

ENERGY USE

1. Version, Date. 1, 1 April 2012

2. Purpose. The purpose of this Environmental Standard Operating Procedure (ESOP) is to implement energy conservation measures into the actions and culture at Marine Corps Base, Quantico (MCBQ). This ESOP will help ensure that MCBQ does its part to meet energy goals established by the President, Congress, and the Department of Defense. It also will help ensure mission sustainability by reducing MCBQ's dependence on commercial utilities and infrastructure.

3. Applicability

a. Audience. This ESOP is directed towards every Marine, Sailor, civilian employee, contractor, family member and visitor at MCBQ. Base wide commitment is essential because everybody aboard MCBQ consumes energy.

b. Scope. Currently, MCBQ obtains the majority of its energy through commercial transmission sources (e.g., electric distribution lines, natural gas pipelines, and trucked diesel/propane fuel). Commands and Tenant Activities must participate in efforts to reduce energy consumption through conservation efforts, increased efficiency, and alternative energy projects. Implementing these efforts will reduce demand on commercial utility companies who provide energy while also helping to preserve the mission of MCBQ in the event of major utility service disruption. This ESOP serves as supplemental information to MCBQ's Energy and Water Management Program and corresponding **B-A-S-E Plan** [Benchmark Building Performance, Activities and Tenant Command Commitment, Sustainable Facilities, Energy Awareness Campaign).

4. Definitions. The following definitions are provided to support this procedure:

a. B-A-S-E Plan. MCBQ's strategy for implementing energy conservation measures and promoting efficient use of utility resources. It is composed of the following: **Benchmark Building Performance, Activity and Tenant Command Commitment, Sustainable Facilities, Energy Awareness Campaign.** A full description of the B-A-S-E Plan and its program elements can be found in Enclosure 2 of Marine Corps Base Order (MCBO) 4100.1B.

b. Building Envelope. Physical separation between exterior and interior spaces. The outer shell of a building used to control the interior environment.

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c. Environmental and Energy Management System (E²MS) Core Team. An information panel chaired by the Base Commander and staffed by activity and tenant command leaders. The E²MS Core Team meets quarterly to make management decisions concerning MCBQ's Environmental Management System (EMS) and Energy and Water Management Program. A full description of the E²MS Core Team and its responsibilities can be found in MCBQ's EMS Manual.

d. E²MS Implementation Team. A multidisciplinary team that provides a "hands on" approach to implementing the Base Commander's EMS and Energy and Water Management Program. The E²MS Implementation Team meets on a quarterly basis to ensure sound technical quality of policies, procedures, and action plans. A full description of the E²MS Implementation Team can be found in MCBQ's EMS Manual.

e. Environmental Coordinators (ECs). Individual appointed at the command level who acts as an intermediary between the Energy Conservation Officers (ECOs) and the Energy Manager. EC's are responsible for appointing ECOs.

f. Energy Conservation Officer. Energy use "practice owners" assigned at each facility/building that will act as a single point-of-contact for energy matters (projects, issues, costs) within each activity and tenant organizations. A full description of the ECO position and its responsibilities can be found in Enclosure 4 of MCBO 4100.1B.

5. Responsible Parties. ECs and ECOs are responsible for implementing the procedures described in this ESOP. They are also responsible for distributing necessary information described in this ESOP to personnel located in their shops and work locations.

6. Procedures for Energy Conservation (Guidelines to be Followed to Increase Energy Conservation). MCBQ is implementing the B-A-S-E Plan in order to meet energy reduction goals and to spark a culture shift to reduce our energy footprint. The B-A-S-E Plan is made of four pillars that include targets and programs to reduce energy use. These pillars are described in detail in Enclosure 2 of MCBO 4100.1B. MCBO 4100.1B also describes conservation measures that personnel can implement at buildings and facilities throughout MCBQ, including but not limited to:

a. Building Envelope Energy Conservation Measures.

(1) Immediately report building envelope leaks, such as leaky windows and doors, to the ECO or the Energy Manager.

