

Renewable Energy

Project proposal on The use of Wind Turbines for electricity generation.

I. Introduction

Wind has been the world's fastest growing renewable energy source for the last several years, and this trend is expected to continue with the continual rising cost of crude oil and the falling costs of wind energy and the urgent international need to tackle CO2 emissions to prevent climate change.

There are two types of wind turbines currently in use differing in direction of the rotating shaft (axis): horizontal and vertical. The size of the turbines varies widely. Small turbines used to power a single home or business have a capacity usually less than 100 kilowatts. Some large commercial sizes can have a capacity up to 5 megawatts. Larger turbines are often grouped together into wind farms providing power to the electricity grid.

II. Aim

The aim of the project is to conduct an economic and technical study on the use of wind turbines for electricity generation in selected areas in Thailand.

III. Objectives

Feasibility study and analysis on the use of wind turbines in chosen areas

- To collect, compile and report on wind turbines previously and currently manufactured for electricity generation.
- To summarise types of wind turbines economically and efficiently viable for electricity production.
- To obtain and analyse data on wind speed, direction and availability from selected areas.
- To assess types of turbines most suitable for each area.

Viability study and analysis on the application of wind turbines for electricity generation

- To establish electricity production costs from the recommended turbines in specific areas.
- To obtain and analyse the cost of electricity for purchase from the national grid or other suppliers (if any)
- To evaluate viability of the project in designated areas.

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March 12, 2008