ENERGY POLICY

OF

K K WAGH INSTITUTE OF ENGINEERING AND REASERCH

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Preamble:

Energy plays important role in the development of Nation as well organisation. 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

Objectives of Energy Management:

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

Energy Management Principles:

Various Energy management principles are:

- Procure Energy at lowest cost.
- Use Energy at Highest possible efficiency
- Use low investment technologies.
- Reduce, reuse and recycle.
- Fuel substitution
- Use of renewable Energy

Energy Management structure:

There is Energy management cell at Institute Level headed by Prof (Dr) B E Kushare. Each department representatives are part of Energy management cell for effective implementation of Energy management program at department levels.

.There are following certified Energy Auditors:

Prof (Dr) B E Kushare: Professor and Head of Electrical Engineering Department

Prof N.M Shelar: Professor Mechanical Engineering Department

Prof Barhate: Associate professor: Mechanical Engineering Department

List Of Certified Energy Manager:

Prof S SDhamal: Associate professor, Electrical Engineering Department

Types and Use of Energy

S.No.	Type of Energy	Energy Usage
1	Electrical energy	Indoor and outdoor illumination Ventilation Air conditioning. Water Pumping. Computers and peripherals Laboratory Equipment's Work shop Equipment's
2	LPG	Mess and Canteen for Food preparation
3	Solar Heat Energy	Water Heating

Electrical Supply System:

Electrical supply to campus is through 11KV HT supply from MSEDCL over head line .500KVA Packaged substation is installed to step down 11KV supply to 415 V in substation .Electrical supply is distributed to various sections of campus through under ground cable network protected adequately to avoid mechanical damage .Energy is measured by Utility at 11KV by using TOD meter .

Back up Power Supply:

Back up supply arrangement is provided to 100% campus by installation of 320KVA DG set with AMF facility.

Reactive Power management:

Reactive power management is carried out using detuned RTPFC panel at Substation Level

Energy policy of KKWIEER is as below

ENERGY POLICY

K.K.Wagh Institute of Engineering Education and Research is one of the leading Engineering Institutions offering Engineering Education at UG, PG and Ph.D. level plays important role in development of Economy by providing quality engineering professionals

Our Mission is:

- 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.

This we plan to achieve:

- Manage efficiently utilisation of Energy resources by use of cleaner and more efficient technologies.
- Train faculties, students, Industry professionals to make institute the pace setter in the area of Energy conservation.
- Promote awareness related with Energy conservation among various sections of society
- Enrich our experience on Energy conservation by exchange of ideas with other organisations
- Encourage faculty members to obtain certification as a certified Energy Auditors and Managers.
- Carry out regular internal energy audit to identify energy conservation opportunities
- Provide Expertise to industry and other organisations in the area of Energy management by offering Energy Audit Services.

Prof (Dr.) K.N Nandurkar
Principal

Energy management Action Plan:

Improvement in Energy efficiency :

- Use of star labelled Equipment's such as Refrigerator, Air conditioners.
- Replacement of Conventional T8 36/40-watt florescent lamps by T8 18W LED tube.
- Replacement of 150HPSV street light fixtures by 72 W LED street Light Fixtures.
- Use of TFT computer monitors.
- Replacement of conventional ceiling fans by BLDC ceiling Fans.

Elimination of Energy wastages:

- Maximum use of natural day light for indoor illumination.
- Use of natural ventilation,
- Use of timer switches to street light control
- Use of timer switches in class room
- Good House keeping practices.
- Fine tuning of temperature setting of Air conditioners and Water coolers

Energy Substitution:

- Use of solar water Heaters in place of Electric Geysers.
- Maximum Use of Renewable Energy : Grid interactive Solar PV systems at Roof tops

Energy Cost Optimisation:

- Maximum demand optimisation by adequate reactive power management.
- PF incentive by maintenance of Power factor above 0.995 .
- Use of detuned RTPFC to eliminate risk of resonance.
- TOD tariff benefits by operating flexible load during off Peak Period.
- Use of dual trigger RTPFC panel to optimize DG fuel consumption

Training and awareness programmes:

- Conducting awareness program for staff, students and society.
- Active involvement of UG /PG students in awareness program in schools.
- Conduct faculty development program to faculties from various Engineering colleges.
- Conduct competence enhancement program for industry professional in the area of Energy management.
- Conduct work shops on Grid interactive solar PV systems and Renewable Energy.
- Organise seminar and poster presentation in the area of renewable Energy and Environmental Protection.
- Encourage students to undertake UG projects in the area of Energy Management