

Department of Defense

Annual Energy Management Report



Fiscal Year 2008

Office of the Deputy Under Secretary of Defense
(Installations and Environment)

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EXECUTIVE SUMMARY

The Department of Defense (DoD) continues to make significant progress toward achieving the goals of the *Energy Policy Act of 2005* (EPAAct 2005), Executive Order (EO) 13423 *Strengthening Federal Environmental, Energy, and Transportation Management*, and the *Energy Independence and Security Act (EISA) of 2007*.

The DoD Energy Program initiatives include energy awareness efforts, energy manager training, audit programs, procurement of energy efficient products, and the use of sustainable design in new construction. Other contributing factors include integrated energy planning, enhanced use of renewable energy, and demonstration of innovative technologies, and the use of Energy Savings Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC).

EPAAct 2005 and EO 13423 established a new energy baseline (2003), increased the annual reduction requirement to 3 percent per year, increased the percentage of renewable energy required (7.5 percent by 2013), increased efficiency of new construction to 30 percent below the current standard, and required metering electricity consumption of all facilities.

Through Fiscal Year (FY) 2008, the DoD achieved a 10.7 percent decrease in goal facility energy consumption (as measured on a British Thermal Unit (Btu) per gross square foot (GSF) basis [Btu/GSF]) as compared to the 2003 baseline. This exceeded the federal government goal decrease of 9.0 percent.

At the end of FY 2008, the Department has 1.98 billion square feet of facilities and spent \$3.95 billion on facility energy. DoD spent \$16 billion on fuel for non-fleet and fleet vehicles and other equipment. This included auto gasoline, LPG-Propane, Aviation Gasoline, jet fuel, diesel-distillate and Navy-special fuel.

DoD continues to make progress in installing renewable energy technologies and purchasing electricity generated from renewable sources (solar, wind, geothermal, and biomass) when life cycle cost-effective. The total renewable energy consumption in 2008 amounted to 4.72 trillion Btu or 4.7 percent of all electricity consumption in DoD. When all renewable energy is considered, DoD procured or produced 9.89 trillion Btu or 9.8 percent of its consumption. When counting only renewable electricity, 2.9 percent of DoD's electrical consumption came from renewable energy, not quite reaching the goal of three percent. This is a significant drop from the 5.5 percent reported in FY 2007. All three of these measures are down from 2007, primarily due to the increased cost and resulting smaller purchase of Renewable Energy Certificates (RECs). DoD encourages the cost effective purchase of all energy commodities. In most cases, it is not cost effective to purchase RECs and in many cases, renewable energy projects are only cost effective when the RECs are sold as part of the financing arrangement. In addition, thermal renewable energy sources are generally more cost effective than electrical sources as clearly evidenced by the more than two fold factor between the two measures. DoD continues to advocate changing the renewable energy metric for all Federal agencies to "procure or produce" vice "consume" and to recognize the valuable contribution of thermal renewable energy vice only electricity.

I. MANAGEMENT AND ADMINISTRATION.

A. Energy Management Infrastructure

1. Senior Agency Official

The Deputy Under Secretary of Defense (Installations and Environment) (DUSD I&E) is the DoD Senior Agency Official responsible for implementing the goals of EPAAct 2005 and EO 13423.

At the Service and Agency level, the following are senior level officials:

Department of the Army (DoA)

The Deputy Assistant Secretary of the Army for Energy and Partnerships (DASA (E&P)), Mr. Paul Bollinger, is the Senior Energy Official for the Army.

Department of the Air Force (DoAF)

The Assistant Secretary of the Air Force for Installations, Environment, and Logistics (SAF/IE), Mr. Kevin W. Billings, is the DoAF Senior Energy Official.

Department of Navy (DoN)

Mr. B.J. Penn, Assistant Secretary of the Navy for Installations and Environment (ASN (I&E)), is the designated senior DoN official for Energy.

Defense Finance and Accounting Service (DFAS)

The Director of Support Services, Mr. Bruce Keith, has been appointed as the agency's senior energy official.

Missile Defense Agency (MDA)

MDA's Environmental Executive, Mr. Albert D. Hemphill II, will coordinate, as necessary, with the Steering Committee on EO 13423 implementation, program management, and performance reporting at the Defense Agency level.

National Geospatial-Intelligence Agency (NGA)

Cynthia G. Snyder; Director, Installation Operations Office; Senior NGA official responsible for installation operations at all assigned sites.

National Security Agency (NSA)

Mr. Stephen Lopez, Deputy Associate Director for Installations and Logistics is the designated senior NSA official for Energy, and oversees the Agency's energy and water management program.

Tricare Management Agency (TMA)

The Senior Official and headquarters program managers are responsible for advocating policy, programs, and initiatives to improve energy and water efficiency, implement applicable Executive Orders, DoD directives, other federal or agency requirements, and TMA specific initiatives.

- The Bureau of Medicine and Surgery (BUMED) Senior Official for energy management is Captain Stephen Bell, (202) 762-3512, email: stephen.t.bell@med.navy.mil .
- The Headquarters (HQ) Medical Command (MEDCOM) Energy Program Manager is Jim Butts, MEDCOM Assistant Chief of Staff for Installations, Environment, and Facility Management.
- The BUMED Energy Program Manager is LCDR Titania B. Cross, (202) 762-3523, email: titania.cross@med.navy.mil.
- The MEDCOM Fort Detrick, MD Energy Manager is Mark Zangara, Mechanical Engineer, Engineering and Construction Branch, Directorate of Installation Services, Ft. Detrick, MD.

Washington Headquarters Service (WHS)

During FY 2008, Terri Robertson was the Pentagon Energy Manager. Her position is located within the Defense Facilities Directorate (DFD) in the Engineering and Technical Services Division (ETSD). The official's role and responsibilities are to provide leadership for the WHS Energy Management Program and obtain resources for energy conservation projects. The Pentagon Energy Manager is responsible for the utilities supplied to the Pentagon Reservation which includes the Pentagon, the Pentagon Heating and Refrigeration Plant (PH&RP), Federal Office Building #2 (FOB2/Navy Annex), the Remote Delivery Facility (RDF), the Modular Office Complex and all Reservation grounds and parking areas. The Energy Manager is also responsible for the utilities for the Hybla Valley Office Building (HYBLA) and the U.S. Court of Military Appeals (CMA) for the Armed Forces. The total gross square footage for these facilities exceeds 8 million gross square feet.

2. Agency Energy Team

DoA

The Army Energy Team is comprised of persons from the Office of the DASA(E&P), Office of the Assistant Chief of Staff for Installation Management and the Installation Management Command (IMCOM) in collaboration with the US Army Corps of Engineers (USACE), Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, the Army Staff, and other Army Offices and Commands.

The Army established the Army Senior Energy Council in August 2008. The Council is led by the Secretary of the Army with co-chairs the Vice Chief of Staff and Assistant Secretary of Installations and Environment, and is comprised of the Deputy Chiefs of Staff for Operations and Plans, Logistics, the Deputy Chief of Staff G-8 and other Staff Officers. Its mission is to develop a comprehensive Army Enterprise Energy Strategic Plan encompassing installations and facilities including non-tactical vehicles; weapon systems including tactical, combat manned and unmanned ground and air platforms; and sustainable contingency operations base camps. The Plan at a minimum will synchronize submission of energy program resource requirements with the Army planning, programming, budget and execution process and timeline; provide guidance for the development

of Army power and energy priorities and implementation plans; promote integration of power and energy strategies for installations, weapons systems and contingency operations base camps; leverage innovative technologies for alternative and renewable energy; and provide metrics for monitoring progress of programs and operations intended to facilitate the accomplishment of the Plan's goals and objectives.

DoAF

The Air Force Energy Team consists of the Energy Senior Focus Group (SFG) -- five working sub-groups and three advisory groups. It also includes Energy Management Steering Groups (EMSG) at the Major Command (MAJCOM) and installation levels. Each workgroup provides a forum for information exchange and coordinates interagency efforts to promote agency implementation of Air Force policies supporting federal mandates. Each workgroup develops guidance, reporting metrics, and other documents and tools. In addition, workgroups may establish subcommittees to make recommendations for addressing implementation issues identified by the workgroups. The synergy of these groups' link decision making and advocacy, thus optimizing resources and program performance.

- Energy SFG. The Energy SFG serves as the Senior EMSG within the HQ United States Air Force (USAF). The Energy SFG's scope extends to energy use and conservation issues within the Air Force, including seeking alternative energy opportunities. This includes energy use on Air Force installations and property, ground transportation and support equipment/systems, aviation fuel, and associated science and technology. It designates working groups to focus on specific energy issues within the Air Force. The Air Force Agency Senior Energy Official chairs the Energy SFG with membership organizations from the Secretariat and Air Staff.
- Energy SFG Working Groups. The SFG has five working sub-groups: Infrastructure, Acquisition & Technical, Aviation Operations, Culture Change, and International. The SFG also has three advisory groups: Strategic Communication Integration, Critical Infrastructure Program, and Innovative Financing.
- EMSG. MAJCOMs and installations also formed their own EMSGs. These groups consist of environmental, energy, acquisition, transportation, facilities, procurement, legal, budget, operations, and information technology professionals. Each group tracks their own progress. MAJCOMs consolidate installation and MAJCOM EMSG actions and initiatives and submit them through the SFG working groups.

