A Sustainable Future for Aviation



N250UT

Economics of Electric Aviation

Lower Energy Costs: Electricity is ~40X cheaper than JetA (not accounting for the sustainability cost of COe)

Cheaper Maintenance: Electric maintenance is ~33% of the cost of maintenance for similar feeder aircraft **Fewer Parts:** ~70% fewer parts than similar-sized turbine aircraft, based on the current bill of materials

Meet BETA

BETA is an electric aerospace company that is developing systems to enable customers to complete all-electric cargo, logistics, medical transport, and passenger missions:

Electric Aircraft Zero operational emissions aircraft with distributed propulsion

Charging Infrastructure Multimodal charging infrastructure to enable EVs of today and tomorrow

> **Training Programs** Curriculums and immersive simulators to train pilots and mechanics in electric

N25AII



Lessons from Ava

Our first aircraft was **liquid cooled** and **thrust vectoring**. We quickly learned it was not commercially viable. Why not?

- Increased certification risk / expense
- Increased weight / complexity
- Increased maintenance costs
- Reduced performance range and payload
- Reduced safety

However, we did prove BETA flight controls, battery management system and culture of flight test safety.

N802UT





CX300 Airport-to-airport all-electric airplane



Safe | Built-in redundancies and extensive real-world testing

Simple | Air cooling with no articulating surfaces or rotors

Pragmatic | Purpose-built for simplicity and ease of operation

Inspired by Nature | Modeled after the long-migrating Arctic Tern

Crawl, Walk, Run Fleet Integration

Phase I (CTOL) Early Adoption + Integration



Phase III (Integrated Fleet) Zero Emissions Operations



CTOL

- \rightarrow Closes current missions
- \rightarrow Improves existing OpEx
- \rightarrow Simple integration into fleet
- \rightarrow Utilizes existing infra.
- $\rightarrow\,$ Fits existing logistics operations
- \rightarrow Begin CO2e reduction



VTOL

- \rightarrow Unlocks new missions
- \rightarrow Enables new revenue streams
- \rightarrow Stepwise integration into fleet
- \rightarrow Utilizes new and existing infra.
- → Enables point-to-point logistics
- \rightarrow Significant CO2e reduction





- $\rightarrow\,$ Optimizes missions
- \rightarrow Improved OpEx and growth
- \rightarrow Supports entirely net-zero fleet
- \rightarrow Utilizes new and existing infa.
- \rightarrow Transforms network to mesh
- \rightarrow Meets net-zero sustainability

Pragmatic Charging Solutions

Multimodal: EV charging that supports all EVs – aircraft, trucks, cars – not just BETA's ALIA

<1 Hr. Charge: Harmony between the aircraft and charging systems enable safe supercharging

50ft retractable reel: The 50 foot cord provides flexibility in aircraft parking orientation and location to minimize aircraft ground handling.

Mobile App: Powered by a mobile-app that allows for seamless, touch-free access to reliable charging.



HHS/ASPR: Deploying a Charging Network

BETA received a \$10M contract from the Advanced Regenerative Manufacturing Institute (ARMI) for the U.S. Department of Health and Human Services (HHS) and the Administration for Strategic Preparedness & Response (ASPR) to work on a public health preparedness pilot in Mississippi.

This will allow BETA to expand its network of multimodal charging infrastructure to demonstrate the rapid deployability AAM for remote locations to serve emergency response support.

BETA's Charge Cube



FOB for medical storage



Fixed Charge Pad (KPBG)

The contract will help to build:

- Eleven (11) Electric Aircraft Charger Installations
- One (1) Forward Operating Base (FOB)
- One (1) Mobile Charge Truck



BETA's mobile charge truck supports aircraft recovery and mobile maintenance

Committed Partners

We have a versatile aircraft design with announced customers across four verticals, and have raised more than \$800 million from financial institutions and funds





ALIA Today: Demonstrated Real-Life Performance

- → Operating under Market Survey flight certificate from FAA
- → Qualification evaluation flights with FAA, U.S. Air Force, Army
- → Louisville and back on own charging infrastructure (1,300+ nm)
- → Bentonville and back on own charging infrastructure (2,000+ nm)
- → Briefed U.S. Secretary of Transportation in Louisville, KY
- \rightarrow Flown through Class B and C airspace
- \rightarrow Completed 336 nm flight
- \rightarrow Completed first 50ft battery drop test (with FAA, NIAR)
- → 3+ years of flights (*full-scale pre-engagement program*)

Qualitative Evaluation Flights

Our testing program has included multiple qualification evals with test pilots from the Air Force, Army, and most recently, the FAA. These flights have provided valuable feedback in our development and given key external stakeholders validation of the aircraft's performance as well as our training program.

All qual evals followed the same cadence, allowing us to standardize safety and training procedures:

- \rightarrow Extensive ground school course covering every system on ALIA, taught by the SMEs that designed them
- → Dedicated simulator training sessions with current BETA test pilots, flying the planned test route and practicing emergency procedures
- → Culminated in a real-world flight of our ALIA aircraft, with a BETA test pilot in the left seat









Extensive Safety & Compliance Tests



- → Successful result; BETA-designed battery pack showed no significant damage at cell or pack level
- → Demonstrated completion of intended means of compliance for certification
- → Important step toward creating a foundation of battery safety and testing for the industry

Rethinking Military Aviation Logistics

Military cargo transport, humanitarian response, and range/base logistics missions are enabled by the key benefits of electric aviation:

.S. AIR FORD

Operational efficiency and effectiveness

A reliable, safe, and quiet aircraft with low maintenance costs ensures mission success.

Fuel Independence

Net zero emissions are enabled by fast multi-modal charging infrastructure.

Flexibility

Point-to-point logistics and runway independence increase aircraft adaptability.



Built for an Autonomous Future

We recognize the value of autonomy - especially for military and cargo use cases - and are employing a crawl, walk, run approach to integrating this technology.

Designed with autonomy in mind

ALIA's flight controls are fly-by-wire, making integration with autonomous systems straightforward

Initially focused on a manned configuration

Identified this as the clearest path to FAA certification

Leveraging industry-leading technologies

Already taken steps toward integration - will continue to augment our aircraft with the latest certifiable autonomy technology, as it's developed



Manufacturing & Final Assembly Facility









