

A plane that runs on the sun to end US journey

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This May 22, 2013 file photo shows the Solar Impulse, piloted by André Borschberg, taking flight, at dawn, from Sky Harbor International Airport in Phoenix. The spindly no-fuel plane called Solar Impulse is scheduled to leave Washington Saturday early in the morning and arrive after midnight at New York's John F. Kennedy International Airport. It may silently buzz the Statue of Liberty on the way. The plane started its cross-country journey May 3 from San Francisco. (AP Photo/Matt York)

A revolutionary solar-powered plane is about to end a slow, symbolic journey across America by quietly buzzing the Statue of Liberty and landing in a city whose buildings often obscure the sun.

The Solar Impulse leaves from Washington on a journey planned for Saturday, depending on the weather. It will take hours for the journey—top speed is 45 mph (73 kph)—and there are none of the most basic comforts of flying.

The aircraft's creators view themselves as green pioneers—promoting lighter materials, solar-powered batteries and conservation as sexy and adventurous. Theirs is the high-flying equivalent of the Tesla [electric sports car](#). They want people to feel a thrill while [saving the planet](#).

Bertrand Piccard is one of the two pilots who take turns flying Solar Impulse. His grandfather was the first man to see the curve of the Earth as a pioneering high-altitude balloon flier more than 80 years ago. His father more than half a century ago first took a submarine to the deepest and most inaccessible ocean trench on Earth.

Now, Piccard says there's no truly new place on Earth for explorers to pioneer. At 55, he's tried.

"After a conquest of the planet, the 21st Century should be about improving the quality of life," Piccard said.

Europe saw Solar Impulse first with a [test flight](#) from Switzerland and Spain to Morocco last year. This year's U.S. flight is another trial run that's preparation for a 2015 around-the-world trip with an upgraded version of the plane.



In this June 17, 2013 file photo, Andre Borschberg, one of two pilots of the Solar Impulse plane is interviewed by a reporter on a ladder as he sits inside the cockpit of the solar powered plane during a media availability at the Smithsonian National Air and Space Museum's Steven F. Udvar-Hazy Center at Washington Dulles International Airport in Chantilly, Va. The spindly no-fuel plane called Solar Impulse is scheduled to leave Washington Saturday early in the morning and arrive after midnight at New York's John F. Kennedy International Airport. It may silently buzz the Statue of Liberty on the way. The plane started its cross-country journey May 3 from San Francisco. (AP Photo/Jacquelyn Martin, File)

"We're flying the most extraordinary airplane in the world," Piccard said.

Parts of its wings are three times lighter than paper. Its one-person cockpit is beyond tiny.

Most of the 11,000 [solar cells](#) are on the super-long wings that seem to

stretch as far as a [jumbo jet](#)'s. It weighs about the size of a small car, and soars at 30,000 feet (10,000 meters) with what is essentially the power of a small motorized scooter.

"We can use much less energy than we use today without the sacrifice," said Solar Impulse CEO Andre Borschberg, the plane's other pilot. "And that's really important."

Borschberg and Piccard both say this is not about clean-energy planes for the future. What they're doing is more likely to improve energy efficiency on the ground, in cars and homes, agrees U.S. Energy Secretary Ernest Moniz, who met with the pair to talk up future energy a couple days after they landed in Washington.

Still, questions of practicality come up.

"It's clearly a stunt," said John Reilly, co-director of MIT's Joint Program on the Science and Policy of Global Change. "And it's clearly an attention-grabbing stunt. The idea that you could fly an airplane powered by the sun is kind of hard to believe. So doing it is an impressive stunt, I suppose."

But these kinds of gimmicks do pay off at times, Reilly said.

University of Colorado science policy professor Roger Pielke Jr. compared it to giant prizes that encourage private companies to go into space or build robot-driven cars, which are proving successful.

This, Pielke said, is "an essential part of technological innovation. It gives people an opportunity to attempt what previously was thought of as impossible."

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