SAF/IE chairs the Headquarters Air Force Energy SFG, providing leadership and guidance to the USAF. In September 2007, former Secretary of the Air Force Michael W. Wynne issued a memorandum implementing EO 13423 and outlining the energy strategy of the Air Force. As a result of this memo, the Air Force developed the Air Force Infrastructure Energy Strategic Plan (IESP) and Infrastructure Energy Implementation Plan, and mandated EMSGs at the MAJCOM and wing levels.

- Energy Vision. The overarching vision of the Air Force Energy Strategy is “Make Energy a Consideration in All We Do.” The Air Force uses energy awareness to keep all personnel focused on energy conservation and efficiency to reduce energy costs. It is only by involving everyone in the Air Force at all levels that the Air Force energy goals will be met or exceeded.
- Energy Strategic Plan. The Air Force energy strategy is to reduce demand, increase supply, and change the culture. This strategy is comprehensive and includes the full spectrum of energy activities across all operational and support areas in the Air Force. This includes everything from developing new weapons systems and fuel-efficient aircraft engines to responsibly operating bases and flying aircraft.
- Air Force IESP. In 2008, the Air Force published the IESP that adopted the requirements of EO 13423, EPLA 2005, and EISA. The plan maps the way ahead for meeting energy mandates through FY 2015 and requires accountability that will ensure success. The plan will be updated every three to five years or as conditions --such as major changes to statute, new executive orders, revised or new DoD or Air Force policy, or a national crisis, warrant.

This plan is built on four pillars: 1) Improve Current Infrastructure; 2) Improve Future Infrastructure; 3) Expand Renewables; and 4) Manage Cost. The pillars rest on “enablers” to ensure that improvements in technology are integrated with a meaningful change in our Air Force culture. These enablers include the planning, programming, and budgeting processes; data systems that guide investments and decisions; and energy awareness. MAJCOMs are required to defend the plan’s business case and prove the return on investment through life-cycle cost analysis in order to receive energy project funding. A copy of the plan is available on the Air Force Civil Engineer Support Agency (AFCESA) Web site at

<http://www.afcesa.af.mil/shared/media/document/AFD-081029-038.pdf>.

- Implementation Plan. The Air Force published the Infrastructure Energy Implementation Plan which guides MAJCOM and installation commanders in executing the strategic plan. Within the strategic plan, accomplishment of mandated infrastructure goals is based on the four pillars discussed above. The implementation plan covers development of a basic installation energy program that integrates these four actions with refined processes, targeted education and training, asset management, and culture change. With successful implementation by MAJCOM and installation leaders, the infrastructure energy strategy not only saves energy resources and the environment, but also frees funds to support important mission areas. It enables the Air Force to become lighter, yet remain lethal.

DoN

Mr. Howard Snow, Deputy Assistant Secretary of the Navy for Installations and Facilities (DASN(I&F)), is designated as the Chairman of the Department of Navy Shore Energy Policy Board. Mr. Chris Tindal is the Deputy Director for Renewable Energy, Navy Energy Policy Office for the office of the DASN(I&F).

Mr. William Tayler, Office of the DASN(I&F), serves as Director of the Department of Navy Shore Energy Office.

LCDR Anthony Conley represents the Commander Navy Installations Command (CNIC), and serves as the Utilities Program Manager.

Mr. Paul Bouley represents Headquarters United States Marine Corps, Facilities and Services Division Facilities Branch (LFF-1), and serves as the Marine Corps Shore Installation Energy Manager.

Defense Contract Management Agency (DCMA)

Emma C Lewis: Administrator for HQ DCMA Energy Management Program

Virginia Hankins: Energy Manager DCMA Aeronautical System Division, Bratenahl, OH

David Gavira: Energy Manager DCMA Space & Missile Systems Division, Carson, CA

Natividad Ortega: Energy Manager, HQ DCMA, Prince George, VA

Defense Commissary Agency (DeCA)

DeCA Energy chain of command.

Mr. Philip E. Sakowitz, Jr., Director and Chief Executive Officer

Mr. Richard S. Page, Chief Operating Officer

Mr. Robert E. Hayden, Director, Performance and Policy

Mr. E. Carroll Shepherd, III, Agency Energy and Environmental Manager

DFAS

The DFAS Corporate Energy Management Team (CEMT)

Brian Bradley, DFAS Facilities Program Manager

Randy Shanafelt, DFAS Facilities Specialist

The majority of DFAS Central and Field sites pay for utilities through lease arrangements with local reuse authorities, or General Services Administration (GSA), or through base operations agreements with active military host installations. DFAS has two sites in leased space where the agency directly pays the utilities:

- Limestone, Maine - DoD-07-0NRCH
- Rome, New York - DoD-07-0ULDF

Defense Intelligence Agency (DIA)

DIA Energy chain of command.

Lieutenant General Michael D. Maples, Director

Mr. James Manzelman, Deputy Director, Mission Services

Mr. John Davis, Chief, Engineering and Logistics

Colonel James Wolak, Chief, Facility Engineering Division

Defense Logistic Agency (DLA)

Valerie Hines: Administrator for HQ DLA Energy Resource Management Program

Linda Passerini: Energy Manager Defense Depot San Joaquin California
Marvin Lockey: Energy Manager Defense Supply Center Richmond Virginia
Steven Webster: Energy Manager Defense Supply Center Columbus Ohio
Beth DeSorbo: Energy Manager Defense Depot Susquehanna Pennsylvania

MDA

MDA established a cross-functional EO 13423 Work Group whose team members include leaders across the Agency to address energy, water, and fuel reductions. The Work Group provides leadership, expedites MDA's implementation of EO 13423, and fosters the development of programs and performance monitoring mechanisms to document progress in meeting EO targets.

MDA has a separate Agency Energy Team within its EO Work Group that focuses on energy and water management. The team is working on:

- Determining MDA's capacity for acquiring renewable energy at its host installations and investigating the potential to procure renewable energy. The team will coordinate the renewable energy requirements as defined by EAct 2005 and EO 13423, particularly as they relate to MDA Military Construction (MILCON) projects.
- Integrating the requirements of EAct 2005, EISA, and EO 13423 into new buildings being built for MDA (MILCON projects). These projects, and their estimated completion dates (ECDs), are:
 - Von Braun III at Redstone Arsenal, AL (ECD 2011)
 - MDA Headquarters Command Complex, Fort Belvoir, VA (ECD 2010)
 - MDA Field Activity Office, Dahlgren Naval Station, VA (ECD 2011)
- Coordinating MDA's conservation efforts with our host installations to ensure the maximum benefits are realized while also reducing the potential for conflicts with host programs, policies, and procedures.
- Managing an Energy Conservation Campaign initiative at each MDA location. MDA's Energy Conservation Campaign is a proposed FY 2009 project designed to achieve resource reductions by promoting the value and benefits of energy conservation. The Campaign seeks to engage MDA employees on a "personal responsibility" level, with the goal of eliciting behavioral changes that will result in energy, water, fuel, and greenhouse gas reductions.
- Identifying and pursuing available energy and water conservation projects through ESPCs and UESCs, and coordinating MDA's participation in these ventures through our host facilities.

NGA

The energy program for NGA falls under the Quality Assurance Division (SIOQ) in the Installations Operations Office. SIOQ provides support to the sites in the development of operational procedures and assists in the development of site-specific energy and water management programs. SIOQ also prepares the annual Energy Report. The Agency Energy Manager, Mr. James Wenzel, left NGA, and

his replacement started in November 2008. The site managers and their assigned staff develop and implement all site-specific plans and pursue strategies to accomplish energy and water consumption reduction goals. The team includes:

- Joseph Radakovich, Professional Engineer (P.E.), NGA Energy Manager (Acting)
- Eileen Corrigan, Site Manager Bethesda
- Ted Coon, Action Officer Bethesda
- Ken Murphy, Site Manager St. Louis
- Mark Lodholz, Action Officer St. Louis
- Robert Marquart, Site Manager Washington Navy Yard
- Marcos Irizzary, Action Officer Washington Navy Yard
- Erick Knowles, Site Manager Reston
- Mark Wood, Action Officer Reston

NSA

The NSA Energy Team is responsible for identifying and initiating energy conservation projects to meet the objectives of EO 13423. The following are members of the NSA's Energy Team, and represent various agency organizations:

- Craig Harman, NSA Energy Program Manager
- Cartier Mckinzie, NSA Program Manager
- James Sturla, NSA Energy Manager
- Teresa Sprague, Chief of Facilities Engineering
- Ken Shoster, Chief Infrastructure Maintenance
- Glen Schech, Deputy Chief Operations, Maintenance, and Utilities
- Steve Hause, Finance and Accounting
- Tammy Hebron, Finance and Accounting
- Various representatives from Occupational Health Environment and Safety Services
- Various representatives from Security

TMA

BUMED's Energy and Water Management Team consist of a Senior Official for energy management, a headquarters program manager, and the energy managers at the Navy Medicine regions and activities. At the activity level, the facility manager, or a member of their staff, is charged with managing and implementing facility-level energy and water efficiency initiatives and coordinating energy activities with the host installation's energy manager.

