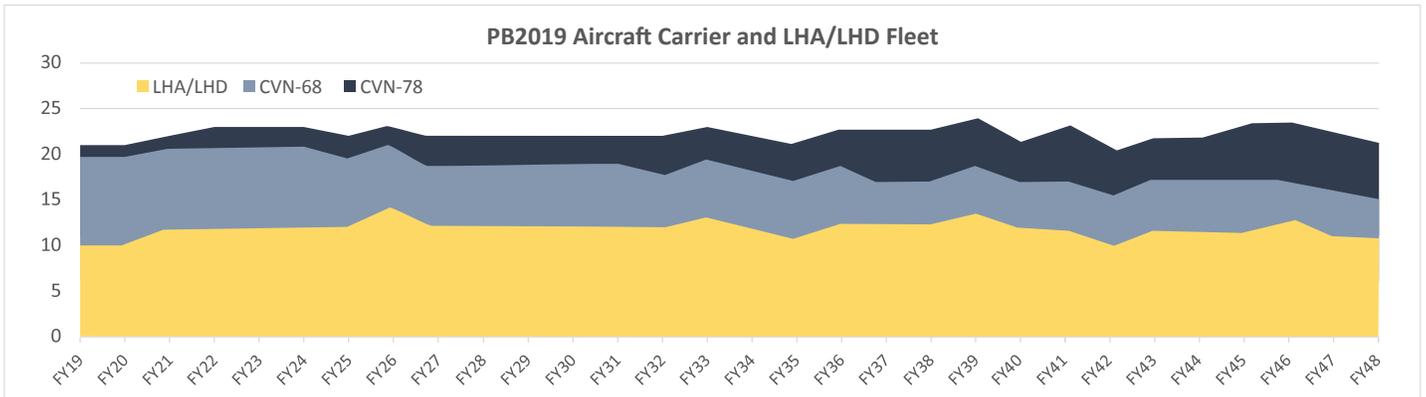


Sustaining Future Naval Airpower with Accelerated Aircraft Carrier Construction Today



KEY POINTS:

- Nuclear aircraft carriers (CVN) and large-deck amphibious assault ships (LHA/LHD) are mobile air bases that can quickly respond to crisis and operate near areas of conflict without host nation restrictions
- With the F-35 Lightning II, U.S. aircraft carriers will deploy stealthy, 5th-generation aircraft equipped with the world's most advanced sensor and command and control systems
- Under its FY2019 shipbuilding plan, the Navy will never reach its requirement of 12 nuclear aircraft carriers CVNs and 12 LHA/LHDs

WHY DO WE HAVE THIS REQUIREMENT?

- The Navy needs 12 CVN and 12 LHA/LHDs to maintain 2 of each deployed forward at sea, assuming 1 of each is in overhaul, 1 of each is based in Japan, and the remainder are based in the United States and operate under the Optimized-Fleet Response Plan (O-FRP)
- LHA/LHDs cannot replace a CVN's 44 strike-fighters and associated radar, electronic warfare, and logistics aircraft, but can carry up to about 15 short-takeoff strike-fighters to temporarily fill gaps when CVNs are not available
- As tensions increased with North Korea and China during the last several years, the U.S. Navy often maintained 2 CVNs forward in the Western Pacific, and used surge CVN deployments or LHA/LHDs to provide naval airpower in the Middle East

INDUSTRIAL BASE CHALLENGES:

- CVNs are built most efficiently at an interval of one every 3 ½ years, but today are built at five-year intervals, increasing costs and preventing the Navy from reaching its 12-ship requirement
- Shorter intervals between ships yield several benefits:
 - Improves efficiency by allowing workers to apply learning from one ship directly to the next ship and not lose proficiency between ships
 - Reduces the impact of inflation
 - Increases the ability to save costs by buying materials and equipment in economic quantities
 - Incentivizes shipyards to invest in production improvements

RECOMMENDATIONS:

- Begin two-ship procurement of CVNs, paid incrementally over the construction period
 - This will save \$1 to \$2.5 billion per contract by stabilizing workforce requirements, enabling procurement of economic quantities of equipment, and improving production efficiency
- Accelerate CVN procurement to begin 3 to 4 year intervals with CVN-81 by bringing it forward from 2023 to 2022; then build CVNs on 3 or 4-year intervals to sustain 12 CVN fleet starting in the 2030s