

KARNATAKA STATE CENTRE

Vision 2010 - International Conference & Exhibition on Lighting

November 21-23, 2008

Vision 2010 was organised by ISLE KSC around the theme of better Lighting with less energy and least impact on environment and emerging opportunities for lighting applications from new developments, Carbon Trading and Clean Development Technologies.

Light, Energy and Environment are the buzz words regulating most of the decisions today. Light, which is basic to all activities is closely related to Energy and Environment. Today, with the growing awareness of the impact of indiscriminate use of energy on the environment, new issues of caring for the environment and conservation of energy have emerged. Many of these issues and in particular the opportunities and impact of Carbon Trading and Clean Development are the topics of the day. However, the details

are not clear and often vague. This program was aimed at removing the grey areas and bringing clarity.



Mr. Sanjay Jadhav, Chairman ISLE, KSC Greater importance for lighting from the aspects of energy and environment arises in India, as a consequence of the acute shortage of power and in particular the inability of our power systems to meet the peak demand - and the one element of peak demand which can be controlled very easily and effectively comes from lighting.

The two day conference discussed at length the issues in this framework. This program had fifteen domain experts from various related fields to give information and discuss the available opportunities.

Developments in Lighting are taking place at a very fast pace today. While there are problems due to acute shortage of energy, there are solutions to provide even better lighting conditions with less energy. Even though Lighting energy consumption, is of the order of 17% to 23% of the total energy consumption, energy consumed for lighting attracts attention as this demand comes during the peak load.

An Integrated approach for problem solution is another area of interest. Lighting companies or lighting designers cannot work in isolation in their own compartment today. An Integrated team approach covering architecture, HVAC, non-conventional or renewable energy, efficient controls and remote control are also areas of interest. Integrated approach is leading to the concept of Green Buildings, which is finding a growing interest.



Dr. Ajay Mathur, Director General BEE inaugurating the Exhibition.

Lighting users and the Lighting Industry are both interested in knowing more about these issues. While the buzz word today has become GREEN, the Green Building guidelines and LEED do not give a proper weightage or importance to lighting, as they are oriented towards the American conditions. The weightage given in LEED or IGBC rating system is a meagre 3 points for residential buildings and 7 points for a new commercial buildings.



Mr. K.K. Rohatgi being felicitated



Mr. Swamy demonstrating LED lighting with cowdung



Mr. Krishnesh Mehta

Developments in Light Emitting Diodes (LEDs) is taking place in different directions at different places and consolidation as well as building synergy in the R&D effort is very necessary. LEDs appear to be the most promising energy and environment saver in the next decade.

On the application side, India has been on the path of the highest ever rate of development of infrastructure and Lighting is an essential element in all these activities. Street Lighting, City Beautification, Tourism development on the one side, and Retail Lighting and Medical applications on the other attracted the attention of the participants. Sports Lighting, Lighting in airports, sea ports and other transportation terminals are all of importance from the aspect of giving the best and most comfortable visual impact to the consumer with the least impact on the energy front.

Apart from the focus on urban areas, the importance of lighting in rural areas (which do not have grid power or are subject to severe cuts) was also highlighted in the demonstration project by Mr. M.S.N. Swamy, who demonstrated a LED lighting system that is based on Cow Dung as the source fuel. The system could bring relief to a large number of rural households and spare them the ills associated with kerosene lamps and also help in reduction of the CO₂ production.

Dr. Ajay Mathur, Director General BEE brought out the economics of the CO₂ and CDM schemes and explained the objectives of using the carbon trading route to subsidise the CFL lamps and LED lamps so that the common man can switch over to these with a low additional investment. Schemes are being worked out with ESCOMs and KREDEL.



Mr. Bhavin Soonderji

Developments in electronics and computing have made available tremendous power at low cost, enabling us to provide sophisticated monitoring and controls even in small and medium installations, which were till recently were affordable only by large chemical industries or power plants etc. Building Automation, automatic and programmed lighting controls, remote central monitoring of external lighting are areas witnessing rapid development. But the developments are in isolated pockets. Vision 2010 aimed at building a platform for exchange of information and knowledge in all these fields.

ISLE-KSC had organized a series of the training programs on Street Lighting and Outdoor Lighting, with assistance from the European Commission. This conference was conceived as an extension of that training program on the initiative of the then Chief Secretary, Shri Mahishi and the DG, BEE, Dr. Ajay Mathur. The theme of the program is convergent with the objective of the BEE.



Mr. Richard Taylor

The program was attended by 434 delegates, consisting of not only engineers and architects, but also banking and financial institutions. Today the need is conservation of energy and as far as lighting is considered, the technological and manufacturing developments put us in a position to have the optimum or good lighting without increasing our energy consumption. This aspect was highlighted by Mr. Bhavani Prasad and Dr. Ajay Mathur. Dr. Ajay Mathur elaborated the success achieved so far by the BEE in association with CPWD, starting from the Rashtrapati Bhavan and requested adoption of the ECBC by all, even though the ECBC is at present voluntary.