(2) High efficiency insulation, windows, and "cool roofs" should be incorporated into new construction/renovation when cost effective.

b. Exterior Lighting Energy Conservation Measures.

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(1) Exterior lighting (including exterior signage) shall only be used from dusk till dawn, unless there are extenuating circumstances due to poor visibility.

(2) Replace exterior inoperable lamps/fixtures with energy efficient lamps/fixtures.

c. Interior Lighting Energy Conservation Measures.

(1) Lighting must be shut off in areas that are not occupied; coordinate with the ECO and Energy Manager to install lighting occupancy sensors.

(2) All lights, with the exception of emergency lights, must be shut off during unoccupied building hours; coordinate with the ECO and Energy Manager to install lighting occupancy sensors.

(3) Replace interior inoperable lamps/fixtures with energy efficient lamps/fixtures.

d. Air Conditioning/Heating Energy Conservation Measures.

(1) Perimeter windows and doors must be shut when operating an air conditioning unit.

(2) During the cooling season, set thermostats to 76°F; air conditioners should be set to 80°F when buildings are unoccupied. During the heating season, set thermostats to 68°F; heaters should be set to 55°F when buildings are unoccupied, but do not let water pipes go below 32°F. During unoccupied hours during heating and cooling season, equipment thermostats should be set to 55°F and 80°F, respectfully.

(3) Do not obstruct heating, ventilation, and air conditioning (HVAC) vents with furniture or other items that may impede air flow.

(4) Contact the Energy Manager for approval of replacement HVAC equipment; the equipment must meet specific energy efficiency requirements.

e. Miscellaneous Electric Loads Energy Conservation Measures. Shut off power strips, whenever possible, to further reduce power consumption.

f. Purchasing Conservation Measures.

(1) Any personnel involved in the purchase of new equipment (office equipment, HVAC equipment, kitchen appliances, etc.) and general office supplies must follow the Federal Energy Management Program (FEMP) procedure for [Energy-Efficient Product Procurement](#).

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(2) In addition to FEMP requirements, purchasers of Government equipment and supplies must procure ENERGY STAR[®] - qualified items in lieu of non-qualified product, when available and reasonable.

7. Inspection and Corrective Action. ECOs will perform quarterly assessments/inspections of the facilities/buildings they are responsible for. Assessments/inspections should be conducted according to Attachment 36-1. Provide copies of the inspection reports to the EC, once completed. The EC will provide all reports to the Energy Manager when compiled.

8. Internal Communication

a. As the main point-of-contact for the MCBQ Energy and Water Management Program, the Energy Manager provides a good share of communicative materials to personnel at MCBQ. Items are available on the Energy Management website (<http://www.quantico.usmc.mil/activities/display.aspx?PID=4192&Section=PWS>), and include:

(1) Information to the E²MS Core Team and ECOs on existing, new, and upcoming energy conservation initiatives and requirements. These could include Federal, state, or Department of Defense requirements or conservation measures specific to MCBQ. Hold quarterly meetings with the E²MS Core Team and quarterly meetings with ECOs.

(2) Periodic articles are prepared for the Quantico Sentry, information on energy conservation events such as Earth Day and Navy Energy Awareness Month, and information on other energy conservation activities at MCBQ.

(3) Updates to MCBO 4100.1B and quarterly policy letters containing requirements that Activities and Tenant Commands must implement.

(4) Provides information and awareness material for ECOs to post in their facilities/buildings. The Energy Manager will also distribute the Navy/Marine Corps Building Energy Monitors Guide to personnel appointed as ECOs.

b. ECOs act as an intermediary between building tenants and the Energy Manager. ECO's communicate mandates, requirements, and awareness materials from the E²MS Core Team and Energy Manager to individuals in each facility/building. ECOs also communicate ideas, maintenance requests, and usage data that originate within the facilities and provide it to the Energy Manager on a quarterly basis. On an annual basis, ECOs will submit reports that document the performance of their facility(ies) to their EC. The ECs will compile ECO reports for their organization and then forward to the Base Energy Manager. The Base Energy Manager will then distill the performance reports and brief results to the E²MS Core Team and Implementation Team.

