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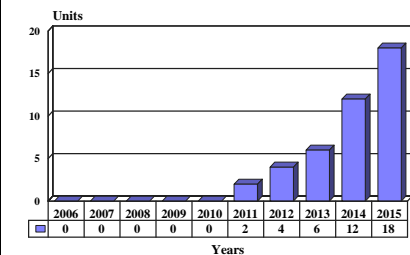
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U.S. Air Force CSAR-X - Archived 3/2007

Outlook

- USAF plans to procure 141 production aircraft; finalist selection planned for late 2006
- Candidates are Sikorsky H-92, Lockheed Martin US101, Boeing MH-47G
- Initial deliveries planned for 2011

**10 Year Unit Production Forecast
2006 - 2015**



Orientation

Description. Medium-lift helicopter for recovering/rescuing personnel under combat conditions.

Sponsor. U.S. Air Force Aeronautical Systems Center, Wright-Patterson AFB, Ohio, USA.

Status. Design, early development of existing designs.

Total Produced. Not applicable.

Application. Search and rescue; personnel recovery/rescue.

Price Range. Estimated at \$20 million in 2006 dollars.

Contractors

Prime

Boeing Army Systems	PO Box 16858 MC P30-08, Newtown Square, PA 19142-0858 United States, Tel: + 1 (610) 557-5060, RDT+E (Competitor)
Lockheed Martin Corp	http://www.lockheedmartin.com , 6801 Rockledge Dr, Bethesda, MD 20817 United States, Tel: + 1 (301) 897-6000, Fax: + 1 (301) 897-6704, RDT+E (Competitor)
Sikorsky Aircraft Corp	http://www.sikorsky.com , 6900 Main St, PO Box 9729, Stratford, CT 06615-9129 United States, Tel: + 1 (203) 386-4000, Fax: + 1 (203) 386-7300, RDT+E (Competitor)

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U.S. Air Force CSAR-X

Technical Data

Design Features. To be determined by finalist selection.

Variants/Upgrades

Block 0 PRV. The baseline, so-called minimal capability version, scheduled to enter service in FY11. The Block 0 is expected to feature similar weapons system capabilities as the current HH-60G and will incorporate off-the-shelf hardware and software to reduce both risk and costs. USAF plans to procure 105 Block 0 versions, all to be subsequently brought up to Block 10 standard from about 2016.

Block 10 PRV. The Block 10 version is slated for Initial Operational Capability (IOC) in FY18, and current plans call for it to be fitted with an upgraded radar featuring terrain-following and terrain-avoidance capabilities. The Block 10 may also feature upgraded engines. USAF plans to procure 36 aircraft built to Block 10 standard from the outset.

CVLSP. The Common Vertical Lift Support Platform (CVLSP) is the intended replacement for USAF UH-1s now used to support Air Mobility Command and Air Force Space Command requirements. As originally envisioned, the CVLSP would be a less complex version of the Block 0 platform. However, the requirement reportedly calls for a cruise speed of 225 to 300 knots, which has led some analysts to speculate that USAF would select a tiltrotor design over a CSAR-X variant. In any case, the commonality issue was put on the back burner in 2005 and USAF will address this at a later date. The service has identified a need for 66 CVLSPs.

Program Review

Background. Originally known as the Combat Search-and-Rescue (CSAR) requirement when formulated in 1999, later redesignated Personnel Recovery Vehicle (PRV) and now the CSAR-X, this aircraft will replace USAF's 100+ Sikorsky HH-60G Pave Hawk helicopters that are used primarily to locate and rescue downed airmen.

The Numbers

USAF plans to procure five test aircraft and 141 production-standard machines. In early 2005, the program timetable called for release of the Request for Proposals (RFP) in July 2005, finalist selection in March 2006, and initial deliveries in 2011. However, in mid-2005, the House Appropriations Committee cut \$42 million from USAF's FY06 budget request, noting its view that the program's timeline was "unrealistic." The legislators said they wanted the service to "realign the program with a more realistic date," adding that they considered the eight-month span between release of the RFP and contract award to be overly ambitious.

