



**CHEBROLU ENGINEERING COLLEGE(HU)::CHEBROLU  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering	Name of the student studied course on experiential learning through project work/field work/internship
EEE	B.Tech	Solar Power Smart Home Appliances	EEE	2020-21	GANJI VENKATA BHARGAVI
EEE	B.Tech		EEE	2020-21	KESANI BAJI BABU
EEE	B.Tech		EEE	2020-21	KISTAM BALA SIVA NAGARAJU
EEE	B.Tech		EEE	2020-21	MOPIDEVI GOWRI PRIYA
EEE	B.Tech	wireless energy used to energize tube light	EEE	2020-21	PANDALA NAVEEN KUMAR REDDY
EEE	B.Tech		EEE	2020-21	BADDULA SAI RAM
EEE	B.Tech		EEE	2020-21	MANAM SRINIVASULU
EEE	B.Tech		EEE	2020-21	MULIKI YOGESWARA KUMAR
EEE	B.Tech		EEE	2020-21	JORIGE MAHESH BABU
EEE	B.Tech	A fabrication of solar powered mobile plough with remote	EEE	2020-21	POTHANA ROOPKIRAN
EEE	B.Tech		EEE	2020-21	YARRAKULA SIVA KRISHNA
EEE	B.Tech		EEE	2020-21	SUNKARA GOPI RAJU
EEE	B.Tech		EEE	2020-21	GANACHARI VAMSI KRISHNA
EEE	B.Tech		EEE	2020-21	BODDU BASAVASANKAR

**A  
project report on**

**A FABRICATION OF SOLAR POWERED MOBILPLOUGH  
WITH REMOTE**

**Submitted in partial fulfillment of the requirement for the award of the degree of  
BACHELOR OF TECHNOLOGY IN**

**ELECTRICAL&ELECTRONICS ENGINEERING**

**Submitted by**

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**Under the esteemed guidance of**

**N.Archana M.TECH**



**CHEBROLU ENGINEERING COLLEGE**

**DEPARTMENT OF ELECTRICAL&ELECTRONICS**

**ENGINEERING**

**(Approved by AICTE, NEW DELHI & affiliated TO JNTU, Kakinada, A.P  
CHEBROLU, GUNTUR-522212**

**2017-2021**

**CHEBROLU ENGINEERING COLLEGE**  
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**DEPARTMENT OF ELECTRICAL&ELECTRONICS ENGINEERING**

**2017-2021**



**CERTIFICATE**

This is the certify that this study on "**A FABRICATION OF SOLAR POWERED MOBILE PLOUGH WITH REMOTE**" is a record work done by **P.ROOPKIRAN , Y.SIVA KRISHNA , S.GOPI RAJU,G.VAMSI KRISHNA** in a partial fulfillment of the requirements for the award of degree of BACHELOR OF TECHNOLOGY in ELECTRICAL&ELECTRONICS ENGINEERING BY Jawaharlal Nehru Technological University ,Kakinada.

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## **Fabrication of solar powered mobile plough with remote**

### **Abstract**

The most important work in agricultural fields is soil 'tillage', and a plough is an essential tool to do this job. Tillage is the basic operation in farming and it is done to create favorable conditions for seed placement. The plough is known as Nagal or nagali in Indian languages. In most cases, several plough's attached to a Tractor to its rear side will be in use. The main drawback of this system is that this tractor requires fuel or Diesel which is costliest affair. To avoid this condition, here a machine is designed that performs as like the tractor but without fuel, solar energy is used to run the Tillage machine. Since the solar energy is free energy source, very soon tractors will be disappeared.

To prove the concept practically, prototype module will be constructed for demo purpose; in this regard the plough mechanism arranged at rear side of small 4 wheeler vehicle is designed with two or three ploughs. DC motor is used to lift and lower the plough mechanism and with the help of another two DC motors used to move the vehicle in all directions is controlled through remote. A solar panel of 12V 1amp is used to provide source to the machine and is arranged over the roof frame of vehicle. With the help of rechargeable battery, solar energy will be stored in to it and the same will be utilized when required.

