About the Theme

Energy conservation is one of the important domain which needs urgent attention of engineering community to ensure the continued provision of the necessary resources for humanity. The over exploitation of non-renewable sources is a threat to the survival of mankind, as it results in major environmental impact in the form of global warming and climate changes. Hence the conservation of energy is the need of the hour, for which an interdisciplinary approach is to be followed. The sustainable energy production, the use of renewable resources, energy-eficient water purification / desalination, solar energy harvesting, sustainable construction practices etc. are some of the areas we need to focus.

The Civil Engineers and Architects can play a key role ensuring these practices by developing new materials, technology and design processes. Buildings are the principal consumers of energy in the world, accounting for an average of 40% of total energy consumption. The haphazard growth of urbanization results in a potential adverse impact on our environment. Thus reducing the environmental impacts of buildings and ensuring proper development and planning is the need of the sustainable world. Energy efficient and sustainable construction practices and planning are the solutions and it became an integrated part of modern development. The presentation on sustainable principles in the building construction and the subsequent discussions targeted in this seminar may help us in ensuring energy saving and conservation in construction projects.

According to Bureau of Energy Efficiency about 32% total energy produced in India is consumed for cooling purposes. The productions of oil and natural gas have becomes carcer and the reserves are likely to be consumed by the year 2040. The production of coal is also not so promising and its maximum will touch some where around in 2045 on a world wide basis. With the advent of energy crisis and the realization of the depleting nature of fossil fuels the search for the use of alternative energy source and energy conservation becomes an essentiality. Since we have limited quantity of non-renewable energy resources available on earth,

It is very important to preserve energy from our current supply. An alternative is to utilize renewable resources so that it is also available to our future generations and ensure the environmental protection. The Electrical Engineers can play a key role in energy conservation & management and renewable energy promotions.

Energy conversation differs from efficient energy use which refers to using less energy for a constant service. Energy supply to refrigeration and air-conditioning systems constitutes a significant role in the world. The mechanical Engineers can contribute to the field of energy conservation aspects in most significant ways. One of the important aspects is in solar cooling. This migrate energy shortage and environmental pollution. The direct solar energy option scan be used to drive VCR systems and power generation units. The indirect solar energy sources like Wind, Ocean energy, Geothermal energy etc. can be utilized and this enormous amount of energy can be converted in to mechanical and electrical energy by means of thermal power plant cycles. The other applications are based on photo-chemical conversion and photo-biological processes i.e. Bio-mass conversion. The bio-mass and bio-substances can be effectively utilized in thermal converters to produce electricity. Mechanical engineers can play a vital role in the development of new composite materials for solar energy collectors and bio-PCM materials etc.

Vision of the Programme

The main vision of this programme is to create awareness on energy conservation among the engineering community and framing the way forward for conservation and efficient use of energy. The presentations and discussions planned in this seminar may eventually help us in developing the plan of action to wards this goal.

National Seminar
On

Energy Conservation: Today's Challenges

18th January 2020

Organized by

The Institution of Engineers (India)

In Association with

TKM Institute of Technology

Venue
TKM Institute of Technology
Karuvelil, Kollam.

About The Institution of Engineers (India)

The Institution of Engineers (India) [IEI] is a statutory body to promote and advance the engineering and technology, established in 1920 and incorporated by Royal Charter in 1935. It is the largest multi-disciplinary professional body of engineers encompassing 15 (fifteen) engineering disciplines with a membership of more than 820 thousand, and serving the nation for more than 9 decades. The IEI has its headquarters located in Kolkata with national presence through more than hundred Centres and several Overseas Chapters, Foras and Organ.

About The Institution of Engineers (India), Kollam local centre

The Kollam Local Centre was established in 2010, housed in the campus of TKM College of Engineering, Kollam. At present, there are 1352 members attached to this centre and it covers the districts of Kollam, Pathanamthitta and Alappuzha.

About TKM Institute of Technology (TKMIT)

T.K.M. Institute of Technology was established by the T.K.M. Trust and is located on a verdant 25-acre campus known asMusaliar Hills at Karuvelil, Kollam. The campus is about 23 kmfrom Kollam City and about 3 km from Cheerankavu junction onNH 208, the Kollam – Madurai National Highway. The T.K.M. Institute of Technology started functioning in the year 2002.The institute is approved by AICTE and is affiliated toAPJ Abdul Kalam Technological University.At TKMIT the whole process of learning is viewed in its holistic form, directed to empowering each individual to become a responsible citizen in keeping with its Founder's foresight-to mould today's youth into tomorrow's future..

Programme Schedule

Inauguration : 09.30 AM
Sri. Kodikunnil Suresh, MP

Key note : **Sri. K. G. Chandrasekharan**
Former Member, KSEB

Tea Break

Session 1 : **Sri. Dinesh Kumar A . N.**
Energy Management Centre,
Thiruvananthapuram

Session 2 : **Sri. John Daniel**
Energy Management Centre,
Thiruvananthapuram

Lunch Break

Session 3 : **Dr. M. Jayaraju**
Principal
College of Engineering
Munnar

Session 4 : **Dr. R. Sheeba**
Department of Electrical and Electronics Engineering
TKM College of Engineering

Tea Break

Concluding Session : **Er. Rajan K.**
Honorary Secretary
IEI Kollam Local Centre

Organising Committee

Er. K. Sivadasan, FIE
Chairman
IEI Kollam Local Centre

Organising Secretary

Er. Rajan K., MIE
IEI Kollam Local Centre

Members

Dr. M. Jose Prakash, FIE
Dr. Sudhi Mary Kurian, MIE
Er. Binu John, MIE
Er. K. Narayana Kurup, MIE
Er. Vyshak R.S, AMIE

Contact

Prof. Vyshak R. S.
Department of Civil Engineering
TKM Institute of Technology
Mobile: 9446 251 929

Er. Rajan K., MIE
Honorary Secretary, IEI Kollam local centre
TKM College of Engineering
Kollam – 691005
Office: 0474-2716699
Mobile: 9447 980 527

Registration

Registration can be done institute wise in google forms in consultation with the faculty advisor.
Fee: Rs. 100 for IEI Members and Rs.200 for non members.

Account Details : Federal Bank, Kundara

Account Name : The institution of engineers india CV students chapter
Account No. : 12430200007776
IFSC Code : FDRL0001243

Transport Facilities will be arranged between Cheerankavu and the Institute in the morning (8.45 am) and evening.