

UNIT 4: ENERGY MANAGEMENT – MEANING, STEPS & OBJECTIVES

ENERGY MANAGEMENT

Meaning

Energy management is the art and science of optimum use of energy to maximise profits (minimise costs) and thereby improve the economic competitiveness. The energy should be used efficiently, economically and optimally.

Energy management can also be defined as the science involving planning, directing, controlling the supply and consumption of energy to maximise productivity and comforts and minimise the energy costs and pollution with conscious, judicious and effective use of energy.

The energy management involves strategy, policy, organisational changes, energy audit, energy conservation measures, administrative actions, training and awareness programmes, monitoring of energy conservation efforts etc.

Steps

Energy management involves the following basic steps:

1. Energy management as Policy and Commitment.
2. Selection of energy manager and defining his responsibilities;
 - i. Energy planning,
 - ii. Monitoring energy consumption,
 - iii. Planning energy conservation,
 - iv. Implementing energy conservation measures,
 - v. Achieve energy conservation objectives.
3. Formulation energy strategy and energy conservation plan.
4. Bring awareness and involvement at various levels by means of training programmes, workshops, communication, in-house journals.
5. Introduce suggestion scheme and award scheme.

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6. Appoint energy audit team/consultants.
7. Obtain report on energy conservation measures.
8. Establish practice of monitoring energy consumption and effectiveness of energy conservation measures.
9. Adopt new technology measures.
10. Adopt recycling of scrap, avoid wastage etc.
11. Carry out modifications, retrofitting or replacement of existing plant/machinery so as to save energy.

Objectives

1. Objectives of supply side:

To formulate energy strategies, plan energy supply on short term, mid-term and long term basis and to ensure adequate supply of various forms of secondary (usable) energy to various consumers in the allocated geographical zone with minimum cost and minimum environmental pollution, to regulate energy flow.

2. Objectives of End-user side:

To select optimum energy forms for consumption and to optimize energy consumption of each form of energy for reducing energy costs and for improving productivity, standard of living and environment.

In accordance with this generic objective, every end-user organisation should have an energy objective statement in written form as a management policy statement. This is an obligatory function for every organisation on supply side and demand side in individual and national interest.