

“ENERGY AUDIT: DEMAND SIDE MANAGEMENT OF AIT CAMPUS”

PROJECT REPORT

**In partial fulfillment of the requirements for the
Award of the degree of**

**BACHELOR OF ENGINEERING
In
ELECTRICAL & ELECTRONICS ENGINEERING**

Submitted by

**AMITH.C.S
(4AI06EE001)**

**GIRISH.K.V
(4AI06EE012)**

**LOKESH.T.M
(4AI06EE019)**

**SAFANA
(4AI06EE032)**

Under the guidance of

Mrs.A.M.LEELA M.E.
Prof. & HOD
Dept. Of E & E Engg.
A.I.T, Chikmagalur

Mr.K.N.THILOTHAM B.E.
Lecturer
Dept. Of E & E Engg.
A.I.T, Chikmagalur

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Adichunchanagiri Institute of Technology
(Affiliated to Visveswaraya Technological University)

CHIKMAGALUR-577102

2009-2010



ABSTRACT

Energy is the basic necessity for the development and survival of every living being. It is also the backbone of the prosperity of all nations. Among all the available forms of energy, electricity is the most flexible form needed for all types of activities. Electricity is upcoming as an unavoidable form of energy and it also cannot be replaced by any other form of energy. It has become so important so that the growth rate of a country is measured in terms of 'per capita consumption of energy'.

Energy audits don't save money and energy for companies unless the recommendations are implemented. Audit reports should be designed to encourage implementation, but often they impede it instead. This paper writing industrial energy audit reports and suggests some ways to make the reports more user-friendly. The goal in writing an audit report should not be the report itself; rather, it should be to achieve implementation of the report recommendations and thus achieve increased energy efficiency and energy cost savings for the customer.

Demand-side management (DSM) has been traditionally seen as a means of reducing peak electricity demand so that utilities can delay building further capacity. In fact, by reducing the overall load on an electricity network, DSM has various beneficial effects, including mitigating electrical system emergencies, reducing the number of blackouts and increasing system reliability. Possible benefits can also include reducing dependency on expensive imports of fuel, reducing energy prices, and reducing harmful emissions to the environment. Finally, DSM has a major role to play in deferring high investments in generation, transmission and distribution networks. Thus DSM applied to electricity systems provides significant economic, reliability and environmental benefits. When DSM is applied to the consumption of energy in general—not just electricity but fuels of all types—it can also bring significant cost benefits to energy users (and corresponding reductions in emissions). Opportunities for reducing energy demand are numerous in all sectors and many are low-cost, or

even no cost, items that most enterprises or individuals could adopt in the short term, if good energy management is practiced.

This module examines the types of DSM measures that can reduce energy demand for the end-user, that can manage and control loads from the utility side, and that can convert unsustainable energy practices into more efficient and sustainable energy use. The module includes a review of housekeeping and preventative maintenance, two of the simplest and most effective ways of reducing demand, and discusses marketing of DSM programmes. Some of the challenges that face the implementation of DSM programmes are also examined[1].