

## **'Promotion of Electronics/IT Hardware Manufacturing**

### **Background**

The Information, Communication Technology and Electronics (ICTE) is the world's largest and fastest growing industry and it is finding applications in all sectors of the economy and thus is accepted as a key enabler in development. The electronics hardware production increased from Rs. 56,600 Crore in 2005-06 to Rs.1,21,760 Crore in 2010-11, registering a CAGR of 16.5% and Electronics Hardware exports is estimated to be Rs. 25,900 crore in 2010-11. This sector contributes total employment of around 4.4 Million. To stimulate growth of the IT-ITES and electronics hardware manufacturing sectors, a Task Force was set up by the Government in August 2009, which projected the demand for electronics hardware in the country to grow from US \$ 45 Billion in 2009 to US \$ 400 billion by 2020. The main growth drivers of electronics hardware demand in India are: (i) growth in per capita income and corporate spend on electronics; (ii) government focus on infrastructure; (iii) increasing spend on IT equipment; (iv) growing penetration of Internet including Broadband and Mobile phones and (v) need for innovative products at low cost. The value addition in electronics products manufacturing in the Country is also meager and shortfall in demand is met by imports and hence there is a strong need to promote electronics and IT hardware manufacturing in the country and strategically also.

Indian electronics hardware production constitutes around 1.31% of the global production. On the other hand China's share of global electronic equipment production has increased from 17% in 2004 to 33% in 2009. At the current rate of growth, the domestic production can cater to a demand of USD 104 Billion in 2020 and the remaining would have to be met by imports. This aggregates to a demand supply gap of nearly USD 1200 Billion by 2020.

The vision is to establish India as a leading global destination for ESDM. The objective during the Twelfth Five Year Plan is to achieve domestic production of about USD 122 Billion by 2017 by creating an industry friendly policy framework and ecosystem for the ESDM sector. This is expected to generate exports of about USD 20 Billion, direct employment of about 3.5 Million and indirect employment of 6.5 Million. There is a need to create a level playing field and an enabling environment for the industry to compete globally. This requires several initiatives including setting up of semiconductor fabs, providing support to manufacturing across the value chain, providing world class infrastructure through Electronics Manufacturing Clusters, supporting R&D and innovation by setting up of Electronics Development Fund. Besides, efforts to institute a mechanism for mandating compliance to standards for electronics goods, communications and brand development, marketing of India as an investment destination and human resource/skill development are some of the other initiatives which need to be pursued. There is a need to set up a National Electronics Mission to achieve the goals as above for the Twelfth Five Year Plan. The major initiatives are summarized in subsequent paragraphs:

### **Special Incentives Package (SIPS)**

In order to create a conducive environment for manufacture of high technology, capital intensive semiconductors and other high tech electronic products, attract global investments as well as bridge the viability gap due to lack of adequate infrastructure and ecosystem, the Special Incentive Package Scheme (SIPS) to encourage investments for setting up Semiconductor Fabrication and other high technology manufacturing industries in India was announced was announced by the Government on 21.3.2007. The last date for receipt of applications under the Scheme was 31.3.2010.

Twenty Six (26) applications in all, one in the area of Semiconductor Fab, one in the area of ATMP and specified storage devices, two for LCD Panels and twenty two in Solar Photovoltaic (SPV) seeking financial assistance under the Scheme have been received. As of now 11 SPV applicants have reported the achieving of Financial Closure of the threshold value of Rs. 1000 crore and above. These applicants are being examined and thereafter, the Appraisal Committee would evaluate the projects and based on its recommendations, approval of competent authority shall be sought. The approved applicants would be released the prescribed financial assistance, based upon the actual investment made in the project.

**Recommendations of the Committee formed by the Chairman, National Manufacturing Competitiveness Council (NMCC) and Adviser to PM on Public Information Infrastructure & Innovation**

In parallel, issues relating to manufacture of electronic hardware including telecom equipment in India have also been deliberated by the Committee formed by Chairman, National Manufacturing Competitiveness Council (NMCC) and Adviser to PM on Public Information Infrastructure & Innovation, which included the Member Secretary, NMCC; Secretary, DIT and Secretary, DOT. This Committee has made following key recommendations in its Report submitted to the Prime Minister :

- a) Setting up of Semiconductor Wafer Fabs for manufacture of Chips in India and Indian Microprocessor Design initiatives;
- b) Setting up of a National Electronics Mission (NEM);
- c) Special Incentive Package Scheme-II (SIPS-II) to encourage manufacture of specific high priority electronic product lines in India by providing capital grant and creation of electronic manufacturing clusters;
- d) Setting up a dedicated Electronics Development Fund; and
- e) Preference for "Manufactured-in-India Electronic Products" / "Indian Electronic Products" for all Government procurements and procurement by Government Licensees.

The implementation of these proposals will help flow of investment and technology focused on higher value addition in the electronics products manufactured in the country

and will lead to large employment opportunities. The Draft Cabinet Notes have been prepared and sent for Inter-Ministerial consultations in r/o recommendation no. b), C) & e). Regarding recommendation no. a), an Empowered Committee has been set up for identifying technology and investors for setting up two Semiconductor Wafer Fabrication (Fab) Manufacturing facilities after obtaining approval of Cabinet in its meeting held on 20.4.2011. The EC after interacting with the potential investors will crystallize the nature and quantum of Government support in physical/financial terms and recommend to the Government the course of action to attract investments in the sector. Regarding recommendation no. d), the feasibility study is underway.

