



UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION
POSTAL SERVICE CENTER BOX 8003
CHERRY POINT, NORTH CAROLINA 28533-0003

IN REPLY REFER TO:
ASO 11300.40
FAC

7 OCT 2022

AIR STATION ORDER 11300.40

From: Commanding Officer, Marine Corps Air Station, Cherry Point
To: Distribution List

Subj: ENERGY RELIABILITY RESILIENCY AND EFFICIENCY PROGRAM

Ref: (a) DoDI 4170.11
(b) NAVFAC P-602
(c) MCICOM Policy Letter 9-19
(d) MCAS CHERPT IESP of 31 Mar 21

Encl: (1) Energy Vulnerabilities
(2) Acronyms

1. Situation

a. For the last decade, the Federal government promulgated mandates and established goals to reduce energy consumption and costs, enhance environmental stewardship, and reduce dependence on foreign energy sources to increase energy security. In March 2016, the Department of Defense (DoD) updated reference (a), Department of Defense Instruction (DoDI) 4170.11, to include energy reliability and resilience. In May 2017, Naval Facilities Engineering Command (NAVFAC) published a supporting document that further defined energy security in terms of reliability, resiliency, and efficiency, per reference (b). Reference (c) requires alignment of energy requirements to critical mission operations on military installations. Department of Defense (DoD) Components shall plan and have the capability to ensure available, reliable, and quality power to continuously accomplish DoD missions from military installations and facilities. In keeping with the references, this order will ensure Marine Corps Air Station Cherry Point (MCAS CHERPT) not only has an efficient energy supply, but also reliable and resilient energy infrastructure and systems to accomplish installation missions.

b. The air station's energy plan currently relies principally on commercially supplied power and natural gas. If the primary power system fails, emergency generators are available to provide power to critical facilities. Additional work is required to strengthen energy reliability, resiliency, and efficiency and mitigate energy vulnerabilities.

c. The air station has five major existing energy reliability, resiliency, and efficiency vulnerabilities that are listed below and described in enclosure (1).

- (1) Lack of electrical substation redundancy.
- (2) Utility plant and infrastructure components are timeworn; risk of failure exists.
- (3) Cybersecurity attacks.
- (4) Acts of nature and unplanned energy/water outages impacting mission readiness.

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(5) Minimal activity and tenant command participation in the Marine Corps' Energy Ethos program.

d. This order provides information, guidance, instructions, and policy which actively engage activity and tenant commands in initiatives that will enhance energy reliability, resiliency, and efficiency at MCAS CHERPT.

2. Cancellation. ASO 11300.4N.

3. Mission. Air station activity and tenant commands will enhance energy reliability, resilience, and efficiency by actively participating in the installation's energy program in order to reduce energy consumption/costs and position MCAS CHERPT to develop and implement a sustainable energy resilience program that will ensure success in meeting goals and mandates, per the references.

4. Execution

a. Commander's Intent. The Commander's intent is to steer the Energy Reliability, Resilience, and Efficiency Program by specifying program objectives and defining activity and tenant command responsibilities that ensure MCAS CHERPT is on the right path to improve energy reliability, enhance energy resilience and reduce energy consumption by 2.5 percent per year from the FY2015 baseline.

b. Concept of Operations

(1) Period of Performance. The intended period of performance for this order is six years: Fiscal Year (FY) 2023 through FY 2028. After three years, update the order to comply with current energy program requirements.

(2) Objectives. Three program objectives will steer the energy program for the next three years:

(a) Analyze Energy/Water/Natural Gas Performance,

(b) Improve Energy Security through Reliability and Resiliency Enhancements, and

(c) Reduce Energy Consumption & Operating Costs.

(3) Actions. Implement the following six actions to propel the air station's energy efforts forward. The relationship between the program's mission, objectives, and actions are illustrated in enclosure (2). Each action is summarized below. The Installation Energy Plan will define requirements for each Line of Effort (LOE):

(a) LOE 1 - Lead Effective Energy Program. Per policy guidance, energy reliability, resilience, and efficiency will drive future planning and prioritization for infrastructure investment and energy management. Achievement of the tasks defined in this order will ensure continuous improvement in the Energy Program.

(b) LOE 2 - Build-Out Facility Related Control Systems (FRCSs). Enhance and secure FRCSs, such as the Advanced Metering Infrastructure (AMI), Energy Management Control Systems (EMCS), and the electrical and water/wastewater Supervisory Control and Data Acquisition (SCADA) systems to improve energy reliability, resiliency, and efficiency.

