Defense Logistics Agency Instruction

DLAI 4204
Effective: April 1, 2010

# ENERGY RESOURCE MANAGEMENT

Reference: Refer to Enclosure 1.

1. PURPOSE: This Instruction provides energy policy and guidance for complying with DoD initiative actions, strategies, goals, mission, and vision. This Instruction also provides guidance on reporting energy consumption, cost, energy conservation measures, narratives, implementation plans, and energy scorecards in order to comply with Executive Order 13123. By implementing the energy laws, executive orders, instructions, and handbooks, DLA will improve the overall energy consumption and cost to the Agency without affecting mission. The outputs of this process are:

a. Annual Energy Management Report with four parts submitted to DoD;

b. DLA input to the DoD Annual Energy Report which is sent to the Office of Management and Budget and Congress;

c. Status against deliverables, priority initiatives, and other energy goals to the Corporate Board;

d. Development and updating of the DLA Energy Resource Management policy; and,

e. DLA will provide reliable and cost-effective utilities to support the warfighter's mission.

2. APPLICABILITY: This Instruction applies to all Headquarters (HQ) DLA and DLA Field Activities (FAs).

3. POLICY:

a. Heads of DLA Staff agencies will:

(1) Ensure that energy and water management considerations are included in agency functional responsibilities.

(2) Coordinate all plans and actions which impact on energy and water matters with the Office of Energy Resource Management at DLA-HQ, ATTN: DS-I (ERM), 8725 John J. Kingman Road, Ft Belvoir, VA 22060.

(3) Maintain a single point of contact (POC) to expedite staff actions on energy and water management matters and to disseminate essential information within each agency. The name, rank/grade, DLA agency, e-mail address, mailing address, and telephone number of the agency POC will be provided to DS-I (ERM) at the address in paragraph (2), above. This information will be submitted within 30 working days (six weeks) following publication of this document and within 15 working days (three weeks) following any change to the POC information.

(4) DLA Directors are responsible for compliance in meeting or exceeding Federal energy and water conservation goals. Directors will assist their organizations or staff that are not meeting goals by providing additional resources, assistance, and technical expertise.

(5) DLA HQ office of Energy Resource Management (ERM) will Conduct Energy Awareness and Conservation Assessment visits and ensure follow-on field surveys to maintain Headquarters-level interest and receive feedback on accomplishments and problem areas. In addition, an incentive awards program sponsored by HQ DLA will promote and recognize energy and water conservation efforts by both individuals and DLA agencies/organizations.

b. Procurement: Energy and water saving specifications will be included in acquisition, purchasing, and contracting documents for all purchased items and equipment that uses or consumes energy or water per the Energy Policy Act of 2005 (Epact 05). Energy and water saving technologies are to be used in determination of the most cost effective options for equipment purchases. Directors of all DLA sites and staff organizations will ensure that contracting and purchasing actions:

(1) Maximize use of alternative financing methods, such as Energy Savings Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC) to reduce energy use and cost in facilities when appropriated funds are not available.

(2) Purchase only ENERGY STAR™ rated appliances for any new or replacement application.

(3) Use sustainable design and development (SDD) principles and the current DLA policy memo with regard to energy technology in operation and maintenance of existing facilities and siting, design, and construction of new facilities.

(4) Incorporate lease provisions that require compliance with federal energy and water efficiency requirements. This includes new leases and renegotiation or extension of existing leases.

(5) Procurement specifications will be periodically (annually) reviewed and updated to permit procurement of newly developed energy saving items, in accordance with guidance for the procurement of utility commodities and services as defined by FAR (part 41).

c. Energy and Water Management.

(1) Energy and water conservation management is based on the premise that:

(a) Readiness and training of our Armed Forces must be maintained.

(b) Well-being of Soldiers will be maintained or improved.

(c) Decisions will be based on life cycle economic analysis and accepted conservation practices in order to manage resources in the most cost effective and practical manner using a 10 year payback for all energy/water reduction/savings life cycle costing criteria for required implementation.

(d) Ongoing energy and water awareness programs are required to achieve energy savings.

