



CVX Flexibility Terms of Reference

General Objective: Identify science and technology opportunities that have the potential for major impact on engineering and operational flexibility over the lifetime of new Navy ship classes now under consideration.

ASN(RD&A) Sponsors

RADM Dennis V. McGinn	Dir. Air Warfare Division (N88), Office of Chief of Naval Operations
RADM Michael T. Coyle	Dep. Commander for Engineering, Naval Sea Systems Command

Naval Research Advisory Committee

In January 1997, the NRAC was tasked by the Honorable John Douglass, ASN(RD&A) to conduct a study of S&T opportunities that might beneficially impact the engineering and operational flexibility of CVX, the 21st century replacement for the Nimitz class aircraft carriers of today, as well as other new classes of Navy ships. The Terms of Reference for the study are given below:

**TERMS OF REFERENCE
NAVAL RESEARCH ADVISORY COMMITTEE
CVX FLEXIBILITY PANEL**

General Objective: Identify S&T opportunities that have the potential for major impact on engineering and operational flexibility over the lifetime of new Navy ship classes now under consideration.

Background: The lead ship of the CVX class is currently scheduled for completion in 2013. The CVX class of aircraft carriers is intended to have a useful service life of approximately 50 years. During this lifetime, the class is likely to experience 2 to 3 generations of prime power and propulsion technologies, 3 to 4 generations of naval aircraft, and 8 to 12 generations of C⁴I technologies. Throughout the course of such changes, it is essential that CVX class ships maintain their preeminent role as projectors of naval air power for the widest spectrum of missions.

Specific Tasking:

- Consider CVX requirements, concept of operations, roles, and missions to analyze capabilities and ship configurations related to engineering flexibility.

- Identify potential technical limitations to CVX operational flexibility over the lifetime of the class.
- Recommend specific S&T initiatives, such as integrated electric power and electric drive, to address such limitations.
- Consider the applicability of such initiatives to other current and new Navy ship classes.

Sponsors of the NRAC study on CVX flexibility were Rear Admiral Michael T. Coyle, Deputy Commander for Engineering, NAVSEA and Rear Admiral Dennis V. McGinn, Director, Air Warfare Division (N88), OPNAV.