

**UTILIZING WIND BLOWING BETWEEN TWO TALL  
BUILDINGS AS A FREE ELECTRIC SOURCE**

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## **ABSTRACT**

This paper presents a study on the feasibility of capitalizing the wind energy produced between two tall buildings. A system is designed to “capture” the energy. Used computer fans are arranged so as to obtain maximum possible voltage output. The voltage output is fed to a dc to dc converter, which is then stored in capacitor banks. The challenges are to i) boost up small voltage produced by the fans and ii) be able to store the charges in capacitor banks for a relatively long period. All the systems design are analyzed and the results are concluded.

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# CHAPTER 1

## 1.0 INTRODUCTION

### 1.1 BACKGROUND OF STUDY

The past 100 years has shown that the fossil fuel was the only source of energy that can satisfies consumer's energy requirement. However, the diminishing of fuel reserve and the intention to secure the supply for generation world over has made certain countries use renewable energy. Between all those available renewable energies, the chosen green energy that has the potential to be developed is wind energy [1], but the disadvantage is that wind power generation is intermittent, depending on weather conditions. There are many uses of electrical energy produced by a wind turbine. Converting wind energy into electric energy enables the user to store energy in a battery, transmit it over long distances, or convert the energy into many different forms (mechanical energy, heat, etc.).

The rapid growth of wind and solar energy applications and their immense potential for future use in electric power system dictates the need to quantitatively evaluate the reliability benefits associated with unconventionally energy sources [2]. Wind is one of the most important and the most technically suitable energy source. It has a lower production cost than solar thermal electricity. It saves land since land area within a wind farm is still available for cultivation. It creates more employment, in particular for the local people, because the installation, operation and maintenance of wind