

MRJ has high hopes but higher US hurdles to overcome

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Mitsubishi's new regional jetliner has already gained orders from American short-haul operators. But if it wants to secure a share of the US market, there are several problems to solve, Richard Smith reports

Although the MRJ finally arrived in the United States for testing last month, after two aborted attempts, not all is rosy.

For the moment, the MRJ's biggest concern is trying to gain appeal in the US regional jet market, says Vinay Bhaskara, a senior business analyst at the Miami-based Airways News. "Mitsubishi needs relaxation of 'scope clauses' in the United States on the weight side [the MRJ is currently too heavy for existing scope clauses] as well as on the seat capacity side," he says.

Unique to the US, a scope clause is part of a contract between an airline and a pilot union that limits the weight and capacity of regional aircraft. The idea is protectionist – the mainline carriers do not want regional airlines flying larger aircraft. If regionals do not have the weight and seating limits, they can add larger aircraft and undercut mainline aircraft economics, according to Air Insight, a commercial aviation consultancy. The current capacity limit in most US scope clauses is 76 seats. The capacity restriction can be circumvented by re-configuring the MRJ90 to have, say, 10 larger first-class seats to fit the 76-seat limit, Mr Bhaskara says. However, the MRJ is offered as all-economy, meaning a real-world configuration of at least 80 to 82 seats

Most scope clauses also contain restrictions on maximum take-off weight (MTOW), which for the MRJ family ranges from 39,600 to 42,800 kilos. The current limit in most US scope clauses is 39,009kg. "But the weight restriction is impossible to game, so Mitsubishi has been banking on a relaxation of scope clauses for a while now," Mr Bhaskara adds, as are its US customers SkyWest and Trans States Holdings.

However, Mitsubishi may be looking at taking some weight out of the MRJ90 to get in under the scope clause, he says. "That should be achievable relatively easily with the standard model MRJ90 – Mitsubishi only needs to take out about 500kg of weight."

It will probably have to. Winning concessions on scope clauses looks unlikely, he says. "The market dynamics are tilting towards pilots who are emboldened by a unionised labour structure and a looming pilot shortage."

In addition, Edward Bourlet, a senior analyst for CLSA Japan, believes the MRJ's builders have refrained from using much carbon fibre and have generally been conservative with technology. That could also come back to haunt the aircraft maker. "Taking lower risk with technology for the sake of reliability at this stage means the MRJ's superior efficiency may be short-lived," he says.

Mitsubishi Aircraft Company begs to differ. The company has applied composite material on the tail assembly but decided not to do so on the wings or fuselage, Mac spokeswoman Miho Takahashi says.

Fuselage damage can occur while the aircraft is on the ground, particularly when loading cargo, so making the MRJ fuselage in composite would necessitate thickening the parts near the doors, Ms Takahashi says. "For an aircraft the size of the MRJ, doing so would cause weight merit loss," she says.

Adding to Mitsubishi's problems, the standard model's maximum range is only about 2,000 kilometres, which translates into a real-world range of about 1,500km. That might be sufficient in the Japanese market but it will not appeal greatly in the much bigger US, Mr Bhaskara says. "So that pushes Mitsubishi on to the harder problem of pulling nearly two tonnes of weight from the extended range version [to produce a still-anaemic 2,100km to 2,400km of real-world range], or close to four tonnes from the long-range version," he says.

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By contrast, the standard version of Embraer's newest regional jet, the E170, with 70 to 78 seats, has a range of just under 4,000km and an MTOW of 38,790kg, it says.

A further issue is the fact that, from an investor's standpoint, the MRJ is, as are all new aircraft projects, capital intensive and risky – and in this case really not necessary, Mr Bourlet says. Mitsubishi's aerospace division would do just fine by continuing to supply components to Boeing, he says. "But in some ways it's a national project, involving government financing, with Mitsubishi Heavy Industries the vessel."

On the plus side, getting into the business of making passenger jets will give MHI increased leverage in the aviation industry, says the Ireland-based expert Eamonn Fingleton, who has published three books on the economies of east Asian countries. "Not all the components by any means will be made in Japan, so Mitsubishi will be courted by suppliers in [South] Korea, Taiwan, China as well in the United States, the UK, France, Germany and, of course, Canada," Mr Fingleton says.

Japanese firms such as Mitsubishi and Kawasaki, through their heavy industry units, have been providing products to Boeing for the past two to three decades, developing wings and even fuselage components for the US jet maker, Mr Bhaskara adds.

That exposure to sector-leading manufacturing, planning and technologies has given them the ability to quickly spool up and build their own world-class airliner, he says.

"And the MRJ, despite its uneven development process, is truly a modern western airliner in all but locale."

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