(2) The administrative use of vehicles, aircraft, and other energy-consuming equipment will be monitored for abuse and unnecessary use beyond that needed to maintain readiness. Engines will be turned off when vehicles are parked or driver/operator is not at the controls unless a maintenance operation is current being conducted that requires the engine to be running.

(3) Within the limits of operational requirements, curtail energy intensive activities until evening/weekend/holiday periods (I.E. high horsepower pump/motor checks, refill of water towers, functional checks on high electrical resistance maintenance or process equipment).

(4) Savings realized from implementation of energy management initiatives will be used to invest in additional energy saving measures such as the purchase of renewable energy systems and renewable energy sources.

(5) Locations with facilities that show exemplary energy or water efficiency and renewable energy improvements will gain exposure as a Department of Energy (DOE) Showcase Facility. Notification of application for this program shall be made through DS-I (ERM) to DLA HQ.

(6) Use of renewable energy systems such as solar hot water or solar thermal, solar electric or photo voltaic, solar outdoor lighting, wind turbines, fuel cells, geothermal, biomass, hydroelectric, ground coupled heat pump systems, and other alternatives will be considered based on life cycle cost effectiveness using a 25 year life cycle.

d. Energy conservation and management guidelines for facilities and buildings:
The following policies apply to all facilities unless specifically excluded via a signed exemption letter from the DS Director.

(1) Low-cost/no-cost initiatives. Energy and water consumption in DLA facilities will be reduced through low-cost, common sense management actions, and preventive maintenance. These include the following:

(a) Establishment of location specific energy and water management plans and policies.

(b) Establishment of an energy awareness program including such measures as de-lamping, turning off unneeded lights, use of automatic occupancy temperature set point controls, closing doors and windows to prevent loss of energy required for heating and cooling, establishment of procedures for “energy waste/abuse reporting,” and appointment and training of facility/building energy monitors that coordinate with site appointed energy managers.

(c) Establishment and performance of scheduled maintenance activities (inspections, operational checks, and replacements/repairs/adjustments) on building systems that impact energy and water consumption, such as heating, cooling, and water distribution systems and the integrity of the building envelope, to obtain efficiencies.

(d) Use of outside air when it is free to heat and cool buildings in accordance with equipment specifications and design criteria.

(2) Heating and cooling.

(a) During the heating season, temperatures in occupied facilities will be maintained in the range of 72 degrees Fahrenheit plus or minus 2 degrees Fahrenheit during working hours and heating setback temperatures during unoccupied times shall be set at 55 degrees Fahrenheit plus or minus 5 degrees Fahrenheit. Temperatures in warehouses and similar active working spaces, such as maintenance bays, will be at 60 degrees Fahrenheit plus or minus 5 degrees Fahrenheit during occupancy and 45 degrees Fahrenheit plus or minus 5 degrees Fahrenheit during unoccupied periods. Warehouses will not be heated if they are usually devoid of human activity and if freezing and condensation are not issues. Wherever mechanical cooling is authorized, cooling season temperatures for occupied working and living spaces shall be maintained in the range 74 degrees Fahrenheit plus or minus 2 degrees Fahrenheit. Cooling set-up temperatures during unoccupied times shall be set at 85 degrees Fahrenheit plus or minus 5 degrees Fahrenheit. Space temperature for medical and medical research operations will comply with these standards unless exempted by UFC 4–510–01. Museum activities on DLA controlled sites that are recognized by the Center of Military History will maintain heating and cooling in accordance with their military agency's regulation and if not provided or available will follow these requirements.

(b) The operation of portable heating and cooling devices is prohibited where the intent is to circumvent the heating and cooling standards outlined above. Supplemental heating and cooling may be used when cost effective energy reductions can be achieved by reducing usage of primary heating and cooling systems or personal comfort levels cannot be achieved by reasonable adjustments of the primary system. Such devices are particularly effective where only a few people occupy a portion of a large building, and conditioning is only required in a small section of the facility. Use of personal supplemental heating or mechanical cooling devices must have supervisor written approval and must only be used when the area is occupied.

