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MARINE CORPS AIR STATION
BEAUFORT, SOUTH CAROLINA 29904-5001

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AIR STATION ORDER 11000.2C

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

Subj: ENERGY CONSERVATION PROGRAM

Ref: (a) MCO P11000.9C, Real Property Facilities Manual,
Volume VI, Energy and Utilities Management
(b) ASO 11000.4, Marine Corps Air Station Beaufort
Unit Energy Manager (UEM) Program

Encl: (1) Marine Corps Air Station Beaufort, Air Station Command
Energy Program Manual

1. Situation. This Order updates operating procedures for the Energy Conservation Program and contains new energy directive modifications from fiscal year (FY) 2015 to FY 2025.
2. Cancellation. ASO 11000.2B.
3. Mission. It is the policy of Marine Corps Air Station (MCAS) Beaufort to support and implement the energy reduction goals and policies established by higher headquarters. Energy costs have continued to rise and are expected to continue to do so in the future. An active, aggressive, and dedicated Energy Conservation Program is essential to ensure continued readiness. Through resourceful application of conservation measures, significant energy reductions can be made without imposing on operational readiness or the health and welfare of our service members and their families. The enclosure provides guidance on energy management policies, and practices. Leadership, command interest, initiative, supervision, and discipline are key qualities required to attain the goals of the Marine Corps Energy Conservation Program.
4. Execution. Through the timely development and initiation of more efficient methods of energy use, all installations and organizations are to meet and strive to exceed, the reduction goals established by higher headquarters. MCAS Beaufort's energy reduction goals, in support of reference (b), will be measured at the activity level. Goal accomplishment will be measured against the FY 2015 adjusted baseline figure. General objectives established for this program and specific goals to be met by MCAS Beaufort are addressed in the enclosure.
5. Administration and Logistics. The Installation Energy Manager will have oversight of the Energy Conservation Program review and updates as required.
6. Command and Signal
 - a. Command. This Order is applicable to all MCAS Beaufort tenant commands, military personnel, civilian employees, and contractors.
 - b. Signal. This Order is effective the date signed.


T. P. MILLER

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MARINE CORPS AIR STATION BEAUFORT
AIR STATION COMMAND ENERGY PROGRAM MANUAL

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1 Introduction

The mission of Marine Corps Air Station (MCAS) Beaufort is “to provide the highest quality aviation facilities, support, and services to promote the readiness, sustainment and quality of life for Marines, Sailors, family members, and Civilian Marines.”

2 Acronyms and Abbreviations

ASO	Air Station Order
CO	Commanding Officer
ECIP	Energy Conservation Investment Program
EIP	Energy Investment Program
EMC	Energy Management Council
EnMS	Energy Management System
EnPI	Energy Performance Indicator
ESPC	Energy Savings Performance Contract
FAR	Federal Acquisition Regulation
IEM	Installation Energy Manager
M2R2	HQMC Facility Sustainment and Restoration Program (Repair and Construction)
PPA	Power Purchase Agreement
SCE&G	South Carolina Electric & Gas
SEU	Significant Energy Use
UEM	Unit Energy Manager
UESC	Utility Energy Service Contract

3 Terms and Definitions

For the purposes of this Air Station Command Energy Program Manual (hereafter “Energy Program Manual”), the following terms and definitions apply.

continual improvement – recurring process which results in enhancement of energy performance and the energy management system

NOTE 1: The process of establishing objectives and finding opportunities for improvement is a continual process.

NOTE 2: Continual improvement achieves improvements in overall energy performance, consistent with the Air Station's energy policy.

energy – electricity, fuels, steam, heat, compressed air, and other like media

NOTE 1: For the purposes of this Energy Program Manual, energy refers to the various forms of energy, including renewable, which can be purchased, stored, treated, used in equipment or in a process, or recovered.

