



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

OPNAVINST 4100.5E
N4
22 Jun 2012

OPNAV INSTRUCTION 4100.5E

From: Chief of Naval Operations

Subj: SHORE ENERGY MANAGEMENT

Ref: (a) Public Law 111-84
(b) Public Law 110-140
(c) E.O. 13423
(d) Public Law 109-58
(e) E.O. 13514
(f) SECNAVINST 4101.3
(g) Chief of Naval Operations A Navy Energy Vision for the 21st Century, Oct 2010
(h) DoD Manual 3020.45-VI, Defense Critical Infrastructure Program (DCIP): DoD Mission-Based Critical Asset Identification Process (CAIP), 24 October 2008
(i) SECNAVINST 3501.1B
(j) Department of the Navy Energy Program for Security and Independence, Oct 2010
(k) United Facilities Criteria 4-030-01, Sustainable Development, Dec 2007
(l) DoD Instruction 4170.11 of 11 December 2009
(m) SECNAVINST 4100.9A
(n) OPNAVINST 11010.20G

Encl: (1) Navy Shore Energy Definitions
(2) Navy Shore Energy Governance Structure
(3) Navy Shore Energy Return on Investment
(4) Shore Energy Technology Summary
(5) Shore Energy Partnering Summary
(6) Navy Shore Energy Strategic Communication Plan

1. Purpose. To issue policy, objectives and guidance, and assign responsibilities for Navy shore energy as defined in enclosure (1). This instruction represents the first in an integrated series of shore energy governance documents for all Navy echelons (see enclosure (2)). It should be considered a major revision and read in its entirety.

2. Cancellation. OPNAVINST 4100.5D and OPNAVINST 4100.6B.

3. Policy. Navy policy is to ensure energy security and legal compliance, per references (a) through (f), by increasing infrastructure energy efficiency and integrating cost-effective and mission-compatible alternative energy technologies while providing reliable energy supply ashore. The Navy shall:

a. Ensure Energy Security as a Strategic Imperative. As stated in reference (g), energy security is a critical component of national security. Energy security is having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet operational needs afloat and ashore. Shore energy security for Navy is the mitigation of vulnerabilities related to the electrical grid, including outages from natural disaster, accident and physical and cyber attack. To increase shore energy security, Navy shall:

(1) Provide reliable, resilient, and redundant mission-critical energy sources to Navy tier I and II task critical assets (TCA) ashore, per references (a), (h) and (i).

(2) Reduce vulnerabilities tied to the electrical grid, including outages from natural disaster, accident, and physical and cyber attack, by lowering energy dependence and integrating energy security technologies which enable greater control of energy supply and distribution, per reference (j).

b. Achieve Legal Compliance for Shore Energy and Sustainability

(1) Achieve a 30 percent facility energy intensity reduction by 2015, per references (b) through (e).

(2) Reduce consumption of fossil fuel and increase the use of alternative fuels by the Navy's non-tactical vehicle (NTV) fleet as mandated by references (b), (c), and (d). To the maximum extent possible, NTVs powered by alternative fuels shall be cost-effective over their lifecycle when compared to NTVs powered by fossil fuels.

(3) Increase water efficiency of shore infrastructure, per references (b) and (d).

(4) Reduce greenhouse gas emissions as required by reference (c).

(5) Produce, procure and consume renewable energy as required by references (a), (c) and (d).

(6) Complete annual, comprehensive energy and water evaluations for approximately 25 percent of covered facilities as defined in enclosure (1) and per reference (b).

(7) Install, to the maximum extent practicable, advanced metering devices on shore facilities that measure electricity, natural gas, and steam consumption, per references (d) and (e).

(8) Promote sustainable development for all new footprint and major recapitalization projects ashore, per references (c) and (k).

c. Achieve Department of the Navy (DON) Shore Energy Goals. Navy will use the most cost effective manner, per reference (f), to meet DON shore energy goals, per reference (j). They are:

(1) Fifty percent ashore consumption reduction by 2020.

(2) Fifty percent total ashore energy from alternative sources by 2020.

(3) Fifty percent of installations net-zero consumers (as defined in enclosure (1)) by 2020.

(4) Fifty percent reduction in petroleum used in the commercial vehicle fleet by 2015.

4. Guiding Principles. Shore energy security and legal compliance shall be achieved through three key components:

a. Energy Efficiency. Navy will increase the energy efficiency of existing facilities and utility systems as the most cost-effective way to reduce energy consumption and increase impact of current and future renewable energy generation sources.

b. Renewable Energy and Sustainability. Navy will integrate mission compatible and cost-effective renewable energy sources, based on an analysis of operational impacts and energy return on investment (eROI), per enclosure (3). All new construction and major renovation projects will meet high performance and sustainable building design and construction standards (Leadership in Energy and Environmental Design (LEED®) or equivalent), per reference (k), or current DON directed level, whichever is greater at time funds are programmed.

c. Navy Culture and Behavior. Invest in energy management systems and personnel to provide leaders with building-level transparency of energy consumption to further drive efficiency beyond infrastructure related improvements at the command and functional levels, per reference (g).

