

DEFENCE PRODUCTION & EXPORT PROMOTION POLICY (DPEPP) 2020

1. PREAMBLE

1.1 Self-reliance in defence has been the cornerstone of India's defence production policy. The recent call for "ATMA NIRBHAR BHARAT" has provided further impetus to realise the goal of self-reliance. Over the years, transparent and streamlined Procurement Procedures, Production Policies and 'Make in India' initiatives have provided significant stimulus to demand for indigenous products. Indian Defence industry, primarily catering to the needs of the armed forces, has evolved with diversified product mix and market. Propelled by the recent successes in exports, India is set to realize its potential as an emerging defence manufacturing hub.

1.1.1 Over the years, the Department of Defence Production (DDP), Ministry of Defence, Government of India has facilitated establishment of wide-ranging production facilities of various defence equipment through Ordnance Factories and Defence Public Sector Undertakings (DPSUs) and, from the year 2001, through licensed private sector companies. This has resulted in the development of a diverse range of products such as arms and ammunitions, tanks, armored vehicles, heavy vehicles, fighter aircrafts and helicopters, warships, submarines, missiles, ammunition, electronic equipment, earth moving equipment, special alloys and special purpose steels.

1.1.2 Defence Research & Development Organisation (DRDO), the R&D wing of Ministry of Defence envisions empowering India with cutting-edge defence technologies. A large number of state-of-the-art weapon systems/platforms/equipment have been designed and developed by DRDO to meet the requirement of the armed forces through a strong indigenous technology base. The

development and production of strategic systems and platforms such as Agni and Prithvi series of missiles; Tejas-light combat aircraft; Pinaka-multi-barrel rocket launcher; Akash-air defence system; a wide range of radars and electronic warfare systems; Dhanush-artillery gun; Arjun-main battle tank etc have given a quantum jump to India's military might, generating effective deterrence and providing crucial leverage.

1.1.3 Indian Armed Forces through their in-house design wings and Directorates of Indigenization have also contributed significantly to the development of design and production capabilities in India.

1.1.4 The size of the Defence Industry, including Aerospace and Naval Shipbuilding Industry, is currently estimated to be about Rs 80,000 Cr (2019-20). While the contribution of Public Sector is estimated to be Rs 63,000 crores, the share of Private Sector has steadily grown to Rs 17,000 crores over the years.

1.1.5 Defence Public Sector Undertakings (DPSUs) like Hindustan Aeronautics Limited (HAL) in Aerospace, Mazagon Dock Shipbuilders Limited (MDL), Garden Reach Shipbuilders & Engineers Limited (GRSE), Goa Shipyard Limited (GSL) and Hindustan Shipyard Limited (HSL) in naval, Bharat Dynamics Limited (BDL), BEML Ltd, Mishra Dhatu Nigam (MIDHANI) in special Metals and Alloys, Ordnance Factory Board (OFB) in land systems and Bharat Electronics Limited (BEL) in strategic electronics have been the pillars of the defence production ecosystem in the country. The DPSUs have come a long way in terms of development of products and technologies through their own R&D as well as in collaboration with DRDO labs.

1.1.6 In the private sector, many engineering majors have diversified and joined the Defence sector. More than 460 licenses have so far been issued to private companies for production of defence equipment.

1.1.7 The defence industry is ably supported by a strong base of over 8,000 MSMEs that provide strength and vibrancy to the defence supply chain.

1.2 Defence Procurement Procedure (DPP) being notified over the years for capital acquisition of the Armed Forces of India aims to develop a robust industrial ecosystem by giving preference to 'Make in India' initiatives.

1.2.1 Defence Procurement Manual (DPM) 2009 lays down guidelines for procurement of goods and services meant for operation and maintenance viz. equipment, stores, spares, as well as packing/unpacking, delivery, transportation, insurance, leasing, consultancy, software development, etc.

1.2.2 DPP and DPM together cover government's procedures for fulfilling capital and revenue needs of goods/services for the armed forces. These two procedures are the demand side engines that have fueled growth of defence manufacturing in India.

1.3 Significant efforts have been made to ease the licensing/investment processes to allow participation of the private sector. Startups have been steadily gaining ground after the launch of the 'Start-Up India' programme. Innovations for Defence Excellence (iDEX) has provided a platform for startups to get connected to the defence establishment.

