U.S. Department of Transportation
United States Coast Guard

United States Coast Guard

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COMDTINST 4100.2D

- 6 MAR 1997

COMMANDANT INSTRUCTION 4100.2D

Subj: ENERGY MANAGEMENT

1. PURPOSE. This Instruction outlines the framework of the Coast Guard's energy program designed to meet mandated reduction goals, improve energy efficiency in all areas of operations and support, and minimize energy costs.

2. ACTION. Area and District Commanders, Commanders of Maintenance and Logistics Commands, Commanding Officers of Headquarters Units, and Assistant Commandants for Directorates shall work within the framework of the Coast Guard's energy program to ensure a viable and aggressive energy efficiency and conservation effort is carried out for all units in their area of responsibility without adverse impact to operational missions.

3. DIRECTIVES AFFECTED. COMDTINST M4100.2C dated 17 December 1981 is canceled.

4. PROGRAM GOALS. The Coast Guard's energy goals are to maximize efficiency, reduce consumption and waste, and to ensure the most cost efficient selection of energy resources are used. Knowledge of current energy levels of facilities and assets, understanding where energy is consumed, and use of proven engineering retrofit changes can assist in meeting these goals. Specific cost savings and consumption goals are identified below.

   a. Energy Funding. Reduce facility energy costs at least 12% and operational energy costs at least 3% in FY97 from the established (normalized) energy baselines. Recognizing that larger retrofit projects typically take time to return savings, another reduction is not planned for three years. The energy program is dynamic and will be continually assessed to determine the necessity of further resource and funding actions.

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b. Energy Consumption Goals. Reduce Coast Guard facility energy consumption 20% by FY 2005 from FY 1995 levels. All other requirements of the Energy Policy Act of 1992, 10 CFR 436, and Executive Order 12902 shall be carried out. Exemption from the mandated reduction targets for facilities which are by nature energy intensive may be approved by Commandant G-SEC once identified. While not subject to mandated targets, exempted facilities will still proactively strive to improve energy efficiencies where available.

5. BACKGROUND. The importance of managing energy resources has been accentuated recently by the overall downward trend in the resources available to perform our many missions. Comprising approximately one in every six of the Coast Guard's operating and maintenance dollars, energy dollars saved can be put to work elsewhere. Increased energy efficiency is just good business sense. The Coast Guard is required by law to reduce its overall energy consumption and to minimize the use of petroleum fuels in all its facilities and platforms. Surveys indicate significant potential for energy savings through investments in engineering and retrofits to our existing facilities. There is further potential for savings on our operational platforms through increased emphasis on fuel economy, selection of lower cost fuels that meet power plant specifications, and better logistics and operational planning.

6. ORGANIZATION. Every Coast Guard member and employee bears responsibility for being good stewards of our energy resources. Furthermore, dependents in Coast Guard family housing also have a responsibility to guard against wasteful energy use. Energy efficiency and conservation can only be successful if every member considers it his or her own responsibility.

a. HEADQUARTERS.

(1) Coast Guard Energy Program Director (G-CFP). The Director of Finance and Procurement (G-CFP) shall lead and oversee the Coast Guard's energy program to meet Commandant directed goals and comply with federally mandated targets. The Energy Program Director will champion energy efficiency at the most senior management levels. He will promulgate applicable energy policy that will frame direction of energy management efforts at all levels.

(2) Coast Guard Energy Program Manager. As a staff element of G-CFP, the Coast Guard's Energy Program Manager will manage overall day-to-day program direction and provide guidance as appropriate on energy issues and resources. Other responsibilities will include management of all Coast Guard AFC-30 energy funds, approval of Facility Energy Efficiency Funds (FEEF) projects, and development of applicable training curriculums and sponsorship as funding allows. He will serve as primary Coast Guard point of contact on energy policy and resource issues.

