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ELECTRONICS e-NEWSLETTER

.... For Electronics System Design & Manufacturing (ESDM) Sector

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From Chief Editor's Desk

Dear Readers,

Human resource is India's strength in its march to becoming a leader in knowledge society. The development of ESDM is also intricately linked to leveraging this asset. India is increasingly becoming the hub for R&D and innovation. Most major companies have set up their development centres in India. It is anecdotally believed that the cost of development of a new technology or a product in India is a fraction of that in a developed country.

The draft National Policy on Electronics recognizes the importance of developing human resource (HR) in this sector of growing importance. It is not confined to conventionally recognized electronics sectors. New and emerging sectors like photovoltaic, LED, automotive electronics, avionics etc., are going to make huge HR requirements. The Jawaharlal Nehru National Solar Mission with target of 20 GW by 2020 requires manpower to manufacture the photovoltaic cells and also in its maintenance. India has undertaken a commitment to reduce its carbon intensity by 25% by 2020. This would need a huge thrust on energy saving devices like the LED. As India aims to manufacture 6 million cars annually, nearly double of current capacities, there is need for greater expertise in automotive electronics. Electronics share in car's value is constantly on the increase, presently estimated to be around 40%. Electric cars will further increase the role of electronics in cars. Are we training enough manpower to cater to these growing needs?

An important lesson in this regard can be taken from the IT sector where the scaling up was possible due to large number of training institutions which provided trained HR. While the requirements of the ESDM sector may be quite different, yet we need to have a system which has the flexibility and dynamism to scale up and change, based on the needs of the industry. At DeitY, several small steps have been taken to prepare the ecosystem for developing human resource in the ESDM sector. These were baby steps and much more needs to be done. Nevertheless, the beginning has been made.

Dr. Ajay Kumar

Project for 'Capacity building in Electronic Product Design and Production Technology'

A project on 'Capacity building in the areas of Electronic Product Design and Production Technology' has been sanctioned by Department of Electronics and Information Technology (DeitY), Government of India, at a total estimated cost of Rs. 49.69 Crore. The project is part of the Department's initiative to develop human resource in the ESDM sector.

Even though it is a pilot project, the project has lofty objectives of upgrading the competence in Electronic Design and Production Technologies. The project aims to:

- Develop Human Resource at various levels including Certificate, Diploma, Post Graduate, and Research Professionals with adequate competence levels.
- Launch short /long term modular non formal courses in selected areas of specialization.
- Upgrade the competence of working professionals.
- Upgrade the knowledge and skills of faculty of technical institutions.
- Design and conduct employment and self – employment linked quality and cost effective education / training – entrepreneurial development programmes.
- Promote affordable Electronic Design & Technology training programmes targeted towards rural/ underdeveloped segment of our population.
- Make available Design Consultancy, Product Development & Technical support services of international standards to the Indian industry.

The implementing agencies of the project are NIELIT, Aurangabad, C – DAC, Hyderabad and NIELIT, Chennai. The project which is expected to commence from May 2012 has a duration of 5 years.

For more details, please contact Dr. B. K. Murthy, Senior Director, DeitY (Email: bkm@mit.gov.in).

- NIELIT (DOEACC) Certification in ESDM Sector
- Workshop for Setting up of Sector Skill Council

A plaque with new name unveiled at the Renaming Ceremony on 19.04.2012

Shri Kapil Sibal, Hon'ble MCIT speaking at the Renaming Ceremony

Shri J. Satyanarayana, Secretary, DeitY with Hon'ble MCIT at the Renaming Ceremony

NIELIT (DOEACC) Certification in ESDM Sector

National Institute of Electronics and Information Technology (NIELIT), (formerly DOEACC) is a known standard for human resources in the area of IT and ITES. Its certificates, namely O, A, B and C as well as CCC, BCC, etc., have tremendous brand value. Several State Governments and Government organizations have prescribed certificates as necessary eligible criteria for recruitment purposes. Ministry of HRD recognizes A, B and C level courses of NIELIT as equivalent to Diploma, Degree and Post graduate degrees respectively.