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9. Training/Awareness. The Energy Manager will provide annual training to all personnel appointed as an ECO. Under the Sustainable Facilities pillar of the B-A-S-E Plan, the Energy Manager will also develop training that emphasizes the importance of sustainability in the development, maintenance, and operation of installation infrastructure.

10. Emergency Preparedness and Response.

a. For natural gas leaks, refer to the following steps:

(1) If you smell the "rotten eggs" odor of natural gas inside, please leave immediately.

(2) From a safe location, call 911 and Columbia Gas of Virginia at 800-544-5606.

(3) If you detect or smell natural gas, do not use matches, electric switches or any kinds of appliances or motorized tools.

b. Refer to ESOP #11, Fuel Storage - Aboveground Tanks and ESOP #12, Fuel Storage - Underground tank for response procedures related to leaks from petroleum storage containers.

11. References and Related Documents

a. EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management.

b. EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance.

c. PL 109-58, Energy Policy Act of 2005.

d. PL 110-140, Energy Independence and Security Policy Act of 2007.

e. MCBQ Energy Conservation Officer (ECO) Guide.

f. Refer to MCBO 4100.1B, Energy and Water Management for a full listing of related references and related documents.

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12. Document Revision History

The following provides a history of revisions of this ESOP:

Revision Number	Date	Revision Made By	Section	Page	Summary of Change and Reason	Signature

13. Document Owner.

- a. Document Owner. Chair, E²MS Implementation Team.
- b. Document Approval. Chair, E²MS Implementation Team.

ENERGY CONSERVATION OFFICER CHECKLIST

Building Number: _____

ECO Name: _____

Code/Shop: _____ **Telephone:** _____

Responsible for what part of the building: _____]

CHECKLIST ITEM

YES NO CORRECTIVE ACTION

OFFICE MANAGEMENT

1) Power management features of computers/monitors activated.			
2) Computers, monitors, photocopiers, and/or printers turned off after normal hours.			

HEATING AND COOLING

3) Unused areas closed off.			
4) Air conditioning or heating system turned off after normal hours.			
5) Air conditioning or heating vents free from obstructions.			
6) Exterior doors closed during heating/cooling season.			
7) Windows closed during heating/cooling season.			
8) Blinds/drapes on south-facing windows are opened in the heating season/closed in the cooling season.			
9) The computer schedule (if the central computer controls heating) matches your occupancy schedule.			
10) Thermostats are set at appropriate heating/AC set points.			
11) Do staff have portable electric heaters in the facility? If so, how many exist?			

LIGHTING

12) Lights turned off in unoccupied area.			
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**Attachment 36-1
Energy Conservation Officer Checklist**

CHECKLIST ITEM

YES NO CORRECTIVE ACTION

13) Lights turned off when daylight is sufficient.

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14) Exterior lights off in daytime.

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15) Building occupants are using task lighting where appropriate.

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16) Ambient light levels lowered when task lighting in use.

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17) Task lighting lamp equipped with compact fluorescent instead of incandescent bulb.

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18) Lighting on backshifts and weekends turned off when not needed.

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KITCHEN APPLIANCES

19) Coffeepots turned off after normal operating hours.

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20) Unneeded light bulbs removed from vending machines.

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21) Gaskets around refrigerator doors in good condition.

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BUILDING ENVELOPE

22) Exterior doors are tightly sealed and weather-stripping is in good condition.

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23) Windows are well sealed and caulking/weather-stripping is in good condition.

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24) Windows panes are in good condition. (There is no cracked or broken glass.)

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WATER CONSERVATION

25) Faucets show no signs of leaking.

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26) Faucets are low-flow or have aerators.

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27) Toilets show no signs of leaking.

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28) Low flow showerheads are installed.

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COMMENTS: _____

ENERGY CONSERVATION OFFICER SIGNATURE: _____ DATE: _____