



## WHEN WILL WE HAVE AN ELECTRIC PLANE?

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The idea of the electric plane has existed since the electric car came into existence. Imagine getting out of the plane only to see the flight attendants plugging a giant cable into a charging station. It sounds like something from the future, but an electric plane may not be as far away as people think.

The electric plane would be far better for the environment, it would use rechargeable batteries, and it would presumably replicate the same level of performance as existing planes. But concerns have been raised on a frequent basis regarding the viability of such a device.

So when will we have an electric plane?

What this Innovation Relies On

The only way the divide between planes and cars is going to bridge is through advancements in lithium ion battery technology. This is the fuel that's going to power any electric innovation. There's always the fear that the batteries will run out of energy in the middle of a long flight and the aircraft will plummet to the ground. The batteries also have to perform as well as what currently exists.

But battery technology has managed to fight its way to a priority place in this industry. It's done this due to the increasing demand for and the success of electric cars. The Electric Cars Initiative wants to have 20 million electric cars on the road by 2020, which is helping to fuel innovation. Building a better battery has become a priority for automakers and entrepreneurs all over the world.

And today batteries are getting lighter, cheaper, and more durable.

## The Limits of Batteries

But the energy required to make a plane work far surpasses the energy required to make a car work. This is why a full electric airline is highly unlikely to happen anytime soon. The simple fact is that batteries are not powerful enough to fuel such a huge metal object.

The future for electric-powered planes is in smaller one and two-seat aircraft. Only when these smaller machines have been proven to be successful with electricity will airlines stand a chance of implementing this technology, despite the views of Airbus, who believe that it could be closer than people think.

## Changes to Infrastructure

In order to see electric airplanes, become a reality, it won't be necessary to simply improve battery technology. Upgrades to the infrastructure will also be necessary. It's not just about making an aircraft work, it's about how commercially viable it will be. Unless airline operators are confident that they can make more money by making the switch, they are never going to do it.

Batteries must be able to be charged quickly. There also has to be the infrastructure in place to charge large numbers of batteries in the first place. If batteries are taking hours to charge fully, it will be impossible for airlines to use them because it's such a fast-paced industry.

In order to accommodate this, airports will have to build fast-charging stations that are reliable and don't cost too much to install in the first place.

## So What's on the Way?

There are projects already in the pipeline. Boeing and Airbus have taken considerable steps forward in trying to make electric power work. Smaller makers of unmanned aircraft have also taken to trying to see how electric-powered planes will work.

But what people are quickly noticing is that these tests are done on an extremely small scale. The fact is that nobody has ever managed to make an aircraft of any significant size that works on electricity. The technology simply isn't there, which even the most ardent supporter of electric planes has had to acknowledge.

## The Dream

Airbus was one company that revealed what it believes to be the future of aircraft in 2011. They showed off the VoltAir Concept, which was a concept of what airliners will look like 25 years from now. As indicated earlier in this article, Airbus is sure that commercial airlines will be exclusively powered by electricity.

The big difference would be that batteries are swapped and refreshed every time the plane lands. Aircraft would also be far quieter, while lacking the characteristic roar of the engine.

It's important to mention that this is a project that has been in operation since the 1970s. Only time will tell whether Airbus's dream becomes a reality.

## Conclusion

The world has changed and airlines are determined to investigate what electric technology means

for them. There's a strong chance that smaller airplanes will start to use lithium ion batteries. Until technology advances significantly, there are no guarantees that this will happen anytime soon.

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