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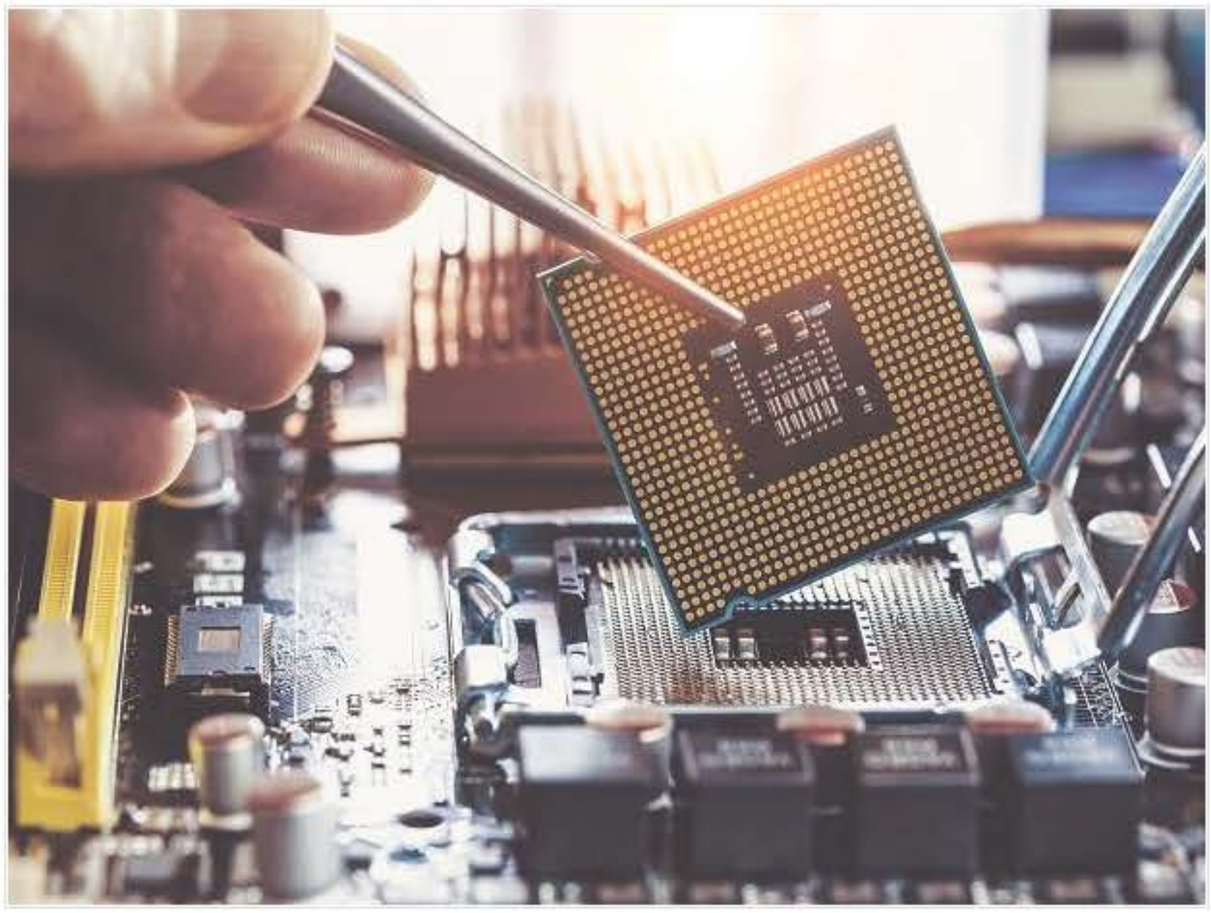
Govt's Rs 76,000-cr plan to woo chip makers, create semiconductor ecosystem

Domestic fabless players to get support via design-linked incentive

Surajeet Das Gupta | New Delhi December 16, 2021 Last Updated at 01:45 IST



30% of capex as max support to compound semiconductor units and ATMP facilities. Govt expects at least 15 such units

The Union Cabinet on Wednesday cleared a comprehensive Rs 76,000-crore ($10-billion) package to build a much-needed semiconductor ecosystem in the country. The incentives will be extended to a range of new units -- greenfield chip fab and display fab units, apart from compound semiconductor and ATMP (assembly, testing, marking, and packaging) facilities.