All levels of the energy and water management team have a responsibility for energy and water efficiency at all BUMED facilities.

The BUMED Energy and Water Management Team is also supported by: CNIC and Commandant of the Marine Corp, Facilities and Services host installation energy managers (at sites where BUMED is a tenant); Naval Facilities Engineering Support Command for engineering support; Naval Facilities Engineering Command (NAVFAC) for contracting and technical support for ESPCs; TMA for programming support in the development and implementation

of Energy Conservation Investment Program (ECIP) projects; and the Department of Energy (DoE) Oak Ridge National Laboratory for technical support and guidance.

WHS

The DFD Energy Advisory Committee members include:

- Terry Robertson, Chairman
- Bob Cox, (Director, ETSD),
- Joseph Eichenlaub,
- James Buczek,
- Richard Nelson,
- Scott Bohnhoff,
- Brian Maguire,
- Albert Blake and Swaraj Basu from ETSD;
- Robert Candido,
- Rob Walker, and a Building Operations Command Center Representative (Paul Vierkutz) from the Pentagon Building Management Office (PBMO);
- Steve Carter and Robert Harvey from FOB2;
- Bhatti Gurdarshan and James Graves from the PH&RP.

In FY 2008, an additional smaller Sustainability Team was formed that includes Terri Robertson, Jim Buczek, Joe Eichenlaub, Crystall Merlino, and Mike Langone. These teams' responsibilities are to formulate and execute energy management strategies to meet or exceed the EO goals and to report progress.

B. Management Tools

1. Awards (Employee Incentive Programs)

DoA

The Army conducted the 30th Annual Secretary of the Army Energy and Water Management Awards Ceremony at the annual Federal energy exposition and workshop GovEnergy 2008, with the DASA(E&P) presenting the awards. Among awardees were individuals and small groups representing Army installations of Fort Carson, CO; US Army Garrison Vicenza, Italy; US Army Garrison Camp Zama, Japan; Chief Joseph Dam, WA; Fort Campbell, KY; Fort Hood, TX; US Army Garrison Bamberg, Germany; Fort Knox, KY; Radford Army Ammunition Plant, VA; Picatinny Arsenal, NJ; and Fort Gordon, GA. Representatives from Fort Hood also received a 2008 Federal Energy Management Program (FEMP) Energy Award given by the DoE. Fort Bragg, NC was a recipient of the 2008 White House Closing the Circle Award for Sustainable Design/Green Buildings for Military Installations using sustainable design through Leadership in Energy and Environmental Design (LEED) for construction projects. Army Installation Energy Managers Mr. David Osborne, Rock Island Arsenal, IL; and Mr. Bill Stein, Fort Huachuca, AZ, were recognized by DoE with Energy Champions Awards. Fort Carson received the Governor of Colorado Energy Excellence Award for renewable energy program efforts. Local energy award programs were also conducted by Army installations such as US

Army Garrison Hawaii's building energy monitor awards program to recognize achievement of individuals and organizations at their Environmental Quality Control Committee.

DoAF

The Air Force Chief of Staff Team Excellence Award. This award recognizes teams that use a systematic approach to enhance mission capability, improve operational performance, and create sustained results. The Chief of Staff award for Nellis Air Force Base (AFB), Nevada, was presented to members from the Air Force Energy Team; AFCESA Utility Rate Management Team; Nellis AFB, NV; and Air Combat Command (ACC). Nellis AFB, Nevada, won the award in September 2008 and was recognized by the Air Force Chief of Staff for the renewable energy acquisition process used to procure solar energy from a photovoltaic (PV) array at Nellis AFB. This 14.2 megaWatt (MW) array is the largest in the Americas. In FY 2008, the PV array produced approximately 25 percent of Nellis AFB's electricity.

Commander in Chief's Installation Excellence Award. One installation is recognized annually for introducing innovative programs that help to create and sustain excellent base operations. In 2008, Dover AFB, DE, was selected with Hill AFB, UT as the runner-up. Dover AFB posted an 11.7 percent FY 2007/FY 2008 energy consumption reduction. Projects included jump starting an ESPC by implementing a 29 building thermostat setback schedule that reduced energy consumption 5 percent, saving \$300,000, installing a \$328,000 flooring/radiant heat system in the vehicle facility, and avoiding a 70 percent electric rate increase.

Federal Energy and Water Management Awards. The Air Force participated in the FEMP 2008 Federal Energy and Water Management Awards program earning the following awards:

- FEMP 2008 Federal Energy Management Award
 - Eglin AFB, FL. The base teamed with Gulf Power Company and Southern Company Energy Solutions to implement energy efficiency projects through a UESC that reduced consumption by more than 48 billion Btu (BBtu) and saved nearly \$1 million in energy costs. A second UESC was executed with Gulf Power and Chevron Energy Solutions that will save an additional 36 BBtu and \$700,000 annually.
 - Charleston AFB, SC. Using an ESPC, Charleston AFB executed a project to replace the existing heating, ventilation, and air conditioning (HVAC) system with a combination of ground source heat pumps (GSHP) and high-efficiency air conditioning equipment. The ESPC saved the base more than 186 BBtu, 31.7 million gallons of water, and \$2.3 million in FY 2007.
- FEMP 2008 Federal Energy Management Award (Small group)
 - Nellis AFB, NV. The base implemented a three part energy strategy that included developing infrastructure projects that increase the use of renewable energy, improved base infrastructure, and reduced energy

consumption. The new base energy policy outlined numerous changes to base energy operations that saved more than \$1.3 million in FY 2007.

- FEMP 2008 Federal Energy Management Award to an Individual
 - Mr. Robert Montgomery, Moody AFB, GA. Mr. Montgomery redirected the efforts of an ESPC that previously identified \$900,000 in energy projects to tackle high energy consumption locations. This resulted in an eight percent reduction in energy consumption and savings of \$310,000 in natural gas and \$445,000 in electricity.

DoE Renewable Energy Award. The DoE Renewable Energy Award was won this year by Mr. Ken Davis, F.E. Warren AFB, WY. Ken developed an ECIP project to install two wind turbines that will produce 1.32 MW of electrical power. The two wind turbines are capable of generating 4.4 million kilowatt hours (kWh) per year, enough to power 522 homes. The turbines are expected to save the Air Force more than \$3 million in energy costs over the next 20 years.

Environmental Protection Agency (EPA) Water Efficiency Leadership Award. Lackland AFB, TX, won the EPA award for water efficiency for its comprehensive water conservation measures and purchases of recycled wastewater for use on the parade ground, golf course, and cooling plant tower.

2008 Green Power Leadership Award. The Air Force received the 2008 Green Power Leadership Award in the EPA's Green Power Purchaser category. The Air Force made an annual purchase of over 899 million kWh, making it the top federal government purchaser of green power.

The Air Force Reduced Energy Appreciation Program (REAP). The Air Force rewards major installations for efforts to reduce energy consumption. Two Contiguous United States (CONUS) and one Outside Contiguous United States installations are selected each year. Installations with the largest reduction in energy consumption for the fiscal year are recognized with the REAP award. Renewable energy credit purchases are not counted as part of this program. The installations selected this year:

- Little Rock AFB, AR, reduced its energy consumption 20.1 percent.
- Charleston AFB, SC, reduced its energy consumption 19.4 percent.
- Royal Air Force (RAF) Lakenheath, United Kingdom, reduced its energy consumption 18.9 percent.

Various MAJCOM and Installation Energy Awards.

- Air Force Material Command's (AFMC) Local Energy Champion: Hill AFB, UT.
- Kunsan AB, South Korea, 8th Civil Engineer Squadron, awards quarterly and annual awards for exceptional staff performance for achieving cost savings related to energy savings.

- Cheyenne Mountain, CO, sponsored a conservation contest as part of the 2008 Earth Day celebration. Base personnel submitted ideas for saving energy and water and the base energy staff judged the submissions based on life-cycle cost savings and practicability of idea implementation. The winners received a \$100 prize from privately donated funds and a one-day time-off award.
- ACC distributed \$1 million in Energy Savings Awards for energy program reinvestment to Barksdale AFB, LA; Davis-Monthan AFB, AZ; Ellsworth AFB, SD; Holloman AFB, NM; Langley AFB, VA; Minot AFB, ND; Moody AFB, GA; Nellis AFB, NV; Offutt AFB, NE; Seymour Johnson AFB, NC; Shaw AFB, SC; and Whiteman AFB, MO.
- Pacific Air Forces (PACAF) recognizes energy conservation and awarded Kunsan AB, South Korea, for its successful conservation efforts.

DoN

The Department annually holds a Secretary of the Navy (SECNAV) energy awards ceremony to recognize outstanding achievement in the efficient use of energy. Six SECNAV awards were issued to the top installations in the categories of facilities and industrial installations. In addition, installations with an aggressive and successful program were recognized as achieving Platinum (highest) or Gold (second highest) level rankings for their energy programs. DoN installations and individuals also received 1 of 4 Presidential Energy and Water Management awards and 5 of 22 awards from the DoE for Federal Energy and Water Management.