5. Strategy. To accomplish the Navy's goals as set forth in this policy while allowing for local differences, the Navy shall implement a consistent programmatic approach centered on the following strategies:

a. Establish a tailored energy consumption reduction goal for each installation, based on its unique energy situation. These tailored goals will aggregate to a 50 percent total energy consumption reduction across Navy.

b. Optimize viable Navy-wide or region-wide technical solutions without precluding local innovative actions.

c. Transform the Navy shore energy culture, comprised of three components:

(1) Technical solutions that provide energy consumption data so leaders and individuals can modify behavior.

(2) Operational and process changes that reduce energy consumption and costs.

(3) Awareness of conservation and the valuing of energy as a strategic resource.

d. Link infrastructure maintenance and recapitalization systems with energy management and distribution systems to realize energy efficiency through improved requirements identification, demand management, and condition-based maintenance.

e. Utilize a "Watch-Partner-Lead" framework to assess new technologies, as described in enclosure (4).

f. Look externally to seek win-win partnership opportunities with energy stakeholders (other Government, utilities, industry, developers, and academia), as described in enclosure (5).

g. Execute shore energy communications at all echelons, both internally and externally, following the Navy Shore Energy Strategic Communication Plan, as described in enclosure (6).

6. Action

a. Enabling Systems (Infrastructure and Initiatives). To facilitate the most effective and efficient achievement of the Navy's shore energy goals, the Navy will utilize enabling infrastructure and initiatives, to include: advanced metering infrastructure (AMI), per references (b) and (d); annual facility energy audits, per reference (b); energy managers assigned to each Navy region and installation, per references (b), (d), and (1); and establish smart building and base energy management operating systems, per references (d) and (1). These new enabling energy systems will be integrated into facility management systems to ensure the cost-effective level of recapitalization and maintenance occurs such that energy savings are not only achieved, but also sustained.

(1) Commander, Navy Installations Command (CNIC) shall utilize these enabling systems when analyzing performance against energy goals and when developing requirements for energy and sustainability initiatives.

(2) Naval Facilities Engineering Command (NAVFACENGCOM) shall track and monitor the effectiveness of the enabling systems, and periodically make performance improvement and other technical recommendations to CNIC.

b. Reporting and Analysis. Regional commanders and installation commanding officers shall, utilizing NAVFACENGCOM support as described in enclosure (2), collect Navy shore energy data and submit to CNIC headquarters (HQ) quarterly, within 60 days of quarter completion. CNIC HQ shall then submit within 30 days of receipt to Chief of Naval Operations (CNO) (Director, Shore Readiness Division (OPNAV N46)). Once final, these completed reports shall be distributed to all regions, installations, systems commands (SYSCOMs), and supported commands so energy metrics are transparent at all echelons. Progress will be reported on:

(1) Shore energy progress data (as defined in enclosure (1)), per reference (b), by installation, tenant, region, and SYSCOM. Progress against the established baseline will be tracked at the installation level and rolled up to the region and enterprise level.

(2) Renewable energy generation, per reference (a), by region and installation.

(3) Progress towards annual net-zero energy use requirements, per reference (m).

(4) Annual Navy NTV fleet petroleum consumption (in million gallons gasoline equivalents (MGEG), per references (b) and (c); alternative fuel consumption (in MGEG), per reference (c); acquisition of alternative-capable vehicles, per reference (d); and number of alternative fueling stations, per reference (d).

(5) Percentage of Navy tier I and II TCA, per references (h) and (i), which have been assessed for critical energy system vulnerabilities and assigned potential mitigation strategies.

(6) Percentage of covered facilities evaluated for energy and water reduction opportunities, per reference (b).

(7) Annual progress on AMI deployment to installations, per references (b) and (d).

c. Shore Energy Investments (Planning and Selection). All shore energy investments (as defined in enclosure (1)),

regardless of funding source, will be planned, programmed, budgeted, and executed based on fact-based and defensible criteria which maximize the eROI to the Navy. Data reporting shall validate the actual result achieved against the planned output.

(1) CNIC shall ensure shore energy investments are identified and prioritized without regard to funding source or maintenance unit identification code (see paragraph 4, enclosure (1)). Inputs for the Energy Conservation Investment Program (ECIP), third-party financing funded through annual utility savings, as well as sustainment, restoration and modernization funds for Navy shore energy will be collected into a single annual energy requirements listing and prioritized solely based on eROI criteria, enclosure (3), which includes the CNO Director, Assessments Division (OPNAV N81) approved combination of financial and non-financial energy factors. From this annual master energy requirements list, CNIC shall determine the best funding mechanism and methodology to maximize shore energy investment, based on project characteristics and localized cost of energy.

(2) NAVFACENGCOM shall ensure Major Maintenance and Repair Program energy efficiency investments, which are submitted for funding by targeted energy investment funds, are prioritized for funding solely based on the eROI criteria. Traditional and energy Major Maintenance and Repair Program shall be separate and distinct.

