



Backgrounder

Boeing Defense, Space & Security
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SolarEagle (Vulture II)

Description and Purpose:

SolarEagle is a solar/electric-powered high altitude long endurance unmanned aerial vehicle system that can provide persistent intelligence, surveillance, reconnaissance (ISR) and communications.

SolarEagle is designed with highly efficient electrical motors and propellers, and a high-aspect-ratio wing spanning more than 400 feet for increased aerodynamic performance. The highly-efficient propulsion system and long wingspan will allow SolarEagle to stay aloft for up to five years at altitudes above 60,000 feet. A SolarEagle demonstrator will test the vehicle's flight characteristics. It will be built prior to the five-year SolarEagle, and will fly for 30-90 days at the same altitudes. The demonstrator is scheduled to make its first flight in 2013.

The ultra-long endurance SolarEagle will carry payloads of up to 1,000 pounds.

Potential Customers:

The Department of Defense, Department of Homeland Security and various telecommunications operations.

General Characteristics:

Wingspan:	435 ft
Takeoff gross weight:	Approx. 6,000 lbs
Altitude:	65,000 ft
Motors:	solar/electric
Endurance:	five years

Background:

Vulture II is a Defense Advanced Research Projects Agency (DARPA) program. Boeing received the \$3.8 million Vulture I contract from DARPA in April, 2008. SolarEagle is the second HALE aircraft Boeing is currently developing. In July, Boeing unveiled the hydrogen-powered Phantom Eye. The Phantom Eye is designed to perform similar

missions as SolarEagle, but will stay aloft for 4 – 10 days at 65,000 feet. It is part of Boeing Phantom Works' rapid prototyping program.

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