### **Other Initiatives**

Additionally, following initiatives have also been taken for promotion of the sector:

(i) With the objective to control the quality of electronics goods being manufactured in the country and restrict import of sub-standard electronics goods, mandatory compliance of safety standards for electronics items is proposed to be introduced. A draft Order in respect of safety standards for 16 selected electronic items has been prepared and consultations are underway with the Department of Consumer Affairs and Bureau of Indian Standards to notify mandatory compliance.

(ii) Communications and Brand Building Campaign with the objective to build "Made in India" as leading global brand in ESDM and increasing awareness regarding initiatives taken by Government to promote investments in ESDM sector has been launched. As part of the campaign, first International LED Forum 2011 was co-organised with LED Products Manufacturers' Association (LEDMA) during September 23-24, 2011 at New Delhi.

(iii) Amendment of the Defence Offset Policy for enhancing its scope to include electronics products for meeting the offset obligation is also being pursued with the objective to promote electronics hardware manufacturing.

(iv) Preparation of roadmap to enable semiconductor design and services industry to move up the value chain and maintain growth rate of revenue of over 17% p.a.

(v) Preparation of roadmap to promote growth of electronics components industry.

### **Draft National Policy on Electronics, 2011**

The Department of Information Technology has formulated the Draft National Policy on Electronics, 2011 (NPE 2011) which envisions creating a globally competitive ESDM industry to meet the country's needs and serve the international market. One of the important objectives is to achieve a turnover of about USD 400 Billion by 2020 involving investment of about USD 100 Billion and employment to around 28 million by 2020. This is a quantum jump from production level of about USD 20 Billion in 2009. This inter-alia includes achieving a turnover of USD 55 Billion of chip design and embedded software industry and USD 80 Billion of exports in the sector. Moreover, the policy also proposes setting up of over 200 Electronic Manufacturing clusters. Another important objective of

the policy is to significantly upscale high-end human resource creation to 2500 PhDs annually by 2020 in the sector. Some of the major strategies proposed in the policy include:

- i. Providing attractive fiscal incentives across the value chain of the ESDM sector through Modified Special Incentive Package Scheme (M-SIPS).
- ii. Setting up of Semiconductor Wafer Fab facilities and its eco-system for design and fabrication of chips and chip components.
- iii. Providing Preferential Market Access for domestically manufactured electronic products including mobile devices, SIM cards with enhanced features, etc. with special emphasis on Indian products for which IPR reside in India to address strategic and security concerns of the Government consistent with international obligations in procurement.
- iv. Providing incentives for setting up of over 200 Electronic Manufacturing Clusters with world class logistics and infrastructure.
- v. Creating an "Electronic Development Fund" for promoting innovation, R&D and commercialization in ESDM, nano-electronics and IT sectors including providing support for seed capital, venture capital and growth stages of manufacturing.
- vi. To use innovation and R&D capabilities to develop electronic products catering to domestic needs and conditions at affordable price points.
- vii. Setting up Very Large Scale Integration (VLSI) specific Incubation Centres across country.
- viii. Developing an India microprocessor for diverse applications/ strategic needs.
- ix. Creating a 10 year stable tax regime for the ESDM sector.
- x. Setting up a specialized Institute for semiconductor chip design.
- xi. Encouraging greater participation of private sector in human resource development for the sector. Also encouraging setting up of skill-oriented courses for electronic designs along with hands-on laboratories enabling graduates from other disciplines to migrate to ESDM.
- xii. Developing and mandating standards for electronic products specific to Indian conditions of power, climate, handling etc.
- xiii. Creating linkages for long term partnership between domestic ESDM industry and strategic sectors like Defence, Atomic Energy and Space.
- xiv. Setting up of Centres of Excellence in the area of Automotive electronics, Avionics, and Industrial electronics.
- xv. Adopting best practices in e-waste management

xvi. Setting up of a National Electronics Mission with industry participation to advance the implementation of various programmes in this policy.

xvii. The Department of Information Technology to be renamed as Department of Electronics and Information Technology (DeitY) to reflect the desired focus on electronics.

The Draft NPE 2011 released on 3rd October, 2011 has been put up on website of Department of Information Technology ([www.mit.gov.in](http://www.mit.gov.in)) for public consultation.

### **Budgetary Requirements:**

Budget Estimates for budget head 'promotion of Electronics/ IT Hardware (megafab)' at Plan side for the FY 2012-2013 has been envisaged as follows:

#### **Grant-in-aid**

<b>Seri no</b>	<b>Scheme</b>	<b>Budget Estimate (Rs in crore)</b>
1.	SIPS & Modified SIPS	600
3.	Electronics Manufacturing Clusters	500
4.	Electronics Development Fund	250
5.	Human Resource Development	10
6.	Registration Scheme for safety standards	55
7.	Communication & Brand Building Campaign	1.50
	<b>Total</b>	<b>1416.50</b>

#### **Direct Expenditure**

<b>Seri no</b>	<b>Scheme</b>	<b>Budget Estimate (Rs in crore)</b>
1.	National Electronics Mission	5.00
2.	Communication & Brand Building Campaign	11.50
3.	ESDM-PMU	1.50
	<b>Total</b>	<b>18.00</b>

**Total projected requirement=- Rs. 1416.50 +18.00= Rs. 1434.50 crore**