(3) Other region and installation tenant commands, detachments, and Navy Working Capital Fund (NWCF) entities (Space and Naval Warfare Systems Command, NAVFACENGCOM, Naval Sea Systems Command, Naval Air Systems Command) will align their shore energy investments, regardless of funding source or maintenance unit identification code, with the eROI prioritization criteria and submit project information to CNIC, via the installation commanding officer. This is required to comply with Federal law, per reference (b), and allow for inclusion in the annual Shore Energy Implementation Plan update.

7. Roles and Responsibilities

a. CNO, through the Deputy Chief of Naval Operations for Fleet Readiness and Logistics (N4), plans and programs for Navy energy to ensure resources are effectively and efficiently employed to meet validated requirements.

(1) Director, Energy and Environmental Readiness Division (OPNAV N45), shall:

(a) Serve as the CNO's single point of contact, responsible for Navy energy issues including, but not limited to, energy efficiency, conservation, alternative energy, and energy innovation for both tactical and shore forces.

(b) Provide coordination, integration and oversight of tactical and shore energy products and issues, to include assessment of the resourcing and execution of Navy energy programs.

(c) Develop and update the comprehensive Navy energy strategy.

(d) Coordinate with budget submitting offices and resource sponsors.

(e) Develop metrics, processes and frameworks to analyze energy investments.

(2) OPNAV N46, in support of OPNAV N45, shall maintain overall responsibility for Navy shore energy, and shall:

(a) Support the Navy Energy Coordination Office.

(b) Support Secretary of the Navy (SECNAV) Shore Energy Policy Board, per reference (f).

(c) Set policies and program resources necessary for execution of goals as set by the CNO annually.

(d) Develop programming guidance for shore energy investments.

(e) Coordinate with CNIC and NAVFACENCOM (as detailed in enclosure (2)) to develop and update the overarching guiding principles, which will balance and prioritize annual shore energy investments for maximized eROI.

(f) Direct adjustments to the criteria and weighting values for individual eROI attributes, as required, complying with Federal mandates and annual CNO programming guidance.

(g) Analyze and coordinate the lifecycle cost impacts of shore energy investments necessary to achieve the Navy's goals among all shore readiness programs. This includes alignment with facility consolidation and demolition, recapitalization and modernization, and the NWCF budget submission for all utility systems.

b. CNIC shall plan and execute Navy Shore Energy Program as resourced and according to policy.

(1) Support SECNAV Shore Energy Policy Board, per reference (f).

(2) Develop and submit a shore energy implementation plan, including tailored energy reduction goals for regions and installations, to enable enterprise-wide achievement of the Navy's shore energy goals in the most cost-effective manner. The plan will delineate planned and actual progress in output-based metrics. This plan shall be updated annually based on progress and submitted by 1 November of each year to allow for inclusion of requirements in the annual programming and budget cycle.

(3) Develop annual shore energy investment requirements, which utilize the various available energy funding sources, including financed and energy military construction (MILCON), per reference (n) classifications of work; to maximize shore energy progress.

(4) Coordinate annual shore energy investments with traditional annual facility capital investment plans for MILCON, special projects, and footprint consolidation projects.

(5) Review and approve annual region and installation shore energy plans, to include required annual goal revisions based on planned and actual consumption data driven results.

c. NAVFACENGCOM is the SYSCOM lead to:

(1) Support SECNAV Shore Energy Policy Board, per reference (f).

(2) Develop and submit an annual shore energy execution plan, detailing the technology and partnering plan and shore energy building code, per enclosures (4) and (5). This plan shall be updated annually based on progress, and submitted by 1 August of each year to allow for inclusion of requirements in the annual programming and budget cycle.

(3) Following consultation with CNIC, provide a shore energy building code, updated every 4 years, to ensure all infrastructure upgrades, from service calls to new construction, provide the maximum energy efficiency and sustainability possible.

(4) With consultation with CNO (N4) and CNIC, submit annual shore energy utility system upgrade requirements, which provide the most cost-effective increase in utility system energy efficiency and distribution control, for consideration within the annual NWCF budget submission.

(5) Issue the Navy's base support vehicle and equipment plan, which complies with legal mandates for fleet fuel efficiency, alternative fuel consumption, and alternative fuel vehicles, per references (b), (c), and (d). This plan shall be updated annually based on progress, and submitted by 1 August of each year to allow for inclusion of requirements in the annual programming and budget cycle.

(6) Provide detailed quarterly utility and energy consumption data reports, derived from meters and enterprise analytical tools, to CNIC, per reference (b).

d. Regional Commanders and Installation Commanding Officers, as the CNO's local designee, shall develop, plan, and execute, as resourced, approved region and installation shore energy plans. Plans shall:

(1) Comply and align with the CNIC Shore Energy Implementation Plan, and identify cost-effective energy efficiency and renewable energy requirements for all infrastructure (facilities and utility) systems, regardless of tenancy or maintenance unit identification code, and consider mission compatibility. Individual installation investment initiatives will be evaluated and prioritized solely based on their eROI value.

(2) As part of the installation shore energy plan, develop and implement actions in alignment with paragraph 5c of this instruction to further achieve or exceed specified installation energy reduction goals.

e. All Commanders, Commanding Officers, and Tenant Commands Operating Ashore shall:

(1) Work with the respective installation commanding officer to thoroughly plan and coordinate energy investments. The installation commanding officer shall have final approval of all energy investments, regardless of funding source. This applies for all alterations or upgrades to any Navy facility, and is required to leverage potential interdependencies and prevent potential conflicts or redundancy to other efforts or funding.

