Columbia Program Manager: Missile Sub Still on Schedule, But Suppliers Present Biggest Risk for Delay



An artist rendering of the future Columbia-class ballistic missile submarine, which will replace the current Ohio class. U.S. Navy

WASHINGTON – The U.S. Navy's program for its next-generation ballistic-missile submarine (SSBN), the Columbia class, is on track to start construction on time, but the program has a tight schedule with little margin for delay, the program manager said.

"Our biggest risk today is the supplier base," said Capt. Jon Rucker, program manager for the Columbia SSBN, speaking Oct. 8 at the eighth annual TRIAD Conference in the Washington, D.C., area.

Rucker pointed out that when construction of the current Ohio class began, a supplier base of 17,000 companies contributed to the materiel and systems for the boat. Today, the Columbia program is pressing forward with only 3,000 suppliers.

The supply of skilled shipyard workers also is a concern to Rucker. He noted that General Dynamics Electric Boat, the prime contractor for the Columbia, is increasing its workforce to 20,000 from 17,000 workers. But the hiring is drawing skilled workers from naval shipyards that routinely maintain subs and carriers.

Rucker said that robots have been used in building the Common

Missile Compartment for the Columbia class and the U.K. Royal Navy's Dreadnought-class SSBN. Robots used in welding the missile tubes to the bottom of the hull section took 44 minutes and 8 seconds, compared with 4 days for a human worker.

Electric Boat has invested $1.8 billion in facilities to build the Columbia class and Huntington Ingalls Industries' Newport News Shipbuilding division is spending $800 million to $900 million to support the construction, Rucker said.

About 10 percent of the construction of the lead boat, Columbia, already has begun but its formal start is scheduled for Oct. 1, 2020. The first Columbia SSBN needs to be on patrol by the beginning of fiscal 2031, on Oct. 1, 2030. The program goal is to build each of the following boats of the class in 84 months.

"We will deliver at least 12 Columbia-class SSBNs by 2042," Rucker said, with emphasis on "at least."

The Navy operates 14 Ohio-class missile submarines, which are scheduled for an extended service life of 42.5 years. The last Ohio-class boat built, USS Louisiana, recently entered its final refueling period to extend its life. The Ohio class is scheduled to begin retirement in 2027.

"We can't extend them anymore," Rucker said.

Rucker noted that the Columbia program has a high design maturity, with a design that will be 83% at construction start. By contrast, the Ohio design was only 2% complete at construction start.

"We make sure we keep stable requirements," he said.

"We own this platform cradle to grave," Rucker said, noting that the program office will be responsible for sustainment in addition to construction.