1.4 It is imperative that focused attention is laid on promotion of exports of Indian defence products. Export authorisation procedures have been streamlined through the introduction of online procedures and portals. Defence Lines of Credit (LOCs) being extended to sovereign governments are also enabling buyers in those countries, to import goods and services from India on attractive credit terms.

1.5 Defence Offsets are intended to leverage capital acquisitions of Armed forces to develop domestic defence industry. The policies for offsets are intended to further boost the domestic industry's capability through

sourcing of defence products, investments in defence sector, transfer of technology etc.

- 1.6 The present '**Defence Production & Export Promotion Policy (DPEPP) 2020**' is positioned as Ministry of Defence's overarching guiding document to provide a focused, structured and significant thrust to defence production capabilities of the country for self-reliance and exports.

2. VISION

To make India amongst the leading countries of the world in Defence sector, including Aerospace and Naval Shipbuilding sectors, from design to production, with active participation of public and private sector and thus fulfilling the twin objectives of self-reliance and exports.

3. GOALS AND OBJECTIVES

The policy has the following goals and objectives:

- 3.1 **To achieve** a turnover of **Rs 1,75,000 Crores (US\$ 25Bn)** including export of **Rs 35,000 Crore (US\$ 5 Bn)** in Aerospace and Defence goods and services by 2025.
- 3.2 **To develop** a dynamic, robust and competitive Defence industry, including Aerospace and Naval Shipbuilding industry to cater to the needs of Armed forces with quality products.
- 3.3 **To reduce** dependence on imports and take forward "**Make in India**" initiatives through domestic design and development.
- 3.4 **To promote** export of defence products and become part of the global defence value chains.
- 3.5 **To create** an environment that encourages R&D, rewards innovation, creates Indian IP ownership and promotes a robust and self-reliant defence industry.

4. FOCUS AREAS

- 4.1 Procurement Reforms
- 4.2 Indigenization & Support to MSMEs/Startups
- 4.3 Optimize Resource Allocation
- 4.4 Investment Promotion, FDI & Ease of Doing Business
- 4.5 Innovation and R&D
- 4.6 DPSUs and OFB
- 4.7 Quality Assurance & Testing Infrastructure
- 4.8 Export Promotion

5. PROCUREMENT REFORMS

Expeditious and streamlined procurement procedures are helpful in the development of Defence Production ecosystem and to impact the flow of investments into the sector as well as the use of technologies already developed by DRDO. Several reforms in the Defence Procurement Procedure for capital procurement have been proposed and are being notified. DPP-2020 relies on the emerging dynamism of the Indian industry to build domestic capabilities for designing, developing and manufacturing defence equipment. The revision of Defence Procurement Manual (DPM) for revenue procurement is also underway.

In addition to above, following strategies are proposed for expanding the domestic defence manufacturing ecosystem.

- 5.1 A negative list of weapons/platforms would be notified with year-wise timelines for placing an embargo on import of such items from those dates. This list would be updated periodically, without compromising on the operational requirements of the Services, to allow lead-time to industry to prepare itself for any such procurement which is likely to come up, subsequent to the indicated embargo date.
- 5.2 Defence procurement is a highly specialized activity that requires a-priori estimation of the development and production lead times specifications and technologies involved, life cycle costs and maintenance requirements etc. of the platforms, equipment and weapon systems. In order to make the above assessment, a Project Management Unit (PMU), with representation from the Services, would be set up to support the acquisition process and facilitate management of the contracts. This setup would bring in expertise to the process of acquisition as well as create focus and synergy in building military capabilities.
- 5.3 With self- reliance as the motto, aim is to move away from licensed production to Design, Develop and produce wherein the Nation owns the Design Rights and IP of the systems. With this in view for systems projected in the LTIPP, a Technology Assessment Cell (TAC), with representation from the Services, would be created which would make an assessment of the TRL levels available in the country for all the major systems/ platforms and provide advice for initiation of AONs taking note of the time frames needed for development, trials and induction of systems to avoid immediate procurement requests to the maximum extent.

The TAC would also assess the industrial capability for design, development and production including re-engineering for production of various major systems like Armoured Vehicles, Submarines, Fighter Aircraft, Helicopters, Radars with the major industries in the country which could be categorized as:

5.3.1 System integrators with Design, Development, production, testing & certification capability and ability to develop and sustain the ecosystem required for the next 25-30 years.