(c) Hot water temperatures for general domestic uses, administrative areas, or general cleaning will not exceed 110 degrees Fahrenheit at the destination. Hot water temperatures required for the following are exempt, but will not be set higher than required.

1. Food handling and automatic dish washing in food service facilities: 140 degrees Fahrenheit. Final rinse for dishes and utensils in all food service applications: 180 degrees Fahrenheit.

2. Child care centers: Do not exceed 110 degrees at the site of delivery in any and all child-occupied spaces.

3. Commercial type laundries: 180 degrees Fahrenheit.

4. Industrial and manufacturing processes: Must provide and publish required temperature requirements to DS-I (ERM) within 30 working days of publication of these regulations or comply with these requirements.

5. Medical: See UFC 4–510–01.

(d) In general, where a two temperature or multiple temperature water supplies are needed, lower temperature source generators with “boosters” to the higher temperatures in close proximity to the point of use will be used to the maximum extent practical. The storage and distribution of water above 150 degrees Fahrenheit with distribution and blending to lower temperatures at point of use is not permitted.

(e) Automatic controls for heating and cooling equipment will be maintained to provide energy savings.

(3) Humidity control.

(a) Seasonal humidity levels may be adjusted to improve personnel comfort. Adjustments in humidity control will be accomplished by a cost effective manner for which a life cycle evaluation is used and published to demonstrate that the most efficient manner in used to minimize the increase in total energy consumption.

(b) Special requirements are authorized for unique laboratory, industrial, computer room, and storage applications in accordance with equipment specifications for which the humidity control is required. Such requirements will be in writing and made available upon request and comply with (1) above.

(c) Humidity control for medical and medical research operations varies and shall be in accordance with equipment specifications for which the humidity control is required. Exceptions to this humidity policy are addressed in UFC 4–510–01.

(d) Museum activities recognized by the Center of Military History will maintain humidity in accordance with their service regulations but must also comply with (1) above.

(4) Electrical use.

(a) The lighting fixture standard for new construction, remodeling, and modular office furniture is either a life cycle cost effective LED or the T–8 HO lamp with instant start

electronic ballast or the T–5 HO lamp. Day-lighting and occupancy controls will be used. Illuminating Engineering Society of North America (IESNA) standards of lighting will be used as a guide for all DLA sites and facilities including those occupied by reimbursable tenants.

(b) Off-hour and exterior lighting will be eliminated, except when it is essential as required by safety and/or security regulations by service specific requirements. If lighting is required by need or regulation, the use of motion sensor controls will be used unless demonstrated in writing and analysis to not be cost effectiveness.

(c) Ensure all electrical equipment and appliances (for example, monitors, fans, coffee pots) are turned off when not in current use and during non-duty hours. Individual use or personally owned appliances are not authorized in the workplace. All micro-waves, coffee pots, heating plates, ETC will be used in common areas and be the property of DLA.

(d) Refrigerators are authorized for area use only with sizing based on number of personnel supported. Use one cubic foot per person as an average to determine size and quantity of refrigerators that are appropriate. Refrigerators in work areas and offices intended for only one person's use are prohibited. Exceptions allowed for general officers or SES directors and commanders who have conference room meeting requirements that justify the single use.

(5) All purchases of microcomputers, including personal computers, monitors, and printers, meet ENERGY STAR™ requirements for energy efficiency.

(6) General purpose office equipment, copiers, printing devices, faxes, all-in-one devices, and similar equipment will be turned off at the end of every business day unless a sleep mode/standby mode less than 2 watts exist (1 watt or less is the desired minimum level) and is activated after any five minutes of inactivity or non-use. Computer monitors and peripheral devices such as speakers, scanners, and external drives, shall be turned off when not in use unless a sleep/standby mode of 1 watt or less is available and activated after any 5 minutes of inactivity or non-use. Consideration should be given to using a power strip (with occupancy sensor control) for all external devices to ease and consolidate turning off the devices and the associated transformers that are required for these devices.