DCMA

DCMA will use the DoE FEMP Annual Federal Energy and Water Management Awards Program to nominate individuals, facilities, or teams that perform exceptional work in implementing EO 13423.

DeCA

DeCA currently uses its Agency Incentive Awards Program to recognize individuals and groups with Special Act and On the Spot awards for their energy savings achievements. DeCA's Energy Management Program Policy Directive incorporates provisions for energy savings suggestions under the Agency's incentive awards through our existing Improve Defense Commissary Agency's Efficiency and Service suggestion program and on-the-spot awards. The DeCA West Region does not have an energy efficiency awards program, but has addressed this as an action item by their DeCA West Energy Task Force. Implementation of this program is anticipated to occur in FY 2009. DeCA Europe implemented an employee incentive program to reward employee generated suggestions and initiatives resulting in energy reduction. DeCA East continued its energy task group that evaluates and initiates programs to improve energy and water management. The task group initiates awards to individuals that have provided exceptional efforts in accomplishing program goals. DeCA will participate in the FY 2009 Federal Energy and Water Management Awards program.

DFAS

The Agency Facilities Manager was given a performance award for his efforts to promote the Agency Energy Management program during this fiscal year.

DIA

DIA currently uses its existing performance awards procedures and on-the-spot awards. DIA plans to participate in the Federal Energy and Water Management Awards program in FY 2009.

DLA

DLA will use the DoE FEMP Annual Energy and Water Management Awards Program if and when possible to nominate individuals and facilities that perform exceptional work in implementing EO 13423. DLA will participate in local and regional awards programs if and when possible.

MDA

MDA is developing an Environmental Stewardship Awards Program to recognize significant efforts and achievements in implementing EO 13423, which includes measurable energy and water reduction initiatives. MDA plans to make the first award in 2009.

NGA

NGA provides an opportunity for performance and incentive awards for government Energy Team members.

NSA

Awards are given to employees for outstanding performance, accomplishments, and innovative suggestions related to facilities projects and programs. Awards are also given to individuals or teams where unique initiatives and exceptional performance proved to be deserving of special recognition. These awards frequently involve energy saving ideas that are beneficial to the Agency.

TMA

There are a variety of awards and recognition opportunities in the area of energy and water management that are available to BUMED facility managers and BUMED leaders in the area of energy and water management. The Navy hosts a SECNAV energy awards ceremony annually to recognize exceptional achievements in energy and water efficiency and the FEMP offers the Federal Energy and Water Management Awards each year.

At the individual building level, there are several opportunities to recognize energy and water management achievements. These include FEMP's Federal Energy Showcase Award to recognize and showcase buildings that are models for efficiency. EPA/DoE, ENERGY STAR Label awards are available for high performing buildings. Naval Medical San Diego, a prominent BUMED hospital, was the first federal hospital to receive this prestigious recognition. LEED recognition is also available for both new and existing buildings.

BUMED will utilize these awards to recognize its personnel, activities, and facilities for outstanding performance. At some installations, spot awards are already planned for employees performing exceptionally well with respect to energy management. In FY 2008, Piyush Patel of MEDCOM received the Energy Water Award from DoA. There are no other awards at either installation for energy issues at this time, although one is being considered at Fort Detrick, MD.

WHS

PH&RP has an Award Fee in their contract as a Most Efficient Organization (MEO) resulting from a previous A-76 Competition. The PH&RP personnel must maintain performance requirements of the equipment through proper staffing, maintenance, repairs, etc. Each quarter the MEO may get up to \$25,000.00 in awards, a small portion of which is directly related to energy efficient operations. Through three quarters in FY 2008, they received 67 percent of the total available award with the fourth quarter award pending.

2. Performance Evaluations

DoA

The Vice Chief of Staff for the Army has directed HQ DoA Principal Officials and Commanders to ensure energy considerations are included in the functional responsibilities of their subordinates and that they include energy and water conservation responsibilities in the position descriptions and performance plans of subordinate commanders and civilian supervisors when appropriate. The IMCOM Human Resource Office is revising position descriptions of IMCOM energy team members to include consideration of energy management requirements.

DoAF

Energy Managers. During 2008, Air Force civil engineer underwent a total transformation and reorganization. The Headquarters Air Force, the MAJCOMs, and the installation-level groups and squadrons reorganized to better manage assets and focus on life-cycle cost management. The energy management function was given more emphasis by consolidating the tasks under a new flight called Asset Management. New civilian position descriptions were developed for energy managers at all levels of the organization and are currently being implemented. These new position descriptions include energy conservation, energy planning, and utility management. Within the new civil engineer installation-level organization there is now a central point of responsibility and accountability for energy and utilities. EISA requires each federal agency to designate an energy manager for each installation. There are 166 Air Force installations to include Air National Guard and Air Reserve bases. There are 193 energy-related positions within the Air Force whose performance is measured by the success of their energy program and ability to meet federal and Air Force goals.

DoAF Dedicated Facility Energy Organizations.

- HQ USAF, Office of The Civil Engineer, Asset Management and Operations Division, Energy Management Branch (A7CAE), provides policy and guidance on facility energy issues, advocates for resources, and reports directly to the Air Force Civil Engineer (A7C).
- Air Force Facility Energy Center (AFFEC), located at AFCESA, provides engineering, program management, and legal support to the Air Staff, MAJCOMs, and installations on energy and potable water usage reduction, utility acquisition, and cost control to meet EAct 2005, EO 13423, and EISA goals. The AFFEC is also the Civil Engineer Program Management Office for Energy Capital Investment Programs.

DoN

The Navy created an agency-wide standard description of the roles and responsibilities of its energy managers. This description defined all the elements of the energy management function at the installation level and the regional level. These roles and responsibilities are used in existing job series to set the performance expectations. Due to constraints on in-house workforce, DoN is increasingly contracting for Resource Efficiency Managers (REMs). REMs are expected to produce energy savings equal to twice their cost, providing at least a 2:1 return on investment.

DCMA

Energy Management responsibilities and duties will be included as part of the individual's performance plan.

DeCA

Performance plans for the DeCA Director, Chief Operating Officer, and region directors hold them accountable for meeting the Facility Condition Index metric as identified in the Agency Balanced Scorecard and includes energy conservation measures.

Region directors have facility maintenance HVAC maintenance responsibilities in their position descriptions.

Performance plans of each DeCA region chief of operations, zone manager, store director, and central distribution center (CDC) manager has a critical element for unit cost management and control. Utilities cost are a significant part of facility operational costs; therefore, proper reporting is essential. Utilities management, control, and awareness include quarterly reporting of energy use and costs from each facility to the region designated energy conservation representative, who reviews, consolidates, and forwards to HQ DeCA.

Energy management provisions, including sustainable design practices, are in position descriptions and performance evaluations of the Facilities Program Manager and other facilities personnel including field engineers.

DeCA field engineers are also identified as the Region Energy Conservation Officer for their respective region or sub-region. Their responsibilities include review of regional office managed projects to ensure energy conservation and sustainable design practices are being implemented. Energy conservation design practices are also included as duties and responsibilities in the position description of DeCA field engineers.

DeCA West field engineers have references within their respective position descriptions stating that they are to comply with EO 13423 and that they will be DeCA West Energy Task Force team members.

Energy management provisions are in position descriptions and performance evaluations of the Agency Energy and Environmental Manager and the Energy and Environmental Engineer.

The Agency's strategic plan and key objectives for fiscal years 2008-2013 include goals for improving our facility condition which also includes reducing facility and commissary energy use. This is directly related to reducing our unit operating cost. DeCA has accomplished this by improving the infrastructure through reduction of maintenance backlog and execution of new construction, modernization, maintenance and repair, and store equipment requirements that incorporate state-of-the art efficiencies.

Each DeCA region has a Region Energy Task Force. These teams meet three to four times per year and continuously look for energy saving programs/projects in an effort to achieve both short- and long-term energy efficiency. Each DeCA West Energy Task Force member has an obligation to ensure energy efficiency best practices are being implemented, and is so annotated on their performance plan.

DeCA Europe Facility or Energy Managers are evaluated in their performance of energy reporting and usage.

DFAS

DFAS has added appropriate statements to include successful implementation of conservation actions in the position descriptions and performance evaluations of members of the agency energy team.

DIA

DIA's strategic plan will expand to include goals for conservation of resources, which includes reducing facility energy use. This is directly related to reducing our unit operating cost. DIA has accomplished this by improving the infrastructure through reduction of maintenance backlog, executing new construction, modernization, maintenance and repair, and equipment energy efficiency requirements.

Facility engineers' position descriptions include a knowledge requirement for best practices for operating refrigeration/ HVAC for energy conservation. Their responsibilities include review of all projects to ensure energy-efficient design strategies are invoked as well as to ensure HVAC commissioning practices are observed during construction.

Sustainable design practices are included as duties and responsibilities in the position description of DIA engineers and architects.

Utilities cost management, control, and awareness include monthly reporting of energy use and costs.

DLA

DLA has an Energy Manager at each host facility. As far as the reporting requirements for energy consumption and cost, it is described as other duties as assigned within the position description.

MDA

MDA's Office of Human Resources (MDA/DoH) is currently drafting language that will be included in selected employee job descriptions based on the function of a given position as it relates to the implementation and performance targets of EO 13423.

