

Energy Cost Optimisation in R & D Centre using Project Management Principles



Ramkumar Marar

cmrmarar@rediffmail.com
Ph. No: 0 87923 68496

Student's Name **Ramkumar Marar** **EMM (FT-2012)**

Academic Supervisor(s) Arup Bhattacharya

Industrial Supervisor(s) Babu Ambat, Centre for Environment & Development, Thiruvananthapuram

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Abstract:

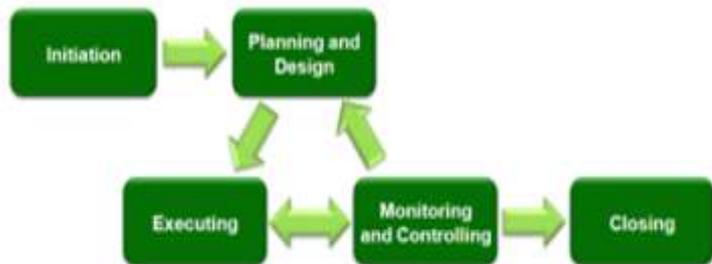
Energy is in a wide variety across the organization through the electrical processes such as lighting, cooling, heating etc. Much of that energy consumption leads into huge amount of energy wastage that results an excessive increase in energy cost. This unnecessary increase of energy cost can only be reduced by its optimization. Energy cost optimization is to systematically to systematically identifying the energy wastage areas and reduce the cost associated with electrical use. The energy cost optimization will result in optimized use of energy with reduction in energy cost and consumption. This can decrease the wastage of energy, which can be further used for other valuable purposes. Thus it is also a step the issue of preventing energy crises.

This Project was an effort to reduce the energy consumption thus reducing the cost by 10%. The main objective of the project was to identify critical areas of energy wastage in the organization by conducting an internal and external audit. After the energy audit possible energy saving measures were planned with proper cost associated with them. The financial evaluation of the suggested energy saving measures were carried out using matrices PBP, NPV, PI, ARR & IRR and optimal measure was selected. The selected measure was implemented and results after implementation were validated both manually as well as comparing with obtained electricity bill.

The result achieved after implementation carried out in the month of March was 21.6% in the month of April and 37.86% in the month of May against the target of 10%. Further to the implementation results a program was developed by the organization named 'WELL (Water & Energy, Literacy & Learning) to acquire the energy security in society.



Energy audit process



Project management process

Financial Evaluation

IRR of Project 2 > IRR of Project 1
Risk of Project 1 > Risk of Project 2
Risk of Project 1 is under control
Risk of Project 2 is out of control
NPV of Project 1 > NPV of Project 2
Payback period of Project 2 > Payback period of Project 1

Financial evaluation