(7) Computer and peripheral devices used in conference rooms, video-teleconferencing, and kiosks environments shall be turned off when not in use. Computer and peripheral devices shall be turned off when not in use for any extended periods of absence such as vacation or holidays.

(8) The central processing unit (CPU) for computers that are laptop or desktop units can remain on for IT purposes only when the computer is capable of, configured, and enabled for energy saving features such as standby/low energy or sleep modes during periods of operator absence and the mode is activated after no more than 20 minutes of inactivity (preference is 5 minutes).

(9) Use of this exception to remain on in (8) above by use of standby/low energy or sleep mode of operation are authorized only when the computer meets ENERGY STAR™ compliance and consumes less than 2 watts energy in the sleep or standby mode.

(10) An exception to leaving non-compliant CPUs on for short periods of after-duty-hours is authorized by Information Technology (IT) authority when a specific start and stop date and applicable times for the CPUs to remain on is stated. The specific impacted computers will be listed with the start/stop date announcement. Start/stop dates and announcements intended to defeat the intent of turning off the non-compliant CPUs when not in use are prohibited.

(11) The director of DLA sites may authorize local policy on the use of outdoor decorative holiday lighting, giving consideration to the use of timers or photo sensors for usage control.

(12) Water Conservation Site requirements.

(a) Conduct surveys to check water use policies and compliance.

(b) Conduct leak detection tests to identify and repair leaks.

(c) Increase water efficiency for domestic water consumption by using water saving fixtures and appliances.

(d) Use reclaimed or recycled water for landscape irrigation.

(e) Develop water management plans to implement best practices for water conservation.

e. Exceptions to energy policy. Facilities with unique lighting, humidity, heating, and cooling requirements may submit requests for exception to these requirements to the DS Director ATTN: DS-I (ERM), 8725 John J. Kingman Road, Ft Belvoir, VA 22060.

4. Responsibilities:

a. DS-I issues energy use and reporting guidance to DLA PLFAs.

b. DS-I ERM manages the tracking, consolidation, validation, and verification of PLFAs submitted data before sending the report to DoD.

c. DS-I ERM prepares a total energy consumption and cost data report.

d. DS-I ERM prepares a narrative report which describes the energy utilization from the previous year compared to the base year. This report describes the energy conservation measures achieved by each permitted installation.

e. DS-I ERM writes an implementation plan which describes the energy initiatives for to be followed to support the DLA Energy and Water Strategy.

f. DS-I ERM prepares an energy scorecard as requested by OSD.

5. Effective Date: This Instruction:

a. Is effective on April 1, 2010.

b. Must be reissued, cancelled, or certified current within 5 years of its publication in accordance with DLAI 5025.01, DLA Issuance Program. If not, it will expire effective April 1, 2020 and be removed from the DLA Issuances Website.

Director, DLA Installation Support

## ENCLOSURE 1

## REFERENCES

(a) Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance; October 5, 2009

(b) Public Law 110-181: National Defense Authorization Act for Fiscal Year 2010, November 03, 2009

(c) DoDI 4170.11 Installation Energy Management December 11, 2009

(d) DLA Energy & Water Strategy, April 06, 2010

(e) DLA Sustainable Design and Development Implementation Direction Memo, Feb 18, 2010

(f) Public Law 110–417: DUNCAN HUNTER National Defense Authorization Act for Fiscal Year 2009, May 15, 2008

(g) Public Law 110-140: Energy Independence and Security Act 2007, December 19, 2007

(h) Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, January 24, 2007

(i) Public Law 109-58, Energy Policy Act of 2005, August 08, 2005

## ENCLOSURE 2

## ADDITIONAL INFORMATION

1. Definitions.

a. Alternative Energy Source. Energy produced from sources or recovered from conversion, including such forms as solar, thermal, photovoltaic, geothermal, and wind.

b. Building Energy Consumption. This includes energy consumed for heating, cooling, ventilation, lighting, domestic hot water, laundry, and non-tactical power generation.

c. Defense Utility Energy Reporting System (DUERS). An automated management information system with which the DoD monitors its supplies and consumption of energy.