Generic EO 13423 and environmental stewardship compliance language will be included in selected MDA internal job descriptions in 2009. Affected positions will include staff involved in senior leadership, procurement, facilities (design, efficiency, renovation, and operations), electronics management, pollution prevention, and transportation. Specific job responsibilities may include mandatory participation in MDA's EO 13423 Work Group, MDA's Energy Conservation Campaign, or other activities that support EO compliance, performance monitoring, and reporting.

MDA/DoH will also integrate conformance with EO 13423 into annual employee performance reviews. While performance criteria will vary for different job positions, examples of factors that will be weighed in the employee performance evaluations include training attendance, coursework certifications, and participation in work groups or teams that support MDA's implementation, performance monitoring, and reporting for EO 13423.

NGA

NGA considers energy conservation as part of the government team members' performance appraisal process.

NSA

The NSA Energy team is committed to cost effective energy saving projects and programs designed to benefit the Agency in numerous areas. Mr. Lopez, (D/ADIL) the senior agency energy official, and Mr. Sturla, the agency Energy

Manager, have provisions included in their annual employee performance appraisal directed at the agency energy conservation program.

TMA

The Navy has a standard description of the roles and responsibilities for energy managers. These will be used to set job performance objectives/expectations. The description outlines roles and responsibilities at both the installation and regional levels and can be used to set performance expectations in performance plans.

WHS

Some job descriptions and critical elements include energy conservation principles for appropriate management and operations personnel and are updated annually. In FY 2008, PBMO continued its efforts to review and update job descriptions for appropriate management and operations personnel. While it did not achieve its 10 percent job description updating goal, the PBMO is progressing in implementing this management tool. The PBMO will identify the number of positions that this process applies to and advise the Energy Advisory Committee how many it has fully completed.

3. Training and Education

DoA

The Army saw a large increase in the number of people receiving energy management training in FY 2008. HQ DoA conducted training at the two-day Army Energy Managers Training Workshop attended by nearly 200 people and conducted in conjunction with the annual Federal energy exposition and workshop GovEnergy in Phoenix, AZ. IMCOM sponsored a Certified Energy Manager (CEM) training course conducted by the Association of Energy Engineers (AEE).

The Army National Guard hosted a two-week training session to train facilities personnel in effective energy management and water conservation practices, facility design and funding programs. The training covered many subjects such as commissioning, sustainability, water conservation, utility energy cost and consumption tracking, life cycle cost analysis, utility invoice analysis, and code compliance.

IMCOM conducted eleven Energy Awareness and Conservation Assessments in FY 2008 to increase energy awareness of installation personnel and assist the installation to identify energy saving. Locations at which these assessments were conducted are Carlisle Barracks, PA; Forts A.P. Hill and Eustis, VA; Forts Greely and Wainwright, AK; US Army Garrisons Bamberg and Hohenfels, Germany; US Army Garrison Detroit Arsenal, MI; Fort Leonard Wood, MO; Fort Sam Houston, TX; and Yuma Proving Ground, AZ. IMCOM also conducted two Energy Summit Workshops for high level Army decision makers to increase visibility and focus of Army energy management programs. Increasing production and use of renewable energy was the main focus of both workshops.

The USACE Construction Engineering Research Laboratory, Engineer Support Center Huntsville and Corps District Offices conducted several energy training courses such as Installation Energy Workshops, ESPC training and energy efficient design practices to meet EAct 2005 efficient design requirements. USACE also conducted training courses through the Proponent Sponsored Engineer Corps Training program such as in sustainable design, electrical design, emergency power generation and boiler operation, maintenance and safety.

Army installations and region offices conducted many energy training events including building energy manager training by IMCOM-Pacific; a Water Wise and Energy Smart training program conducted by Fort Huachuca, AZ; and building energy monitor training such as the program at Fort Lewis, WA in which 150 building energy monitors were trained in FY 2008.

DoAF

Training and education is critical to the Air Force Energy Strategy and energy vision. The Air Force is emphasizing energy training for uniformed and civilian personnel and has made good progress towards training our personnel. This emphasis on training will continue into FY 2009 as energy communication strategies are developed and rolled out. This year we have trained over 7,000 individuals through various training and education courses. The following are highlights of energy training for FY 2008:

- AFFEC Energy Express Newsletter was distributed every two months, providing up-to-date information to energy personnel across the Air Force.
- Air Education and Training Command (AETC) provided bi-monthly energy cross-feed information to commanders MAJCOM-wide.
- The Air Force Institute of Technology (AFIT) energy manager class provided detailed instruction to new energy managers on energy conservation concepts and systems, policy and guidance, programs and project programming.
- An Air Force Energy Manager's meeting held in conjunction with the GovEnergy Conference provided Air Force-specific energy program training to almost 200 Air Force energy personnel.
- AFCEE LEED workshops provided training to Air Force programmers and design engineers.
- The Air Force Space Command (AFSPC) Air Force Smart Operations for the 21st Century (AFSO 21) energy workshop was held to further the Air Force Strategic Energy and Implementation Plans. Workshop instructors, subject matter experts from AFCEA and AFCEE, provided a way ahead to assist AFSPC to expand and enhance their energy program.
- PACAF conducted an AFSO 21 executive leadership energy working group for general officers and senior executives. Topics discussed were facility energy initiatives, ground fuel energy initiatives, aviation fuel energy initiatives, Hawaii's strategic energy plan, and strategic energy perspectives.

Working group meetings produced energy opportunity ideas to initiate in FY 2009 and complete by FY 2014. Ideas included:

- Installing light emitting diode (LED) lights across PACAF.
 - Converting 40 percent of the vehicle fleet to light vehicles.
 - Initiating tests for conversion to plug-in hybrid vehicles.
 - Eliminating unnecessary flying time.
 - Implementing aircraft fuel conservation during ground operations.
 - Enhancing facility energy efficiencies by reducing comfort cooling and enforcing MAJCOM energy standards.
- A PACAF LEED course was taught by a mechanical engineer with over 15 years of experience in mechanical and sustainable design. The course focused on knowledge of the LEED rating system, how to establish LEED points, and the cost-effectiveness and feasibility of individual LEED line items. PACAF base energy managers and engineers attended the course.
 - A solar renewable energy course focused on design fundamentals, construction costs, and energy savings produced from different systems. Benefits include technical knowledge on economics of systems and an overview of different options designers have with PV systems.
 - In FY 2008, the Air Force personnel attended or participated in the following types of training:

Type Of Training
AEE Energy Conference
AFSPC AFSO21 Workshop
AFIT Energy Courses
American Ground Water Association Conference
Air National Guard Energy Conference
American Water Engineering Water Workshop
CEM Certification
Cradle-to-Cradle Sustainability Training
Defense Energy Support Center Energy/Gas Conference
Earth Wise Systems Seminar
EMSG Briefing
Energy Efficient HVAC
Air Force Energy Forum II
GovEnergy (Phoenix, AZ)
Energy Modeling Class - Trane Trace
ESPC Technology Day
Federal Facilities Council EISA Training
GlobalCon 2008 Conference
Grainger Energy Conference
Green Procurement Program training for warehouse buyers

Type Of Training
Greening the Heartland Conference
GSHP Conference
HVAC Design Course
LEED Course
Lighting Design
Metering System Administration
Lighting (General Electric)
Public Service of New Mexico Energy Seminar on Hot Energy Management Ideas
Public Service of New Mexico Energy Seminar on HVAC, Boilers, and Hot Water Systems
Solar Renewable Energy Class
Renewable Energy Quarterly Conference, Tokyo, Japan
Rutgers/McGuire Energy Conference
Square-D Metering Seminar
Xeriscaping Course
FEMP ESPC Training
FEMP UESC Training
Joint Services Environmental Management Conference
Monthly Energy Indoctrination/Training
Air Force Sustainable Design Training

DoN

In FY 2008, 216 personnel received training in areas specified in EPO 2005. These personnel consist of: Energy Managers, Energy Conservation Officers, Maintenance Mechanics, Planners, Equipment Mechanics, Facilities Supervisors, Accountants, Admin. Officers, Project Managers, APWO's, Architects, Environmental Engineers, Electrical Engineers, Division Directors, Controls Mechanics, Civil Engineers, Budget Analysts, Boiler Plant Personnel, Regional Energy Managers, and Utility Engineers. This brings total personnel receiving training to 2,675 since the program began.

The training consisted of specific training opportunities under the specified areas of EPO 2005, namely: Operations and Maintenance, Controls, Design, Lighting, Electric Codes, Renewable Energy, LEED Training, Natural Gas Seminars, Water Resource Management, Steam Plant Improvement, Renewable Energy, Energy Accounting, Energy Savings Performance Contracting, Measurement and Verification, Training on Equipment found in Federal facilities and CEM Training. DoN has seen 174 personnel registered as CEMs since the program's inception.

The sources of training include in house and commercially available sources such as: North Carolina University; DoE; AEE; Johnson Controls; Online Courses; Utility Companies; Tempcon; Allen Bradley; Northwest Energy Efficiency

Council; Sandia National Labs; International Energy and Environmental Congress; American Institute of Architecture; National Technology Transfer; Inc; Navy Civil Engineer Corps Officer School; American Solar Energy Society; University of Wisconsin; FEMP; The United States Green Building Council (USGBC); American Water Works Association; Florida Solar Center; GSA and the GovEnergy 2008 Conference.

