

GOVERNMENT OF INDIA  
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 3440**  
TO BE ANSWERED ON: 01.04.2022

**IMPACT ON PRODUCTION OF SEMICONDUCTOR CHIPS  
AMID RUSSIA-UKRAINE WAR**

**3440. DR. C.M. RAMESH:**

Will the Minister of Electronics and Information Technology be pleased to state:

(a) whether due to ongoing war between Russia and Ukraine, there would be impact on the production of semiconductor chips, if so, the details thereof; and

(b) whether it would have adverse impact in our automobile industry as already, there is a long waiting period for new vehicles due to shortage of such chips and resulting sharp decline in the sale of four wheelers in the country, if so, the details thereof?

**ANSWER**

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY  
(SHRI RAJEEV CHANDRASEKHAR)

(a): Russia-Ukraine conflict has impacted supply chains in numerous sectors, including semiconductor industry. The conflict may have particular impact on the supply of Neon and Hexafluorobutadiene gases, which are an essential element to manufacture semiconductor chips as these are used in the lithography processes for chip production. Ukraine and Russia are major sources of Neon and Hexafluorobutadiene gases. The global semiconductor Industry is already facing a shortage due to supply chain disruptions during the Covid period. The Russia-Ukraine conflict might cause extra disruptions and affect supply chains of semiconductors.

(b): The semiconductor chip shortage has impacted many industries worldwide with auto and electronics industries among the most affected sectors. The shortage first emerged after the Covid-19 pandemic, due to lockdowns and restrictions. The supply side problem has transformed into a demand side problem as economies started recovering which increased the consumption of electronic products across various segments. Some key reasons behind the global chip shortage are supply chain disruptions, geographic concentration of electronic manufacturing, rise in demand for digital and electronic products and digital adoption across the world. The conflict in Ukraine might cause extra disruptions and affect supply chains of semiconductor further constraining electronics industry, including automobile sector.

However, Government is very focused on its important objective of building the overall semiconductor ecosystem and ensure that, it in-turn catalyses India's rapidly expanding electronics manufacturing and innovation ecosystem. The vision of Atmanirbhar Bharat in electronics & semiconductors was given further momentum by the Union Cabinet, chaired by the Hon'ble Prime Minister, approving the Semicon India programme with a total outlay of INR 76,000 crore for the development of semiconductor and display manufacturing ecosystem in our country. The programme aims to provide financial support to companies investing in semiconductors, display manufacturing and design ecosystem. This will serve to pave the way for India's growing presence in the global electronics value chains.

Following four schemes have been introduced under the aforesaid programme:

- i. **Scheme for setting up of Semiconductor Fabs in India** provides fiscal support to eligible applicants for setting up of Semiconductor Fabs which is aimed at attracting

large investments for setting up semiconductor wafer fabrication facilities in the country. Following fiscal support has been approved under the scheme:

- 28nm or Lower - Up to 50% of the Project Cost
  - Above 28 nm to 45nm - Up to 40% of the Project Cost
  - Above 45 nm to 65nm - Up to 30% of the Project Cost
- ii. **Scheme for setting up of Display Fabs in India** provides fiscal support to eligible applicants for setting up of Display Fabs which is aimed at attracting large investments for setting up TFT LCD / AMOLED based display fabrication facilities in the country. The Scheme provides fiscal support of up to 50% of Project Cost subject to a ceiling of INR 12,000 crore per Fab.
- iii. **Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India:** The Scheme provides a fiscal support of 30% of the Capital Expenditure to the eligible applicants for setting up of Compound Semiconductors / Silicon Photonics (SiPh) / Sensors (including MEMS) Fab and Semiconductor ATMP / OSAT facilities in India.
- iv. **Design Linked Incentive (DLI) Scheme** offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design. The scheme provides “Product Design Linked Incentive” of up to 50% of the eligible expenditure subject to a ceiling of ₹15 Crore per application and “Deployment Linked Incentive” of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ₹30 Crore per application.

In addition to the above schemes, Government has also approved modernisation of Semiconductor Laboratory, Mohali as a brownfield Fab.

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