(2) Work with the respective installation commanding officer to develop and implement actions in alignment with paragraph 5c of this instruction to further achieve or exceed specified installation energy reduction goals.

(3) Process all Navy shore energy utility invoices within NAVFACENCOM's utility management system or enter the invoice consumption and cost data into the system for tracking purposes.

8. Implementation. Organizations will ensure compliance to this instruction within 120 days of issuance.

9. Information and Points of Contact. For additional information, please contact the Office of the Chief of Naval Operations (OPNAV) Shore Energy Action Officer directly at (703) 695-5540.

22 Jun 2012

10. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per SECNAV Manual 5210.1 of January 2012.



P. H. CULLOM
Vice Admiral, U.S. Navy
Deputy Chief of Naval Operations
(Fleet Readiness and Logistics)

Distribution:

Electronic only, via Department of the Navy Issuances Web site
<http://doni.daps.dla.mil/>

NAVY SHORE ENERGY DEFINITIONS

1. Navy Shore Energy (Shore Energy and Tactical Energy Management While Ashore). Per reference (b), this instruction defines Navy shore energy as congressionally reportable facilities and vehicle energy consumption on permanent installations. Shore facilities and support will be provided to enable tactical energy efficiency to the maximum extent possible, such as metering each ship berth; however, federally exempt tactical energy consumption while ashore, such as in-port ship use ("cold-iron"), will be covered under a separate instruction and any progress counted towards tactical energy goals.
2. Energy Return On Investment (eROI). A Navy developed multi-attribute decision analysis model designed to make strategic and capital investment decisions based on rigorous, repeatable, and defensible processes. The model ensures future energy investments in Navy shore infrastructure are risk-based, capability-focused, and yield favorable returns on investment. The intent of this model is to consider both the financial and non-financial benefits of all types of energy initiatives when making investment decisions. The five criteria considered in the model are: minimizing total ownership costs, minimizing shore energy consumption, providing reliable energy to critical infrastructure, achieving regulatory compliance and stakeholder expectations, and developing enabling infrastructure.
3. Net-Zero Installations. An installation, which over the course of a fiscal year, matches or exceeds the electrical energy it consumes ashore with electrical energy generated from alternative or renewable energy sources. The alternative energy may be: (1) generated and consumed on the installation; (2) generated off of the installation but directly transmitted to and consumed on the installation; or (3) generated on the installation and sold into the utility grid.
4. Alternative Energy. Energy produced or procured (as a percentage of the total quantity of electric energy consumed within Navy facilities and activities each fiscal year from non-fossil fuel sources. Alternative energy sources may include all renewable energy sources, as defined in section 203(b) of

reference (d) (such as wind, solar, geothermal, and ocean); as well as river current, new and old hydroelectric, biomass or biogenic sources of energy, and nuclear energy.

5. Energy Project. A facility or utility system improvement, regardless of funding source, conceived and developed for the purpose of increasing energy or water efficiency, energy security, or sustainability for a facility or group of facilities. Combining energy upgrades with additional non-energy related scope is permissible, but will lower the overall eROI of the project package. Project packages which reduce the repair and modernization backlog while achieving increased facility or utility system efficiency will be given special consideration, per the eROI framework (see enclosure (3)). Funding sources include, but are not limited to:

a. Office of the Secretary of Defense (OSD): ECIP

b. Operations and Maintenance, Navy (O&M,N) and Operations and Maintenance, Navy Reserve (O&M,NR): Facility sustainment, restoration and modernization funds for Navy shore energy

c. Military Construction, Navy (MCN) and Military Construction, Navy Reserve (MCNR): MCN and MCNR financed energy projects (including energy savings performance contracts and utility energy services contracts)

6. Energy or Sustainability Requirements Resulting From Traditional Facility Sustainment, Restoration and Modernization Projects. Above an individual project threshold, as set annually by CNIC fragmentary order, all facility upgrade projects shall have their scope of work divided so the scope of work needed to achieve or surpass facility efficiency and sustainability standards are identifiable and separable.