(c) LOE 3 - Enhance Energy Resilience. Implement the Office of the Secretary of Defense (OSD) Energy, Installations, and Environment Energy Resilience: Strategy and Planning Guidance to enhance resilience.

(d) LOE 4 – Reduce Energy Consumption. Executive Order 13693 requires federal agencies to reduce consumption by 2.5 percent per year from FY2016 to FY2025 from the FY2015 baseline. To meet this goal, make energy a consideration in all new construction, major renovation, repair, and special energy program projects as well as all maintenance and operation activities.

(e) LOE 5 - Promote Marine Corps Energy Ethos. Marine Corps Energy Ethos is defined as the shared vision that the efficient use of energy increases our resilience and enhances our mission effectiveness. The installation and tenant commands will actively promote an Energy Ethos aboard MCAS CHERPT. Examples of recommended activities include: utilizing the Communication Strategy and Operations (COMMSTRAT) and Marine Corps Community Services (MCCS) marketing and advertising resources, leadership engagement (policy, memos, liberty briefs, etc.), publishing and posting tip sheets and awareness materials and publishing unit-level energy consumption data where available.

(4) End State. Over the next three years, successful implementation of the LOEs defined above will ensure MCAS CHERPT is on the right path to improve energy reliability and energy efficiency, enhance energy resilience, and reduce energy consumption by 2.5 percent per year from the FY2015 baseline.

(5) Tasks. MCAS CHERPT activity and tenant commands shall comply with this Order. A summary of primary roles and responsibilities are outlined below. Every activity and tenant command will review relevant tasks closely and start working on assigned tasks immediately. Additionally, every activity and tenant command will review the Annual Installation Energy Plan to identify specific annual goals and set tasks and goals.

(a) Installation Leadership

1. Provide guidance on installation-specific implementation of Energy Ethos awareness efforts.

2. Support the promotion of an Energy Ethos through command messaging and public affairs efforts, including to the operational units. Encourage various awareness activities (e.g., training, competitions, power-down weekends, etc.) during the month of October, which has been federally recognized as Energy Action Month. Coordinate with Public Affairs and Marine Corps Community Services for communication efforts.

3. Implement awards and accountability measures.

4. Provide high level oversight to ensure Order compliance.

5. Review, comment, and approve the Installation Energy Security Plan, which will be provided by the Installation Energy Manager no later than 30 April, every five years.

6. Approve and distribute the plan to stakeholders no later than 30 September of each FY.

(b) Facilities Directorate.

1. Provide leadership, guidance, and support to Installation Energy Manager with Order implementation.

2. Review and comment on the annual updates to Installation Energy Security Plan, which will be provided by the Installation Energy Manager no later than 30 April of each year.

3. Establish heating /cooling set points in installation buildings. Temperature set points will be 68 degrees Fahrenheit in heating mode and 76 degrees Fahrenheit in cooling mode. Shutdown AC and outside ventilation during unoccupied periods with ample startup time to cool the building by start of working hours. Heating setback of 55 degrees with ample morning runtime to bring the building back to working temperature by start of working hours. Review seasonally (at least two times per year).

4. Submit all energy-related project documents to the Installation Energy Manager for review/comment for energy guideline compliance.

(c) Facilities Asset Management Department (FAMD)

1. Ensure all DD1391s comply with energy guidelines.

2. Ensure critical energy requirements are incorporated in the installation master plan.

(d) Installation Energy Manager (IEM)

1. Continuously oversee all tasks defined in this Order to ensure compliance. Quarterly, use a balanced scorecard to track program progress.

2. At least once every three years, provide updates to this Order to include updates of all energy related Executive Orders, Public Law, codes, etc.

3. Every five years, provide comprehensive rewrite of the Installation Energy Security Plan (IESP). Annually, provide updates to IESP. The purpose of the IESP is to establish specific short-term goals and tasks to complete during the upcoming FY to ensure that progress is made on the requirements in this Order. Submit to MCAS CHERPT Leadership each year no later than 31 July so that the plan can be reviewed and approved prior to the start of the next FY.

4. By FY 2025, ensure neighborhood and building electric, gas, and water meters are installed and connected to a central metering network. Monitor 80% of total reported energy consumption by system.