Recognizing the growing demand for skilled human resource in the ESDM arena, NIELIT has decided to develop equivalent certifications in this area as well. Drawing members from academia and industry, a committee has been formed at NIELIT under the Chairmanship of Prof. N. J. Rao of Indian Institute of Information Technology (IIITB), Bangalore to formulate a National Level Scheme to provide non-formal training in ESDM verticals like, Electronics Manufacturing Services, Solar Photovoltaic & Smart Grid and Embedded Design.

A provision will be made to provide O, A, B, C level certifications, on similar lines as are offered in case of IT training by NIELIT. The committee is likely to come out with the Scheme and a Standard Operating Procedure within six months time.

Brainstorming Workshop for Setting up of Sector Skill Council in ESDM

A brain storming workshop on setting up of Sector Skill Council/s in Electronics System Design and Manufacturing (ESDM) was held in DeitY on 26.04.2012 under Chairmanship of Dr. Ajay Kumar, Joint Secretary, DeitY. National Skill Development Council (NSDC) in its meeting held on March 29, 2012 had approved the proposal to setup an Electronics Sector Skills Council (ESSC) for the sector. Delegates from NSDC, Industry Associations/ Apex Chambers, NIELIT, NKN, NMCC, DGE&T, Training Institutions and Industry also participated at the Workshop.

Smt. Ranjani Vaidyanathan of NSDC made a presentation on NSDC and on role of Sector Skill Councils. She also appraise the status of the Electronics Sector Skills Council (ESSC) proposed jointly by India Semiconductor Association (ISA), Electronic Industries Association of India (ELCINA), Manufacturers' Association for Information Technology (MAIT), Consumer Electronics and Appliances Manufacturers Association (CEAMA) and Indian Printed Circuit Association (IPCA).

Shri Rajiv Jain of ISA mentioned that under the pilot period of one year around 5000 work force would be imparted skills and certificates in the area of production, service support and Design and R&D. Under long term plan around 6.5 lakh persons will be trained yearly by the year 2020. On a cumulative base 2 million workforce is proposed to be trained and certified by 2020. A total 28 trades are proposed to be covered in the skill development plan.

Dr. Ajay Kumar, emphasized the need to operationalize the ESSC at the earliest so that the human resource needs of the sector could be met. Based on detailed discussions, the following main decisions were taken:

(i) Electronic Sector Skill Council should be operationalized at the earliest. The term sheet signing and formation of SPV for ESSC is proposed to be completed by June 30, 2012.
(ii) NSDC may keep DeitY informed regarding the progress of operationalisation of ESSC and other SSCs including that related to IT/ITES and Telecom. If required, a representative of DeitY could be associated with the process, with the objective of facilitating the process of setting up of SSCs on the sector and getting them started.
(iii) DeitY is in process of carrying out a study regarding competency standards for identified job roles in electronics sector. A discussion may be held with NSDCs and ESSC so that the effort of the study could be suitably aligned with the operationalisation of ESSC.
(iv) NIELIT would develop its O/A/B/C certification courses for ESDM sector.
(v) A follow up workshop would be held in July 2012.

Centres of Excellence at NIT-Tiruchi

The National Institute of Technology, Tiruchi (NIT, Tiruchi) has embarked on creation of new Center of Excellence (CoE) in order to carry out industry oriented research in the area of Electronics System Design and Manufacturing (ESDM). The same was recently inaugurated by Shri T. Ramasami, Secretary, Department of Science and Technology, Government of India.

The inter-departmental research at the CoE will focus on executing high-value sponsored projects, and offer M. Tech programs. A Research and Consultancy Council formed with members drawn from different departments will recommend on proactive policy and other changes for improving project implementation.

According to B. Venkataramani, Professor, Department of ECE, the CoE in ESDM will have infrastructure, equipments and CAD tools worth Rs 8.41 crore and will function with the following objectives:

1. To collaborate with defence laboratories and foreign universities such as SUNY and Georgia tech and develop the expertise on electronic packaging
2. To create the infrastructure for carrying out education, training and research on electronic packaging
3. To take up consultancy projects on the development and deployment of high end embedded systems
4. To develop expert systems for modeling and simulation
5. To organize short term courses, national and international conferences for effective knowledge dissemination in the lines of the theme of the center.
6. To train and provide necessary manpower, both scientific and technical for the industries.

