



INSTITUTE OF AERONATICAL ENGINEERING (Autonomous)

Dundigal, Hyderabad - 500 043

ENERGY MANAGEMENT POLICY

Energy plays important role in the development of Nation as well Organization. Energy requirement is linked with GDP development. Out of various costs Energy cost is one of major cost. Energy intensity is Energy requirement per GDP Energy intensity of our country is 3.7 times of Japan, 1.55 times of USA. 1.47 times of Asia and 1.5 times of world average Energy intensity indicates development stage of country and Efficiency of Energy Use Our country is not Energy secure country and energy requirement is met through import of coal and petroleum product. Around 70% of countries Energy requirement is met through) Electricity generation using thermal power plants Use of fossil fuels leads to environmental pollution Energy conservation 2001 was enacted to improve Energy efficiency and reduce Energy intensity for sustainable development it is necessary to provide focus on Energy. Environment and Ecology Energy Management is Judicious and Effective use of Energy without curtailing requirement to maximise profit and minimise Environmental degradation There is substantial potential to conserve Energy by implementation of Energy Management Program in all sectors of Economy Energy conservation awareness at all level is important to engage involve all stake holders in Energy Management program Engineering colleges can play significant role in creating awareness about Energy management program among Engineering students schools and society and guide Industry in the area of Energy management Energy Audit is one of the important tool to identify Energy conservation potential Energy Audit would give positive orientation about Energy cost reduction Energy audit is translation of Energy conservation into realities taking into consideration techno commercial aspects.

Mission

- Minimise Energy consumption by use of Energy efficient Equipment's and maximum use of day light, natural ventilation and Energy substitution.
- Maximize use of renewable Energy.
- Create Awareness about Energy conservation

Objectives

1. Improvement in Energy efficiency to reduce Energy consumption and cost
2. Eliminate wastages by use of good housekeeping practices.
3. Minimize Environmental degradation

Energy Management Principles

Various Energy management principles are:

1. Procure Energy at lowest cost.
2. Use Energy at Highest possible efficiency
3. Use low investment technologies.
4. Reduce, reuse and recycle.
5. Fuel substitution
6. Use of renewable energy

Energy Management Structure

There is energy management center at Institute level headed by, Dr. P Sridhar. Each department has representatives, are the part of energy management center. The following are the representatives of energy management center.

S. No	Name of the Representative	Department
1	Dr. D Govardhan	AERO
2	Dr. M Madhu Bala	CSE
3	Dr. M Purushotham Reddy	IT
4	Dr. P Ashok Babu	ECE
5	Dr. V V S H Prasad	MECH
6	Mr. S Sri Krishnan	CIVIL

Types and Use of Energy

S. No	Type of Energy	Energy usage
1	Electrical energy	<ul style="list-style-type: none"> ➤ Indoor and outdoor illumination ➤ Air conditioning ➤ Water Pumping. ➤ Computers and peripherals ➤ Laboratory Equipment ➤ Workshop Equipment
2	Solar energy	In addition to the raw power, solar power plant of 160 kW is installed. Grid interfacing facilities are provided.
3	Biogas	Cooking in the canteen

Electrical Supply System

Electrical power to campus is through 11kV HT supply line, at institute the required voltage of 415KVA is achieved with 315kVA Step down a transformer. The 415KVA supply is distributed to various sections of the institute through underground cable. The underground network is adequately protector against local pressures, mechanical and any other damages. The solar energy (160KW) and electrical raw power are interfacing through bidirectional switch whenever raw power is not sufficient to meet the demand at the institute. The power generation from solar is uploaded to grid daily if it is excess.

Backup Power Supply

The institute is equipped with diesel generators as:

1. 180KVA
2. 125KVA
3. 125KVA
4. 62.5 KVA

In addition to the backup facilities, all the departments and laboratories, ICT facilities in class rooms, common facilities are connected to UPS system. Institute having 500 KVA installed UPS system for backup facility.

Reactive power management

The institute have the capacitive bank with the capacity of 150 KVAR

Plan of achievement

1. Manage efficiently utilisation of Energy resources by use of cleaner and more efficient technologies.
2. Train faculties, students, Industry professionals to make institute the pace setter in area of Energy conservation.
3. Promote awareness related with Energy conservation among various sections of society.

4. Enrich our experience on Energy conservation by exchange of ideas with other organizations.
5. Encourage faculty members to obtain certification as a certified Energy auditors and managers.
6. Carry out regular internal energy audit to identify energy conservation opportunities.
7. Provide expertise to industry and other organisations in the area of Energy management by offering Energy audit services.