d. Energy Awareness Program. A program that eliminates energy waste by changing the attitudes of energy users and, through those changed attitudes, changes their behavior as well. It uses action-oriented messages to tell users what they can do and how to do it in the simplest, most direct way possible.

e. Energy Conservation Investment Program (ECIP). A multi-year military construction funded program to reduce energy consumption through retrofit of existing facilities. These projects must pay back over their economic life and show an acceptable energy to cost (E/C) ratio.

f. Energy Manager. A person, who develops a strategy for achieving energy reduction goals, assigns task to activities and monitors goals and task progress. This person understands both the technical and managerial aspects of energy management and educates top management of the cost savings and benefits that can be realized through energy conservation. Meets the federal energy manager requirements in EPAct 92.

g. Facilities Energy. Those energy resources used for the operation of installations and fixed facilities. These resources include, but are not limited to, steam, electricity, natural gas, hot water, cold water, coal, nuclear, solar and refuse-derived fuels, solid fuels, and petroleum products.

h. Mobility Energy. Those fuels used to operate vehicles and other mobile equipment. Mobility fuels are primarily petroleum products. This term is used to distinguish these energy resources from facility energy resources.

i. Renewable Energy Source. Solar thermal (SOL), wind (WND), geothermal (GEO), geothermal electric (GLC), hydroelectric (HYD), refuse-derived fuel (RDF), photovoltaic (PHO), reclaimed fuel oil (RFO), and wood (WUD).

j. Trained Energy Manager. One who has completed a course of study in the areas of: (a) fundamentals of building energy systems; (b) building-energy codes and applicable professional

standards; (c) energy accounting and analysis; (d) life-cycle cost methodologies; (e) fuel supply and prices; and (f) instrumentation for energy surveys and audits.

2. Process Inputs

a. Laws, Executive Orders, DoD and DLA policies.

b. DS-I shall provide guidance and oversight for the Energy Program.

c. DS-I ERM shall develop and maintain an active energy and water conservation program.

d. DS-I ERM requests a quarterly energy report from the PLFAs.

e. DS-F site energy managers and engineers will develop projects to reduce energy and water consumption and cost.

f. The Program Budget Review (PBR) and Budget Estimates Submission (BES) request FAs to submit requirements to accomplish energy and water conservation projects. The PBR and budget processes are explained in DLA One Book Process Chapter, Program Budget Review.

3. Sub Processes

NOTE: Energy and water conservation and reduced costs (where economically justified without jeopardizing mission capabilities or reducing the quality of life for personnel) are done through the following sub-processes:

a. DS-F sites shall provide and staff a trained energy manager position to coordinate facility, mobility, and energy matters and serve as energy point of contact.

b. DS-F sites shall promote energy and water conservation awareness at both the PLFAs, sites and in the communities.

c. DS-F activities shall ensure that the energy and water conservation data is accurate and reported quarterly during the fiscal year. The report should contain the total energy and water consumption along with the total cost data. Electricity should be reported in megawatt hours; fuel oil in thousands of gallons; natural gas in thousand cubic feet; liquid propane gas/propane in thousands of gallons; coal in short ton; automobile gas in thousands of gallons and diesel in thousands of gallons.

d. DS-F sites shall submit a Defense Utility Energy Reporting System (DUERS) report along with the quarterly energy report.

e. DS-F sites shall develop and recommend candidate energy and water projects for Energy Conservation and Investment Program (ECIP) and other Federal Energy Management Programs (FEMP).

4. Process Mechanisms

a. DS-F site energy managers.

b. DS-F site mid-year energy data review.

c. DLA PLFAs facility personnel.

d. Energy Management Control System (EMCS).

e. Budget Officer.

f. Copy Machines.

g. Computers.

h. Meters.

5. Competencies / Certifications

a. Certified Energy Manager (CEM) assigned to each DS-F site and trained through recognized professional organizations, other Government Agencies training programs, multi-media sources.

b. Training offered by the Military Services training programs for all personnel within the DoD.