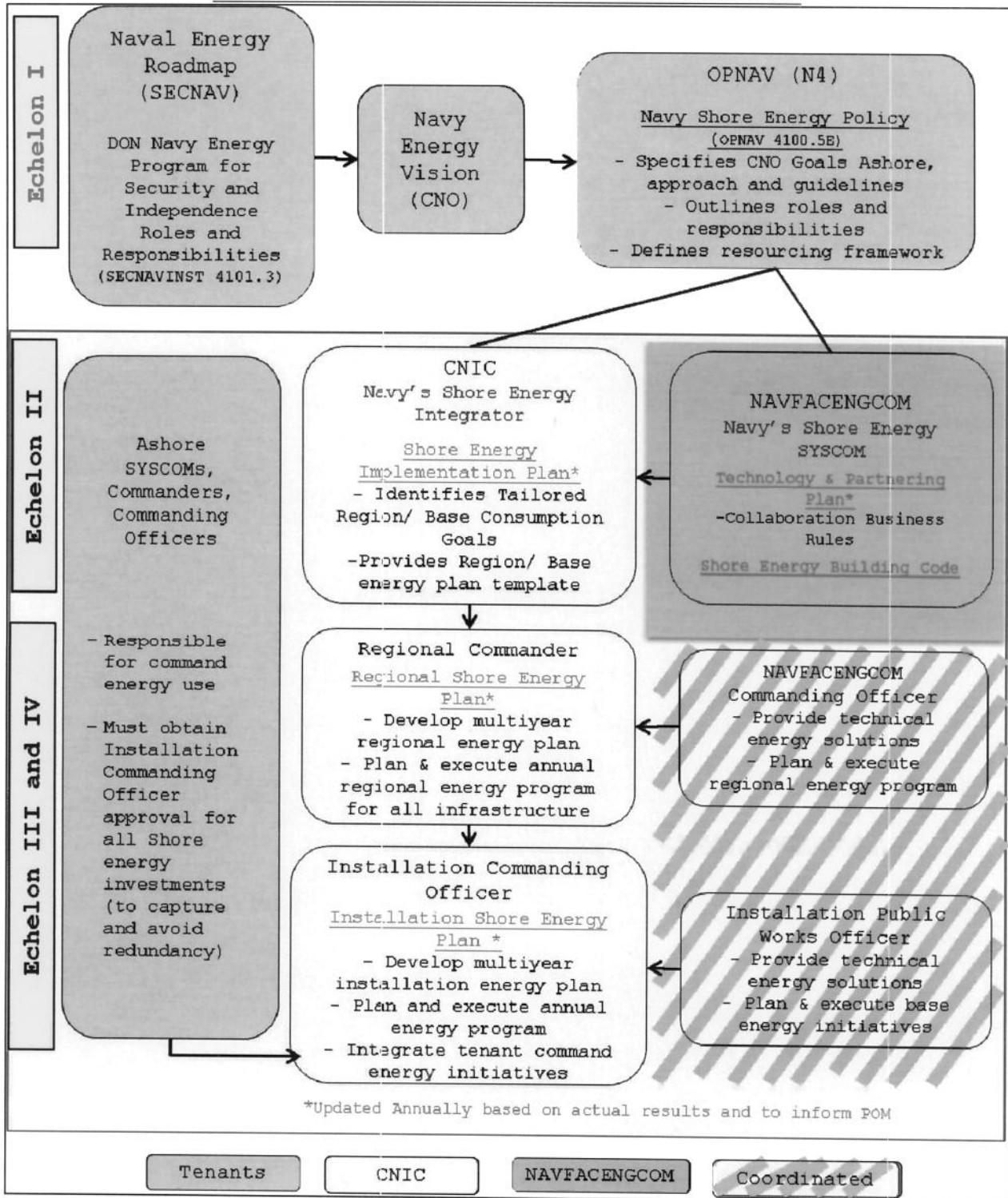
7. Covered Facilities. Per reference (b), this instruction defines covered facilities as shore infrastructure that constitutes 75 percent of the installation's facility energy use.

8. Shore Energy Progress Data. Per references (b) and (d), this instruction defines shore energy progress data as the Navy shore energy consumption per gross square foot (energy intensity) of reportable facilities as compared with the fiscal

OPNAVINST 4100.5E
22 Jun 2012

year 2003 baseline. Shore energy progress data is reported in alignment with the CNIC installations of the Navy real property inventory as recorded in the Internet Navy Facility Assets Data Store.