The CoE is expected to bridge the need for post graduate trained manpower in the area of electronics chip and system design.

CeBIT, Australia: Indian ESDM Opportunities highlighted

A team of officials and industry representatives led by Shri Sachin Pilot, Hon'ble Minister of State for Communications and Information Technology participated at CeBIT, Australia held in Sydney on May 21-24, 2012. The delegation was guided by Shri J. Satyanarayana, Secretary, DeitY. During the event, he led the discussions at the India Seminar organized at CeBIT. The India seminar highlighted the opportunities in the ESDM sector in the country. Dr. Ajay Kumar, Joint Secretary, DeitY, Shri B.V. Naidu, representing India Semiconductor Association, Shri Rajiv Mahajan, representing Tejas Networks, Shri Som Mittal, President, NASSCOM also spoke at the seminar. The India participation included exhibition by more than 40 companies from India in software and hardware area. The participation of these companies was organized under the banner of Electronics and Computer Software Export Promotion Council (ESC). Shri Radhakrishnan, Managing Director, ESC also attended the CeBIT. STPI, led by its Director General, Dr. Onkar Rai, also participated in the CeBIT and in the deliberations.

ESDM Workshop held at Hyderabad

A State level ESDM Workshop entitled, "New Policy Initiatives and Opportunities for Investment in ESDM" was organized by Confederation on Indian Industries (CII) at Hyderabad, on April 25, 2012. This is part of the initiative taken by the Department of Electronics and Information Technology, Government of India to create awareness about opportunities in the ESDM sector and participation by the State level stakeholders, including Government officials, industry and academia.

Dr. Ajay Kumar in his keynote address at the workshop gave an account of India's Goals for the ESDM sector by the year 2020 and the context of new policy initiatives being taken by DeitY to make the Electronics manufacturing sector in India, competitive. He said that, "Andhra Pradesh is flag bearer for growth of the IT Sector and has seeds for the growth of the Electronics hardware industry. The State has requisite infrastructure and has also come out with a draft supportive policy. The Department of Electronics & Information Technology would be happy to support the State Government efforts in setting up Electronics Manufacturing Clusters."

Shri Sanjay Jaju, Secretary, Information Technology & Communications Department, Government of Andhra Pradesh informed that Andhra Pradesh Government is committed to the development of ESDM sector and will act as a catalyst in terms of providing a favorable business ecosystem which will harness technology for creation of employment and make it as an ideal investment destination for Electronic Hardware Industry. The draft Andhra Pradesh Electronics Hardware Policy 2012-17 was circulated amongst the delegates to seek comments on it in order to make it more user friendly. The draft policy interalia includes simplification of procedures, exemption from statutory power cuts, Electronic Hardware Industry being declared as essential service under AP Essential Services Maintenance Act, power subsidy, investment subsidy, interest rebates and 100% Tax reimbursement of VAT / CST or SGST for the new units started after the date of issue of the policy, for a period of 5 years from the date of commencement of production for products made in AP and sold in AP. Incentives for investment in Tier-II locations and creation of a Nodal agency are also there.

Shri Shiva Prasad, President, Electronics Industry Association of Andhra Pradesh, Ms. Suchitra Ella, Chairperson, CII-AP State Council and Shri B Ashok Reddy, Vice Chairman, CII-AP State Council, Shri G V Raghunathan, Advisor, CDAC-Hyderabad, DeitY, Shri Gopi Kumar Bulusu, CEO, Sankhya Technologies Pvt. Ltd., Prof. U B Desai, Director, IIT, Hyderabad, Shri S.K. Marwaha, Additional Director, DeitY, Dr. M V Ramana Rao, President LEDMA and MD MIC Electronics Ltd, Shri A Gururaj, MD, Vittal Innovation City, Shri Pankaj Mohindroo, National President, Indian Cellular Association (ICA) also spoke at the Workshop.

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Solar Mission Completes 89% of Capacity Goal

The National Solar Mission, which aims to install 20,000 MW capacity of solar energy by 2020, has commissioned 89% of its allotted capacity in its first stage. The government had signed power purchase agreements (PPA) with 28 companies, for 140-MW solar photo voltaic (PV) projects in January 2011, out of which 125-MW of capacity stands commissioned currently.

