

What is X-57 Maxwell?

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About X-57 Maxwell:

- It is an **all-electric experimental aircraft** designed to demonstrate multiple leading-edge technologies.
- It is being **designed and developed by NASA**.
- **Goal:** To **demonstrate that an all-electric airplane can be more efficient, quieter and more environmentally friendly** than airplanes powered by traditional gas piston engines.
- **Design:**
 - It was **made by modifying an Italian Texnam P2006T light aircraft** to be powered by an **electric propulsion system**.
 - It will **demonstrate the use of a high-power distributed electric propulsion system** for use on an aircraft, including a **460 volt battery to power 14 motors and propellers**.
 - The **cruise motor controllers** are critical components of the X-57's powertrain, as they **convert the energy stored in the aircraft's lithium-ion batteries to power the motors** that spin the electric propellers.
 - **The wing, which is being reduced to 42% of the original size to significantly reduce drag,** will **feature wing-tip propellers** to reduce the wing-tip vortex at cruise.

Q1) What are lithium-ion batteries?

A lithium-ion battery is a type of rechargeable battery that is charged and discharged by lithium ions moving between the negative (anode) and positive (cathode) electrodes. Because lithium-ion batteries are suitable for storing high-capacity power, they are used in a wide range of applications, including consumer electronics such as smartphones and PCs, industrial robots, production equipment and automobiles.

Source: [NASA builds all-electric aircraft to create path toward electric aviation](#)

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