The Power of Blown Lift for Sustainable Advanced Air Mobility

Introduction

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DECARBONIZE AVIATION

TO BRING AIR TRANSPORTATION TO EVERY PART OF THE WORLD

ELECTRA eSTOL

Operational flexibility of a helicopter with operating costs below current conventional aircraft

9 PASSENGERS

500 MILES
plus 45 mins reserve

175 KTS
Cruise Speed

300FT **x** **100**FT
Runway

75 dBA AT **300**FT
Quiet takeoff

BLOWN-LIFT TECHNOLOGY

Blown Wing → 3x Lift Coefficient → Low Takeoff/Landing Speeds ~30 kts → 150’ Ground Roll (with Car-like acceleration)

Note: Blown-lift has been extensively researched and tested by NASA and large aircraft OEMs in the 60s/70s/80s, but was not practical with traditional engine technology. Distributed Electric Propulsion makes this now feasible at low complexity and cost

Green: 65 dBA contour
Yellow: 75 dBA contour

eSTOL NOISE PROFILE

ELECTRA eSTOL

SANTA MONICA AIRPORT

Source: ANOPP2 models calibrated with test data

CTOL NOISE PROFILE

SINGLE ENGINE TURBOPROP

SANTA MONICA AIRPORT

Source: DOT-VNTSC-FAA-10-17 DOT-FAA-AEE-2010-06