5. At least once every four years, ensure that energy audits and/or retro commissioning assessments are conducted on buildings making up at least 75% of the installation's energy consumption.

6. Annually, collaborate with FEAD to update existing energy design and construction guidelines and publicize new guidelines for new construction, major renovation, and minor repair projects as well as maintenance activities. Review/republish guidelines every year.

7. Quarterly, complete/submit Defense Utility Energy Reporting System (DUERS) report.

8. Annually, complete the Secretary of the Navy's Annual Energy and Water Management Report.

9. Annually, host training for the Facilities Directorate personnel who are involved in making energy-related decisions, including representatives from planning, engineering, operations, and maintenance teams.

10. Annually, identify and submit at least five life-cycle cost-effective projects to special energy project programs such as the Energy Investment Program (EIP) and the Energy Resilience and Conservation Investment Program (ERCIP).

11. Annually, evaluate the need for third party financed projects such as energy savings performance contracts, utility energy service contracts, power purchase agreements, etc. and pursue them accordingly.

12. Annually, or more frequently if needed, provide energy ethos training materials to units.

13. Monthly, distribute energy awareness material from MCICOM to COMMSTRAT. Assist in the development of MCAS CHERPT energy awareness material and submit final products to leadership.

14. Designate a liaison to attend emergency planning/mission assurance meetings to incorporate energy security into planning efforts.

(e) Activity and Tenant Commands

1. Foster a supportive command environment for energy conservation.

2. Unit leaders should Own, Communicate and Demonstrate energy saving-actions.

a. Own – Take ownership of energy-conservation efforts by being an advocate for the Marine Corps Energy Ethos in all aspects of your duties.

b. Communicate – Promote an Energy Ethos in Marine Corps Operations at unit functions (i.e. unit formations, training and operational evolutions, memos and policy).

c. Demonstrate – Consistently perform energy-saving actions such as turning off unnecessary lights, closing doors and shutting windows.

3. Incorporate Energy Ethos training into the unit's annual training schedule to discuss Installation and Operational Energy Best Practices. Contact the Installation Energy Manager for support with this task.

4. Encourage all members of the command to report energy related concerns to the facilities section and submit work tickets as needed or directed.

5. Participation in energy conservation related activities as coordinated by the installation.

6. Post the provided Energy Ethos printed materials within buildings and share on digital media where available.

7. Incorporate energy conservation measures to existing inspection checklists (i.e. Officer of the Day (OOD), Duty Non-Commissioned Officer (DNCO), field day inspections and barracks move-out inspections).

8. Address the Annual Installation Energy Plan produced by IEM within your unit.

(f) Operations Directorate

1. Provide a representative for the Energy Council and/or Energy Resilience Working Group. Participate in semi-annual and/or quarterly meetings, as required.

(g) Logistics Directorate

1. Provide a representative for the Energy Council and/or Energy Resilience Working Group. Participate in semi-annual and/or quarterly meetings, as required.

(h) COMMSTRAT

1. Provide final approval of all Energy Ethos communications materials produced by the region and disseminate.

2. Assist in promoting Energy Ethos outreach efforts using available resources to publish materials provided by MCICOM and generated locally in collaboration with IEM.

3. Contribute to Energy Action Month (October) outreach efforts by providing coverage and distributing awareness materials.

(i) MCCS

1. Assist in promoting Energy Ethos outreach efforts using available resources (e.g. social media, digital signage, theater advertising, etc.).

5. Administration and Logistics

a. Directives issued by this order are published and distributed electronically. The electric version of this directive is located at: <http://www.cherrypoint.marines.mil/Staff-Offices/Station-Adjutant/>.

b. Questions and comments regarding this order should be addressed to the Installation Energy Manager at (252) 466-4547.

6. Command and Signal

a. Command. This order is applicable to MCAS CHERPT including subordinate and tenant commands and organizations, all staff sections, and contractors.

b. Signal. This Order is effective the date signed.


B. C. BURKS

DISTRIBUTION: A

ENERGY VULNERABILITIES

The air station has five major existing energy reliability, resiliency, and efficiency vulnerabilities:

1. Lack of electrical substation redundancy. The electrical distribution system is in good condition. The medium voltage network has standard double-loop primary selective system architecture to facilitate reliability and redundancy; however, there is a need to further enhance redundancy to enhance mission readiness.

