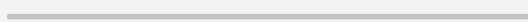






“The sky is no longer the limit” – Archer Aviation to Offer 6-Minute eVTOL Flights to the Airport – CEO Adam Goldstein

By Lynn Walford – June 28, 2022

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Archer Aviation Inc plans to reduce travel times to key destinations through electric air-taxi services using eVTOL. Auto Futures talks to CEO, Adam Goldstein, who details how the company is on track to fly passengers over traffic to get where they are going in several minutes.

Advancements in electric power systems have enabled a new type of aircraft – electric vertical take-off and landing (eVTOL) aircraft. They can fly routes of up to 60 miles per trip, and help people get to where they are going safely, quietly and at a low cost, says Goldstein.

“The first part of the journey has been about designing, developing and certifying the aircraft. So, we are in the process of doing that. Our goal is to certify the vehicle by the end of 2024,” he explains.

The second part is to operate the aircraft and launch networks.



The Road to Deploying eVTOL Services is Paved with Funding And Testing

In 2021, Archer's eVTOL demonstrator aircraft, Maker, completed its first successful hover flight in December. In September 2021, the company was listed on the New York Stock Exchange through a SPAC (special purpose acquisition company).

"We are building a pilot, plus four-passenger aircraft which will fly on typical missions of 20 to 30-mile type routes, where we will operate these aircraft all day long. The routes which could be an hour to and a half in traffic by car could be cut down to 15 minutes or less," says Goldstein.

The Archer e-taxis have many advantages. They fly 150 miles per hour in a straight line and can take off and land vertically. They do not need a runway and can land or take off in areas that are near the starting and stopping points where people are going.

Archer's production eVTOL aircraft will weigh approximately as much as a Tesla Model X, which weighs about 5500 pounds. It can land in parking lots, parking garages, rooftops of parking garages and easy-to-access locations. Then, ultimately, people will start to build eVTOL ports, says Goldstein.

"We started our flight test campaign last year. This year we said it will show the full flight envelope of the Maker demonstrator aircraft."

He explains the full-flight envelope is the tricky and most difficult part of flying aircraft, especially the transition. The aircraft take-off and land like helicopters. They also fly like a plane. To transition between those two modes, the motors that face up (like a helicopter) have to tilt forward in front of the wings so the aircraft can fly like a plane.

"We are going to show the full capabilities of these aircraft. The engineering work has already been done. Now, we flight-test and show it. We are highly confident in our ability to do it in about a year which would be one of the fastest programs ever done," he explains.

The test aircraft is remotely piloted over non-populated areas. The production aircraft will have a human pilot.



Partnerships for Operation of UAM

United Airlines is an investor and a strategic partner to Archer.

“United put in an order for a billion dollars worth of aircraft – that is 200 aircraft with an option for an additional 100 aircraft. And they are helping us with everything from the design of the aircraft to the operational side of air-taxis. They are masters at operating planes safely. They are helping us with things like our pilot, maintenance or operations strategies.”

“Our ultimate goal is to operate the air-taxis ourselves. This is a long journey, and we need to help pay for it along the way. We will sell them to different partners. We start with selling half and operating half,” says Goldstein about its UAM aerial ride-sharing service using Archer eVTOL aircraft.



Archer Operate UAM Services With Uber-Like Prices

Goldstein points out that the company hires excellent people with industry experience. On June 14, it announced the appointment of Tom Anderson as Chief Operating Officer, Urban Air Mobility (UAM). Anderson will oversee and direct the UAM commercial operating service. Anderson formerly was Chief Operating Officer of Breeze Airways.

The company is looking to deploy in the most viable markets first – Los Angeles and Miami.

“LA is kind of like the poster child for UAM. LA has fifteen million daily trips which five million take longer than an hour. Five million people are stuck in traffic for an hour every day. So you start to think about how big these markets can be. It is tremendous. LA is a really good market,” says Goldstein.

He says New York is another good market with 27 million trips to airports a year.

“I think the markets will develop over time. We will start with point-to-point routes where it makes sense. Then we will expand to other places,” he adds.



How Much Will an Archer Air-Taxi Flights Cost?

Archer estimated that it can launch the service for between \$3.00 and \$4.00 per passenger mile. Therefore the charge for a 20-mile trip would be between \$60.00 to \$80.00. Goldstein estimates a trip from downtown Los Angeles to the LA airport that is 15 miles would take about six minutes and cost \$45.00-\$60.00.

“A lot of our competitors announced similar types of price points. The reason why we get there is we look at the direct operating cost of manufacturing aircraft and the direct operating cost around them. And we think we can operate an affordable product and make a good margin at rates similar to Uber prices today,” says Goldstein.

The pricing is not expected to have Uber-like spikes with demand.

"We haven't looked at dynamic pricing. The goal is to try to create a product that is affordable to the masses – that's ubiquitous."

What Will Archer Flights Be Like?

Auto Futures asked if passengers can take their dogs with them and if there will be any creature comforts on the aircraft.

"We have not thought about dog or pet travel. However, we will be offering heating and air-conditioning," says Goldstein.

He says the flight will feel smooth, more like a helicopter ride, and he does not expect that passengers will experience motion sickness.

He adds the air-taxi rides will be quiet. The Archer aircraft have a significantly reduced noise footprint as compared to helicopters. The aircraft sound is near-silence when flying overhead. The level and the noise generated will blend into the background of the environment.



The Future of Archer Aviation

"We will use existing airspace. We'll fly okay with current regulations. We're certifying at very high levels of safety, much higher than helicopter safety. As it becomes more scaled up you likely will see the airspace open up further because it is a good safe form of transportation," says Goldstein.

He imagines the routes as invisible tubes in the air. He says the sky is good for stacking things on top of each other. There is a lot of room to build infrastructure and the ability to scale in the sky.

"I think the aircraft will create a lot of demand. People will be able to take them safely and will ultimately look at expanding existing airspace," says Goldstein who concludes, "With Archer's UAM and aircraft – the