

Solar plane revs up for historic round-the-world flight

March 7 2015, by Wissam Keyrouz



Bertrand Piccard, one of the two Swiss pilots of the solar-powered plane Solar Impulse 2, lands at the Emirati capital Abu Dhabi's small Al-Bateen airport during the third test flight early on March 2, 2015

A solar powered plane aims to fly into history on Monday, taking off from Abu Dhabi on a round-the-world odyssey to promote alternative energy.

The flight of Solar Impulse 2, whose hoped-for Saturday takeoff had to

be put off due to strong winds, will cap 13 years of research and testing by two Swiss pilots whose idea was ridiculed by the aviation industry.

The Si2 made a third successful test flight in the United Arab Emirates on Monday, and mission chiefs reported no problems.

Solar Impulse's chairman and one of the pilots is Bertrand Piccard, who hails from a family of scientist-adventurers and was the first person, in 1999, to circumnavigate the globe in a [hot air balloon](#).

"We want to demonstrate that clean technology and [renewable energy](#) can achieve the impossible," he told AFP.

"Renewable energy can become an integral part of our lives, and together we can help save our planet's natural resources," he said when the Si2's route was unveiled in January.

The plane is powered by more than 17,000 solar cells built into wings that, at 72 metres (236 feet), are almost as long as those of an Airbus A380 superjumbo.

Thanks to an innovative design, the light-weight carbon fibre aircraft weighs only 2.3-tonnes, about the same as a family 4X4 and less than one percent of the weight of the A380.

Si2 is the first sun-powered aircraft able to stay aloft for several days and nights.

The propellor craft has four 17.5 horsepower electric motors with [rechargeable lithium batteries](#).



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It will land 12 times on the trip lasting about 25 days spread over five months.

The longest single leg will see a lone pilot fly non-stop for five days across the Pacific Ocean between Nanjing, China and Hawaii, a distance of 8,500 kilometres (5,270 miles).

"Solar Impulse 2 must accomplish what no other plane in the history of aviation has achieved—flying without fuel for five consecutive days and nights with only one pilot in the unpressurised cockpit," said Andre Borschberg, the company's co-founder and chief executive, who is a former Swiss air force pilot.

Only room for one

The plane will take off from the Gulf to benefit from the region's relatively cloudless skies, stopping first in Muscat, Oman.

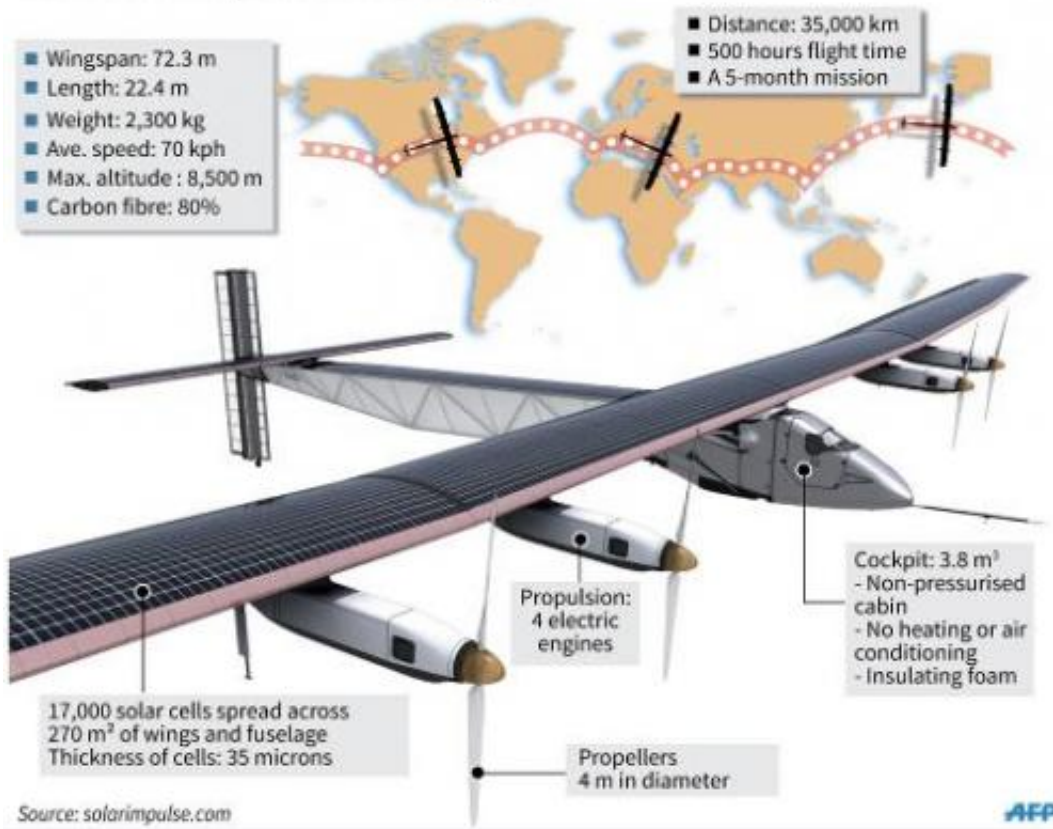
"From the operation point of view, this part of the world and the Middle East is the best location for us to start because it gives us the possibility to fly over India and China very early in the season," said Borschberg.

"It also gives us the possibility to be back in summer with relatively good weather," he told AFP.

From the Gulf Si2 it will cross the Arabian Sea to India before heading on to Myanmar, China, Hawaii and New York.

Solar Impulse 2

Planned world tour to promote alternative energy



Factfile on the new solar-powered aircraft Solar Impulse 2.

Landings are also earmarked for the midwestern United States and either southern Europe or north Africa, depending on weather conditions.

Borschberg and Piccard will alternate turns at the controls because the plane can hold only one person.

"Physically we are fine," Piccard said Monday of what he said would be a "very, very challenging and difficult" tour. "Andre is preparing himself with yoga (and) self-hypnosis."

Si2 is the successor to Solar Impulse, a smaller craft that notched up a 26-hour flight in 2010, proving its ability to store enough power in the batteries during the day to keep flying at night.

Two years ago, Borschberg and Piccard flew the original version of their plane on a two-month journey across the United States.

And Si2 had its first test flight of more than two hours in Switzerland last June.

It will travel at 50-100 kilometres per hour, with the slower speeds at night to prevent the batteries from draining too quickly.

As it circles the world, aiming to arrive back in Abu Dhabi in July, its progress can be monitored via live video streaming at www.solarimpulse.com.

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