NAVY SHORE ENERGY GOVERNANCE STRUCTURE

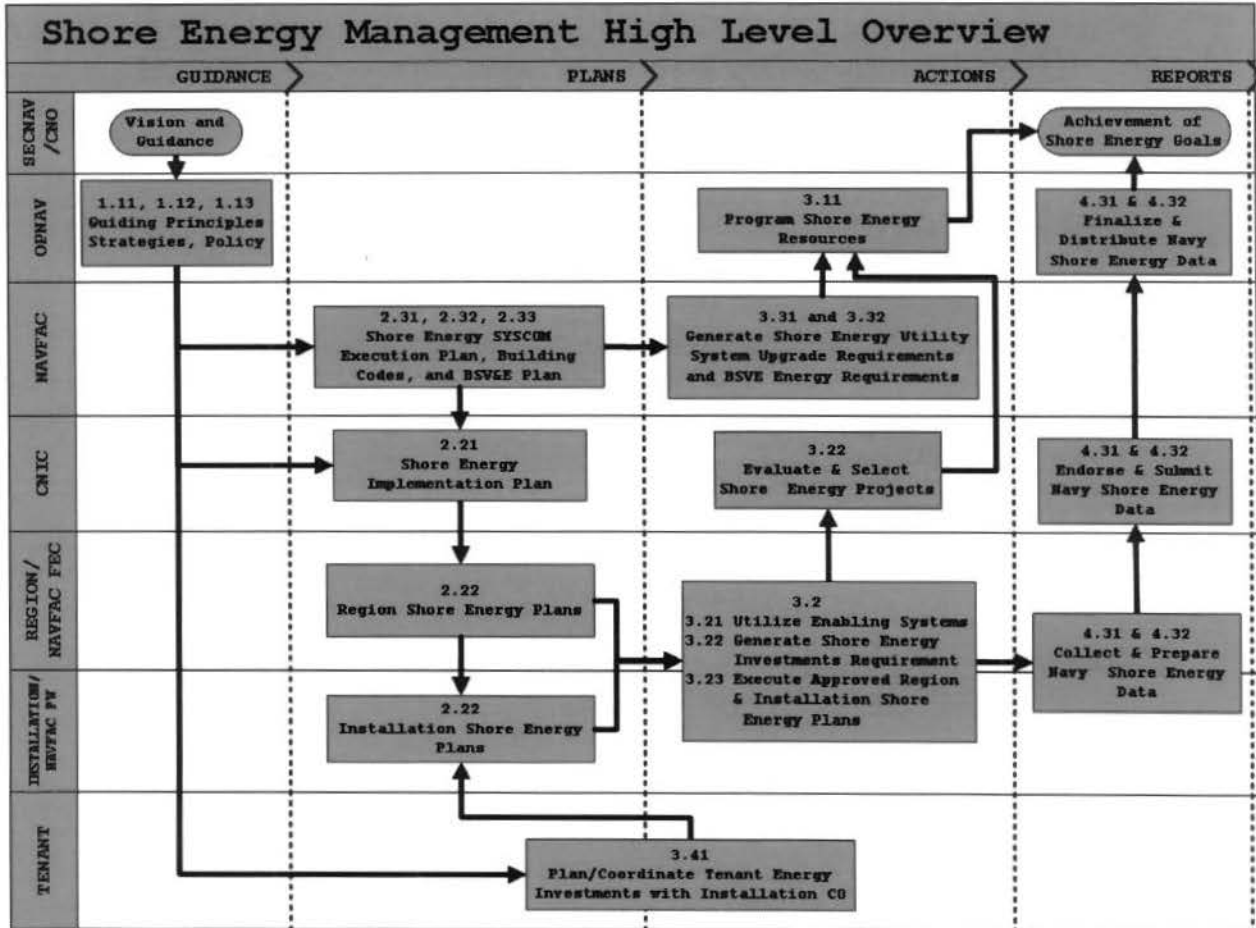


22 Jun 2012

NAVY SHORE ENERGY RESPONSIBILITY MATRIX

Task #	Task Description	OPNAV	CNIC	NAVFAC/NOOR	Tenants	Notes
1	Guidance					
1.11	Overarching Navy Shore Energy Guiding Principles & Strategy	A	C	C	I	
1.12	Set Policies for Navy Shore Energy Program	A	I	I	I	
1.13	Programming guidance for Shore Energy investments: - Direct adjustments to eROI criteria and weighting values - LOCA of Shore Energy Investments opportunities	A	C	C	I	Shore Energy Investments opportunities include: - Consolidation / Demolition - Recapitalization and Modernization - NWCFC Utility System Investments
2	Plans					
2.21	Shore Energy Implementation Plan	C	A	C	I	Updated annually. Includes: "tailored" Region / Installation Energy Reduction Goals
2.22	Installation and Region Shore Energy Plans	I	A	C	C	Prepared by Installations & Regions, approved by CNIC HQ
2.31	Shore Energy SYSCOM Execution Plan	I	C	A	C	Details Energy Technology and Partnering Initiatives
2.32	Shore Energy Building Code	I	C	A	C	Updated every four years - Ensures "all" infrastructure upgrades provide maximum energy efficiency and sustainability
2.33	Navy Base Support Vehicle & Equipment (BSVGE) Plan	I	C	A	I	Ensure compliance with all legal mandates
3	Actions					
3.11	Program Resources for Navy Shore Energy Program	A	I	I	I	
3.21	Utilize Enabling Systems (Infrastructure & Initiatives) - Advanced Metering Infrastructure (AMI) - Smart Grid Systems - Annual Facility Energy Audits - Annual Critical Infrastructure Energy Security Audit Program (ESAP) - Region and Installation Energy Manager (REM / IEM) Program	I	A	C	C	Further details will be provided as appendix to the CNIC / NAVFAC JR2 Manual
3.22	Generate Shore Energy Investment Requirements ECIP - DoD Energy Conservation Investment Program MILCON-energy FSRM-energy Financed (ESPC / UESC)	I	A	C	C	"Energy Investment" Requirements coordinated with traditional annual Facility Capital Investment Plans: MILCON, Special Projects, Footprint Consolidation All projects will be evaluated using eROI Tool
3.23	Execute approved Region & Installation Shore Energy Plans	I	A	C	C	
3.31	Generate Shore Energy Utility System Upgrade Requirements - Utility Major Maintenance and Repair Program Energy	C	C	A	I	NWCFC Budget Submission RFPVT (Revolving Fund Price Validation Team) process Traditional Major, Maintenance, & Repair Program (MMRP) investments shall be separate and distinct from energy efficiency; MMRP-energy
3.32	Generate BSVGE Energy Efficiency Requirements	C	C	A	I	NWCFC Budget Submission RFPVT (Revolving Fund Price Validation Team) process
3.41	Plan & Coordinate Tenant Energy Investments with the Installation CO	I	C	C	A	
4	Reports					
4.31	Quarterly Navy Shore Energy Progress Data: - sub-facility utility consumption usage derived from meters and enterprise analytical tools	I	A	C	C	1) Prepared by Installation PW, submitted by Installation Commanding Officer - Tenants enter consumption data into NAVFAC's energy management system, if not captured by WCF utility rates / NAVFAC billing process. 2) Submission to OPNAV Endorsed by CNIC - Enterprise / Region / Tenant: (SYSCOM / BBO) summary data prepared by NPESC 3) Once Finalized by OPNAV, report distributed to Regions, Installations, SYSCOMs and supported commands.
4.32	Additional Annual Energy Report Data: - Renewable Energy Generation by Installation and Region - AMI deployment progress by Installation and Region - Navy Progress towards Net-Zero Energy Use - Navy Non-Tactical Vehicle (NTV) petroleum consumption - Navy percentage of Navy Tier I/II assets assessed - Navy percentage of 'covered facilities' audited	I	A	C	C	Same note as 4.31. Further details will be provided as appendix to the CNIC / NAVFAC JR2 Manual