The package also gives a fiscal push to the fledgling homegrown semiconductor product design companies (fabless players). And backing this effort is support to universities to train 85,000 engineers under the "chips to start-ups" programme.

Semiconductor and display fab units under the scheme will be offered financial support of up to 50% of the project cost. This will be given to eligible players that have the technology, as well as the capacity to execute such high capital and resource incentive projects. The government is targeting the setting up of two semiconductor, as well as display fab units.

To encourage the setting up of compound semiconductor units (which make chips that are used in mobile chargers, electric vehicles, and telecom radios) and ATMP facilities, the government will offer fiscal support of up to 30% of capital expenditure to the approved units. The government expects over 15 such units to come up in this space.

Announcing the package, Ashwini Vaishnaw, communications and electronics & IT minister, sought to hard sell the policy to potential global players that are being offered incentives in other competing countries, such as South Korea, the US, and Taiwan to set fab plants.

"Our biggest advantage is our design ecosystem. We already have 25,000 design engineers in India. All the major economies are today giving 50 per cent capital incentive for semiconductor fab and display fab. We will be giving a similar incentive. But we are also offering something extra -- a clear 20-year roadmap for generating and nurturing talent and making sure that as the industry grows, there is a sufficient number of required talent," the minister said.

Welcoming the package, IT services industry body Nasscom in a statement said: "Over the next six years, this programme will form the foundation of a new era in electronics manufacturing and will form a vital pillar of the government's Atmanirbhar Bharat vision, in addition to driving growth and innovation, increasing prospects of job creation, and contributing to addressing the global supply chain crisis."

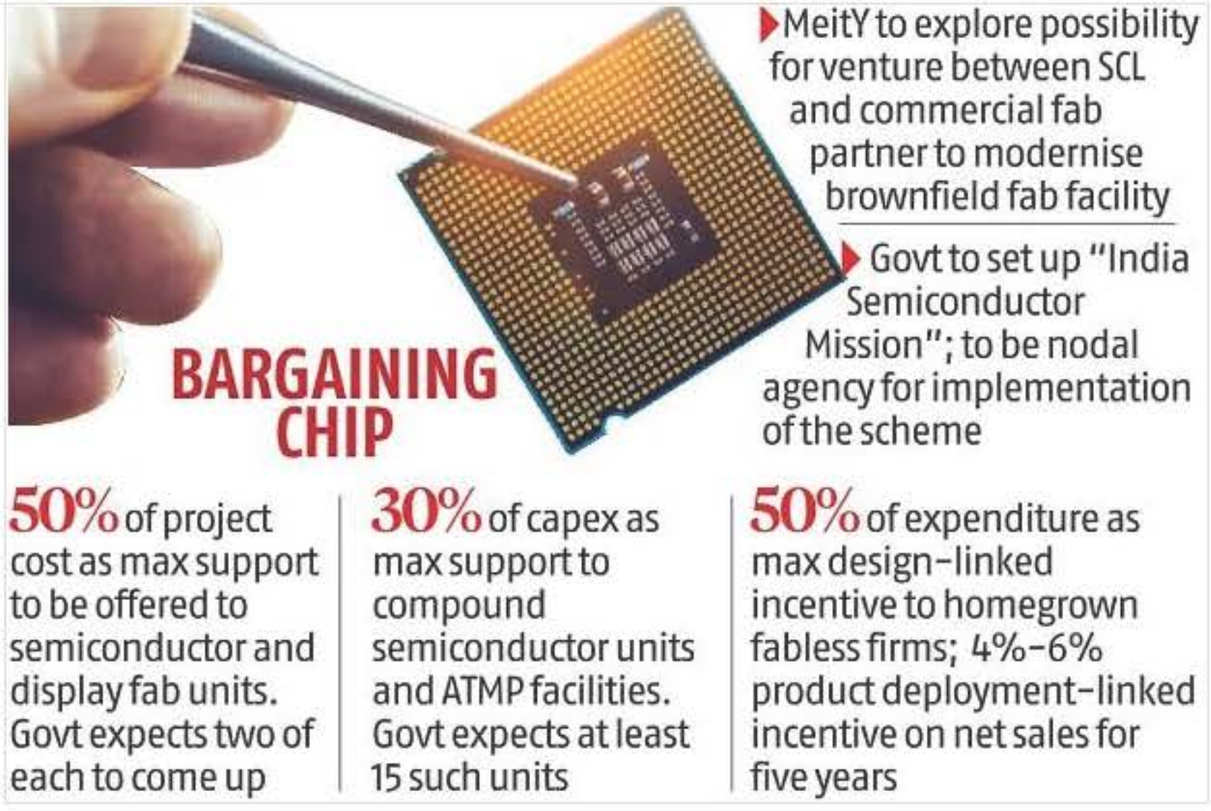
"The programme has a holistic long-term vision and includes several critical aspects, aside from manufacturing, like growing the pool of skilled engineering talent in India via the chips to start-ups scheme and support to design firms and start-ups, through the design-linked incentive (DLI) scheme," said Rajen Vagadia, VP and president-Qualcomm India & Saarc. "The focus areas of the programme are closely aligned to many of the design and innovation initiatives for India that Qualcomm has invested in over the years and we remain committed to supporting the expansion of a vibrant semiconductor ecosystem in India."