DoN continued and expanded its energy awareness program to train all personnel to be aware of and influence energy consumption. The program includes compact disks that provide policy, publications and program execution tips for energy managers, as well as materials targeted to educate and involve military youth. Quick dissemination of key information is achieved through the distribution of a monthly newsletter titled Energized, and weekly flash emails to energy managers, regions, and HQ. Promotional materials are distributed to personnel to involve all in energy management practices without impacting productivity.

DCMA

DCMA Energy Manager attended the DoE Energy Manager Certification Workshop 2008 Workshop in Phoenix, AZ; Building Operation Management-Specification to Boost Energy Efficiency Workshop (WebCast); and FEMP Introduction to ESPC Workshop, Boston, MA.

DeCA

DeCA energy and environmental engineers, two design and construction engineers, and two of our primary energy consulting/energy audit contractors attended GovEnergy in August 2008.

The Agency Energy and Environmental Manager and the Energy and Environmental Engineer are designated as “appropriate personnel” for the Agency and have completed the North Carolina State University Energy Management Diploma Program.

DeCA’s Agency Energy and Environmental Manager is a CEM.

Each commissary, CDC, and office facility has an energy management supervisor whose title is “Facility Energy Supervisor” identified and assigned. Commissaries and CDCs have a requirement to maintain two Facility Energy Supervisor (FES)/Quality Surveillance Representative (QSR) trained personnel on staff at all times. This person attends formal training minimally every 3 to 4 years.

The DeCA Center for Learning hosted seven FES/QSR courses during FY 2008. The FES/QSR training course is a 2-day, commissary-specific course. Instruction includes formal classroom training for energy awareness and conservation practices, quality assurance, reporting, energy monitoring, and the basic operation of refrigeration monitoring and control systems (RMCS). A site visit to a nearby commissary facility is also conducted to acquire “hands-on” experience and serve as a vehicle for student evaluation.

We continue to pursue our goal of two trained FES per store. Our target audience in FY 2008 was commissary store administrators, general managers, and associates responsible for completing DeCA energy management reports. We trained 156 commissary store personnel during our FY 2008 training cycle. Training and travel costs were \$180,000. Students represented facilities in Europe, Far East, and CONUS.

DeCA commissary department operations courses address energy usage and conservation in the store director, meat management, produce management, grocery, and quality assurance courses. These courses are taught throughout DeCA's worldwide operations.

All DeCA employees are required to view our 12-minute commissary energy awareness video "Put Yourself in the DeCA Energy Efficiency Picture," within 30 days of hire, which is also incorporated in our FES/QSR and executive courses. This commissary specific energy awareness training video is provided to all DeCA commissaries, CDCs, and office facilities. All associate and store level contractors are also required to view DeCA's Environmental Management System Awareness Video distributed in FY 2008.

Training materials, including DeCA-produced videos "Put Yourself in the DeCA Energy Efficiency Picture" and "DeCA Environmental Management System Awareness Training" are available at each store and office for initial and refresher energy and environmental awareness training.

Annual continuing education unit (CEU) requirements to maintain state licensing are met by reviewing articles in professional periodicals and attending related training. Benefits are maintaining professional licensing and awareness of current and developing new technologies impacting energy conservation.

The DeCA Government Purchase Card (GPC) Program requires 100 percent of new candidates to complete training on Greening the Government, Recycled Content Products, Environmentally Preferable Purchasing, ENERGY STAR, Bio Based Products, and Low Stand-by Devices prior to being appointed as a participant. Our goal is to train 100 percent of all previously existing cardholders and primary and alternate certifying officers/approving officials.

Our new Contracting Directorate Program Manager completed green procurement training in FY 2008.

Seventy percent of all GPC participants have completed green procurement training. Students represented commissary supply technicians, secretaries, customer service leads, department managers, store administrators, and directors from all regions in DeCA; secretaries; and program managers from regions and Headquarters.

All DeCA GPC participants are required to view the self-paced training entitled “Mandatory Sources and Products,” power point slide presentation. The GPC self-study training modules provides the Web site addresses for EPA www.energystar.gov/products, GSA Advantage, and DoD Emall for easy access to products with 25 percent energy efficiency.

GPC hands-on-training classes include hands-on-practice with Web sites searching for compliant products.

GPC training is also presented in 3-day GPC “Hands On Training” conducted as a classroom course. This module is presented onsite to students as a 4-hour lesson including sample green and bio based products and brochures, hands-on tools and practice searching for Green products using Internet sites, and shopping services such as ENERGY STAR.gov, DoD Emall, and GSA Advantage.

DFAS

Two members of the Energy Management Team attended Introduction to Super ESPC Course Training, live web cast, November 2007. Pertinent energy information has been posted to the DFAS ePortal site for employee access.

DIA

Annual CEU requirements to meet Agency professional development objectives offer opportunities to take classes involving various energy conservation strategies.

In FY 2008, equipment energy efficiency was mandated in specifications developed when issuing acquisitions for energy using products. All new equipment purchases were made to comply with ENERGY STAR products and American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings

Information technology hardware and computer and copying equipment are acquired under the ENERGY STAR program using GSA schedules and either government-wide or service contracts.

DLA

All Energy Managers were advised to attend DoE and AEE formal, interactive computer and correspondence courses to stay abreast of all new technology in order to implement the provisions of EO 13423.

MDA

Environmental Awareness Training:

- MDA developed an Environmental Awareness Training course in 2006 that introduces employees to applicable environmental laws, regulations, EOs, green procurement, and MDA’s statutory obligations. The course assists employees in identifying how their duties affect MDA’s environmental

compliance and discusses these concepts within the framework of employee knowledge and responsibilities.

- The Environmental Awareness Training is a mandatory online course for all MDA staff and new hires. MDA requires periodic Environmental Awareness refresher courses and monitors employee completion certificates.
- MDA is currently updating the Environmental Awareness module to include the implementation of EO 13423 and describe employee obligations in achieving the EO's annual targets. The new module will be available in FY 2009.

Procurement Training:

- MDA identified Agency staff engaged in the acquisition of goods and services and made Green Procurement Training mandatory for these individuals (e.g., government purchase cardholders, contracting staff). These personnel were invited to an instructor-led classroom training presented by the Office of the Federal Environmental Executive in October 2008.
- Two Green Procurement Training sessions were held, one in Arlington, VA, and the other in Huntsville, AL, to inform MDA's procurement staff of their statutory and EO 13423 obligations to acquire energy & water efficient products, Electronic Products Environmental Assessment Tool (EPEAT) Silver- or Gold-registered personal electronics, and low standby power devices to decrease MDA's annual resource intensity.
- MDA requires its acquisition staff to receive Green Procurement Training annually and monitors employee coursework and certifications.

NGA

NGA personnel attended Intelligence Community Environmental and Energy seminars during FY 2008 (two staff officers attended at an approximate cost of \$2,000). Training of Acquisition Personnel and Agency Purchase Card Holders in FY 2008 included:

- A briefing on the requirements of EO 13423 was provided to Agency Contracting Officer Representatives (COR), during the Agency "COR Day" for NGA East and West personnel. The briefing included a review of the requirement to purchase energy efficient and EPEAT registered products. The training was provided to approximately 300 Agency personnel.
- Agency GPC holders receive initial training that includes a review of EO 13423 to include the requirement to purchase energy efficient and EPEAT registered products. In addition, an article on EO 13423 was included in the Agency newsletter to purchase card holders.

NSA

Agency maintenance staff and first line managers attend training for their respective disciplines. Employees also attended GovEnergy 2008, workshops, conferences, and symposiums, which often include energy conservation modules. Benefits derived from this training include awareness and application of new and

emerging energy saving technologies, new techniques, materials, and best management practices. Also new for FY 2008 is a Green Program web page, which is used to notify the workforce of “Green” initiatives, projects, and products being implemented at the agency.

TMA

A variety of training and educational resources are available to assist BUMED staff in the areas of energy and water management. Internal to the Navy, the Department of the Navy Energy Program website offers a plethora of materials on the subject, including guidelines for energy management teams, guidelines for building energy monitoring, energy managers guidance, lessons learned, and other offerings. There are four energy awareness courses offered within Navy that reach from general employees to executive levels.

Considerable energy and water management training options are available within other federal agency offerings and professional associations as well. Within FEMP, there are many courses, workshops, and training materials available including the FEMP website Services-Training area. FEMP also offers a training event locator, suggested curricula, and detail on the federal requirements for facility energy managers. Trained facility energy managers are available to BUMED staff at BUMED tenant sites (approximately half of BUMED hospitals and most BUMED clinics are tenants on installations). AEE offers many courses and certifications in the areas of energy management. ASHRAE offers many training courses associated with energy-related equipment and systems (many of which are on-line).

Navy is very active in acquiring this type of training with over 160 personnel having attained CEM designations from AEE. These professionals are available to support BUMED efficiency efforts, particularly at facilities where BUMED is an installation tenant.

