Electric Aircraft & Propulsion Types

Understanding the Future of Sustainable Flight

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Tagline: Tomorrow Takes Flight

What is an Electric Aircraft?

Aircraft powered fully or partially by electricity

Cleaner, quieter alternative to traditional aviation

Key to sustainable regional and urban mobility

Types of Electric Propulsion

1. Battery-Electric (BEA)
2. Hybrid-Electric (HEA)
3. Hydrogen-Electric
4. Solar-Electric

Battery-Electric Aircraft (BEA)

Powered by onboard rechargeable batteries

Examples: Pipistrel Velis Electro, Alice by Eviation

Typical power: 200-600 kW

Range limited by battery density

Hybrid-Electric Aircraft (HEA)

Combination of fuel-burning engine and electric motor

Examples: Ampaire Electric EEL, VoltAero Cassio

Provides range extension and efficiency

Power output: 300-800 kW depending on system

Hydrogen-Electric Aircraft

Uses hydrogen fuel cells to generate electricity

Zero-emission at point of use

Examples: ZeroAvia ZA600, H2Fly

Power output: ~600 kW and growing

Solar-Electric Aircraft

Solar panels provide electricity for propulsion or battery charging

Examples: Solar Impulse 2

Mainly experimental or ultra-light

Low kW output, very energy-efficient

How Much Power is 1 kW?

1 kW = 1.34 horsepower

Small eVTOL may use 100–200 kW

Larger electric aircraft may use 500–1,000+ kW

Helps determine range, speed, and load capacity

Why Electric Propulsion Matters

- Reduces carbon emissions
- Lowers noise pollution
- Enables new aircraft designs (eVTOL, STOL)
- Supports urban air mobility and climate goals

Thank You

Quote: 'The power of flight is being reimagined—quietly, cleanly, and electrically.'

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