FEASIBILITY INTO THE UTILIZATION OF COMBINED HEAT AND POWER (CHP) FOR A HOSPITAL

Project Report submitted by

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CHAPTER 1
INTRODUCTION

Combined Heat and Power (CHP) generation or cogenetation as is otherwise known, is the simultaneous production of electrical and thermal energy. The technology has been applied successfully in various countries for a number of years. The fact that it provides locally electrical power at higher efficiencies than central power stations, allowing at the same time the utilization of waste neat for process and space heating, offering minimum environmental pollution made CHP an attractive solution for local power and heat generation as compared to other conventional methods.

The overall conversion efficiency of CHP Installations can be as high as 90% whereas the energy conversion efficiency of central power stations where the by-product waste is rejected to the ambient or the sea is of the order of 30% to 35%.

Cyprus, apart from solar energy which currently accounts for around 6.5% **[2.4]** of total energy has no other energy consumption resources. Energy conservation and in particular the application of enrgy technologies of high energy conversion efficiencies is of paramount importance.

However combined heat and power generation is a candidate technology which has not yet been applied in Cyprus due to:

(a) insufficient awareness of the potential of the technology
(b) lack of local expertise and
(c) unfavourable regulations of the Cyprus Electricity Authority which prohibit the private generation and export of electrical energy to the island's electricity distribution grid **[2.5]**

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