In addition to training, the Navy has a variety of communications that are made available to all Navy staff in order to raise employee conservation and pollution prevention awareness. These include energy-related awareness materials, a regularly-distributed “Energized” newsletter, tips, success stories, and fact sheet.

In FY 2008, several BUMED facility managers participated in online energy training opportunities offered by Navy regions or attended public or private training.

In FY 2008 three people attended the Army Annual Energy Training in conjunction with GovEnergy in Phoenix. Two personnel at other MEDCOM medical treatment facilities participated in CEM training, and earned their CEM certification.

WHS

During Earth Week each year, booths are arranged in the Pentagon to educate tenants about energy conservation, recycling and other environmental friendly

activities. Pamphlets, cards, and other various reading materials are made available to provide information on practices and their benefits. Also, during October (Energy Awareness Month), booths are set up in the apex to educate tenants about energy conservation.

A DoE Super ESPC Webinar training session was held at the Pentagon. Pentagon Renovation Office (PENREN) Sustainability and Environment Integrated Product Team (SE IPT) also met throughout the year. These meetings focused on initiatives to incorporate best practices in sustainable design and construction practices. These meetings included guest speakers that have knowledge and expertise in the built environmental field to share with PENREN new technologies and industry standards. For example, the SE IPT held training sessions on ENERGY STAR and Portfolio Manager. As for off- site conferences, Pentagon personnel participated in the National Facilities Management and Technology Conference in Baltimore, MD and the GovEnergy 2008 Conference in Phoenix, AZ. In all, about seven of the appropriate personnel types were trained during FY 2008.

4. Showcase Facilities

DIA

Energy efficient lighting systems. Planned energy efficiency features for this facility are occupancy sensors, automatic water control on restroom fixtures, and separate utility metering. During design and construction, this facility achieved 24 credits that could be applied towards future certification as a LEED building by the USGBC LEED-Existing Building program.

The designated “showcase facility” for the FY 2009 construction program is the Joint Use Intelligence Analysis Center. A design is currently underway to identify new lighting and HVAC design strategies to reduce the energy consumption per square foot to exceed the minimum energy efficiency requirements of ASHRAE Standard 90.1. The proposed design is expected to achieve a building energy budget of 21 percent less than the baseline building required by Standard 90.1

II. ENERGY EFFICIENCY PERFORMANCE

A. Energy Intensity Reduction Performance

DoN

DoN energy expenditures were on a general downward trend below 1985 levels for the last 23 years due to effective energy management and stable energy rates. Though energy intensity is down 30 percent from 1985 and 10 percent from the new 2003 baseline, recent increases in energy costs caused DoN expenditures on energy to exceed the 1985 inflation adjusted cost for the first time in 23 years. Still, over \$600 million in cumulative energy costs were avoided between 2000 and 2008, when compared to inflation adjusted expenses in 1985, despite a period of the most dramatic energy price increases in history.

TMA

The data reported in this report represents BUMED's seven stand-alone installations and MEDCOM's Fort Detrick and Walter Reed Army Medical Center (WRAMC): BUMED's stand-alone installations are: National Naval Medical Center (NMC) Bethesda, MD; NMC Portsmouth, VA; NMC San Diego, CA; Naval Hospital (NH) Beaufort, SC; NH Bremerton, WA; NH Guam; and Naval Health Clinic Charleston, SC. Prior to FY 2007, only total Department of the Navy numbers were reported (BUMED stand-alone installations were not reported separately). All remaining BUMED facilities (other hospitals, clinics, etc.) continue to be reported within DoN data.

1. Goal Subject Buildings

DoA

Army facilities collectively reduced energy use per unit area of gross square feet from 100,260 Btu/GSF in FY 2003 to 91,879 Btu/GSF in FY 2008, a reduction of 10.4 percent. This is in comparison to the energy reduction goal of nine percent, mandated by EPA 2005, EO 13423, and EISA. The main reason for the decrease is a general increased effort on the part of installations to improve efficiency. Most installations and almost all National Guard sites report having implemented energy saving projects in FY 2008, such as lighting improvements, installation of energy management control systems, heating and air conditioning upgrades, window and door replacement projects, system and temperature reset, water conservation measures and use of renewable technologies.

DoAF

Using the adjusted FY 2003 baseline, the Air Force percent change from FY 2003 is 17.8 percent decrease (FY 2003: 137,931 Btu/GSF; FY 2008: 113,368 Btu/GSF).

DoN

DoN reduced energy consumption per gross square foot by 10 percent relative to the 2003 baseline, exceeding the three percent annual reduction required by EO13423. Baseline consumption was 120,230 Btu/GSF and current consumption is 109,550 Btu/GSF, after accounting for renewable energy and cogeneration credits. DoN is generating "free" thermal energy from the waste heat of five cogeneration systems. Cogeneration credits account for four percent of DoN energy intensity reduction, the largest single cause of DoN progress toward reduction goals. A sixth plant in Yokosuka Japan came on line in November 2008 and will contribute to the 2009 energy savings.

DCMA

In FY 2008, DCMA's actual utilization was 126,999 Btu/GSF compared to 136,476 Btu/GSF from the FY 1985 baseline. This is a 9.7 percent reduction from the baseline.

DeCA

DeCA's energy use in combined facilities (all DeCA reporting facilities) was 146,051 Btu/GSF for our revised FY 2003 base year. Energy use for FY 2008 was 139,623 Btu/GSF based on data reported through the fourth quarter of FY 2008. Percent change from FY 2003 was a decrease of 4.4 percent. Meeting our energy goal is a unique challenge as commissaries are energy intensive facilities with a fixed refrigeration load of approximately 50 percent of total energy use. The Agency's current energy use is currently about 10 percent better than the ENERGY STAR energy intensity for such facilities. From FY 1996 to FY 2003, DeCA reduced annual energy use intensity by 12.8.

New and renovated commissaries typically increase in energy use by 0.2 percent from older designs due to patron demand for frozen and pre-prepared food items. Increased energy intensity is also directly affected by decreased warehouse space and an increased sales area footprint. Initiatives identified in our current effort to complete a strategic energy and water resource plan should enable DeCA to achieve the FY 2015 energy reduction goal of an additional 30 percent assuming adequate funds and or financing resources are available. Because DeCA is a tenant of host installations and normally a third-party customer (not directly billed from the local power company), we continue to find billing irregularities which, when corrected, result in significant changes to our reported energy use. We achieved much progress in this area since November 2002 in obtaining more accurate energy use and cost data from host installations. DeCA Utilities Task Forces, ad hoc committees formed to investigate and solve high energy use and utility billing problems, continue to provide assistance to overcome reporting inaccuracies from host installations.

DFAS

DFAS did not have a baseline for FY 1985 as the agency did not exist then and has only started reporting as of FY 2003. Electrical consumption declined from 23,035.6 megaWatt-hours (MWh) in FY 2003 to 7,336.8 MWh in FY 2008, with a corresponding drop in annual cost from \$1,970.4 thousand to \$899.5 thousand. Purchased steam consumption increased from 14.5 BBtu to 16.2 BBtu with a cost increase from \$281,400 to \$427,500. The site with steam usage has contacted the supplier and an improved metering system has been installed to capture a more accurate measure. The Btu/GSF has fallen from 151,807 to 101,445 in the same time period.

DIA

DIA's energy intensity was 229,108 Btu/GSF for the FY 2003 base year, based on the original 864,000 GSF Defense Intelligence Analysis Center (DIAC) facility. DIA's energy use (287.2 billion Btu) in FY 2008 amounts to an energy intensity of 216,622 Btu/GSF based on the present 1,325,610 SF DIAC facility, according to data reported through the fourth quarter of FY 2008. Percent change from FY 2003 is a decrease of 5.4 percent.

DLA

In fiscal year 2008, the DLA actual utilization was 60,832 Btu/GSF compared to 51,385 Btu/GSF from the FY 2003 baseline. This is an 18.4 percent increase from the baseline. The DoD goal for FY 2008 was a 9.0 percent reduction from the FY 2003 baseline. The lack of goal attainment is attributable to DLA continuation of modernization initiatives consistent with our actions to ensure cost effective business operations. This includes the replacement and/or conversion of high square footage, low energy intensity facilities with low square footage, high energy intensity facilities.

NGA

NGA's energy utilization rate for FY 2008 was 195,803 Btu/GSF compared to a rate of 177,040 Btu/GSF in FY 2003. Increases were experienced in both electricity usage and fossil fuel consumption for heating purposes (natural gas and fuel oil). This represents a 9.0 percent increase compared to the FY 2003 benchmark.

While energy reduction remains a high priority goal, energy utilization has increased compared to FY 2003 as NGA's mission and personnel strength has grown rapidly. The need to provide vast amounts of graphically intense data on a virtual real time basis requires energy intensive production equipment, storage media and transmission systems. In addition, NGA's large data center in St Louis has reached its existing capacity, with an expansion of capability planned in FY 2009. Continued increase in energy consumption is expected for the foreseeable future.

NSA

The following data are a comparison of electric, oil, and natural gas in Btu's/GSF between the 2003 base year, and the current year.