NOTE 2: Energy can be defined as the capacity of a system to produce external activity or perform work.

energy baseline – quantitative reference(s) providing a basis for comparison of energy performance

energy consumption – quantity of energy applied

energy efficiency – ratio or other quantitative relationship between an output of performance, service, goods or energy, and an input of energy

EXAMPLE: Conversion efficiency; energy required/energy used; output/input; theoretical energy used to operate/energy used to operate.

NOTE: Both input and output need to be clearly specified in quantity and quality, and be measurable.

energy management system (EnMS) – set of interrelated or interacting elements to establish an energy policy and energy objectives, and processes and procedures to achieve those objectives

energy team – person(s) responsible for effective implementation of the energy management system activities and for delivering energy performance improvements

energy objective – specified outcome or achievement set to meet the Air Station's energy policy related to improved energy performance

energy performance – measurable results related to energy efficiency, energy use and energy consumption

energy performance indicator (EnPI) – quantitative value or measure of energy performance, as defined by the Air Station

energy review – determination of the Air Station's energy performance based on data and other information, leading to identification of opportunities for improvement

energy target – detailed and quantifiable energy performance requirement that arises from the energy objective and that is set and met in order to achieve the energy objective

energy team – persons responsible for effective implementation of EnMS activities and for delivering energy performance improvements

energy use – manner or kind of application of energy

EXAMPLE: Ventilation; lighting; heating; cooling; transportation; processes; production lines.

internal audit – systematic, independent and documented process for obtaining evidence and evaluating it objectively in order to determine the extent to which requirements are fulfilled

nonconformity – non-fulfilment of a requirement

significant energy use – energy use accounting for substantial energy consumption and/or offering considerable potential for energy performance improvement

4 Energy management system (EnMS)

4.1 General requirements

Marine Corps Air Station (MCAS) Beaufort (“Air Station”) has established, implemented, maintained and improved an Energy Management System (EnMS) for the purpose of continual improvement in energy management and energy performance. The EnMS is based on the requirements of the International Standard, ISO 50001-2011. The Air Station meets the requirements of ISO 50001 using the processes and approaches described in this Air Station Command Energy Program Manual.

4.1.1 Scope and boundaries of the EnMS

MCAS Beaufort has implemented an ISO 50001 Energy Management System (EnMS) for the community of “Fightertown.” The scope and boundaries of the MCAS Beaufort EnMS includes facilities located at MCAS Beaufort and facilities within the Laurel Bay Housing area that are not transferred via lease in conjunction with public private venture (PPV) management of family housing. Facilities as identified on the current DUERS Facilities Report Spreadsheet define the scope and boundaries of EnMS. Also included in the EnMS scope and boundaries is Garrison Mobile Equipment (GME) under the control of the GME Manager as identified on the most current MCAS Beaufort GSA GME Vehicle Listing. Excluded from the EnMS scope and boundaries are the Family Housing property transferred to PPV management, Townsend Bombing Range, and Flight Operations.

4.2 Management responsibility

4.2.1 Senior Leadership responsibilities

The Commanding Officer and the Logistics Officer are Senior Leadership at the Air Station for purposes of the EnMS. Senior Leadership shall demonstrate its commitment to supporting the effectiveness and continual improvement of the EnMS by:

- (a) issuing and maintaining the Commanding Officer’s Energy Policy Statement which sets the direction for energy management and energy performance improvement at the Air Station;
- (b) appointing the Utility Director/Energy Manager as the EnMS Management Representative and maintaining an Energy Team;
- (c) providing resources needed for the EnMS and energy performance improvement through such mechanisms as annual budgetary support for the Air Station’s Energy Office, personnel assigned to the Unit Energy Manager Program, and locally funded energy projects;