Restructured Program

In the spring of 2005, the service announced it would split CSAR-X deliveries by deploying a so-called minimal capability Block 0 platform in 2011, with an upgraded Block 10 variant entering service in 2016. The Block 10 will feature improved radar and engines, plus an optimized mission management computer and crew workload.

Beginning around 2016-17, the planned 105 Block 0 aircraft will be upgraded to Block 10 standard, and 36 aircraft will be built to Block 10 standard from the ground up.

The CSAR-X candidates are the Sikorsky H-92, Lockheed Martin US101, and Boeing MH-47G. Bell Boeing decided against offering its V-22 tiltrotor as it felt the requirement called for a pure helicopter design. Most analysts, however, expect the contest to boil down to one between the US101 and H-92 contenders.

Significant News

Boeing Announces Agreement with Keystone for CSAR-X Program – Boeing has announced an agreement with Keystone Helicopter of West Chester, Pennsylvania, to design, manufacture and deliver a patient treatment area for the HH-47 aircraft proposed for the U.S. Air Force CSAR-X helicopter program. The tandem rotor HH-47 is based on the CH/MH-47 Chinook tandem rotor transport helicopter. (FI, 8/06)

V-22 Osprey Will Not Enter CSAR-X Competition – Bell/Boeing will not enter its V-22 Osprey tiltrotor aircraft in the U.S. Air Force’s upcoming CSAR-X competition, saying that the requirements are more suited to a traditional helicopter. (*Flight International*, 10/05)

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Funding

U.S. FUNDING

	FY04 <u>QTY</u>	FY04 <u>AMT</u>	FY05 <u>QTY</u>	FY05 <u>AMT</u>	FY06 <u>QTY</u>	FY06 <u>AMT</u>	FY07 (Req) <u>QTY</u>	FY07 (Req) <u>AMT</u>
PE#0604261F		-		-		-		254.3
PE#0207224F		-		-		70.8		-
Total		-		-		70.8		254.3

All \$ are in millions.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	1999	CSAR/PRV and CVLSP requirements identified
Jan	2004	PRV program office established
Jul	2005	RFP released
Sep	2006	Planned finalist selection
	2011	Initial Block 0 deliveries planned
	2012	Planned Block 0 IOC
	2018	Block 10 IOC planned

Forecast Rationale

The CSAR-X was funded under PE#0207224F in FY06, with funding subsequently transferred to PE#0604261F in FY07. Finalist selection had been planned for March 2006 but that milestone slipped out to August of this year, and USAF’s Air Materiel Command is now planning to pick a winner by September 2006.

The overall consensus is that the competition will be largely a two-horse race between the US101 and H-92 designs, although late-comer Boeing has offered the MH-47G as well.

Too Close to Call?

When the requirement was first put forward several years ago, USAF had indicated a preference for the Sikorsky design, but the CSAR-X design specifications have since been modified in a number of areas and the competition may now be too close to call out a winner.

CVLSP Issues

A version of the initial Block 0 PRV was originally planned for selection as USAF’s Common Vertical Lift Support Platform (CVLSP) to replace UH-1s now used

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to support the missile field and other requirements. However, that plan was put on hold in 2005, and the service's intentions regarding commonality remain unclear. We are not including the CVLSP in our production forecast. USAF's current requirements call for 66 CVLSPs.

Delivery Timetable

Our forecast assumes finalist selection/contract award in late 2006, with initial Block 0 production deliveries

taking place in 2011. The Block 0 will achieve its Initial Operational Capability (IOC) in FY12.

Even without any timetable slippage, deliveries of the Block 10 version would not begin until at least 2017; thus, we are not yet forecasting that variant.

We are not calling out a CSAR-X winner at this time, but we are projecting deliveries of 42 aircraft, all Block 0 models, during the 2006-2015 forecast period.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Aircraft	(Engine)	thru 05	High Confidence Level				Good Confidence Level				Speculative			Total 06-15	
			06	07	08	09	10	11	12	13	14	15			
NOT SELECTED															
USAF CSAR-X	NOT SELECTED	0	0	0	0	0	0	2	4	6	12	18	18	42	
Total Production		0	0	0	0	0	0	2	4	6	12	18	18	42	