Biomass power production

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Declaration

I proclaim that the effort enclosed in this proposal is my own, with the immunity of where unequivocally expressed something else. Furthermore this work has not been defer to additional degree or any skilled capability.

Signed: _____

Date: _____

Acknowledgments

We might likewise want to demonstrate our appreciation to the educator Waseem Iqbal for imparting their pearls of shrewdness to us throughout this examination, and we thank "unknown" commentators for their alleged experiences, albeit any mistakes are our own and ought not discolour the notorieties of these regarded people.

Dedication

This thesis is dedicated to my late father and my friends who always support me.

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Abstract

This project is based on the waste materials in Pakistan and how we convert these wastes to energy. Pakistan is now a days facing 4,554 megawatts of electricity shortfall. As we know that Pakistan is blessed with lot of resources like wheat, rice, cotton and sugar cane etc. we can use the wastes of these materials to produce electricity by fermentation method. And there is also lots of buffalos and poultry wastes, we can use these wastes and convert into electricity by gasification method. In this project we collect data of wastes materials within Lahore division. We found enough data to inject a project of biogas in feasible place in Lahore division which produce enough electricity in Lahore division to overcome electricity shortfall in division. We can also implement these plants in different areas in Pakistan especially in villages where we easily found wastes. These types of plants in Pakistan overcome the shortfall of electricity in Pakistan.

Keywords: Biomass, Electricity short fall, fermentation, gasification, Feasibility analysis, CHP

Chapter 1

Introduction

This project discuss the biomass conversion to electricity. In this project we discuss the suitable, feasible and inexpensive ways to produce electricity which overcome the shortfall of electricity in Pakistan. In this project we mainly discuss the three method to produce electricity from the biomass wastes these three methods are fermentation, gasification and pyrolysis. In fermentation process we use different type of waste mostly dungs, municipal solid waste (MSW) and poultry wastes. These wastes are abundant in Pakistan so we do fermentation of these to produce useful electricity from these wasteful materials. The facts and figures of these wastes are discuss below in the fermentation process. Pakistan is a cultivated land and we produce large level of rice wheat cotton and sugar cane. Every year produces tons of wheat, rice and sugarcane etc. we have wastes from these materials are rice husk and the wastes of sugarcane. We can produce electricity from these wastes by gasification process because its very feasible and inexpensive way to produce electricity. We collect data of Lahore division the production of wheat, sugarcane, rice and cotton are mentioned below in gasification portion.