5.3.2 System integrators who lack integral design, development and certification capability but have the capability and infrastructure to be development cum production partners of DRDO/ any other domestic development agency and have the ability to sustain the ecosystem so developed for next 25-30 years.

In addition, the Technology Assessment Cell (TAC) would carry out the scan of regional and global technological capacities and would also render advice to the Services while formulating SQRs.

- 5.4 Procurement of indigenously developed products/systems involves conducting a number of tests and trials and consumes a considerable amount of time as a result of which placement of orders is delayed and industry finds it difficult to carry out advance production planning. A comprehensive review and overhaul of the trials and testing procedures would be done to reduce the procurement cycle time.
- 5.5 Our Armed forces have over the years acquired a range of platforms from diverse sources leading to a buildup of spares and consumables which has resulted in sub-optimal planning and resource allocation. Efforts would be made to adopt a family of weapons approach to standardize and optimize inventory and supply chain management.
- 5.6 All Acceptances of Necessity (AoNs) involving procurement from domestic sources would be reviewed for time-bound procurement.
- 5.7 Efforts would be made to provide the industry greater visibility into the likely opportunities in the defence sector. Understanding future capital acquisition priorities will enable industry to develop technologies, carry out necessary ground work and position themselves in an optimal manner to compete at the appropriate time. The process of obtaining AONs should be initiated by the SHQs taking note of the lead times needed for development and production indicating the overall quantities required.

6. INDIGENIZATION AND SUPPORT TO MSMEs/STARTUPS

The indigenization policy laid out by the department aims to create an industry ecosystem to indigenize the imported components (including alloys and special materials) and sub-assemblies for defence equipment and platform manufactured in India. 5,000 such items are proposed to be indigenized by 2025.

In order to achieve this objective, following strategies are proposed:

- 6.1 An indigenization portal will be developed for DPSUs/OFB/Services with an industry interface to provide development support to MSMEs/Startups/Industry for import substitution.
- 6.2 The Make-II process will be further strengthened and monitored to make it easier for the industry to provide indigenous solutions.
- 6.3 Inter-Governmental processes would be taken forward to indigenize spares and components for legacy platforms and equipment.
- 6.4 Public Procurement Order will be made applicable for procurement preference to those items in Defence sector for which domestic production capability exists.
- 6.5 The current provisions to enable Startups and MSMEs to participate in the procurement process would continue to be reviewed and further strengthened.
- 6.6 Defence Investor Cell in Department of Defence Production will provide handholding to MSMEs, investors and vendors in defence production for resolving issues with Central, State and other authorities.
- 6.7 Vendor Development would be taken up by OFB/ DPSUs and use of TReDS platform would be mandated for improving their liquidity and timely payments.

- 6.8 In case of the **critical** products and materials currently being imported, DPSUs/OFB would consider issuing long term orders as feasible to incentivize the domestic industry and also have provision for repeat order. In such cases, resultant single vendor should also be acceptable with due price discovery and negotiations.
- 6.9 Services will hand-hold the industry through continuous interactions, sharing of information and arranging visits to repair establishments/field depots for better understanding/appreciation of the requirements.

7. OPTIMIZE RESOURCE ALLOCATION

The Department of Defence Production has laid out a target to achieve a turnover of Rs.1,75,000 crores (USD 25 Bn) in Aerospace and Defence Goods & Services by 2025. The share of domestic procurement in overall Defence procurement is about 60 per cent. In order to enhance procurement from domestic industry, it is incumbent that procurement is doubled from the current Rs 70,000 crore to Rs 1,40,000 crore by 2025.

In order to achieve this objective, following strategies are proposed:

- 7.1 To carve out a distinct budget head for domestic capital procurement.
- 7.2 To strive for enhancing allocation for domestic capital procurement at the rate of minimum 15 per cent per annum for the next five years.
- 7.3 Various studies have over the years brought out the need to enhance cost effectiveness and improve efficiency in the use of MoD's resources. Efforts would be made to scrutinize, evaluate and optimize various items of expenditure in the Defence budget.
- 7.4 OFB/DPSUs will be mandated to increase productivity, enhance quality, reduce costs and ensure timely execution of orders by optimizing inventory management, greater vendor outsourcing at all levels, improving skill levels and overall project management.

