

# समाचार पत्रों से चयित अंश Newspapers Clippings

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## Six vendors in race as IAF seeks 110 fighters

*Experts calculate final contract price of \$10.66 to \$19.46 billion*

*By Ajai shukla*

Six of the world's premier fighter aircraft vendors – American companies Boeing and Lockheed Martin, Russian Aircraft Corporation, Dassault of France, Swedish firm Saab and European consortium, Euro fighter GmbH – have submitted responses to an Indian “request for information” (RFI), kicking off the purchase of 110 fighters for the Indian Air Force (IAF).

The IAF had put out a detailed, 73-page RFI on April 6, giving “original equipment manufacturers” (OEMs) and “government sponsored export agencies” three months to submit their responses. Friday was the last date. There are four twin-engine aircraft in the fray: the F/A-18E/F Super Hornet, Block III, Euro fighter Typhoon, MiG-35 and Rafale. Two single-engine fighters have been offered: F-16 Block 70 and Gripen E. The flyaway cost of single engine fighters is estimated to be between \$80-90 million, with the larger, twin-engine fighters likely to be priced at \$120-160 million, according to industry analysts. The RFI mandates that 85 per cent of the fighters must be built in India, and each of those would cost at least \$20 million more.

That adds up to an overall contract price of \$10.66 billion for the cheapest single-engine fighters, to \$19.46 billion for the high-end, twin-engine fighters.

The cost of weaponry, spares, base infrastructure and simulators would be over and above that. The defence ministry will now process the acquisition under the provisions of the Defence Procurement Procedure of 2016 (DPP-2016). The RFI leaves the door open for an Indian private sector firm to co-manufacture the selected fighter in India.

The next stage of procurement will involve scrutinising OEMs' responses to the RFI to assess the options available. Based on vendors' responses, the IAF would draw up a short-list of vendors that would receive the IAF's “request for proposals”, or formal tender, spelling out its precise requirements, the terms and conditions of supply, “Make in India” and offsets. In response to the RFP, the OEMs will submit two simultaneous bids: First, a technical bid, with details of aircraft performance, terms of supply, technology transfer and “Make in India” proposals. Alongside that, OEMs would submit their commercial bids, which would indicate the cost the IAF would have to pay.

The RFP will indicate whether the commercial bids would be assessed on the basis of the upfront price, or through “life cycle costing” (LCC). The latter involves totting up the total cost of ownership, including the cost of flying and maintaining the fighter through its 3-4 decade-long service life. While LCC better indicates the real price the IAF will pay for a fighter, it is a complex calculation that led to disputes and the eventual abandonment in 2015 of the 2007 RFP for 126 medium, multi-role, combat aircraft (MMRCA). The RFP will indicate whether the IAF follows the same path.

Another question hanging over the current fighter procurement is: with the IAF having rejected variants of four of the contending aircraft – the Super Hornet, F-16, Gripen C/D and MiG-35 – in flight trials carried out between 2009- 2011 in the MMRCA tender, are the current contenders improved enough to pass flight trials conducted to the same standards?

If not, the IAF would have to lower its performance bar during flight trials, or face the same outcome, in which only the Typhoon and Rafale were found technically eligible.

### **What the air force wants**

- 110 multi-role fighters, capable of roles of air superiority, air defence, ground and maritime strike, reconnaissance and electronic warfare.
- 15% of the order to be supplied in flyaway condition and 85% made in India.
- OEMs to transfer design development, manufacturing and repair expertise to India.

- OEMs to offer high-value technologies as part of the contract. Must specify scope, depth and range of technology transfer.
- OEMs to indicate “Indigenisation Content” it would achieve while building fighter in India.
- Flyaway fighters to be delivered 3-5 years from contract, Made in India in 5-12 years.
- 75% single-seat fighters and 25% twin seat variants.
- OEM must provide “performance linked warranty” for aircraft to fly minimum 150 hours per year, for ten years.
- Doors opened for Make in India by private sector, or by public sector (HAL)
- Twin seat variant should have all the operational capabilities of single-seat variant.



Sat, 07 July 2018

## 6 Foreign cost apply to make jets

*By Ajay Banerjee*

Battle readiness of the Air Force will hinge upon decision-making speed of the government and the Ministry of Defence. Global tender inviting bids to make 110 fighter jets in India closed on Friday, even as the ministry is yet to finalise contours of a production policy.

The same six competitors are in the fray that had participated in a similar competition announced 11 years ago.

India has announced a “strategic partnership” model that envisages Indian private companies to partner foreign makers and even absorb the technology to make these jets.

The guidelines of the policy are yet to be announced. The ministry hopes to do so before trials of competing planes begin. Of the 110 aircraft, 15% (or 16-17 planes) will be in fly-away condition and the remaining 85% will have to be made in India under “strategic partnership”. India wants original manufacturer to transfer design, development, and manufacturing and repair expertise to India. Securing against any whimsical imposition of sanctions, the foreign manufacturer will have to provide government assurances from their home country for the transfer of technology, manufacture, repair, overhaul, upgrade and also for all subsequent authorisations needed to negotiate, sign and execute contracts with India.

Faced with a dwindling fleet of fighter jets, India, in April, launched an ambitious plan to get a foreign military aviation manufacturer to make 110 fighter jets in India. The Tribune was the first to report in its edition dated February 22 that the IAF would float a fresh tender for fighter jets as its fleet in dwindling (down to 32 squadrons against the need for 42) while the production of the indigenous plane, the Tejas, is yet to pick up. For India and the global manufacturers, it is a re-run of the 2007 tender for 126 medium multi-role combat aircraft.

### **110 to be bought**

- A global tender inviting bids to make 110 fighter jets in India closed on Friday
- The Ministry of Defence is yet to finalise contours of a policy facilitating production in India
- The original manufacturer will have to transfer design, development, manufacturing and repair expertise to India.



*Sat, 07 July 2018*

# **NASA is about to test ‘quiet’ sonic booms over Texas**

*By Mike Wehner*

Humans have already mastered the art of going really really fast in the sky, and modern technology has made topping the speed of sound a trivial thing, but there’s one big problem with going supersonic: those dang booms! Now, NASA is planning to test a new method to reduce the startling noise of a sonic boom, and it’s going to use the city of Galveston, Texas, as its proving ground.

NASA has been working hard at figuring out how to make an aircraft go supersonic without shattering windows and scaring people on the ground below.

The tests will aim to determine just how loud NASA’s new “quiet” supersonic technology really is, and compare it to the sounds of a traditional sonic boom. Humans have already mastered the art of going really really fast in the sky, and modern technology has made topping the speed of sound a trivial thing, but there’s one big problem with going supersonic: those dang booms! Now, NASA is planning to test a new method to reduce the startling noise of a sonic boom, and it’s going to use the city of Galveston, Texas, as its proving ground.

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