

Sarvajani Education Society

Sarvajani College of Engineering & Technology

SUTEX - Faculty of Electrical Engineering

### Report on one day workshop on Energy Conservation Awareness

*One day workshop on Energy Conservation Awareness was arranged by Electrical Engineering Department (EED) on 30<sup>th</sup> September 2015 with a view to spread energy conservation spirit and to meet the PEO of the Department which states to inculcate the ethical and social responsibilities besides the technical and professional attitude in the students. The program was sponsored by Gujarat Energy Development Agency (GEDA) – A Government of Gujarat Organization. The program was conducted by M/s. Global Energy Consultancy Agency, Vadodara. More than 90 students registered for the workshop. In the inaugural function, Prof. Himashu Padhya, Vice-Principal, delivered welcome speech which was followed by a key-note address by Dr. B.G. Desai, a pioneer for Energy Conservation Activities in Gujarat and a founder member of Devki Energy Consultancy Pvt. Ltd., Vadodara. Dr. B G Desai, in his keynote address focused on activities and initiatives taken for energy conservation and awareness by GEDA. Dr. Vaishali Mungurwadi – Principal, faculty of engineering, SCET presided the function and encouraged the participants for energy conservation through her motivational presidential address. Prof. Nilesh Shah - Head, EED concluded the inaugural function by presenting the vote of thanks. Ms. Niki Patel, Master of Ceremony, beautifully and successfully anchored the program.*



## ENERGY CONSERVATION AWARENESS WORKSHOP



*The technical session started with the overview of the energy sector and Energy scenario in India, where Dr. B G Desai pointed out that - India has less than 1% of world oil & gas reserves and 17% of world population. He remarked that heavy dependence on imported energy (80% of oil, 15 to 20% of coal and Gas ), poses serious questions about energy security and balance of payment. To meet challenges of climate change and environmental pollution, improving energy efficiency is a cost effective solution.*

*He also discussed about why energy should be saved. This was explained with several examples. He explained how the investment can be reduced using energy efficient tube lights, fan etc.*

*Mr. Niraj Panchal, Junior Engineer, Global Energy Consultancy Services, discussed Residential , Commercial, and LT Industries Tariff. Case study for bill analysis of engineering industry was also discussed. He has talked about the getting rebate by industry by improving power factor and by shifting load to night from peak period.*



*Mr. R M Panchal, Proprietor, Global Energy Consultancy Services, explained the process of Energy Audit. Energy audit is aimed to improve energy productivity i.e. To reduce*



## **ENERGY CONSERVATION AWARENESS WORKSHOP**

*energy consumption per unit product. Different steps for energy audit like monitoring and control, reduction of losses, maintenance, more efficient equipments, more efficient processes etc. were highlighted. Mr. R M Panchal also gave information regarding different renewable sources and use of renewable sources.*



*In the technical session II, conducted by Dr. B G Desai measures of saving electricity in motors & pumps were highlighted. Different standards like IS 7538-1996 (agriculture motors), 12615-2004 Energy efficient motors, American standard - Nema-mg-1-2003 Premium efficiency, IS 12615-2011, ISO 50001 etc. were covered.*

## **ENERGY CONSERVATION AWARENESS WORKSHOP**

*To make the sessions interesting, various case studies were included to highlight the energy conservation practices employed by various industries towards energy conservation, cost reduction and sustainable development. Some of the case studies are reported here. Hindustan Unilever saved Rs. 139.6 lakh by using IE3 motors, LED bulb, efficient pump, VFD for air compressor etc. Public/government organization can also identify energy conservation opportunities (ECO) and can contribute towards sustainable development. In this context, it was presented that Vadodara Municipal Corporation achieved the annual saving of Rs. 294 lakh by replacement of 45000 36W tube lights (45W consumption) with 15W LED. Case studies of other organization included energy conservation by Arvind Ltd (a textile unit, gandhinagar, gujarat), INFOSYS Ltd, Asian Paints, Maharashtra State Electricity etc. Information on Energy Conservation Act was also disseminated and the importance of BEE star rating and the energy consumption and the method of calculating energy for these different starred equipments was also discussed. The significance of BEE star rating while purchasing the TV (LCD, plasma), room air conditioner, heater, refrigerator, washing machine etc. was communicated to the participants.*

*All the sessions were highly interactive and participants actively interacted with the experts. The workshop was very interesting and successful and met the objective for which it was planned and organized. At the end co-ordinators Dr. Hardik Desai and Dr. Hiren Patel extended thanks to all the experts, Global Energy Consultancy Services, GEDA and all the participants for making the workshop a success.*

**Dr. Hiren H. Patel, Dr. Hardik P. Desai**

**Workshop Coordinators**