While the lighting industry had a phenomenal growth dependent on the high investments in infrastructure and the real estate boom over the last five years, the lighting industry is now required to change gears to cater to the requirements of the tremendous potential in the replacement and renovation aspects in existing installations. It is anticipated that the lighting industry can continue with its high growth rate in spite of the possible reduction in the real estate area.



Mr. Saumen Bhaumik

Dr. Mathur explained the new methods of renovation through the ESCO (Energy Service Companies) scheme which will analyse the existing installations and take up renovation with energy efficiency. The ESCOs will be paid out of the reduction in energy consumption. The principles required for such operations like measurement, verification and contract modalities are finalized by BEE. The Banks and financial institutions have a leading role to play in this type of operations as they would finance the initial investment component for the installation of the new energy efficient lights.

The conference had brought in selected experts from Japan, Italy, Germany, Malaysia, Hongkong, China, and Indian experts from NID Ahmedabad, BIAL, Major Lighting Companies Like Philips, Crompton Greaves, GE, Bajaj, Venture, etc., for the two day deliberations. The sessions covered LED lights and Source Management, City Beautification, Retail Lighting, Airport Lighting, Controls & Automation and Sports Lighting.



Mr. Chin Le Yan

Another area that got highlighted during the deliberations was the absence and/or inadequacy of the specifications for a number of new products which are available. The development of standards and codes by the Bureau of Indian Standards is a process which inherently requires time and also consensus. ISLE as a professional body without any sectorial bias may well fill the need by developing the specifications for the new devices.

Dr. Mathur also brought out the need for a third party assurance for the efficient products, which may be more expensive. While the Star rating being given by BEE is a step in this direction, there is need for information dissemination and education or updating the knowledge of even professionals of different disciplines such as engineers, architects, interior designers and it was considered necessary that ISLE should take up the cause.

The exhibition was a showcase of what the scenario will be in the next couple of years in street lighting, home lighting, and affordable automation at home and in offices. Many forward looking lighting companies have brought their products to the exhibition which was open for three days including the Sunday November 23, which brought in a large number of visitors. Even though the entire event was focused at professionals from manufacturing, application developers, users, designers, associated traders, dealers, distributors, the exhibition attracted a number of general users as well. The most common enquiry was about the time frame when the exhibited energy conservation lighting products would be available at competitive prices in the market.

The whole event was Sponsored by GE, Crompton, Anchor, Philips, Bajaj, Nichia, Venture, K'Lite, Light Form Marketing, BESCOM and KPTCL. The Event was supported by Government of Karnataka, Ministry of Energy, International Council of Consultants, Consultancy Development Centre, BEE, ELCOMA, CPWD and BBMP.

The event was inaugurated by Mr. K. Jairaj, Principal Secretary Energy, Government of Karnataka and Presided over by Dr. Avinash Kulkarni, President ISLE. The Keynote Address was delivered by Dr. Ajay Mathur, Director General BEE. The Master of Ceremonies for the technical programme were Mr. Bhavani Prasad and Mr. Riaz Kagalwala of Karnataka KSC.

M.S.N.Swamy

Hon. Secretary ISLE-KSC

The conference programme is given below.

Light Source Management

LED Lighting by Hiroki Oguro, Nichia Corporation, Japan

LED Lighting developments in India by K.K. Rohtagi, Binay Optoelectronics

Metal Halide Lamps by Venkateshwaran Venture Lighting

Lighting for Retail Stores

Lighting to persuade the customer, without the penalty of expensive installations or huge energy bills- by Krishnesh Mehta, National Institute of Design

Challenges in Retail Store Lighting Design for balancing Energy Economy & Performance by innovative application of Solid State Lighting with new fittings- by Sameer Dass, Philips Electronics

City Beautification

Street Lighting - case studies and analysis by K.Naveen, Bajaj Electricals

Street lighting and beautification lighting, energy management by design and operating procedures by Nilesh Naik, Philips Electronics

Lighting Controls

Innovative office lighting and Intelligent lighting controls by Praveen Thampi Ministry of Light, Hongkong

Developments and applications in ballasts and control gear for bringing in energy efficiency in lighting installations by Bhavin Soonderji, ATCO Controls

Airport Lighting

Recent Developments worldwide in Airport Lighting from aspects of energy management by Richard Taylor, Trilux Lighting, Germany

Lighting India's latest Airport - Bangalore International Airport by Hari Kumar, BIAL, Bangalore

Techniques and technology for making lighting system cost effective: Case Study comparison by Saumen Bhaumik, Philips Electronics

Sports Lighting

Sports Lighting design Analysis of the new developments in sources and fittings by Massimo Ferrari, Fael Luce, Italy.

Challenging lighting projects for sports; Case studies for renewal of installations for better performance & improving energy efficiency, by Raja Mukherjee, GE

Case Study

Chin Le Yan, Lumileds, Malaysia

Concluding Session