Sanjay Gupta, managing director, NXP India, said: "This will enable India to become an electronics hub and encourage corporates to start manufacturing in India. It is a big step to bring India on the world map of the semiconductor industry as it will pave the path for the industry to broaden the horizon of research, manufacturing and export. In the long term, issues like a sudden surge in demand for semiconductors will also be addressed. This move will also make the Indian manufacturers globally competitive to attract investment in the areas of core competency and cutting-edge technology."

The bulk of the funding of the government will go towards setting up fab and fab display plants. According to estimates, the investment required for an advanced technology chip plant (producing 28-nanometre chips and above) in the US is anything between $3 billion and $4 billion, while a modern fab display plant may need a $3-billion investment. With half the investment coming from the government, nearly 60 per cent of the package may be spent on funding these megaprojects, say experts.

According to Satya Gupta, advisor in India Electronics and Semiconductor Association, "the bulk of the government funding will go in chip fab and display fab units. Another $2 billion will go towards funding compound semiconductor plants that require an investment of around $250 million each and OSAT (outsourced semiconductor assembly and test) operations."

The package includes support to homegrown chip product design companies (fabless companies) that also sell the product by manufacturing it at third-party units. Under the design-linked incentive (DLI), product design-linked incentive of up to 50 per cent of eligible expenditure and product deployment-linked incentive of 4 per cent-6 per cent on net sales for five years will be offered. The government is looking to offer this support to at least 100 domestic companies; it expects at least 20 such companies to hit revenue of Rs 1,500 crore in five years. The plan, according to industry experts, will require over Rs 1,500 crore.



The new policy is the government's third attempt to create a semiconductor ecosystem in the country. In 2007, Intel showed interest but moved to China and Vietnam instead because the Indian government's policy and incentives were not thought through. In 2013, the government approved two proposals, one by the Jaypee group with a promise to subsidise the project cost. The promoters failed to raise finances and the projects were aborted.

Giving the thumbs up to the new plan, Hemant Mallapur, co-founder of chip product design company Saankhya Labs, said: "We have never leapfrogged like software companies have been able to. The whole industry has only a few small players with total revenue of not more than $30 million. Designing a chipset is expensive and costs $2-10 million and venture funds don't fund us. The government incentive will give us a huge boost to grow our business." He pointed out that currently, Indian chip design firms go to Taiwan to get their chip manufactured and costs are high.

The government through its various expressions of interest floated late last year and this year to gauge interest from global players for fabs has already targeted chip manufacturers. They include Taiwanese majors Taiwan Semiconductor Manufacturing Company, VIA Technologies, and United Microelectronics Corporation, US giants Intel, Micron Technology, NXP Semiconductors, and Texas Instruments, Japanese players Fuji Electric and Panasonic, European chipmakers Infineon Technologies and STMicroelectronics, and South Korean SK hynix and Samsung. Domestic players like the Tatas and Vedanta have also been approached for OSAT and display fabs, according to sources.

However, some analysts point out that the key to success is building the infrastructure -- abundant water and continuous power supply, and dust-free environment -- an area in which India is still lacking.