The remote control unit is designed with RF modules, these devices operates at a high frequency can control the vehicle from a distance of greater than 100 feet. The remote control unit and main processing unit both are designed with 89C2051 microcontrollers and with the help of a H Bridge IC interfaced with processing unit in the receiver, motors are controlled independently.

**A project report**  
**on**  
**Solar Power Smart Home Appliances**  
*Submitted in partial fulfillment of the requirement for the award of the Degree of*  
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**In**  
**ELECTRICAL & ELECTRONICS ENGINEERING**

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**CERTIFICATE**

This is the certify that this study on " **SOLAR POWER SMARTHOME APPLIANCES** " is a record work done by **G.VENKATA BHARGAVI, K.BAJI BABU, K.BALA SIVA NAGARAJU, M.GOWRI PRIYA** in a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY** in **ELECTRICAL & ELECTRONICS ENGINEERING** BY **Jawaharlal Nehru Technological University, Kakinada.**

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**PROFESSOR**

## Abstract

These days smart homes are fetching lot of popularity because of many latest features are adopted, in this regard people are concentrating about smart home appliances and looking for them, there by this project work is selected in which three important appliances are selected and are automated.

The main aspect of the system is to utilize solar energy to run the devices automatically. First importance is given for automatic exhaust fan for the Kitchen, in this with the help of universal gas sensor, all sorts of toxic gases including smoke will be detected by which fan will be energized automatically. The second device is to control the outdoor lights automatically, in this device LDR is used for sensing the nature light by which outdoor lights will be energized automatically in the evening and they will be switched off in the morning. The last but most important device is automatic door bell, in this concept sensors arranged at the main entrance of the home, detects the person and activates the door bell automatically, this device can be used for security purpose also.

Since it is a prototype module, the solar panel & battery used here is not sufficient run the appliances continuously, to run the devices continuously higher rating panels and batteries are essential. The prototype module contains all required devices including 6W panel & 2AH battery, which makes the system as real working. The solar panel used in the project work can deliver a maximum current of 0.5amp under the bright Sun & this energy is used for charge the battery. The concept is to utilize free energy source of solar energy to drive domestic appliances by which consumption of conventional energy can be reduced considerably and lot of revenue can be saved.

**A**  
**Project report on**  
**WIRELESS ENERGY USED TO ENERGIZE TUBELIGHT**

**Submitted in partial fulfillment of the requirement for the award of the degree of**  
**BACHELOR OF TECHNOLOGY IN**

**ELECTRICAL&ELECTRONIC SENGINEERING**

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## **Abstract:**

The project work described in this project report deals with the subject of High voltage Engineering and the purpose is to study and implement the Technology of "Wireless Power Transmitters" (WPT's). In this regard to demonstrate practically, using basic "Resonant coil" theory, high voltage is generated through a specially designed air core pulsating coil and radiated electrical energy in to the air to create Electro-magnetic field. This is a type of electrical transformer used to produce high-voltage pulses from a low-voltage direct current (DC) supply. If any Tube light is brought near to this field, it will be glown automatically without wires.

The Electro Magnetic Radiation (EMR) coils used here carries high-frequency alternating current (AC), which produces High-voltage, Low current at high frequency. With the help of a 5V stable DC source, and with the help of a simple oscillator circuit designed with high frequency switching transistor drives the 2 phase primary coil by which nearly 350 to 400V AC source will be developed in the secondary coil. The idea of using two phase primary coil is to induce more pulsating current in to it by which more electrical energy will be radiated in to the air at less voltage. The energy generated by this coil is radiated in to the surrounding space up to a distance of 15 to 25 Cm's. To energize either 2' or 4' tube light, two similar coils must be used and they are supposed to be arranged at certain distance according to the length of tube light. As these coils radiate Electrical energy in to air, if any Tube light is brought near to this electric field, tube will be glown by acquiring energy present in the air. The phenomena presented here falls under the subject of transmission of electrical energy without wires. The main use of this system is to study and construct the high voltage resonant coils for educational purpose. Since the device generates high voltage, it is hazardous to demonstrate without proper care, demonstrator should follow the guidelines suggested by the experts.