- (d) defining the scope and boundaries of the EnMS in consultation with the EnMS Management Representative;
- (e) communicating the importance of energy management across the Air Station through issuance of the Commanding Officer's Energy Policy Statement and approval of Air Station Orders (ASOs) related to energy and energy management;
- (f) incorporating energy performance considerations into strategic planning as evidenced by the MCAS Beaufort Strategic Sustainability Performance Plan;
- (g) establishing an Energy Management Council (EMC) to plan and pursue a progressive utilities conservation program by:
 1. creating an energy management plan and publishing instructions which identify actions required to achieve the energy reduction goals that fit the requirements, constraints, opportunities and organization of the command;
 2. establishing the Unit Energy Monitor (UEM) Program (ASO 11000.4) to promote energy awareness and sound energy conservation practices and to ensure the policies published by the EMS are enforced;
 3. establishing and maintaining an active energy awareness program, including publicizing energy performance improvement objectives and progress towards them;
 4. ensuring reviews are conducted of unmetered utilities services to verify or adjust consumption estimates;
 5. where meters are not feasible, ensuring equitable monthly quantity consumptions are established and reviewed every three years;
 6. preparing required utilities conservation orders, bulletins and awareness materials to ensure maximum publicity of the EnMS and associated energy programs;
 7. conducting quarterly management review of the Air Station's EnMS and energy performance;
 8. reviewing and approving the setting of energy objectives and energy targets;
 9. ensuring that results are measured and reported quarterly; and
 10. ensuring the use of appropriate energy performance indicators (EnPIs).

The following members are appointed to the EMC:

S-4 Officer, MCAS (Chairman)
 Public Works Officer, MCAS
 Public Works Mobile Equipment Specialist
 Comptroller, MCAS
 Utilities Director/Energy Conservation Manager
 S-1 Officer, MCAS (ad hoc)
 S-3 Officer, MCAS (ad hoc)
 S-4 Officer, MAG-31 (ad hoc)
 S-4 Officer, MACS-2 (ad hoc)
 Marine Corps Community Services Officer (ad hoc)
 Family Housing Director, MCAS (ad hoc)

4.2.2 Management Representative responsibilities

The EnMS Management Representative has the responsibility and authority to:

- (a) ensure the EnMS is established, implemented, maintained, and continually improved:
1. the EnMS was established and implemented under the ISO 50001 Implementation Demonstration Project #BE1317R, and
 2. the EnMS is maintained and continually improved through the energy management actions and decisions of the Air Station's EMC, Energy Office and UEMs.
- (b) lead and manage the Energy Team;
- (c) report to Senior Leadership on energy performance and the performance of the EnMS;
- (d) ensure that energy management planning supports the energy policy (see Energy Review Procedure and Energy Planning Procedure);
- (e) define and communicate energy management responsibilities and authorities using the Energy Program Manual;
- (f) determine the criteria and methods to be used to ensure the effectiveness of the operation and control of the EnMS;
- (g) promote awareness of the energy policy across all levels of the Air Station.

4.2.3 Energy Management Responsibilities Matrix

P = Primary Responsibility S = Supporting Responsibility	Senior Leadership	Public Works	Mgt Rep/Energy Office	Energy Team	PWC/FSC (Maintenance)	Operations (MAG/Units)	Station Supply	COMMSTRAT	Engineering	NREAO/Safety/IH	Comptroller	Unit Energy Managers	All Hands
Appoint the Management Representative	P												
Consider energy in strategic planning	P	S	S	S	S	S	S	S	S	S	S	S	S
Define the energy policy	P	S	S	S									
Provide resources for energy management and energy performance improvements	P	P	S	S	S	S	S	S	S	S	S	S	
Identify and support meeting legal requirements	S	S	P	S	S	S	S	S	S	P	S	S	S
Identify and support meeting other energy requirements	S	S	P	S	S	S	S	S	S	P	S	S	S
Develop and maintain the energy review	S	S	P	P									
Track and analyze energy data	S	P	P	S							S	S	
Determine significant energy uses (SEUs)	S	S	P	P									
Identify energy opportunities	S	S	P	P	S	S	S	S	S	S	S	S	S

