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Navy Light Replenishment Oiler (TAOL) (Previously Next-Generation Logistics Ship [NGLS]) Program: Background and Issues for Congress

Introduction

The Navy's Light Replenishment Oiler (TAOL) program, previously called the Next-Generation Logistics Ship (NGLS) program, envisages procuring a new class of smaller at-sea resupply ships for the Navy. The Navy's proposed FY2024 budget requests \$8.8 million in research and development funding for the program. The Navy's five-year (FY2024-FY2028) shipbuilding plan programs the procurement of the first TAOL in FY2026 at a cost of \$150.0 million, the second in FY2027 at a cost of \$156.0 million, and the third in FY2028 at a cost of \$159.0 million.

Terminology

The Navy's *Combat Logistics Force (CLF)* ships, also called *underway replenishment (UNREP)* ships, are logistics ships that resupply the Navy's combatant ships (e.g., aircraft carriers, surface combatants, and amphibious ships) at sea, so that the combatant ships can continue operating at sea without having to return to port.

The Navy's current CLF ships include oilers (TAOs), dry cargo and ammunition ships (TAKES), and fast combat support ships (TAOEs). In these designations, T means the ship is operated by the Military Sealift Command (MSC) with a mostly civilian crew, A means auxiliary ship, O means oiler, K means cargo, and E means ammunition (i.e., explosives). (TAO, TAKE, etc. are also typed as T-AO, T-AKE, etc.) These CLF ships are large auxiliary ships. In the designation TAOL (also typed as T-AOL), the L means light, meaning a smaller version of such a ship. TAOL thus means an oiler that is smaller than a full-sized oiler.

New Fleet Architecture and Operational Concepts

To more effectively counter the improving A2/AD capabilities (i.e., capabilities that aim to create a defended area around a country that in time of conflict would be a "no-go zone" for opposing military forces) of China in particular, the Navy wants to begin shifting to a new, more distributed fleet architecture (i.e., mix of ships) that is intended to support a new Navy and Marine Corps operational concept (i.e., a general approach for using forces) called Distributed Maritime Operations (DMO), and an associated new Marine Corps operational concept called Expeditionary Advanced Base Operations (EABO).

DMO aims at avoiding a situation in which an adversary could defeat U.S. naval forces by concentrating its attacks on a relatively small number of large, high-value U.S. Navy ships. Under EABO, relatively small Marine Corps units armed with anti-ship cruise missiles and other weapons

would hop on and off islands in the Western Pacific to conduct "shoot-and-scoot" operations against adversary ships. For more on DMO, EABO, and the Navy's more distributed fleet architecture, see CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke, and CRS Report R46374, *Navy Medium Landing Ship (LSM) (Previously Light Amphibious Warship [LAW]) Program: Background and Issues for Congress*, by Ronald O'Rourke.

Logistics Ships Currently Being Procured

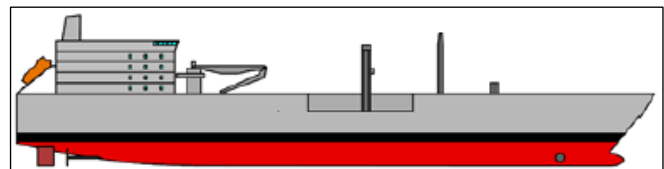
The Navy is currently procuring new John Lewis (TAO-205) class oilers, which are large CLF ships. TAO-205s have a currently estimated procurement cost of more than \$800 million per ship. For more on the TAO-205 program, see CRS Report R43546, *Navy John Lewis (TAO-205) Class Oiler Shipbuilding Program: Background and Issues for Congress*, by Ronald O'Rourke.

TAOL Program

Basic Concept for Ship

The TAOL program (referred to in some documents as the NGLS program) was initiated in the Navy's FY2021 budget submission. The program envisages building a new class of CLF ships (or a family of CLF ship designs) that would be smaller and individually less expensive to procure than the Navy's current CLF ships. **Figure 1** shows a sketch of a Navy notional TAOL design concept.