8. INVESTMENT PROMOTION, FDI AND EASE OF DOING BUSINESS

India is emerging as an attractive investment destination. The improvement in the India's ranking in World Bank's 'Ease of Doing Business' (EoDB) report, market size, demographic dividend and availability of diverse skill sets have been driving this momentum. Defence being a monopsony, investments in this sector are incumbent on regular supply of orders. However, India's emergence as a Defence manufacturing hub with rising exports offers a unique opportunity now for attracting investments in defence and aerospace sectors.

India is already a large aerospace market with rising passenger traffic and increasing military expenditure, as a result of which the demand for aircrafts (fixed and rotary wings) is increasing. The opportunities in the aerospace industry have been identified in the following segments:

- (a) Aircraft Build Work
- (b) Aircraft MRO
- (c) Helicopters
- (d) Engine manufacturing and MRO work
- (e) Line Replaceable Units (LRUs)
- (f) Unmanned Aerial Vehicles (UAVs)
- (g) Upgrades & Retrofits

8.1 Investment Promotion

Investments would be encouraged to provide specific focus on certain identified segments and technological areas. Investments in aviation sector which help in co-development and strengthening defence ecosystem would be facilitated in association with the Ministry of Civil Aviation.

Efforts would be made to address the identified gaps in those segments and offer incentives to global OEMs and domestic industry to set up design and manufacturing facilities in India. The investments in these segments would also be channelized by offering high multipliers through offsets obligations.

Considering the current status and the future potential, following segments would be supported.

8.1.1 Development of Aero Engines Complex

India has manufactured close to 4,000 aero platforms since inception and has built capacities to produce various platforms, including Light Combat Aircraft (LCA), Advance Light Helicopter (ALH), Light Combat Helicopter (LCH), Light Utility Helicopter (LUH) and Dornier. Most of these platforms make use of imported aero engines and related components. While significant improvements have been made, there are still critical gaps in the aero engine segment for future development programmes as well as for taking up the engine related MRO activities of the current inventory of platforms.

8.1.2 Maintenance Repair & Overhaul (MRO)

With recent rationalization in the GST structure, MRO activities in Aerospace sector have got a major fillip. The sector would be developed as a pivot for the development of the Aerospace sector and the components industry which would entail seeking lifetime support for large platforms to enable setting up of adequate facilities for spare, repair and maintenance during the life-cycle of such platforms. Automotive component manufacturers and other similarly relevant industries could through appropriate skill development and technology upgradation initiatives, diversify to aerospace components design and manufacturing.

8.1.3 Critical Technologies & Materials

India has made significant progress in developing unique technologies and wide range of complex systems that includes missiles, radar systems, fighter aircrafts, main battle tanks, rocket systems, under water systems, Naval systems, communication systems, electro optic systems, EW systems, etc. However, further progress in these areas is incumbent on bridging the gaps in certain critical technologies and materials and supplement the efforts made by DRDO and other R&D organizations. Efforts would be made to attract investments for development of such technologies and bring them to a level of maturity.

8.2 Defence Corridors

The two Defence Corridors set up in Tamil Nadu and Uttar Pradesh would be specifically targeted by providing additional support as well as by offering higher multipliers for offset discharge for investments flowing into the Defence Corridors.

8.3 FDI

In the current FDI policy for Defence sector notified vide Press Note No. 5 (2016 Series), FDI was allowed under automatic route up to 49% and above 49% through government route wherever it is likely to result in access to modern technology or for other reasons to be recorded.

Efforts have recently been made to liberalize FDI in Defence Sector for attracting global OEMs to shift manufacturing facilities and expand India's presence in international supply chains.

Efforts would be made to attract FDI through Invest India and Defence Investor cell.

8.4 Licensing process for defence industries would continue to be eased by obtaining regular feedback from the industry and disposal of applications in a time bound manner.

9. INNOVATION AND R&D

Defence R&D

Defence Research & Innovation lies at the heart of development of cutting-edge technologies and systems. By harnessing the nationwide R&D capabilities, future requirements of the services could be met and critical gaps in related technologies would get addressed.