P = Primary Responsibility S = Supporting Responsibility	Senior Leadership	Public Works	Mgt Rep/Energy Office	Energy Team	PWC/FSC (Maintenance)	Operations (MAG/Units)	Station Supply	COMMSTRAT	Engineering	NREAO/safety/IH	Comptroller	Unit Energy Managers	All Hands
Establish the energy baseline(s)	P	S	S	S								S	
Set EnPIs		S	S	P									
Establish energy objectives and targets	P	S	S	S						S		S	
Develop action plans (projects)	S	S	P	S	S				S		S	S	
Ensure competence of personnel	S	P	S	S	S	S			S			S	
Conduct energy awareness training	S	S	P	S			S	S				P	
Internal EnMS/energy communications	P	P	P	P	S	S	S	P	S	S	S	P	S
Maintain EnMS documentation	P	P	P	S	S	S	S	S	S	S	S	S	
Establish and implement operational controls		S	S	P	S	S	S		S			S	S
Consider energy improvements in design		P	P	S	P				P			S	
Energy criteria and considerations in procurement	S	P	P	S	S	S	P	S	P	S	S	S	S
Purchasing energy supply			P			P					P		
Supplier/contractor communications		P	P		S		P		S				
Other external energy/EnMS communications	P	S	S	S				S	S				
Monitor energy performance	P	P	P	P								P	
Evaluate legal compliance	S	S	P	P			S		S	S			
Evaluate compliance with other energy requirements	S	S	P	P			S		S	S			
Manage and conduct internal audits	S	P	P	S					S	S			
Identify and report nonconformities (energy or energy management related problems)	S	P	P	S	S	S	S	S	S	S	S	S	S
Manage/implement corrective action system	S	S	P	P	S	S	S	S	S	S	S	S	S
Manage/implement preventive action system	S	S	P	P	S	S	S	S	S	S	S	S	S
Maintain EnMS records	S	P	P	S	S	S	S	S	S	S	S	S	
Conduct management reviews	S	S	P	S									

NOTE: In some cases, only one or some of the groups or units associated with each category of personnel will have responsibility for a specific activity.

Personnel Categories:

1. Senior Leadership - CO, S-4

2. Public Works - PWO, DPWO, PW Program Support Assistant, Garrison Mobile Equipment (GME)
3. EnMS Management Representative/Energy Office - Utilities Director, Energy Management Technician
4. Energy Team – PWO, DPWO, APWO, Comptroller, Housing, NREAO, PWC, PWMT, MCCS, MAG S-4, PWE
5. PWC/FSC – PWC Director, ET's, FSC Manager, Performance Assessment Representatives (PAR's), Base Operations and Support (BOS) Contract Manager
6. Operations - MAG-31, MALS-31, CLC-23, PMO, Station Fuels
7. Station Supply (Purchasing) - Supply Officer, Contracting Officer, Credit Card Program Manager
8. PAO – Public Affairs Office
9. Engineering - Engineering Director, engineers, architect
10. NREAO/Safety (EHS) – NREAO, Safety, Industrial Hygiene
11. Comptroller (Finance) – Comptroller
12. Unit Energy Managers
13. All Hands – Marines, Sailors, Civilian Marines, Contractors

4.3 Energy policy

The MCAS Beaufort Energy Policy sets forth the Comanding Officer's commitment to continual improvement of energy management and energy performance. The Energy Policy established, implemented and maintained by MCAS Beaufort:

- (a) is documented and signed by the Air Station CO;
- (b) reflects the vision of the Air Station's EnMS to sustain and enhance mission readiness and access to training environments through effective and efficient energy management and continual improvement in energy performance;
- (c) commits to:
 1. continual improvement in energy performance,
 2. the availability of information and resources needed to achieve energy objectives and targets,
 3. compliance with applicable energy-related legal requirements and other energy requirements subscribed to by the Air Station;
- (d) provides the framework for the Air Station's energy objectives and targets and supports procurement and design for energy performance improvement;
- (e) is communicated at all levels within the defined EnMS scope and boundaries; and
- (f) is reviewed annually by the EMC, updated as appropriate by the Management Representative and approved by the CO.

