FACULTY OF ENGINEERING

DEPARTMENT OF COMPUTER AND ELECTRICAL ENGINEERING

DIPLOMA OF ELECTRICAL AND ELECTRONICS ENGINEERING.

FINAL YEAR PROPOSAL REPORT.

TITLE: AUTOMATED HIGHWAY POWER GENERATION SYSTEM.

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Final year Project report submitted to the Department of computer and electrical engineering as a partial fulfillment of the requirements for the award of diploma of industrial electronics and electrical engineering.

ABSTRACT

Energy is crucial to the economic growth and social development of any country. In the present world, every country is giving important place on energy, security and sustainable development hence role of renewable energy has become more significant

There are different energy sources in Uganda and various systems have been used for providing energy for electrification, water pumping and agriculture. These include; Hydropower, engine systems (diesel and petrol), Solar power, wind mill power among others. (Okoboi & Mawejje, 2016). The high cost of installation of these systems presents challenges that can be minimized or eliminated by our system. Every day, human beings walk for at least a kilometer and the physical energy thus produced from these steps can be utilized. In this project we make use of pinion and rack mechanism to generate electricity from mechanical energy lost to the ground as people travel from place to place using means such as; bicycles, vehicles, motor-cycles, by foot and among other This project consists of two system, mechanical system for power generation and electrical system that controls the lighting process. It hence focuses on an automated footstep power generation system which will thus provide electricity for lighting during night hours, reduced power wastage, reduced electricity bills among others.

Keywords; Electric power generator, automated system, LDR sensor, footstep mechanical tool, sustainable energy.

DECLARATION

We hereby declare that all the material portrayed in this project report is original and has never been submitted in for award of any Degree, certificate, or diploma to any university or institution of higher learning to the best of my knowledge, this project proposal report is an outcome of our own efforts.

Name: NEKESA CATHERINE

Signature: …….

Name: SASIIRA PHILLIP

Signature: ……

ACKNOWLEDGEMENT

We thank the Almighty God for the gift of good health, knowledge and guidance throughout our life at school and being able to work on this design project and great thanks to my lovely parents Mr.Mangeni Batrumayo and Mrs. Dorcus Nabwire and my partners parents and sibling for the infinite love, support and encouragement that has been a lamp to this journey and strength that has helped us break this lap, May the Almighty God bless you in all your endeavors.

We further express we deepest gratitude to our supervisor Mr. BUTIME ERIC KATABARWA for technical guidance in the whole project process, all lecturers and staff at the Department of Computer and Electrical Engineering Busitema University, and other departments for their guidance and support throughout this work.

My sincere appreciation to Mr. Ali Kibirige and Mr. Ochii Joseph for providing all possible technical support in fabrication of the project till operation. May God bless you.

Great thanks to all our classmates and friends for their practical help and prayers during the work

synthesis.

APPROVAL

This is to certify that NEKESA CATHERINE and SASIIRA PHILLIP students pursuing diploma of industrial electronics and electrical engineering have been able to submit their final year proposal report. This report is a true record of the work they did under my close supervision. I hereby approve this report for submission to the head of Department of Computer and Electrical Engineering.

SUPERVISOR:

M R. BUTIME ERIC KATAMBARA.

Sig nature……

Date……/……/…….

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LIST OF ACRONYMS

LDR Liquid Crystal Display

LDR Light Dependent Resistor sensor.

AC alternating current

DC Direct current

LIST OF FIGURES.