The following strategies are proposed:

- 9.1 DRDO in consultation with the Services and in collaboration with other scientific and industrial establishments would set up missions in select areas to develop futuristic and critical systems/platforms/materials. An indicative list is as below.
- a) Gas Turbine Engines
 - b) Hypersonic Missiles
 - c) Ballistic & Cruise Missiles
 - d) Armoured Vehicles
 - e) Submarines
 - f) Fifth Generation Fighters
 - g) Transport Aircrafts to meet military requirements
 - h) Secure communication devices, secure microprocessors and secure routers
 - i) Cyber Security Infrastructure
 - j) Surveillance Systems
 - k) Artificial Intelligence & Robotics including unmanned platforms
 - l) Airborne Sensors
 - m) Strategic Materials
- 9.2 The conversion of prototypes into commercially useful products go through a cycle across Technology Readiness Levels (TRLs). A comprehensive reform of the *productionisation* process would be undertaken to cut down the 'lab to lines' time by roping in production partners at early TRL levels by bringing concurrent engineering practices between research and production agencies.

- 9.3 Systems Engineering approach to derive system specifications for project development would be mandated for capturing the concept, feasibility, requirements, design etc. and detailed in-depth review at each stage would be done through a stage-gate process.
- 9.4 Competitively funded prototyping would be pursued during the design process to address the multiple challenges of technical feasibility, affordability, producibility and supportability.

Innovation

9.5 Startups

Innovations for Defence Excellence (iDEX) has been operationalized to provide necessary incubation and infrastructure support to the start-ups in defence area. More than 50 startups are currently developing new 'fit-for-military-use' technologies/ products. iDEX would be further scaled up to engage with 300 more startups and developing 60 new technologies/ products during the next five years, and their procurement under Make-II route of DPP.

- 9.6 Mission Raksha Gyan Shakti was launched to promote greater culture of innovation and technology development and file greater number of patents in Defence PSUs and OFB. This effort would be scaled up for promoting creation of Intellectual Property in the sector and its commercial utilization.
- 9.7 The Offset Policy would be reformed to encourage defence investments and acquisition of critical technologies (know why) through higher multipliers.

10. DPSUs/OFB

Over the years, Department of Defence Production has set up wide ranging production facilities for various defence equipment through the

Ordnance Factories and Defence Public Sector Undertakings (DPSUs). While significant progress has been made by these units in manufacturing arms and ammunition, tanks, armoured vehicles, heavy vehicles, aircraft and helicopters, sub-marines, missiles, electronic equipment, special alloys etc., it is essential that these organizations are reformed to prepare themselves for the future so that they work in tandem with the private industry.

For doing so, following strategies are proposed.

- 10.1 Ordnance factories will be corporatized to make them competitive and to improve their productivity.
- 10.2 Efforts will be made to position DPSUs as system integrators and create a multi-tier domestic supply chain.
- 10.3 OFB/DPSUs will be mandated to maximize outsourcing from indigenous sources.
- 10.4 Disinvestment of DPSUs will be pursued.
- 10.5 Focus would be laid for modernization and technological upgradation in coordination with Services/DRDO.
- 10.6 DPSUs would be encouraged to move towards INDUSTRY 4.0 by using innovative strategies and tools like digital threading to include Internet of Things (IoT), time-stamping by the use of block-chain technology, Artificial Intelligence etc.
- 10.7 A partnership model would be formulated for development of critical technologies and components in DPSUs/OFB to provide a focused approach to the development of indigenous capabilities.

11. QUALITY ASSURANCE AND TESTING INFRASTRUCTURE

Competitiveness of the Defence Industry depends on robust quality assurance practices and mechanisms and this needs to be ensured in all phases of the product life cycle. In order to streamline the quality assurance process and

cut down the “hold points” and reduce the cycle time, following strategies are proposed:

- 11.1 The quality control and assurance process will be comprehensively reviewed and streamlined.
- 11.2 The entire process of quality assurance and its time bound delivery would be rationalized and monitored by developing an IT platform with an industry interface.
- 11.3 Organizational reforms in DGQA/DGAQA would be taken up to rationalize the workforce and enhance their productivity.
- 11.4 Accredited third-party inspection bodies will be promoted to augment the resources of DGQA by outsourcing certain QA functions throughout the value chain.
- 11.5 For the MSMEs to be more quality conscious, ‘Zero Defect Zero Effect’ is being encouraged. This would help industry to adopt Self Certification and Green Channel route through a process facilitated by DGQA/DGAQA.
- 11.6 The pool of test beds/firing ranges/Quality Assurance (QA)-Quality Control (QC) labs/testing infrastructure will be mapped in the country and enhanced to meet the growing requirements of the Industry.
- 11.7 The existing testing infrastructure with Defence organizations would be made available for private industry use on equal priority.
- 11.8 The airworthiness assurance functions of CEMILAC cover the whole spectrum of activities in Indian Military Aviation such as Ab-initio Designs, Continued Airworthiness and Production support, Certification of Systems developed abroad, Indigenization and Unmanned Air Vehicles. Efforts would be made to streamline its functioning and strengthen its operations.
- 11.9 Testing facilities of DGQA/DGAQA/DRDO will be upgraded by establishing test rigs/environmental test chambers, able to simulate

actual operational conditions. Such simulation based testing will be encouraged and a detailed list of environmental tests, which can be conducted on test rigs /environmental test chambers, would be issued for reference in public domain.

11.10 In order to address the grievances and mitigate the concerns of the stakeholders including industry, an appellate mechanism for QA Testing in the form of Independent External Monitor (IEM) would be created.

11.11 Efforts would be made to create testing infrastructure through Defence Testing Infrastructure Scheme (DTIS) by providing assistance to industry to set up common testing facilities.

12. EXPORT PROMOTION

Defence exports have grown manifold over the last few years. In order to achieve the target of Rs 35,000 crore (US\$ 5 Bn) of Defence Exports by 2025, following strategies are proposed.

12.1 Defence Attachés have been mandated and are supported to promote export of indigenous defence equipment abroad. This effort would be supplemented by selected DPSUs which would be positioned to work as export promotion agencies for certain countries with earnings linked to success fee, to promote export of defence products abroad.

12.2 Subject to strategic considerations, domestically manufactured defence products will be promoted through Govt to Govt agreements and Lines of Credit/Funding.

12.3 Export Promotion Cell set up to promote Defence exports through coordinated action to support the Industry would be further strengthened and professionalized.

12.4 DPSUs and OFB would be mandated to have at least 25% of their revenue from exports including success fee earned as target by 2025.

12.5 In collaboration with the Industry associations, DDP would facilitate on boarding of Indian Offset Partners (IOPs) in the discharge of offset obligations by OEMs.

- 12.6 Defence Expo and Aero India will be positioned as major global events to showcase India's capabilities in defence manufacturing, and also to encourage exports. This would be supplemented by branding the Indian Defence products. Defence Industry delegations would be organized to targeted countries in addition to participation in prominent global defence expositions.
- 12.7 The end-to-end export clearance process in the Department of Defence Production would be further upgraded to make the process seamless and time-bound.
- 12.8 In consonance with the provisions of various Multilateral Arms control protocols, Open General Export License (OGEL) regime would be utilized to encourage export of selected defence equipment/items to identified friendly countries.
- 12.9 Achievements of Indian Defence industry would be showcased on running basis on Indian Embassy web-sites.
- 12.10 Active support of services would be taken for exploring opportunities for export of defence products.

13. GOVERNANCE

- 13.1 The concerned departments of the Ministry of Defence would take necessary action to implement the respective strategies outlined in this Policy.
- 13.2 The Department of Defence Production would be the nodal department for coordination on various components of the Defence Production & Export Promotion Policy (DPEPP) 2020 including obtaining approvals of the competent authorities for various schemes, programs and projects outlined in the strategies to achieve the objectives set in this Policy.
- 13.3 The progress on various stipulations of the Policy would be periodically reviewed and monitored by Defence Minister.
- 13.4 All stakeholders viz. DoD, DMA, DDP, Services, Department of Defence R&D, DPSUs, OFB, etc. will conduct regular outreach programmes in various parts of the country to interact with industry associations,

industry especially MSMEs and academia, to spread awareness about the potential opportunities, and also understand the challenges being faced by them.

13.5 Institutional data collection mechanism regarding Defence industry, including Aerospace & Naval Shipbuilding industries, in the country, including production, export, import, would be further strengthened.

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