4.4 Energy planning

The energy planning process is defined in the Air Station's Energy Planning Procedure. The procedure covers the required elements of ISO 50001:2011 4.4.1 General, 4.4.2 Legal and Other Requirements,

4.4.3 Energy Review, 4.4.4 Baseline(s), 4.4.5 Energy Performance Metrics, and 4.4.6 Objectives, Targets and Action Plans.

4.5 Implementation and operation

4.5.1 General

The Air Station shall use the action plans and other outputs resulting from the planning process for implementation and operation.

4.5.2 Competence, training and awareness

Qualifications required to operate and maintain the systems associated with most actual and potential significant energy uses are identified and met using a base maintenance contract. In other cases, qualifications for operation and maintenance of facilities such as the mobile vans are addressed by the specific unit.

The Air Station shall identify training needs associated with the control of its significant energy uses and the operation of its EnMS. The Air Station shall ensure that training or other actions needed to meet these needs are provided. For example, training needs could be identified and met by construction contract requirements and modifications to base maintenance contracts.

Appropriate records of competency and training shall be maintained.

The Air Station shall ensure that any person(s) working for or on its behalf are aware of:

- (a) the importance of conformity with the CO's Energy Policy and the procedures and requirements of the EnMS;
- (b) their roles, responsibilities and authorities in achieving the requirements of the EnMS;
- (c) the benefits of improved energy performance;
- (d) the impact, actual or potential, with respect to energy use and consumption, of their activities and how their activities and behavior contribute to the achievement of energy objectives and targets, and the potential consequences of departure from specified procedures.

The Air Station's UEMs are trained in accordance with the requirements of the *UEM Handbook* and the *IEM Handbook*.

4.5.3 Communication

The Air Station shall communicate internally with regard to its energy performance and EnMS. Internal communication mechanisms include, but are not limited to, the EMC, the Public Works staff meetings, the weekly Public Works "Situation Report," periodic Civilian Breakfasts, MCAS Beaufort Energy Ethos website, quarterly energy and water progress reports to Engineering and Expeditionary Warfare Center (EXWC), periodical articles in *Jet Stream*, and monthly updates to the DUERS spreadsheet.

The Air Station shall establish and implement a process by which any person can make comments or suggest improvements to the EnMS. Suggestions can be made through the Interactive Customer Evaluation (ICE) system which is located on the MCAS Beaufort Webpage at

www.beaufort.marines.mil/Resources/EnergyEthos. Other avenues for suggestions include emails, service calls (843-228-7527) and contacting the Energy Manager (843-228-6317).

The Air Station shall communicate externally about its energy policy, EnMS and energy performance as required by the chain of command or as needed to other external parties. The method(s) for communicating externally within the chain of command is typically through the Marine Corps Action Tracking System (MCATS). Communication with other external parties is handled through the Air Station's Energy Office.

Additional details on methods of communication with both external and internal parties are located on the Interested Parties Worksheet.

4.5.4 Documentation

4.5.4.1 Documentation requirements

The Air Station shall describe the core elements of the EnMS and their interaction within this Energy Program Manual.

The Air Station's EnMS documentation shall include:

- (a) the scope and boundaries of the EnMS;
- (b) the CO's Energy Policy;
- (c) the energy objectives, targets, and action plans;
- (d) the documents, including records, required by ISO 50001-2011;
- (e) other documents determined by the Air Station to be necessary.

4.5.4.2 Control of documents

Documents required by ISO 50001-2011 and the Air Station's EnMS shall be controlled. EnMS controlled documents are identified on the EnMS Document Control Index. The EnMS Management Representative and the EnMS Documents Manager shall have the authority to assign Document Approvers and Document Owners for EnMS documents. Document Owners shall be responsible for ensuring that the needed controls are applied. The overall EnMS document system shall be maintained by the EnMS Documents Manager.

