



Introducing *PropWings*TM

Enhanced Lift for Electric Aircraft

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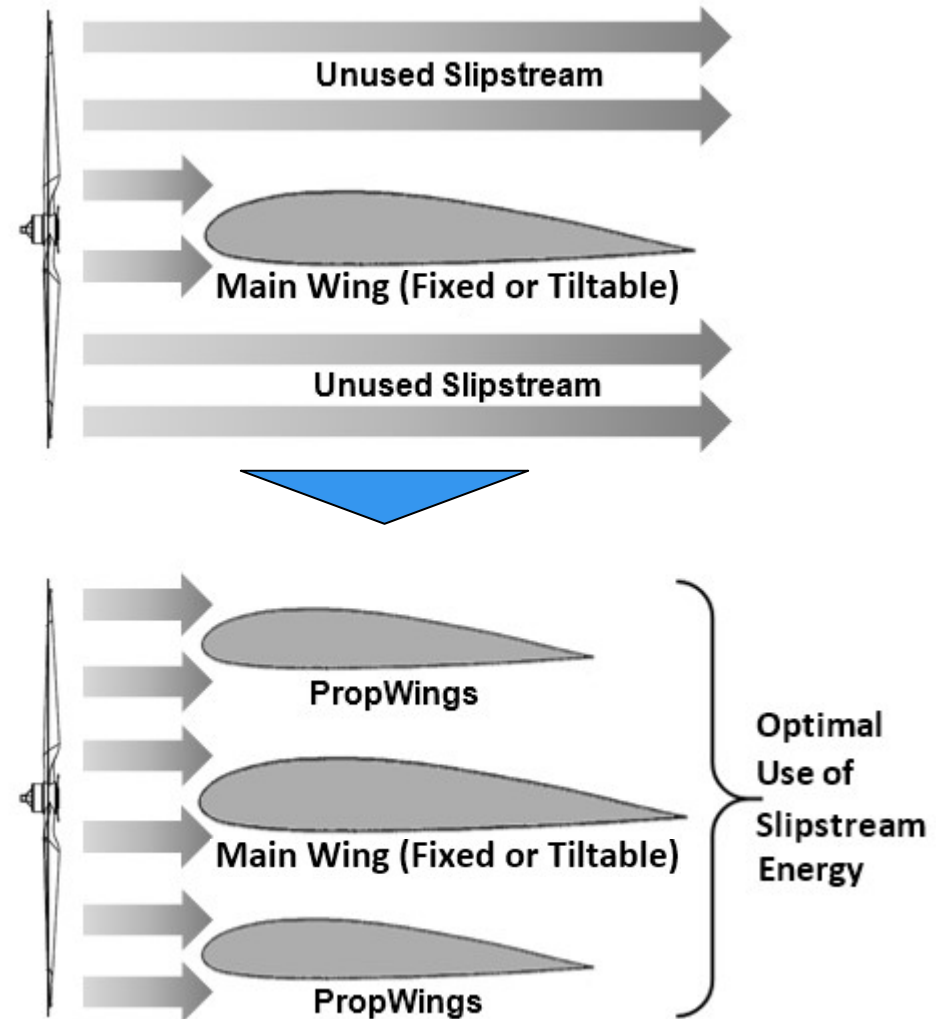
- **Flight Kinetics, Inc.** has invented a propulsive high-lift technology, called **PropWings**, for electric and hybrid-electric Vertical Takeoff and Landing (eVTOL) aircraft.
- **PropWings** is a proprietary, patentable, and disruptive technology applicable to a wide range of eVTOL designs, to enable longer flying range, heavier payloads, with increased safety and efficiency.
- **eVTOLs** are expected to be the workhorse aircraft for air taxis and shuttles, local cargo logistics, and emergency response aircraft, both piloted and autonomous.
- **Analysts estimate** that the global eVTOL aviation segment will grow to \$97B (36% CGAR) from 2025 and 2033, with air taxi sales alone of 30,000 units by 2045, driven by Advanced Air Mobility (AAM) and Urban Air Mobility (UAM) initiatives that look to transform the aviation industry. The market is on an exponential growth trajectory, with North America projected to be the fastest growing region.
- **The key to PropWings' efficiency** is its utilization of previously unused kinetic energy in the propeller slipstream, to significantly amplify lift, increase the aircraft's performance envelope, and offset battery limitations.

How PropWings Work

Technology Overview:

- ❑ Over 50% of propeller slipstream is wasted and does not interact with the main aircraft wing for lift.
- ❑ PropWings repurposes the energy already expended by the propeller in generating thrust, for increased lift.

- ❑ **PropWings locates additional wingspan into the unused propeller slipstream, to generate lift.**
- ❑ **PropWings increases the main wing's effective wingspan, reducing induced drag to improve energy efficiency during cruise flight.**



PropWings on Representative Aircraft

Horizontal Flight Mode



PropWings is the only electric and hybrid-electric VTOL aircraft technology that can provide increased flying range and payload capacity without consuming additional energy.

On tiltrotor and tilt-wing eVTOL aircraft, **PropWings** transitions with the propeller from vertical helicopter mode to horizontal flight mode, to capture propeller slipstream energy and generate enhanced lift.

Vertical Flight Mode



PropWings Value Proposition

PropWings provides an innovative, cost-effective solution to significantly amplify lift in eVTOL aircraft through propeller slipstream technology, leading to increased range, payload, efficiency, and safety.

- **More lift means less energy is needed:**

Reduced energy consumption is crucial to extend flight range and improve operational efficiency, and directly impacts the economic viability and practicality of electric flight.

- **More lift contributes significantly to safer flight:**

Quicker, more predictable transitions between vertical and horizontal flight modes, greater maneuverability, extended stall margins, and steeper climb rates.

- **More lift can revolutionize Electric Aviation:**

The invention offers substantial performance gains with minimal added weight, complexity, or cost. The adaptable technology has the potential to revolutionize both current and future electric aircraft designs.

- **Flight Kinetics, Inc.** aims to commercialize the **PropWings** technology through strategic partnering and licensing arrangements.
- The company has filed initial patents and sought to validate its technology by having industry experts review the technology – the universal feedback is that the PropWings technology, which is based on proven aerodynamic principles, could have widespread adoption if it performs as expected.
- The company will engage with industry partners to perform computer modeling to validate the concept and identify opportunities to optimize it. After that, wind tunnel testing of prototype designs will be performed.
- Once the validation steps above are completed, Flight Kinetics, Inc. will enter into licensing agreements with key industry companies who will further commercialize the technology.
- Flight Kinetics, Inc. expects to earn a long-term stream of recurring revenue through royalty payments from licensees.

The team behind *PropWings*™

Management/Sales: Lester Erlston, CEO

- 40+ years in management, sales, marketing, and manufacturing.
- 9 issued patents.



Aerodynamics: Professor Robert Breidenthal

- Professor of Aeronautics & Astronautics, University of Washington.
- Research interests in Turbulence and Fluid Mechanics.



Business Strategy: Ken Vaughn

- 40+ years in engineering, product development, and management.
- Pioneer in impact investing in the cleantech sector.



IP and Licensing: Mark Hubert

- Seasoned IP attorney, 20 years patent prosecution and litigation.
- Gained experience through 20 years hands-on engineering.

