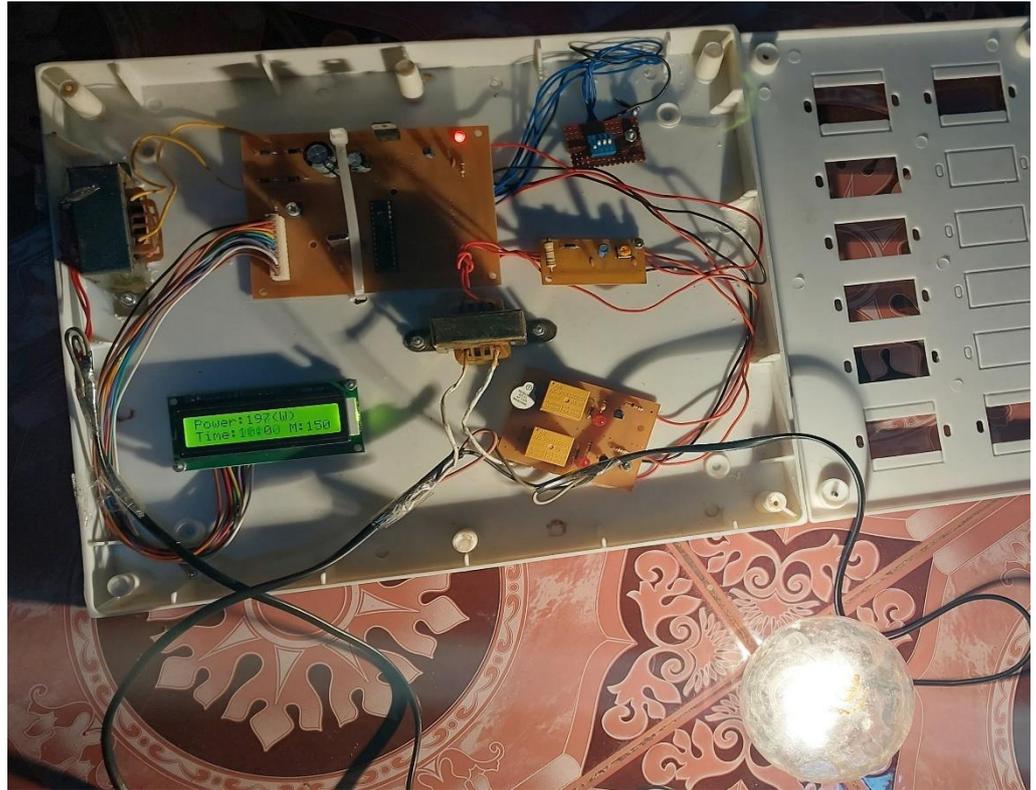
- Easy to use
- Since system is digital it is more reliable
- System can be modified for different customer easily by mean of software change
- It makes power available to all people irrespective of size of nature

4. Result and Discussions

4.1 At100-wattpower:



4.2 At a 200-watt power:

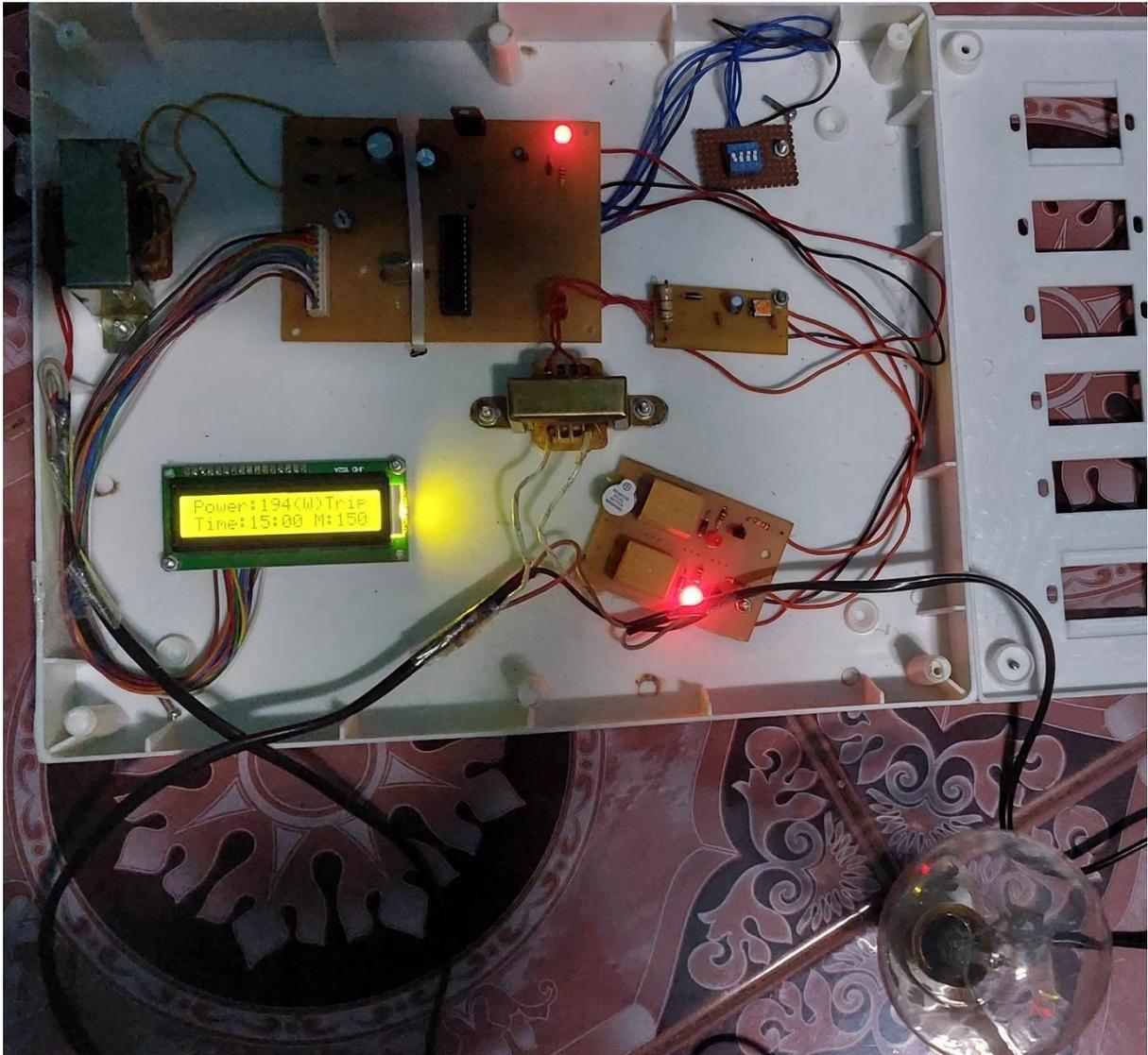


4.3 At a warning period:



Because our limit is 150

4.4 At The Trip



5. Conclusion

Electrical power is very important parameter in our country. We have to overcome this problem and save the energy from this project we are citizens of country and we have to save energy . . . From this system the needed people gets the power and they can live with a electricity. And do there work with no interption

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