

# Pioneering solar pilots 'make sci-fi a reality'

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Andre Borschberg (R) and Bertrand Piccard are two thirds of the way through circumnavigating the Earth in the Solar Impulse 2 aircraft, a bid to inspire a future powered by renewable energy technologies

The Swiss pilot readying to cross the Atlantic in a solar-powered plane on the next leg of a record-breaking, round-the-world mission says he is making science fiction reality.

Bertrand Piccard, a psychiatrist and balloonist, will next command Solar Impulse 2 when meteorologists determine the best five-to-six day

window for the ocean crossing from New York to either Ireland, France, Spain, Portugal or Morocco, depending on the wind and the weather.

"It gives the sensation of being in a science fiction story because you look at the sun and you understand that it's your only source of power," the explorer and father of three told AFP in New York.

"You see left and right, your four props turning with electrical motors, with no noise and it's a vision of future," he added in an interview at John F. Kennedy International Airport.

Piccard, and Swiss entrepreneur and engineer Andre Borschberg, are two thirds of the way through circumnavigating the Earth in a bid to inspire a future powered by [renewable energy technologies](#).

Their single-seater plane, which they take it in turns to fly, weighs the same as a car but has the wingspan of a Boeing 747.

They take off at night with a fully-charged battery and climb to 28,000 feet (9,000 meters) in the day before descending to 5,000-6,000 feet, then catching the next sunrise, going up and down in waves.

The journey began on March 9, 2015 from Abu Dhabi, flying across Asia, the Pacific and the United States. They must now cross the Atlantic, fly through Europe and return to the Middle East.

Each pilot lives off special soups and meals designed to withstand extreme temperature changes and catnaps for 20 minutes at a time on a seat that extends into a business-class style flat bed.



Pilots Andre Borschberg (R) and Bertrand Piccard of the Solar Impulse 2 consider themselves superstitious and say they are focusing all their energies on making it back to Abu Dhabi

## **Cockpit yoga**

There is even time for Borschberg to practice yoga—sitting postures only he concedes—while Piccard does self-hypnosis to help recharge his batteries or sleep more efficiently.

They need to call on great physical strength.

When turbulence disconnects the auto pilot, Piccard and Borschberg must use their feet and upper body to deflect the yoke and the rudder as the plane swerves from left to right.

"Sometimes it's rock and roll," smiled Piccard. But he is never scared. He has been well trained and the worst that could happen, he says, would be to bail out, but only as an unthinkable last-resort.

"It would be really sad to lose the plane," he said. "We know it's a prototype, it's experimental so we have to be really careful with it."

Borschberg, who broke the world record for the longest continuous aviation journey on the 118-hour leg from Japan to Hawaii, said a positive mindset was vital.

But that journey was fraught with problems and months of maintenance work followed. The task ahead is monumental. The unstable situation in the Middle East throws up yet more challenges.



Solar Impulse 2 flies past the Statue of Liberty as it approaches New York City on the latest leg of a record-breaking, round-the-world mission

## **Electric flight in 10 years?**

Both pilots consider themselves superstitious and say they are focusing all their energies on making it back to Abu Dhabi.

But they also see themselves as modern-day versions of the Wright brothers, the American aviation pioneers working 100 years ago.

Their plane goes at the same speed as Wrights' first plane, is also a single seater and also flies only in good weather, Piccard noted.

"You have to start somewhere," agreed Borschberg, dismissing the impracticalities that make it impossible to replicate Solar Impulse 2 for commercial flight.

"I'll make a bet with you that in 10 years' time you have airplanes for short haul flights with 50 passengers flying electric," said Piccard.

They could leave urban airports at night, he points out. No noise and no pollution would allow airports and airlines to double capacity by working overnight, he believes.

"The aviation industry were all laughing when I started and now they are all working on electric airplanes," said Piccard.

"If you're unsatisfied and do nothing you get depressed. If you're unsatisfied and you do something, you become a pioneer."

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