The Air Station shall establish, implement and maintain procedure(s) to:

- (a) Approve documents for adequacy prior to issue
 1. Document Owners and Document Approvers shall be identified on the EnMS Document Control Index.
 2. Once a document has been approved, it shall be made available to the appropriate personnel.
 3. Documents that have not been approved shall not accessible for use.
- (b) Periodically review and update documents as necessary
 1. Review dates for EnMS documents shall be identified on the EnMS Document Control Index.

2. EnMS documents may also be reviewed and updated as needed as part of internal audits, corrective or preventive actions, management review or as part of change management.
- (c) Ensure changes and the current revision status of documents are identified
1. Changes shall be identified within revision history information, part of document-related communications, or other means as appropriate.
 2. Revision status shall be indicated on EnMS documents by issue/revision date.
 3. Current revision dates of EnMS documents shall be identified on the EnMS Document Control Index.
 4. Document Owners shall modify documents as needed.
- (d) Ensure relevant versions of applicable documents are available at points of use
1. Documents shall be made available to the appropriate personnel through the distribution means identified on the EnMS Document Control Index.
 2. For documents accessible on the w:/ drive, access to the w:/ drive shall be controlled through Administrator approval who has the authority to provide access rights.
- (e) Ensure documents remain legible and readily identifiable
1. EnMS documents (excluding external documents) shall be readily identifiable through the use of titles that reflect the content of the document.
 2. Legibility shall be maintained through electronic means.
- (f) Ensure documents of external origin determined by the EnMS management representative to be necessary for the planning and operation of the EnMS are identified and their distribution controlled.
1. External documents shall be identified on the EnMS Document Control Index.
 2. Distribution of external documents shall be controlled either electronically or in hardcopy.
- (g) Prevent the unintended use of obsolete documents
1. Obsolete documents retained for any purpose shall be suitably identified.
 2. Obsolete documents on the w:/ drive shall be maintained separately from active/current documents and are identified within folders identified/labeled as "ARCHIVE."

4.5.5 Operational control

The Air Station shall identify and plan those operations and maintenance activities which are related to its significant energy uses and that are consistent with its energy policy, objectives, targets and action plans, in order to ensure that they are carried out under specified conditions, by means of the following:

- (a) establishing and setting criteria for the effective operation and maintenance of significant energy uses, where their absence could lead to a significant deviation from effective energy performance;
- (b) operating and maintaining facilities, processes, systems and equipment, in accordance with operational criteria;
- (c) appropriate communication of the operational controls to personnel working for, or on behalf of, the Air Station.

Operational and maintenance controls related to significant energy uses are identified and recorded on the *SEU Personnel and Operational Control (P&OC) Worksheets*.

Temperature set points are maintained in accordance with *HQMC Guidance for Temperature and Humidity Settings*.

Portable electric heater blowers, space heaters and threshold heaters are prohibited in Government owned spaces unless previously approved using the *Space Heater Request Form* and *Space Heater Operating Requirements IAW MCAS ASO 11320.1* (current version).

Unusual Conditions. When it has been determined that a system cannot be properly controlled, the organization's UEM shall ensure the Public Works Maintenance Control Desk is notified at 228-7527.

4.5.6 Design

Within the limits of its control and influence, the Air Station shall incorporate consideration of energy performance improvement opportunities and operational control into projects involving the design of new, modified and renovated facilities, equipment, systems and processes that can affect the Air Station's energy performance.

There are three types of projects that can involve design of new, renovated and modified facilities, equipment, systems and processes:

- MILCON Design-Build (D-B) projects
- MILCON Design-Bid-Build (D-B-B) projects
- M2R2 design projects

These three types of projects are initiated using the DD Form 1391. The DD Form 1391 incorporates energy performance considerations and relevant operational controls into the project design process, where applicable.

For projects that are approved, energy performance requirements shall be incorporated as appropriate into the design plans and specifications and the relevant procurement activities. These activities include approval prior to purchase of submittals for equipment specified in the design.

The results of design activities shall be recorded in Doc-Scout, HQMC Facilities Integration (FI) website, or NAVFAC Electronic Program Generator (EPG) database, as appropriate.

