Hydrogen Powered Airplanes Take Off

hydrogen, Hydrogen Airplanes, rick perry, secretary of energy Rick Perry

China becomes 3rd country to test hydrogen-powered plane – report

China’s first domestically developed electrically powered light sport aircraft (Ruixiang – (RX1E). © VCG / Getty Images

China has become the third nation in the world to successfully test an aircraft using hydrogen fuel, the country’s ministry of science and technology has announced.

During the test in Shenyang, Liaoning province, the plane, based on the RX1E electric aircraft, reached a height of 320 meters and emitted zero pollution, Science and Technology Daily, the official

newspaper of the ministry, reported. It made China the third country to successfully test an aircraft powered by hydrogen fuel cells, following the US and Germany.

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The aircraft's output performance, safety, reliability, and the environmental adaptability of the fuel cell system all met technical requirements during the flight, according to the ministry.

The plane is equipped with 20 kilowatts of hydrogen fuel cell power supply. It is powered by fuel cells and lithium batteries during its take-off and climb, and entirely by fuel cells during the cruise phase.

A charging time of 90 minutes enables the aircraft to fly for 45 to 60 minutes, the People's Daily reported in 2015. It was designed to be able to fly at a maximum altitude of 3,000 meters, according to the newspaper.

The push towards hydrogen fueled planes is largely aimed at cutting carbon emissions produced by aircraft. Airplanes dumped 700 million metric tons of carbon dioxide into the air in 2013, according to a 2015 report from National Geographic. That number is set to triple by 2050.

Angie Bergenson

New hydrogen storage facility will be located in Secretary of Energy Rick Perry's Texas Venue

Air Liquide has commissioned the world's largest hydrogen storage facility, which will be based in Beaumont, Texas. The new hydrogen storage facility will be located in an underground cavern and will compliment Air Liquide's already considerable hydrogen supply line. The cavern is 1,500 meters below the surface and is 70 meters in diameter. According to Air Liquide, the cavern will be able to store enough hydrogen to power a backup, large-scale methane reformer for 30 days.

Hydrogen continues to grow in popularity, but storage remains a common issue

Hydrogen fuel has become a very popular form of clean power, particularly in the auto industry. Hydrogen is consumed by fuel cells to generate electricity, and these energy systems have been around since the 1830's. Fuel cells have established themselves in several sectors, but one of their major challenges is efficient storage. Storing hydrogen has been a complicated issue, largely due to the volatility of the fuel as well as the energy required to convert hydrogen into a liquid.

Hydrogen storage facility will provide fuel to several industrial sectors

The new hydrogen storage facility is expected to serve various industrial sectors. Hydrogen is often used in the process of refining petrochemicals, and many organizations are beginning to show strong support for fuel cells. Hydrogen is also often used as a form of chemical storage for other forms of renewable energy, such as solar power. Surplus electricity generated by solar panels, wind turbines, and other clean energy solutions can be used to produce hydrogen, which can then be consumed by a fuel cell system to generate power.

AIR LIQUIDE CONTINUES WORK TO ESTABLISH A COMPREHENSIVE HYDROGEN INFRASTRUCTURE

Air Liquide believes that the new hydrogen storage facility will provide its customers with a more reliable service, allowing them to access hydrogen as they need to. Air Liquide has been instrumental in establishing a comprehensive, interconnected hydrogen infrastructure. The company has invested heavily in the development of hydrogen stations for fuel cell vehicles, as well as the overall hydrogen supply line.

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