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## Solar Impulse 2 completes first test flight ahead of its 22,000-mile round-the-world journey next month

- Solar Impulse 2 completed the first test flight over Abu Dhabi
- During the flight it soared over Sheikh Zayed Mosque and Capital Gate
- Next month it will attempt a round-the-world trip using just solar energy
- Plane will take off from Abu Dhabi, stopping in India, Myanmar and China
- It will then cross the Pacific Ocean, US and Europe before landing
- The 22,000-mile (35,000km) trip is expected to take five months
- Engines of the plane are powered by solar energy, with no fuel on board
- Its wings, with a span of 236ft (72 metres), are covered in 17,000 solar cells
- Two Swiss pilots will take turns at the controls in the tiny cabin

By [VICTORIA WOOLLASTON FOR MAILONLINE](#)

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A pilot's ambitious plan to fly around the world using just solar energy took a step closer this week. Andre Borschberg took off from Abu Dhabi and completed the first test flight of his Solar Impulse 2 plane ahead of next month's 22,000-mile trip.

During the 12-hour flight he soared over the Sheikh Zayed Mosque, the Landmark skyscraper and Capital Gate. Scroll down for video



Swiss pilot Andre Borschberg took off from Abu Dhabi and completed the first test flight of his Solar Impulse 2 ahead of next month's round-the-world trip. During the flight he soared over the Sheikh Zayed Mosque (pictured), the Landmark skyscraper and Capital Gate. The single-seater airplane has been designed to fly day and night without a drop of fuel and Mr Borschberg - along with fellow founder and pilot Bertran Piccard - will attempt the global trip within weeks. They will depart from Abu Dhabi before flying over the Arabian Sea, to India, Myanmar, China, then across the Pacific Ocean.

## SOLAR-IMPULSE 2 SPECIFICATIONS

The solar-powered airplane made its maiden flight in Switzerland in June last year. The single-seater aircraft is made of carbon fibre. It has no fuel on board and weighs around the same as a car at 382 stone (2,300kg). With a wingspan of 236 ft (72 metres), it is larger than a Boeing 747-8I jet liner. The 17,000 solar cells built into the wings supply four electric motors (17.5 CV each) with renewable energy. During the day, the solar cells recharge lithium batteries weighing 2,077lbs (633 kg) which allow the aircraft to fly at night and therefore to have virtually unlimited autonomy.

From there they will stop over in the United States, travel over the Atlantic Ocean to Southern Europe or Northern Africa before finishing the journey by returning to the initial departure point. The groundbreaking 22,000-mile (35,000km) trip, is expected to take five months. The engines of the plane - which has a wingspan of 236ft (72 metres) - will be powered solely by solar energy. The 17,000 solar cells built into the wings supply four electric motors (17.5 CV each) with renewable energy. During the day, the solar cells recharge lithium batteries weighing 2,077lbs (633 kg) which allow the aircraft to fly at night and therefore to have virtually unlimited autonomy. The Swiss pilots will take turns at the controls in the tiny cabin for five consecutive days and nights in the air. This will equate to approximately 25 flight days at speeds between 30 and 60 miles per hour (50 and 100 kph).



The single-seater airplane has been designed to fly day and night without a drop of fuel and Mr Borschberg - along with fellow founder and pilot Bertran Piccard - will attempt the global trip within weeks. The groundbreaking 22,000-mile (35,000km) trip, is expected to take five months and include 25 flight days



Solar Impulse 2's round-the-world journey will begin in Abu Dhabi with stopovers in India, Myanmar and China, before crossing the Pacific Ocean and flying across the US and southern Europe to complete its journey where it started. The route is illustrated in this graphic. To break up flying day and night, Solar Impulse 2 will stop in 12 locations around the world



It will take off in Abu Dhabi, capital of the United Arab Emirates in early March before stopping off in Muscat in Oman and Ahmedabad and Varanasi in India.

From there, it will fly to Mandalay, Myanmar, before making two pit stops in China at Chongqing and Nanjing.

The solar-powered plane will then cross the Pacific Ocean via Hawaii.

The Solar Impulse Twitter handle tweeted images throughout the test flight including this one taken at take off in Abu Dhabi



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**See the maiden flight of solar-powered plane Solar Impulse**



A pit-stop in the south west of the US will be chosen depending on weather conditions, before the Solar Impulse 2 stops off at Phoenix and at JFK airport in New York City. After crossing the Atlantic Ocean, it will make a stop somewhere in southern Europe, before undertaking the final leg of its journal to land in Abu Dhabi. The plane has a wingspan equal to that of the largest passenger airliner, but weighs the same as a family car at 5,100 lbs (2,300kg).



The plane (pictured) has a wingspan equal to that of the largest passenger airliner, but weighs the same as a family car at 5,100 lbs (2,300kg). Feasibility studies, design and construction have taken 12 years, said Mr Borschberg: 'Miracles can be achieved with renewables such as solar power.'

## THE INCREDIBLE JOURNEY



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The two pilots, together with a crew of 80 technicians, engineers and a communications team have been in Abu Dhabi for a fortnight and will conduct safety tests, test flights, and training to prepare for the mission ahead. During stopovers, people will be able to visit the airplane and Google Hangouts will be hosted

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'We want to show we can fly day and night in an aircraft without a drop of fuel,' added Mr Piccard.

'It is not the first solar airplane, however it is the first able to cross oceans and continents,' he said.

Mr Piccard said that the scale of the challenge is unknown.

'It is a question of technical reliability, of human weather and it is the challenge of discovery,' he said, before adding that if something goes wrong, the team will build another aircraft and continue the journey. 'There's a will in humankind to make a better world and find solutions to climate change,' he added.



'Miracles can be achieved with renewables such as solar power. We want to show we can fly day and night in an aircraft without a drop of fuel,' said Bertrand Piccard (pictured), one of the pilots

**Construction of the worlds first round the world solar airplane**





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