

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
BAPUJI INSTITUTE OF ENGINEERING AND TECHNOLOGY, DAVANGERE-577005
Department of Electrical and Electronics Engineering.

1. Electrical Engineering Forum ,BIET,Davanagere organised a **National Energy Conservation Week** on **December 20 ,2019**. The programme was Inaugurated by Sri. B K Subhash Chandra, Superintendent Engineer, BESCO, Davanagere Division BESCO and Y.Vrushabhendrappa, Director ,BIET Davanagere.



2. Electrical Engineering Department, BIET,Davangere has celebrated world Environmental Day on June 5 2020. The Programme was inaugurated by Dr.H.B. Arivanda, Principal, BIET and Y.Vrushabhendrappa, Director, BIET Davangere.



3. Electrical Engineering Forum ,BIET,Davangere organised a National Energy Conservation Week on December 23 ,2020. The programme was Inaugurated by Sri. S.K.Patil , Executive Engineer, Davangere Division BESCO and Y.Vrushabhendrappa, Director ,BIET Davangere.





STUDENTS PROJECTS-2019

INTELLIGENT STREET LIGHTING SYSTEM USING IoT

Dr. M S NAGARAJ, HOD, SOWMYA ANAND Assis. Prof.
ARUNA M, SEEMA M, SAHANA K S, VENKATESH PRASAD G

This project aims for designing and executing the advanced development in embedded systems for energy saving of street lights. Currently we have a manual system where the street lights will be switched ON in the evening before the sunsets and they are switched OFF in the next day morning after there is sufficient light on the outside. But the actual timing for these lights to be switched ON is when there is absolute darkness. With this, the power will be wasted up to some extent. This project gives solution for electrical power wastage. Also the manual operation of the lighting system is completely eliminated. The proposed system provide a solution for energy saving. This is achieved by sensing and approaching a vehicle using an IR transmitter and IR Receiver couple. Upon sensing the movement the sensor transmit the data to the microcontroller which furthermore the Light to switch ON . Similarly as soon as the vehicle or an obstacle goes away the Light gets switched OFF as the sensor sense any object at the same time the status(ON/OFF) of the street light can be accessed from anywhere and anytime through internet. This project is implemented with smart embedded system which controls the street lights based on detection of vehicles or any other obstacles on the street .Whenever the obstacle is detected on the street within the specified time the light will get automatically ON/OFF according to the obstacle detection and the same information can be accessed through internet. The real time information of the street light(ON/OFF Status) can be accessed from anytime, anywhere through internet.

SOLAR CHARGE CONTROLLER AND INVERTER

Dr. M S NAGARAJ, HOD, BASAVARAJAPPA.S.R Assis. Prof.
AJAY S, NAYANA B J, PALLAVI P SPOORTHI D N

Solar energy is a renewable form of energy and is a very efficient method of saving electricity. It does the same functioning as the electricity but the difference is that the major source is solar energy in which electricity is kept aside. Since electricity should be preserved this project is the best way to let the world know the new and the better way to save electricity along with the continuation of all the project and working of appliances with the help of the renewable source that is the solar energy.

This project involves the development of a solar panel to generate direct current (DC) power that will be used to charge a battery. And this DC voltage from battery is converted into AC using inverter. This system will provide the basic electricity requirements for the house.

GENERATION OF FREE ELECTRICITY FROM EARTH

**Dr. M S NAGARAJ, HOD, VIDYA G.H Assis. Prof.
GUNDEGOUDA, PAVANKUMAR B M, MANISH A RANDEWADI, MOHAMMED
SALEEM ATTAR**

In this project Generation of Free Electricity from Earth is discussed. This project demonstrate the generation of electricity by using copper and zinc material .Different combinations of metallic and nonmetallic solid, liquid and gas electrodes were investigated for maximum potential difference. The voltage level was found to increase linearly by connecting multiple earth battery cells in series like commercial lead acid battery. The load current was found to increase by connecting earth cells in parallel. The source current capacities were also found to increase by increasing surface areas of the electrodes. However, single cell voltage was found to remain constant irrespective of the electrode size. Small power electronic devices such as calculators, electronic watches, baby toys and cell phones and white light LEDs were operated on site.

CONVERSION OF SOUND ENERGY TO ELECTRICAL ENERGY

**SHIVAKUMARA SWAMY G M Assis. Prof, ANUSHA D M, NANDINI A V, DEEPIKA U,
PAVITHRA H R**

We all need electricity and when if someone asked what it's importance then it is much essential that many virtual possibilities are now becoming take the shape of the realistic world only due to the electricity if available abundant. Various approaches are used and commencement of these approaches help at a vast scale to provide or to fulfil the demand of the electricity. Now a day using alternate sources of energy such as sound energy, pressure (in the form of energy) to produce electrical energy. In our project we explore a less popular but useful source of clean energy i.e. Sound Energy (Noise). Waste form of sound energy can be used for some creative purpose. Random unwanted noise can be treated as a source of electrical energy. This project deals with "CONVERSION OF ELECTRICAL ENERGY FROM SOUND ENERGY". Sound is known that the technological aspects are increasing at a faster pace. But the utilization of technologies are very low in various sectors. It is known that the sound pollution is increasing in urban cities due to traffic. So here we propose a system where the sound signal is gathered using sound sensors and the obtained waves are used for production of electrical energy. This project presents the work done on the conversion techniques and methodologies of converting sound energy to its electrical counterpart. It focuses on the feasibility and the ground zero application of the same. The prediction of the future development of these kind of sources of energy is emphasized other than commonly known ones such as solar energy, biogas, wind energy and so on. So one can imagine if we were able to convert the sound energy to electricity then we can charge our mobile phone just by talking to our friends on mobile itself.

SOLAR POWERED ELECTRIC VEHICLE CHARGING STATION

**Mr. KEERTHI KUMAR. S. H Assis. Prof. , Mrs. SUMAN. B. S Assis. Prof.,
JEEVITHA J, KAVYA S T, SHIVANI R, KARTHIK M N**

While electric vehicles are generally seen as clean vehicles, they are not completely clean because the production of electricity might generate emissions as well. This project on solar powered electric vehicle charging station is a working solution to close the gap in achieving a truly renewable and clean vehicle. The current scenario of today's solar energy ecosystem is that, it is highly unstructured and localized. There are about 50 solar power plants in India but none of them are connected in a manner that there would be a method to perform analytical analysis of the solar energy produced. Today, with the advancements in sensor technology it is a very viable option to connect the solar energy systems to the GSM. Once these systems are connected to the user can receive the message, the analysis of the performance, productivity and efficiency can be calculated very easily. This project aims at finding a possible and viable method to connect the solar powered electric vehicle charging station.