(3) Assistant Commandant for Systems (G-S). The Assistant Commandant for Systems will establish policy and manage resources that directs the energy efficient design, retrofit, and renovation of shore facilities, aircraft, boats, and cutters. He will lend the appropriate naval, aviation, and civil engineering technical expertise to energy issues as necessary and validate engineering solutions that support viable energy efficient operation of assets and facilities.

(4) Coast Guard Shore Facility Energy Manager. A part of the G-SEC staff, the Shore Facility Energy Manager will provide specialized support for a comprehensive facility energy program consistent with the Energy Program Director's guidance. Among specific responsibilities are development of shore facility energy engineering guidance and standards, implementation of an aggressive audit program, identification and prioritization of energy retrofit projects, coordination of AFC-43 energy funds issues, coordination of regular engineering energy workshops, and service as program director for the agency's partnership with EPA in the GreenLights and Building Energy Star programs. He will serve as primary point of contact for shore facility energy management issues.

(5) The Assistant Commandant for Operations (G-O). The Assistant Commandant for Operations will establish policies and procedures directing energy efficient operation of assets consistent with mission requirements. He will ensure energy is a part of field operations procedures, planning criteria, and scheduling.

(6) Coast Guard Operations Energy Manager. As part of the G-O staff, the Operations Energy Manager will provide the necessary support to ensure a viable operational energy program is implemented. He will serve as the lead point of contact in Headquarters for energy issues relating to or having impact on field operations.

(7) The Assistant Commandant for Acquisitions (G-A). The Assistant Commandant for Acquisitions will ensure that new hardware acquisitions sufficiently address energy efficient operations in their requirements.

(8) The Assistant Commandant for Human Resources (G-W). The Assistant Commandant for Human Resources will establish policies regarding energy usage for both leased and family housing.

b. FIELD.

(1) Maintenance and Logistics Commands (MLCs)/Headquarters (HQ) Units. Commanders of MLCs and HQ units will establish specific energy policy and develop and implement a comprehensive field energy management program consistent with the framework of this instruction, guidance of the Coast Guard Energy Program Director, and the requirements of the program's goals. It is recognized that MLCs and HQ Units have strong engineering and technical support

within their commands (e.g. (v), (s), FDCCs, CEUs, facilities engineers, etc.) that are great assets in energy management. MLCs and HQ units, with support and assistance of Area and District Commands, are directed to work within the structure of the Coast Guard's energy program to make energy efficiency and sound energy management a reality at all field and operational units. MLC's and HQ unit's will closely work with applicable Headquarters energy managers to meet necessary requirements of the Coast Guard's program. MLC and HQ units shall be the primary organizational element in the initiation and oversight of field energy management.

(2) Administrative Target Units (ATUs). District/MLC/ HQ Units which are Administrative Target Units (ATUs) having budget or financial officers (those that receive IBUDS funding) continue to have responsibility for the management, budgeting, and distribution of annual energy funds and appropriate distribution of AFC-30 FEEF dollars to the appropriate accounts. Quarterly submission of energy reports verifying/estimating annual energy cost/needs are required to be electronically submitted on a standard template format 30 days after the close of each quarter. ATUs should note any significant external drivers (e.g. very adverse weather seasons, mandated additional operations without associated energy funding, etc.) beyond unit control in quarterly reports, quantified to as great an extent possible. Every effort will be made to neutralize or account for significant uncontrollable variables. Quarterly data on four standard categories of use will be collected/estimated. These are Cutter & Boat fuel, Aircraft fuel, Electricity, and Other (included in this category is natural gas, propane, home heating oil, purchased steam, auto fuel, coal, wood, etc.). Hydraulic fluid and lubricating oil (unless directly used in propulsion e.g. 2 cycle engines) shall NOT be included or categorized as an energy product.

