Boeing Makes Moves On Airbus A321XLR Competitor Plan

Guy Norris February 02, 2021

Credit: Boeing

Boeing is taking the first tentative steps towards an all-new airliner designed to compete with the Airbus A321XLR and, despite the current cost and market headwinds, has begun sounding out suppliers for provisional requests for information.

The new Boeing airliner study, believed to be called the -5X, appears to be an outgrowth of the shelved New Midmarket Airplane (NMA) project and is targeting the 250-275 seat size category in a two-class, twin-aisle configuration. The aircraft, which would effectively be a replacement for the 757-200/300, would likely have a range of up to 5,000 nm and be aimed at entry-into-service in the late 2020s.

According to industry sources the program goals stress design simplicity and low cost. To minimize development investment and time to market, the company aims to maximize the use of existing structures, systems and propulsion technology—much of it already studied for NMA. Boeing declines to comment on the specifics and says it doesn't "have anything to add" to remarks made on Jan. 27 by company CEO Dave Calhoun—who hinted at continuing studies of such a new aircraft project.

Calhoun, speaking at Boeing's 2020 fourth-quarter earnings call, said an A321-sized competitor is "pretty much in the right space with respect to where next development efforts lean." He noted, "we are really progressing well on our engineering and manufacturing technology development so that we're ready when that moment comes to offer a really differentiated product. So, I'm sure it's not a lot of rocket science for you to add up and guess where things end up. But we're not going to call out that point design. This isn't the moment."

Calhoun's comments also reaffirm that Boeing is sticking to its revised 2020 development plan to focus next on the mid-range sector rather than potentially return to a New Small Airplane (NSA) successor to the 737 MAX. The company previously outlined its intent to go after the A321XLR market in February 2020 after lukewarm market response had earlier forced it to shelve plans for the more ambitious, broader ranging NMA family.

The baseline NMA family concept first focused on a 757 replacement and was later expanded to include a successor to the 767. By early 2019 the NMA was considered ready for market and centered on two main versions, the 225-seat NMA-6X and 275-seat NMA-7X, with the larger of the pair expected to be developed first. However, just as Boeing was about to seek board authority to offer the NMA to airlines in March-April 2019, the second 737 MAX accident and subsequent worldwide grounding of the model occurred.

Key NMA program elements which remain germane to the current A321XLR competitor point design include an overriding focus on a twin-aisle design capable of 5,000 nm missions that could be developed for single-aisle production costs. Program timing has, however, completely changed after the COVID-19 pandemic. Under the original NMA plan the larger variant, dubbed internally the 7K7-7X, was provisionally targeted at entry-into-service in 2025. Now the revised plan is thought to be aimed at entry-into-service of the -5X in the late 2020s pending a potential go-ahead in 2022 or 2023.

Like the NMA, the aircraft is expected to incorporate composite wings and fuselage, and use versions of the same higher bypass ratio, 50,000 lb.-thrust class engines competitively proposed for the earlier family by the General Electric-Safran CFM joint venture and by Pratt & Whitney. The extended service entry timetable could also potentially provide an opportunity for Rolls-Royce to re-enter the contest with a version of the UltraFan. The engine maker dropped out of the NMA contest in 2019 citing tight schedule concerns but, with a potential late 2020s certification goal, may be able to re-consider a bid. The first UltraFan demonstrator is entering assembly and is due to run in early 2022.

Despite Boeing posting record losses close to $12 billion in 2020, industry analysts believe the company will be able to sustain the required initial research and development funding for a new program. Rob Spingarn, Credit Suisse's Global Head of Aerospace/Defense Equity Research, says "it's not like they need to come up with $25 billion all at once." Speaking to Aviation Week, Spingarn adds "they could spend $2-3 billion a year."

Spingarn projects that Boeing's cash situation will improve as MAX production and deliveries spool up and demand returns in the next couple of years. "There's going to be a renaissance at some point," he says. "And that is going to generate cash flow that can fund the next airplane."

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