Figure 1. Navy Notional TAOL Design Concept



Source: U.S. Navy information paper, June 14, 2022, received by CRS from Navy Office of Legislative Affairs, June 16, 2022. The Navy states that the rendering "was developed by the Navy as an illustration of the indicative design that supports the refuel, rearm and resupply missions currently contemplated by the NGLS program. This illustration does not represent the final NGLS design."

The Navy states that the TAOL

is planned to be a new class of ships to augment the traditional Combat Logistics Force (CLF) to enable refueling, rearming, and resupply of Naval assets—afloat and ashore—near contested environments via ship-to-ship operations and ship-to port operations

in support of Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO). Augmenting the traditional CLF, NGLS will provide a flexible, responsive platform to move fuel, personnel, equipment, and supplies between ships, advanced bases, ports, and dispersed nodes of the seabase; sustaining afloat (Surface Action Group) and ashore (Expeditionary Advanced Base) requirements.

(Source: *Department of Defense, Fiscal Year (FY) 2024 Budget Estimates, Navy, Research, Development, Test & Evaluation, Navy* [account], Justification Book Volume 2 of 5, March 2023, page 421.)

A February 1, 2022, report from *Inside Defense* stated that a Navy spokesman said that the TAOL will potentially be a family of vessels rather than a single class of ships. The Navy's Fleet Readiness and Logistics office (known as the N4 division within the Office of the Chief of Naval Operations, or OPNAV) approved the top-level requirements (i.e., major required features) for the TAOL in March 2020. The top-level requirements envision TAOLs being built in two variants: a Platform Supply Vessel (PSV) variant and a Fast Supply Vessel (FSV) variant. The two variants would perform the same missions, but the FSV variant would be smaller and faster than the PSV variant. The Navy states that commercial PSVs and FSVs are potential design solutions for the TAOL program, but that the Navy is not limiting the potential solution to those types of vessels.

Potential Procurement Quantity

The Navy has not yet determined how many TAOLs it wants to procure. The Navy's FY2023 30-year (FY2023-FY2052) shipbuilding plan, submitted on April 20, 2022, includes a table with figures for the potential future total number of CLF ships suggesting that the Navy might want to procure at least a dozen or so TAOLs, and perhaps twice or more than twice that number.

Potential Procurement Cost

The Navy's five-year (FY2024-FY2028) shipbuilding plan programs the procurement of the first TAOL in FY2026 at a cost of \$150.0 million, the second in FY2027 at a cost of \$156.0 million, and the third in FY2028 at a cost of \$159.0 million.

Industry Day

The Navy held an industry day for the TAOL program on June 25, 2020, the purpose of which was to introduce the program to potential industry participants and give them a chance to ask initial questions about the program. Attendees included representatives from shipyards, ship-design firms, and component suppliers.

Industry Studies

A January 6, 2022, press report stated that the Navy on December 17, 2021, awarded contracts to Austal USA of Mobile, AL; Bollinger Shipyards of Lockport, LA; and TAI Engineers, with main offices in New Orleans, LA, for industry studies for the TAOL program. The contracts reportedly have a base value of \$2 million each, with Austal USA's contract having a potential value of up to \$3.65 million, Bollinger's up to \$4.1 million, and TAI Engineers' up to \$3.46 million. The Navy will use studies, which are to last 24 months, to inform its understanding of cost-capability trade-offs for the TAOL.

Program Schedule

As mentioned earlier, the Navy's five year (FY2024-FY2028) shipbuilding plan programs the procurement of the first TAOL for FY2026. The Navy's FY2024 budget submission states that the Navy wants to award the Detail Design and Construction (DD&C) contract for the program in FY2026.

FY2024 Funding Request and Congressional Action

The Navy's proposed FY2024 budget requests \$8.8 million in research and development funding for the TAOL program in Project 4045 (Next Generation Medium Logistics Ship) within Program Element (PE) 0603563N, Ship Concept Advanced Design, which is line 45 in the Navy's FY2024 research and development account.

The House and Senate Armed Services Committees and the House and Senate Appropriations Committees, in their reports on the FY2024 National Defense Authorization Act (NDAA) (H.R. 2670/S. 2226) and FY2024 DOD Appropriations Act (H.R. 4365/S. 2587), all recommended approving the Navy's FY2024 funding request for the TAOL program in Project 4045 of PE 0603563N.

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