7. ENERGY MANAGEMENT POLICY. MLCs/HQ units with support of applicable Area and District Commands shall develop local energy program policy and guidance which promotes greater energy awareness among all Coast Guard personnel and emphasize user controlled reductions. This goal will be achieved with a conscious regard to ensuring an improved condition, a higher quality, or a better standard is achieved by the retrofit of energy projects. This will ensure the maintenance of comfortable and healthy working conditions and achievement of an acceptable indoor air quality standard. Program goals will focus on achievement of real (measurable) rather than statistical efficiencies. The Commandant's goals of mission readiness, quality of life, and safety shall not to be compromised to achieve energy efficiencies, however these should not be viewed as incompatible goals. MLCs/HQ units energy programs along with applicable Area/District operational procedures shall provide specific implementation guidance for field energy management and will include among other items policy which is consistent with the following.

a. Boat, Cutter, Aircraft Operations. Energy efficient measures relating to asset utilization shall be standardized, promulgated and routinely practiced. It is recognized that a more

limited degree of energy retrofit opportunities and technologies are generally available for operational assets without major engineering redesign, however reemphasis of common sense conservation practices, efficient scheduling, and innovative standard operating procedures can contribute significantly to meeting the Coast Guard's energy reduction mandates.

b. Building and Cutter Temperature Policy. Thermostats shall be set to maintain temperatures in accordance with current national standards as specified by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) or by local energy codes, whichever takes precedence. More specific guidelines will be developed and published by Commandant (G-SEC).

c. Shore Facilities. Policy shall address metering, tracking of energy consumption and review of consumption trends to assist in assessment of energy intensive buildings and potential retrofit opportunities. Data capture should be prioritized for all shore facilities in both absolute terms (e.g. British Thermal Units (BTUs) or Kilowatt-hours (KWHs) per year) and in "normalized" terms (e.g. BTUs per square foot per year). Specific guidance shall address procedures for units to coordinate appropriate shore facility energy support for audits/projects. The Shore Facility Energy Manager can provide further assistance in developing field energy management procedures.

d. Vehicle Operations. Except for those vehicles exempted under the provisions specified in the Motor Vehicle Manual, COMDTINST M 11240.9A, all motor vehicles acquired shall be selected to achieve the maximum fuel efficiency directed by the Federal fleet plan, and shall be limited to the body size, engine size, and operational equipment necessary to meet basic requirements.

e. Leased Facilities. Without a specific waiver from the Coast Guard Shore Facility Energy Manager, units shall not enter into leases for buildings with parties other than the General Service Administration (GSA) unless one of the following criteria is met:

(1) The energy consumption rate of the building in BTU/GSF/YR is less than or equal to a rate which is 30% less than the consumption rate for the same type of building which existed in 1985 in a similar climatic region, or

(2) The building energy consumption rate is less than the energy budget targets for energy consumption as directed in the Shore Facilities Energy Management Manual, COMDTINST M11000.6.

f. Audits. MLC/HQ units will ensure policy governing facility audits include a detailed analysis of current utility rate structure to assess potential areas for rate modification and billing reduction. A review of demand and ratchet charges is helpful in determining applicable demand side management opportunities (e.g. peak shaving, load shifting) which may be possible by operational or maintenance changes. This information is also

valuable in determining the best combinations of energy conservation opportunities which will balance cost and energy savings.

g. Energy Contracting Opportunities (ECOs). MLCs/HQ units will assess and recommend units/facilities which are ideally suited as candidates for energy savings performance contracts (ESPCs) or utility partnership agreements. Due to the sensitive nature and limited number which can be entered, liaison with Headquarters is essential.

h. Recognition of Successes. Every opportunity should be made to promote energy efficiency. Articles for local newsletters can cite energy efficient field units. Use all resources available to recognize efforts of energy saving champions. Special interest articles may be submitted to Headquarters for the Commandant's Bulletin, CFO newsletter, Engineering journals, or other publication media. Submit individual and team nominations for outstanding energy work to Headquarters for entry in the Department of Energy's Federal Energy Management Award competition. Deadline for entry to Headquarters is April 1st.

8. FUNDING BASELINES. Energy funding baselines (for all ATUs receiving IBUDS energy funds) were established and representative historic actual energy use during a average year of both OPS tempo and weather. It is anticipated that energy funds will be distributed in follow-on years according to the asset standard approach of the budget model.