2. Some utility plant and infrastructure components are timeworn; risk of failure exists. Significant improvements were made to the air station's infrastructure over the years. In large part, the infrastructure is in good condition. However, the installation has been continuous operation for more than 80 years, so components of the various utility infrastructure, plants, and building systems are reaching, or have exceeded, intended statistical service lives. These systems serve operational and mission critical assets. There is a need to continue modernize equipment/systems by replacing aging and, in some cases, unreliable, infrastructure and inefficient building systems. Modernization efforts will enhance energy reliability, resiliency, and efficiency by minimizing the risk of energy disruption due to primary or backup equipment/system failures.

3. Cybersecurity attacks are a growing threat. Facility related control systems (FRCSSs) are a target because mission sustainment could be severely impacted if energy/water systems are compromised. To minimize the risk of a cyber-attack, the Marine Corps requires all FRCSSs to go through a rigorous Marine Corps cybersecurity accreditation evaluation before they are connected to a central monitoring and control system. Currently, the FRCSSs at the air station are not accredited. The air station must work with higher headquarters to build-out cyber-secure FRCSSs so that systems can be more securely centrally monitored and controlled.

4. Acts of nature can cause unplanned energy/water outages that impact mission readiness. Tropical hurricanes come close enough to influence North Carolina weather about twice in an average year. Much less frequently, perhaps averaging once in 10 years, these storms strike a part of the State with sufficient force to do great damage to inland property. Coastal properties occasionally suffer severe damage from associated high tides. The risk of primary power outages from natural acts, such as hurricanes and tornados, is low in the industrial core area of MCAS Cherry Point because the electric lines are underground. However, the primary incoming electrical service and the distribution lines to outlying areas of the air station are overhead so remain vulnerable. These vulnerabilities can be minimized further by building redundant systems which may include technologies such as onsite generation, backup battery storage systems, advanced electrical distribution controls that provide energy rerouting.

5. Currently there is not widespread activity and tenant command participation in the Marine Corps' Energy Ethos program. Recent battlefield experience has proven that prudent energy use increases operational reach and lethality while minimizing demand for risky resupply. Because the Marine Corps ethos is shaped at home as well as on the battlefield, we must forge a culture of energy and water efficiency that includes our bases and stations. In addition, an energy ethos campaign directed at the energy end-user will address the reality of future fiscal constraints which require further reductions.

(1) Annual Energy Surveys conducted by MCICOM have consistently revealed a direct correlation between rising levels of Energy Ethos/UEM Program Awareness and energy conscientious behavior. Widespread promotion of an Energy Ethos and the UEM Program will foster active participation in

energy conservation efforts and minimize energy waste. By using only the energy needed to accomplish the mission, the installation and tenant commands will be better prepared for energy disruptions which can limit energy resources. When energy-efficient behaviors are practiced in garrison, those behaviors will translate to the battlefield, increasing combat effectiveness and reducing vulnerabilities.

(2) In FY2015 and FY2016, over \$200 million was spent on energy costs on Marine Corps installations. These costs come out of the air station's Operations Support budget. Energy is by far the largest budget line item and it must be paid. If energy costs exceed projections, funding must be taken from other efforts.

ACRONYMS

AMI	Advanced Metering Infrastructure
DoDI	Department of Defense Instruction
EIP	Energy Investment Program
ERCIP	Energy Resiliency and Conservation Investment Program
EMCS	Energy Management Control Systems
FRCS	Facility-Related Control Systems
FY	Fiscal Year
MCCAST	Marine Corps Compliance and Authorization Support Tool (MCCAST)
MCCS	Marine Corps Community Services
MCICOM	Marine Corps Installations Command
NAVFAC	Naval Facilities Engineering Command
OSD	Office of the Secretary of Defense
COMMSTRAT	Communication Strategy and Operations
POAM	Plan of Action and Milestones
PWO	Public Works Officer
SCADA	Supervisory Control and Data Acquisition
TISD	Telecommunications and Information Services Directorate
UEM	Unit Energy Manager

Summary of Revision (ASO 11300.4N to ASO 11300.4O):

This paragraph will be used to briefly summarize the changes that are listed below.

ASO 11300.4N (Current)	ASO 11300.4O (Revision)
Updated to reflect format changes (SMEAC)	Reformatted ASO to reflect the SMEAC format.
Updated enclosures	Reduced from 6 to 3 enclosures.