THE ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)
1000 NAVY PENTAGON
WASHINGTON DC 20350-1000

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MEMORANDUM FOR DISTRIBUTION

SUBJECT: Energy Evaluation Factors in the Acquisition Process

References: (a) DOD Instruction 5000.02
(b) Under Secretary of Defense (Acquisition Technology & Logistics) Memorandum "Better Buying Power: Guidance for Providing Better Efficiency and Productivity in Defense Spending" dated September 24, 2010
(c) Defense Federal Acquisition Regulation Supplement 207.103
(d) March 2007 Edition of the Department of the Navy Acquisition Plan Guide (APG), https://acquisition.navy.mil/rda/content/view/full/5004

Secretary Mabus set forth five ambitious goals that will transform the way the Department of the Navy (DoN) uses energy on our installations and in our operational forces. DoN's energy strategy emphasizes energy security and force capability enhancement for platform and weapons systems as well as non-tactical shore operations. Among Secretary Mabus's goals is DoN's commitment to reforming its acquisition process to include energy performance criteria in its acquisition processes.

This memorandum provides guidance concerning the use of energy-related factors in acquisition planning, trade-off analyses, technology development, and competitive source selections for platforms and weapons systems. A future memorandum will provide guidance on energy related factors in non-tactical shore operations.

Energy Performance in Acquisition

As part of its energy strategy, the Department will take substantive measures to include energy performance in the acquisition of platforms and weapon systems. The following articulates DoN policy for implementation of energy considerations into the acquisition process.

i. Mandatory Calculation of Fully-burdened Cost of Energy (FBCE)

The FBCE estimates the energy-related costs to sustain operational missions, including procurement of energy, the logistics needed to deliver it where and when needed, related infrastructure, and force protection for those logistics forces directly involved in energy delivery (reference (a)). The purpose of calculating the FBCE is to

better understand the relative cost differences between various designs by contemplating the fuel demand and related logistics and force protection in operational environments.

For all DON platforms and weapons systems that consume energy, DON acquisition officials will consistent with reference (a), work with the program and resource sponsors to ensure that FBCE calculations are included in program planning and specifically in the Analysis of Alternatives (AoA) phase to inform system trade-off decisions and to differentiate between competing systems. FBCE considerations will inform the selection of a preferred military solution and associated technology development investments. The FBCE must be calculated using operational scenarios or use conditions specified in the program's AoA guidance. System Commands (SYSCOMS) will develop a uniform method for calculating FBCE to support their respective acquisition programs. Specifically, NAVSEA for ships, submarines and platforms operating on and under the sea; NAVAIR for all aviation platforms; MARCORPS for terrestrial platforms, and SPAWAR for non-platform, energy consuming systems. All FBCE methodologies should, at a minimum, contemplate (i) a standard commodity cost; (ii) the cost, including personnel costs, of operating service-owned fuel delivery assets that are required for resupply of the platform or weapon system; (iii) the cost associated with force protection/convoy escorts that are required for fuel delivery to the platform or weapon system; and (iv) the depreciation costs of the associated fuel delivery and force protection/convoy assets. Further, all cost projections must be tied to planning scenarios in the AoA Guidance, and scenarios must represent both steady-state and surge OPTEMPO. Finally as a baseline requirement, the SYSCOMS should use existing analytic tools, planning data and costing methodologies where possible to project scenarios and apportion costs.

This tasking is to be completed no later than October 2011. SYSCOMs should coordinate cost analysis with Naval Center for Cost Analysis (NCCA) and then forward completed FBCE methods to ASN (RD&A), with DASN Research Development Testing & Evaluation (RDT&E) CHENG office providing guidance as necessary. In addition, in preparing all program cost estimates, the NCCA, and SYSCOM Cost Estimating directorates, shall consider the FBCE.

ii. Establishment of an Energy Component of the Affordability Target

As part of the recent OUSD(AT&L) affordability initiatives, USD (AT&L) Carter mandated affordability as a requirement and directed that program managers set affordability targets into their programs (reference (b)). In line with this directive, program managers, when building cost models regarding these affordability targets, will utilize the outputs from FBCE modeling, including the application of operational scenarios consistent with Section (i) above. Milestone authority to proceed with a program shall, consistent with other exit criteria, be granted only upon the successful

incorporation of these calculations into the affordability targets. Cost models built for the service cost position should use the standard fuel cost.

DoN Program Executive Officers (PEO) and Program Managers (PM) will also manage the energy cost component of the affordability target as a threshold subject to the same review as in the management of Key Performance Parameters at Milestone A.

iii. Energy Considerations in Acquisition Plans

All acquisition programs involving energy-consuming end items that require a written acquisition plan in accordance with reference (c) will ensure that the acquisition team considers energy in making tradeoff decisions and develops an evaluation factor (not a sub-factor) as defined by FAR 15.304(b)(1). All acquisitions plans will include:

- Section 2.1.1 (reference (d)), Discussion of energy consumption in Total Ownership Cost Analysis
- Section 3 (reference (d)), Discussion of FBCE in Alternatives, Trade-offs, and Risks

Should the Head Contracting Authorities (HCAs) or PEO conclude that energy consumption should not be considered in a particular source selection, the rationale for this decision shall be detailed in the acquisition plan Section 3, "Alternatives, Trade-offs" and in Section 6.4.6 "Risks and Environmental and Energy Conservation Objectives" (reference (d)) and forwarded to Deputy Assistant Secretary of the Navy (Acquisition & Logistics Management).

iv. Energy Considerations in the Gate Review Process

DON acquisition officials, in concert with OPNAV and USMC requirements officers, will ensure that energy is considered in each step of the Gate Review Process. Especially, at Milestone B, when a system's detailed design is originated, DoN acquisition officials shall present an energy systems engineering tradeoff analysis, and continually analyze and monitor the energy efficiency of the program. ASN (RD&A) will provide a method to report energy analysis within the PoPs (Version 2.2) for Gate reviews 1-6.

v. Energy Review of Legacy Systems

For all major modernization efforts of legacy programs that are subject to ASN (RD&A) action or review but that do not trigger an Acquisition Plan or Gate Review Evaluation, the Program Manager shall require analysis of the programs' energy performance, consider the feasibility of energy efficiency upgrades, and provide an overview of that consideration as part of that analysis. The potential for reductions in the energy resupply rate for systems, particularly in combat operations, should be considered

when assessing the military and financial value of retrofits or modifications that affect energy demand.

Sean J. Stackley

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