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India's first passenger aircraft Saras gets an expensive tag

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K. Raghu

Bangalore: A 14-seater multi-role aircraft being developed by India's National Aerospace Laboratories (NAL) for use by the country's feeder airlines on short-haul routes and by the Indian Air Force (IAF) will be the most expensive plane in its class, although one expert said its cost would go down with an increase in volumes.

NAL has for the first time put a price tag to the Saras, Rs39.4 crore. The Saras will be the first passenger aircraft designed and manufactured in a country which, despite being in the midst of an aviation boom, still depends on overseas aircraft makers for even small aircraft.

Under development: A May 2004 photo of the first prototype of India's first indigenous civilian aircraft, Saras, as it undertakes its maiden flight in Bangalore.

The state-run NAL, the only design house for passenger aircraft in India, has built the two-seat trainer called the Hansa or Swan—this is sold to flying clubs to train rookie pilots—and is also working with Plexion, a unit of Mahindra and Mahindra Ltd, on the design and development of a four-seater aircraft that will be ready by 2010. However, it is the Saras that has caught the fancy of the country's aerospace establishment—despite the fact that the aircraft is still under development.

Aviation sector regulator Directorate General of Civil Aviation (DGCA) has to certify the Saras before it is mass-produced. The plane is powered by two turboprop engines of Canada's Pratt and Whitney and can take off and land on small runways or air strips. That would make it ideal for use by airlines connecting small towns to larger cities.

Then, there's the cost. "Equivalent twin-engine turboprop aircraft on the commercial market costs anywhere from approximately $3.0 million (Rs11.89 crore) up to about $6.5 million (Rs25.77 crore)," said Raymond Jaworowski, a senior analyst at Forecast International, a US aerospace research firm.

Some of the closest competitors to the Saras would be the King Air 350 built by Hawker Beechcraft Corp. of US, the HAI Y-12 made by the Harbin Aviation Industry in China, Poland's PZL Mielec-built M-28 Skytruck and the Czech-made LET L 410, he

added. The Bangalore-based NAL expects the price of the Saras to drop subsequently to Rs32 crore on higher volumes and better manufacturing practices. The agency has invited private players to take up production of the aircraft in Bangalore and says they can earn annual returns on investment of 14% for the initial period.

“It is easy to pull down an indigenous programme development on costs. Look at the contribution (of Saras) to aerospace development in India,” said A.R. Upadhya, director of NAL. He declined to comment on whether the plane would be more expensive than competing aircraft when it is produced. The Saras programme was conceived in 1990 as an Indo-Russian joint collaboration. It became an indigenous plane project after the Russians backed out in 1995 due to financial constraints. Since then, the Rs139 crore programme has been hit by delays due to design flaws and non availability of foreign components due to US sanctions following the 1998 nuclear tests.

NAL expects prices of Saras to drop to Rs32 crore on higher volumes, better manufacturing practices

In its maiden flight in May 2004, the first prototype of Saras was 900kg heavier than its designed weight of 4,125kg.

“The (new prototype) aircraft is lighter with more composites, and design flaws have been eliminated. It has a greater chance now,” said Roddam Narasimha, one of India’s leading aerospace scientists and a former director of NAL. “The IAF has expressed interest in Saras,” he added.

NAL estimates that India will need 200 such aircraft over 15 years (including around 50 for the IAF). The IAF could be the first customer for the Saras plane with an order of around 40 planes, an NAL note on its website *www.nal.res.in* seeking expression of interest from private players said.

“The Saras could certainly garner a share of the growing Indian civil aviation market, particularly for use as a feeder airliner as well as in corporate and utility service,” said Jaworowski of Forecast.

“On the export market, achievement of FAA and Easa certification will be critical to gaining sales success in North America and Europe,” he added. Federal Aviation Administration is the aviation regulator in the US and European Air Safety Agency is its European counterpart.

The former head of training of the IAF, Air Marshal (retd) T.J. Master, who now runs a consulting firm Master Aerospace Consultants Pvt. Ltd, said the government should support the development of homegrown aircraft and ensure their mass production for the domestic market. “It is unfair to expect a new, untested aircraft to compete commercially. We should follow the model of China and other countries, said Master, who conducted a market survey for the Hansa trainer.