

# **DEVELOPMENT OF AN ENERGY MANAGEMENT PLAN FOR TEA FACTORIES IN SRI LANKA**

A dissertation submitted to the  
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in partial fulfillment of the requirements for the award of the degree of  
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## ABSTRACT

Tea production of Sri Lanka has high importance to the Sri Lankan economy and the world market. Tea industry requires energy in different stages of manufacturing process. Energy is the scarce resource and efficient energy management is important nationally for the industry as well as the globally from the sustainable resource management. Continuous efforts on improvement in utilization of energy is essential for the survival of an industry and introduction of energy efficiency measures would undoubtedly lead to a significant reduction in energy consumption.

The objectives of this study were to preparation of energy management plan for tea factories in Sri Lanka through identification of energy efficiency measures which were introduced to tea factories, find out the areas that require further improvements and already improved areas and to identify factors which affected to adopt energy efficiency measures for tea factories. Primary and secondary data were collected. Questionnaires, Observation were used as primary data collection methods. Existing energy efficiency measures were covered through the questionnaire and descriptive statistics, correlation analysis and chi square test for independents were used to analyze the data.

This study revealed that the elevation, type of tea produce, monthly average production and monthly average electricity units were not significantly affected to adopt energy efficiency measures. High investment, technical knowledge, energy audits, energy management policies and green leaf standard were the major factors to adopt energy efficiency measures in tea factories in Sri Lanka.

*Key Words:* Energy Audits, Energy Efficiency Measures, Energy Management, Energy Management Policies, Variable Speed Drives