NAVY SHORE ENERGY MANAGEMENT HIGH LEVEL OVERVIEW



NAVY SHORE ENERGY RETURN ON INVESTMENT

1. Discussion. To achieve the multitude of energy efficiency, renewable energy, and sustainability mandates and goals within available funding levels, the Navy developed a shore energy return on investment (eROI) analytical decision tool to ensure future energy investments are risk based, capability focused, and will yield favorable returns on investment. The Navy selected a best-in-class method for valuing and integrating multiple strategic objectives - multi-attribute decision analysis which:

a. Translated the Navy's strategic goals into a framework of fundamental objectives.

b. Determined a hierarchical process to measure the impact each project will have when aggregated into the portfolio.

c. Applied logic rules to establish framework elements which are comprehensive, preferentially independent, and establish means to measure project impacts.

d. Criteria weightings set by strategic decision makers to allow for criteria integration and portfolio optimization. Criteria weights are not indicative of comparative importance, but a system to generate output consistent with achieving a myriad of diverse organizational goals. If required, CNO will adjust weightings to maintain proper "glide-slope" towards balanced achievement of all goals.

2. Objective. The objective of this tool is to consider both the financial and non-financial benefits of all types of energy initiatives when making investment decisions.

3. Approach. This comprehensive eROI framework will enable the ability to make strategic and capital investment decisions, based on rigorous, repeatable, and defensible processes. The decision processes and assessment tool were based on input from diverse set of stakeholders and provides quantification of all benefits applicable to achieving multiple strategic objectives. The model is grounded in industry-standard decision analysis and financial theory, and communicates financial and non-financial risks through a multi-user, desktop tool which is scalable and agile to accommodate future enhancements and or modified goals and planning criteria.

SHORE ENERGY TECHNOLOGY SUMMARY

1. Discussion. Leveraging energy technology through strategic pre-deployment development is necessary to meet Navy shore energy goals. To meet this need, the Navy must establish a standard technology approach that meets the specific energy needs of installations while leveraging the size and resources of the entire Navy.

2. Objective. Leverage appropriate technological innovation to enable energy security and compliance.

3. Approach. NAVFACENGCOM shall develop a shore energy technology program to pursue renewable and alternative energy technology. The overarching framework shall separate technologies into three levels of commitment:

a. Watch maturing technologies and invest when and where viable (Example: wind and solar energy).

b. Partner to develop needed technologies with other government organizations and or industries (Example: secure "Smart-Grid" technologies)

c. Lead the development of mission critical technologies (Example: ocean energy for island bases)

4. Action

a. To implement the above, NAVFACENGCOM shall develop a shore energy execution plan detailing how NAVFACENGCOM will support the requirements of this instruction.

b. In addition, NAVFACENGCOM shall provide a shore energy building code to CNIC and OPNAV to detail recommended acquisition rules and thresholds for mandatory energy investments in support of the requirements of this instruction.

c. Annually (by 1 August), NAVFACENGCOM will submit a technology plan update to NAVFACENGCOM, CNIC, and OPNAV N46 leaders, which outlines the status of the previous year, and introduces the technology plan for the next year.

SHORE ENERGY PARTNERING SUMMARY

1. Discussion. Sensible partnerships are necessary to facilitate knowledge sharing and collaboration and to effectively achieve the objectives of the shore energy and sustainability approach. For several years, the Navy shore community has utilized partnerships for internal and external collaboration and knowledge sharing with other government agencies, utility providers and distributors, developers, as well as industry and academia.

2. Objective. Identify and pursue sensible partnerships to enable energy security and compliance.

3. Approach. NAVFACENGCOM shall establish a shore energy partnering program. The program shall meet three strategic objectives:

a. Establish framework and criteria to identify partnership opportunities based on shore installation need, and assess points of value that the Navy can leverage.

b. Provide rules of engagement for entering into partnerships. Guidance will include partnering selection process, acquisition level constraints, partnership governance, and reporting requirements, given specific partnership characteristics.

c. Assure processes for capturing synergies and leveraging best practices across partnerships.