4.5.7 Procurement of energy services, products, equipment and energy

When procuring energy services, products and equipment that have, or can have, an impact on significant energy uses, the Air Station shall inform suppliers that procurement is partly evaluated on the basis of energy performance. Energy efficient purchases are required and implemented by local practice and requirements. Station Supply has issued a *Green Procurement Environmental Standard Operational Procedure*, endorsed by the Station Commanding Officer, which outlines energy efficient purchasing requirements. These requirements are incorporated into annual training for credit card holders. For larger purchases routed through PR Builder, Station Supply enters relevant FAR clauses requiring the purchase of energy efficient equipment into contracts. Energy efficient equipment is required by DD Form 1391, design plans and specifications in construction contracts.

The Air Station shall establish and implement the criteria for assessing energy use, consumption and

efficiency over the planned or expected operating lifetime when procuring energy using products, equipment and services which are expected to have a significant impact on the Air Station's energy performance. EIP and ECIP require life cycle costing, including energy savings, maintenance savings and avoided costs. Both programs have life cycle requirements-savings/investment ratio that need to be met. Life cycle costs analyses can be included in M2R2 requests for Air Station funding of projects. The EIP, ECIP and M2R2 (when applicable) documentation provides evidence of life cycle considerations and calculations. DD-1391's are available for all three types of projects.

The Air Station shall define and document specifications for the purchase of energy, as applicable, for effective energy use. The Air Station purchases natural gas and electricity from SCE&G. The contracts between SCE&G and the Air Station for purchases of natural gas and electricity refer to the General Terms and Conditions and Standard Conditions, and the *PSC Rules and Regulations* apply. Section 103-363 of the *PSC Rules and Regulations* describes electric service standards. Gas is covered under Section 103-480. Requests for natural gas or electricity services for new or renovated facilities are submitted to NAVFAC using the NAVFAC Request for Electrical Service and NAVFAC Request for Natural Gas Services forms which specify the voltages or pressures required.

The use of low sulphur fuel oil is a requirement of the Air Station's *Air Quality Title V Operating Permit No. TV-0360-0004*. The fuel oil is used as a back-up fuel and is purchased from Beaufort Oil.

4.6 Checking

4.6.1 Monitoring, measurement and analysis

The Air Station shall monitor, measure and analyze at planned intervals the following key characteristics that determine energy performance:

- (a) significant energy uses and other outputs of the energy review;
- (b) the relevant variables related to significant energy uses;
- (c) EnPIs;
- (d) the effectiveness of the action plans in achieving objectives and targets;
- (e) evaluation of actual versus expected energy consumption.

The results from monitoring and measurement of the key characteristics shall be recorded.

The Air Station shall define its measurement needs in the *ISO 50001 EnMS Measurement Plan ("MV Plan")*. The MV Plan shall be implemented and periodically reviewed.

The Air Station shall ensure that the equipment used in monitoring and measurement of key characteristics provides data which are accurate and repeatable. Records of calibration and other means of establishing accuracy and repeatability shall be maintained.

The Air Station shall investigate and respond to significant deviations in energy performance. Results of these activities shall be maintained.

4.6.2 Evaluation of compliance with legal requirements and other requirements

The Air Station shall evaluate compliance with legal requirements and other requirements to which it subscribes related to its energy use and consumption. Compliance with these requirements shall be evaluated annually through review and preparation of *Marine Corps Energy and Water Management Report* and other mandatory USMC and DOD energy inspections and reporting, including:

- (a) Command General Inspections (CGI) and evaluations of local energy conservation programs;
- (b) energy conservation inspections conducted by the UEMs; and
- (c) quarterly meetings of the EMC.

Reports and other records of the results of these evaluations of compliance shall be maintained.

4.6.3 Internal audit of the EnMS

The Air Station shall conduct internal audits quarterly in accordance with the annual EnMS Internal Audit Schedule. All Energy Program Manual Topics listed in the annual EnMS Internal Audit Schedule shall be audited at least once annually.

