RENEWABLE ENERGY LAMP AS AN ALTERNATIVE TO KEROSENE LAMP USED IN RURAL HOUSE HOLDS

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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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The above candidate has carried out research for the Masters thesis under my supervision.

Name of the supervisor: Prof S.R. Munasinghe

Signature of the supervisor: ……..... Date : …….....

Abstract

Keywords: Renewable energy, Sustainable development, Batteries, Electrical products, Consumer products

According to UN Foundation there were 600 million people without access to grid power in 2014. As a result quality of living is in very low level among those people. There for they can't compete with other communities to improve their social and economic level.

New renewable energy lamp was built for benefit of these under developed communities. This lamp was a miniature construction of an energy grid. This lamp can be energized with Solar, Wind or Hydro energy. This is affordable even for rural people.

The lamp has a 1W LED powered by 2-cell, 300mAh lead acid battery. Suns' energy is harvested by 5W solar panel. This lamp can light a medium size room for 4 hours. This paper was published in ieeeXplore digital library in December, 2014.

DEDICATION

To my Parents, Brother and Teachers

ACKNOWLEDGEMENTS

Lot of request were heard from all over the world regarding their energy issues. This was a humble effort to convert our traditional commodities to our modern requirements. Final outcome of the project was a replacement for traditional kerosene lamp.

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