4. Action

a. To implement the partnering program, NAVFACENGCOM shall develop a shore energy execution plan detailing how NAVFACENGCOM will support the requirements of this instruction.

b. Annually (by 1 August) NAVFACENGCOM will submit a partnering plan update to NAVFACENGCOM, CNIC and OPNAV N46 leaders, which outlines the status of the previous year and introduces the partnering plan for the next year.

NAVY SHORE ENERGY STRATEGIC COMMUNICATION PLAN

1. Background

a. The Navy embarked on an aggressive, re-energized approach in summer 2010 to meet the aggressive energy goals set by the SECNAV and CNO.

b. Strategic communication is a vital component in the Navy's Shore Energy Program. Effective and aligned communication at all levels will ensure the successful execution of the Navy's Shore Energy Program and will enable the success of the shore energy working groups

2. Communication Framework Goals. The purpose of this strategic communication framework is to ensure the Navy communicates consistent and aligned messages during all communication activities at all echelon levels with all external and internal audiences. All Navy leadership, public affairs officers, managers, specialists and technicians (specifically in the areas of energy, facilities, utilities, capital improvement, asset management, etc.) shall use the communication themes and messages in this framework when communicating with any audience regarding the Navy Shore Energy Program.

3. Stakeholders. The Navy Shore Energy Program has dozens of unique stakeholders, or audiences, which will ultimately enable the Navy to meet its shore energy goals. These stakeholders must be communicated with because they must be aware of energy efforts and progress, must be involved in our progress, must provide support, and or will be affected by the Navy Shore Energy Program. For the purposes of this strategic communication framework, stakeholders are consolidated into eight groups with similar functions and influence related to Navy shore energy. They are:

- (1) OPNAV, CNIC and NAVFACENGCOM
- (2) Shore commands (SYSCOMs, fleet and installation tenants)
- (3) Navy personnel
- (4) Local community

- (5) Partners
- (6) Congress and OSD
- (7) Navy Secretariat

4. Communication Themes

a. The communication themes for the shore energy program are aligned with the policies of the shore energy program and the three supporting priorities. They are:

- (1) Energy security and compliance (policy)
- (2) Position the Navy to most effectively achieve DON alternative energy targets (policy)
- (3) Energy efficiency first (strategy)
- (4) Renewable energy technology at the right time (strategy)
- (5) Inform a Navy energy culture and behavior (strategy)

b. These themes shall be utilized in all communication activities related to Navy shore energy. Communication messages can be tailored by Navy commands when as needed to support targeted and or local communication activities.

5. Communication Framework Implementation. Three Navy enterprise communication plans will be developed to support the Navy Shore Energy Program governance documents (see enclosure (2)):

a. OPNAV N46 will develop a communication plan to support this instruction. This communication plan will be executed concurrently with the publication of this instruction, and will identify targeted communication with, at a minimum, the following stakeholder groups:

- (1) Congress and OSD
- (2) OPNAV

(3) Navy Secretariat

b. CNIC shall develop and execute a communication plan to support the publication of the shore energy implementation plan. This communication plan shall be issued concurrently with the implementation plan, and will identify targeted communication with, at a minimum, the following stakeholder groups:

(1) CNIC and NAVFACENCOM

(2) Shore commands (SYSCOMs, fleet and installation tenants)

(3) Navy Personnel

(4) Local Community

c. NAVFACENCOM shall develop and execute a communication plan to support the shore energy execution plan. This communication plan shall be issued concurrently with the technology and partnering plan, and will identify targeted communication with, at a minimum, CNIC, NAVFACENCOM, and partners

d. Additional Navy enterprise communication plans may be developed as needed to support the objectives shore energy working groups focused on embracing sensible partnering, leveraging technology and informing energy culture and behavior.

e. All Navy regions, installations and shore commands are encouraged to use the communication themes and messages in this strategic communication framework to develop localized and or targeted communication plans to support the Navy Shore Energy Program per Navy public affairs policy and echelon 2 (CNIC HQ or NAVFACENCOM HQ) guidance.

6. Communication Plan Guidance. All communication efforts should utilize the overarching communication themes. All tactical communication plans in support of the Navy Shore Energy Program shall include the following:

a. Communication goals and objectives

b. Stakeholder and audience segmentation as needed

- c. Communication messages
- d. Communication tactics and tools
- e. Execution timeline
- f. Resources
- g. Metrics to evaluate progress toward communication objectives

7. Media Queries. Media queries and other public affairs activities shall align with this strategic communication framework and shall be conducted following existing public affairs policy and practices. Given the high visibility of energy-related issues and initiatives, echelon 3 and below commands should notify echelon 2 public affairs offices of energy-related communication activities (press releases, Navy.mil stories, etc.) as well as any potential national, regional and or trade media interest in shore energy issues or initiatives. Echelon 2 commands should keep the Navy Chief of Information and echelon 1 resource sponsors informed as appropriate.