Audit plans and schedules shall be developed taking into consideration the status and importance of the processes and areas to be audited as well as the results of previous audits.

The selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process.

Records of the audit results shall be maintained locally on the Share drive and reported to senior leadership quarterly at the Energy Management Council Meeting.

4.6.4 Nonconformities, correction, corrective action and preventive action

The Air Station shall address actual and potential nonconformities by making corrections, and by taking corrective action and preventive action, including the following:

- (a) reviewing nonconformities or potential nonconformities;
- (b) determining the causes of nonconformities or potential nonconformities;
- (c) evaluating the need for action to ensure that nonconformities do not occur or recur;
- (d) determining and implementing the appropriate action needed;
- (e) maintaining records of corrective actions and preventive actions;
- (f) reviewing the effectiveness of the corrective action or preventive action taken.

Corrective actions and preventive actions shall be appropriate to the magnitude of the actual or potential problems and the energy performance consequences encountered.

The Air Station shall ensure that any necessary changes are made to the EnMS.

4.6.5 Control of records

The Air Station shall establish and maintain records, as necessary, to demonstrate conformity to the requirements of its EnMS and the ISO 50001-2011 Standard, and the energy performance results achieved. EnMS records and their associated controls, including Record Owners, are identified on the EnMS Records Control Index. The EnMS Management Representative and the EnMS Records Control Manager shall have the authority to identify and/or assign Record Owners. The EnMS Records Control Manager shall be responsible for maintaining the EnMS Records Control Index. Record Owners shall be responsible for ensuring that records assigned to them are properly controlled.

The Air Station shall define and implement controls for the:

- (a) Identification of records. Records shall be identified by title on the Records Control Index.
- (b) Retrieval of records
 - 1. Records shall be retrievable by the means identified on the Records Control Index.
 - 2. Methods of retrieval can include, for example, date, contract number, drawing number, building number, project number, database field, etc.
- (c) Retention of records. Minimum retention times for records are identified on the Records Control Index.
- (d) Legibility and traceability of records to the relevant activity. Legibility and traceability of records shall be maintained using such methods as appropriate database maintenance, back-up of computer drives, conformance with relevant military record procedures (e.g., use of standard subject identification codes), or other means as appropriate.

4.7 Management review

4.7.1 General

Senior Leadership shall ensure the continuing suitability, adequacy and effectiveness of the EnMS by conducting management reviews at quarterly meetings of the Energy Management Council (“EMC,” formerly “UCAB”). Participation by the Base Commanding Officer and/or the Logistics Officer (Top Civilian) and the Utilities Director/Energy Manager is the quorum required for an EnMS management review. Records of management review are maintained on the Management Review Record Form.

4.7.2 Input to management review

The Utilities Director/Energy Manager shall ensure that the information and data (“inputs”) needed for management review is made available to Senior Leadership. The Energy Team shall provide relevant and current information as needed to support the management review process. This includes:

- (a) follow-up actions from previous management reviews;
- (b) energy performance and EnPIs;
- (c) status of energy objectives and targets;
- (d) projected energy performance;

- (e) changes in legal and other energy requirements (if applicable);
- (f) upcoming changes that can/will impact the EnMS (if applicable):
- (g) EnMS internal audit results;
- (h) results of evaluations of compliance with legal and other energy requirements;
- (i) status of corrective and preventive actions:
- (j) recommendations for improvement;
- (k) the energy policy.

Senior Leadership shall review each of the above inputs at least annually. Not all inputs are necessarily reviewed at all quarterly management reviews, but may be covered across the series of meetings held within the fiscal year.

4.7.3 Output from management review

Outputs from management review include any decisions or actions determined by Senior Leadership related to:

- changes in energy performance and EnPIs
- changes to the energy policy
- changes to objectives, targets or other elements of the EnMS, consistent with the Air Station's commitment to continual improvement
- changes to resource allocations
- ensuring the ongoing suitability, adequacy and effectiveness of the EnMS.