9. FUNDS REPORTING. Quarterly energy cost/estimate reports (including an additional September close-out report) will continue to be required for each ATU which receives HQ funds. The standardized report template will be electronically submitted to the Coast Guard's Energy Program Manager and should cite an annual energy funds projection which combines both actual energy expenses/obligations to date as well as best estimates of energy funds projections for the balance of the fiscal year. Reasons should be noted on the report if previous quarter's energy estimates vary significantly from actual use (e.g. asset changes, weather conditions, unanticipated tasking).

10. ENERGY CONSERVATION OPPORTUNITY FUNDING STRATEGIES, INCENTIVES, AND CONTRACTING.

a. Coast Guard Facility Energy Efficiency Fund (FEEF). The FEEF, an AFC-30 account managed by the Coast Guard Energy Program Manager, was developed to assist in audits and low cost Energy Conservation Opportunities (ECOs) $25,000 and less. The FEEF was primarily designed as another resource avenue for quickly implementing low cost, high return-on-investment retrofits, particularly benefiting smaller facilities which may have a more limited scope of energy savings opportunities and funding avenues. The FEEF is annually funded at a ceiling of $2 million. A waiver by Commandant (G-CFP) to the Financial Resources Management Manual (FRMM) raised the construction ceiling of AFC-30 funds from $3,000 to $25,000 as it relates to energy projects. This

waiver does not prohibit use of AFC-43 money for projects below the $25,000 threshold but rather makes available another potential source of energy project funds.

b. Building/System Audits and Funding. Funding for building/systems audits as defined in this instruction is available from the FEEF. Audits may be funded from the FEEF in excess of $25,000. MLCs shall support efforts to develop Coast Guard audit teams on each coast. Often the largest and most immediate savings are achieved by changing facilities operational or maintenance policies and procedures or by making low cost facilities or equipment investments. These ECOs are most often identified through building/systems audits and should be pursued immediately.

c. FEEF Request Process. Requests for FEEF projects are annually solicited by Commandant (G-SEC-1). MLCs/HQ units shall submit data for potential projects, audits, and retrofits within the established deadline for consideration of available funding. Specific project information requirements are published with the solicitation and normally will include facility/unit description, proposed retrofit, estimated cost, and estimated annual savings in both dollars and energy units.

d. Approval. FEEF projects/audits are prioritized by Commandant (G-SEC) and assigned a specific LUFS twelve character project number that remains as that project's unique identifier. A recommendation for funding is made to the Coast Guard Energy Program Manager. If approved, funds are transferred from the Headquarters FEEF project account to a specified receiving account and program element as specified by the ATU via a Funds Transfer Authorization (FTA). The LUFS assigned project number and the project description will be cited on the FTA. Once funds are received, MLCs/HQ units will ensure entry of LUFS data and submit to Headquarters quarterly, and/or upon project completion, transaction summary reports of funded projects. All procurement documents, purchase orders, background and supplemental data relating to the approved energy project will be locally held for three years past project completion and will be subject to periodic audit review. Project completion status and measurement of energy savings from these projects should be submitted at regular intervals as prescribed by the Shore Facilities Energy Manager

e. Incentive Program. Recognizing that proactive participation by individual units are critical to the successful implementation of a viable energy program, MLCs/HQ units are directed to prototype incentive programs for both operational units and shore facilities. The programs shall be designed to return a portion of documented AFC-30 energy savings (from an established baseline usage) to the Operating and Maintenance (O&M) accounts of units which are active in implementing aggressive or innovative energy conservation/retrofit measures. Report to Headquarters, units chosen for prototype, highlight/summarize the incentive process initiated, and

comment/recommend the possible expansion of various incentive options to other units. Facilities meeting EPA's "Energy Star" goals due to aggressive energy efficiency/conservation measures will also be eligible for public recognition and receipt of the Energy Star building plaque.

J. M. LOY
Chief of Staff