For solar thermal sector, power purchase agreements were signed for 27 projects for a capacity of 470 MW in batch 1 to be commissioned by May 2013. The solar PV projects under batch 2 of phase 1, with the selected capacity of 340 MW, signed the PPA in January this year and will be commissioned by February 2013. These projects are highly awaited as this round of bidding saw some big names in the solar energy market quoting low tariffs. The total installed capacity of solar generated power in the country stands at 503.9 MW so far. The total investment, as estimated by the ministry is about Rs. 6,000 crore.

One of the important objectives of the National Solar Mission is to promote domestic manufacturing and developers are expected to procure their project components from domestic manufacturers, as far as possible. In the case of Solar PV Projects selected in first batch during FY 2010-11, it was mandatory for Projects based on crystalline silicon technology to use the modules manufactured in India. For Solar PV Projects selected in the second batch during FY 2011-12, it will be mandatory for all the Projects to use crystalline cells and modules manufactured in India. For grid connected solar thermal power projects, 30% of the total project cost need to be indigenous. In Off Grid projects, use of imported complete system is not allowed, while imported components are allowed. These local content provisions would give a huge impetus to the ESDM industry in India. More details are available at www.mnre.gov.in.

NMCC energizes LED manufacturing

A meeting was held in National Manufacturing Competitiveness Council (NMCC) under the chairmanship of Member Secretary, Shri Ajay Shanker on May 3, 2012 to review manufacturing in the LED in the country. The meeting included representatives of all concerned Ministries and Departments and the Industry. Shri P. Umashanker, Secretary, Power and Dr. Ajay Mathur, DG, Bureau of Energy Efficiency also participated in the meeting.

LED lighting assumes great importance in view of the mission of Ministry of Power to provide "Power for All by 2012" as envisioned at the inception of the XI Plan and India's commitment to reduce carbon emissions by 25% by 2020. National Mission for Enhanced Energy Efficiency is expected to further drive demand of LEDs in the country. Ministry of Power has been instrumental in driving the demand for LED luminaries as well as formulating standards for LEDs to be used through Bureau of Energy Efficiency (BEE) and Bureau of Indian Standards (BIS). 12 standards for LEDs have been taken out so far. It is indeed wonderful that India is the first country which has standards for LEDs developed. Two labs are available in India which can test both safety and performance of LEDs. Two other labs can test the lumens performance. Moreover, BEE has also brought out the Energy Conservation Building Code (ECBC) to bringing down the energy consumption of buildings.

The 12 standards that have been published for LEDs thus far are as follows:

1. 16101 : 2012	General Lighting –LEDs and LED modules-Terms and Definitions
2. 16102(Part 1): 2012	Self-Ballasted LED Lamps for General Lighting Services: Part 1 Safety Requirements
3. 16102(Part 2): 2012	Self Ballasted Lamps for General Lighting Services: Part 2 Performance Requirements
4. 16103(Part 1): 2012	LED Modules for General Lighting- Safety Requirements
5. 15885(Part 2/Sec 13):2012	Lamp Control Gear Part 2 Particular Requirements Section 13 D.C. or a.c.: Supplied Electronic Control gear for LED Modules
6. 16104 : 2012	d.c. or a.c. Supplied Electronic Control Gear for LED Modules-Performance Requirements
7. 16105 : 2012	Method of Measurement of Lumen maintenance of Solid-State Light (LED) Sources
8 16106 : 2012	Method of Electrical and Photometric Measurements of Solid-State Lighting (LED Products)
9. 16108 : 2012	Photobiological Safety of Lamps and Lamp Systems
10. IS 16103: Part 2	LED modules for general lighting Part 2 Performance requirements
11. IS 16107: Part 1	Luminaries Performance Part 1 General Requirements
12. IS 16107: Part 2 Sec 1	Luminaires performance Part 2 Particular requirements Section 1 LED Luminaire

More information is available at the website, http//www.standardsbis.in. A few more standards on LED Modules (IS 16103-2) and Luminaries (IS 16107) are going to be published soon.

For more details regarding the standards please contact Dr. Ashok Kumar, Energy Economist, BEE (email: kumara@beenet.in).

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