Base Year 2003	Current Year FY 2008	Percent Change
263,456 Btu/SF	256,728 Btu/SF	-2.6%

TMA

Energy consumption for BUMED’s standalone installations in FY 2003 was 196,400 Btu/GSF. In FY 2008, the consumption was 172,629 Btu/GSF, a decrease of 12.1 percent (see Table below).

Energy Management Requirement	FY 2003 Btu/GSF	FY 2008 Btu/GSF	Percent Change 2003 - 2008	FY 2008 Goal Target
Reduction in energy intensity in facilities subject to the EPA Act 2005 and EO 13423 goals	196,400	172,629	-12.1%	-9.0%

MEDCOM’s energy use intensity was 260 Million Btu (MBtu)/thousand square feet in FY 2008, vs. 237 MBtu/thousand square feet in FY 2003, an increase of 9.7 percent. The challenge of meeting the Energy Conservation goals at Walter Reed has been made more difficult due to the high influx of injured soldiers from the Iraq war. To help improve performance, each building now has a building manager who is looking for ways to conserve energy in conjunction with the Building Energy Monitor Checklist. All TMA employees have been engaged to help enact all energy efficiency and conservation measures throughout DoD medical facility projects.

To improve performance at Fort Detrick, energy savings design issues were raised, discussed and incorporated with USACE and their designer CUH2A for the United States Army Research Institute for Infectious Diseases (USAMRIID) Replacement Facility. Current construction funds are approximately \$700 million. Energy savings will be realized by incorporating PV panels and a state of the art Energy Management System. Substituting bladder valves in lieu of venturi air valves in the exhaust and supply air systems will reduce the overall pressure drop 0.75”. This is projected to save 480 MWh or \$130,000 per year at the Central Utility Plant rate.

Fort Detrick awarded a \$2.5M, 5-year Research and Development contract to implement a new wireless protocol for energy and building control systems called “Zigbee”. The contractor has begun work on buildings 1776 (Day Care and Chapel), 949 (Daycare and Admin), and 1435 (302 Signal Corps). Larger and more energy intensive facilities were chosen for the next FY. The system will allow for website and/or Local Area Network monitoring and control. This will allow energy monitoring and control for individual building systems, HVAC, lighting, or even our scientists’ experiments from any personal computer.

WHS

There were 176,053 Btu/GSF used in the Pentagon Reservation in FY 2008 compared to the 161,044 Btu/GSF used in FY 2003. The percent addition in usage from FY 2003 to FY 2008 was just over 9 percent. Two items should be noted about this information:

- CMA data is not included in the totals.
- GSF reflects the heating of Henderson Hall, a 262,000 SF military installation that does not receive electricity from the Pentagon. Therefore, a portion of its square footage has been added to reflect the total square footage the Pentagon encompassed for FY 2008.

2. Excluded Facilities

DoA

The Army does not consider any buildings to be excluded from energy reduction goals.

DoAF

The Air Force has identified several exempt facilities. Numerous military family housing communities are privatized or in the process of privatization. These privatized housing community utility systems belong to the housing contractor who pays the cost of the utilities, thus allowing the Air Force to exclude these communities from the energy goals. Several special-purpose and testing laboratory facilities are being considered for exclusion due to energy-intensive loads driven by unique mission and operational requirements that are not influenced by conventional building energy conservation measures.

DoN

DoN excludes mission critical, concentrated energy use transmitters, simulators, cold iron support to ships, and some private party facilities as authorized by the DoE criteria guidelines.

DeCA

DeCA is not billed for utilities at six locations (Kodiak, AK; Cairo, Egypt; Mineo, Italy; Sugar Grove, WV; Riyadh, Saudi Arabia; and Ankara, Turkey).

MDA

In accordance with DoE's "Guidelines Establishing Criteria for Excluding Buildings from the Energy Performance Requirements of Section 543 of the National Energy Conservation Policy Act as Amended by EPCRA 2005, MDA is largely excluded from reporting energy usage because of its tenant status and lack of facility ownership. MDA plans to install metering for its Van Braun II facility in Huntsville, AL in FY 2009 and is continuing to seek metered energy data for our use of Building 1705 at Dahlgren, VA.

MDA owns no facilities or real property. MDA occupies administrative and test support spaces at multiple federal facilities, military installations, and commercially-owned buildings. With few exceptions, MDA's utility services (energy, water, steam, sewer, waste removal, and recycling) are provided through full-service leases and Inter Service Support Agreements (ISSAs) that estimate MDA's energy and water usage based on square footage of leased area.

Additionally, MDA frequently occupies “mixed-use” space, where MDA personnel and activities comprise only a portion of a building’s general occupancy. These buildings often contain a significant number of non-MDA personnel and activities that complicate measurement of Agency-specific energy or water usage.

Between FY 2009 and FY 2011, MDA’s facility and operational structure are expected to change significantly as a result of the requirements of the Base Realignment and Closure Act (BRAC) of 2005. BRAC 2005 required MDA to consolidate and relocate the majority of its administrative functions to the US Army’s Redstone Arsenal in Huntsville, AL; a small number of MDA personnel will remain in the National Capital Region.

In support of BRAC 2005, MDA is currently engaged in the following MILCON projects:

- Von Braun III (VB III) Complex at the US Army’s Redstone Arsenal in Huntsville, AL. Begun in FY 2007, VB III will be an 840,000 SF sole-occupancy facility that will accommodate up to 2,649 MDA personnel. VB III is scheduled for completion in FY 2011.
- MDA Headquarters Command Complex (HQCC) at the US Army’s Fort Belvoir post. The HQCC will be a 99,000 SF sole-occupancy facility that will house 292 MDA personnel. MDA’s HQCC is scheduled for completion in FY 2010.
- Dahlgren Field Activity Office (Expansion) at the Dahlgren Naval Station, VA. MDA commissioned Building #1705 in 2007 to serve as the AEGIS Program Support facility, which is a component of the Naval Sea System Command. The Dahlgren Field Activity Office will be expanded by 44,000 SF, and is expected to accommodate 176 MDA personnel. Construction is expected to be completed in FY 2011.

MDA designed these MILCON projects in accordance with EAct 2005 and the Sustainable Building criteria set forth in EO 13423; these plans integrate Whole Building Design Guide concepts and will be LEED-certified. Each of the design plans was revised to incorporate metering to provide MDA with credible data and reporting capabilities on its energy, water, and gas usage upon building completion and occupancy. While MDA is responsible for the design, construction, operation, and maintenance of these structures, the legal ownership of these buildings will reside with DoD and be managed through the host military service, as reflected in MDA’s FY 2008 Energy and Water Management Summary and Data Report.

MDA anticipates that its annual energy and water intensity usage “as reported” will increase as these MILCON projects are completed and the buildings are occupied even though our “actual” usage intensity will decrease through construction and occupation of LEED-certified buildings. Specifically, as MDA moves into new facilities in Huntsville, AL, and the National Capital Region, the leased space currently covered through full-service leases and ISSAs will

decrease. These facilities are presently excluded from energy and water usage reporting and there is no available metered data.

Furthermore, with the completion and occupancy of VBIII, HQCC, and the Dahlgren Field Activity Office Expansion, MDA will be able to accurately report on its energy and water use intensity for the first time. This phenomenon (i.e., the ability to report data on usage) does not mean that MDA is increasing its overall consumption of energy and water; conversely, the sustainable design, efficiency, and configuration of these new facilities are expected to significantly reduce MDA's energy and water consumption.

TMA

BUMED excluded the following facilities in its installation facility inventory.

- NH Bremerton, WA B04, Water Storage Tank.
- BFH5, Fleet Hospital Training Site (Tents).

3. Non-Fleet Vehicle and Equipment Fuel Use

DoD

See Table 1-3 in the data report attachment for detailed 2008 consumption and cost.

DoA

There has been substantial effort toward obtaining alternative fuel vehicles (AFVs) and increasing use of alternative fuels however these are fleet vehicles and their progress toward meeting EPAct 2005 and EO mandates for alternative fuel use are tracked in the Federal Automotive Statistical Tool reporting system.

DFAS

DFAS did not have a baseline for FY 1985 as the agency did not exist then and only started reporting in FY 2003. Fuel oil consumption increased from the base year of 38.0 thousand gallons to 57.3 thousand gallons with a cost increase from \$37,000 to \$145,300. Propane consumption was virtually unchanged. Natural gas consumption also declined from 118,940 thousand cubic feet to 0 cubic feet with a corresponding drop in annual cost from \$390,700 to \$0. This was due to closing sites that used natural gas.

DLA

In fiscal year 2008, DLA gasoline usage was 165 thousand gallons compared to 127 thousand gallons from the FY 2003 baseline. This is a 29 percent increase from the FY 2003 baseline. DLA distillate-diesel usage was 200 thousand gallons compared to 146 thousand gallons from the FY 2003 baseline. This is a 36 percent increase from the FY 2003 baseline. DLA propane usage was 205 thousand gallons compared to 207.6 thousand gallons from the FY 2003 baseline. This is a 0.9 percent decrease from the FY 2003 baseline. The minor decrease is attributable to the increased energy consumption from tenants and DLA support of Operation Iraqi Freedom and Operation Enduring Freedom.

MDA

Non-fleet vehicle and equipment fuel usage for MDA is primarily associated with mission support activities for the development, testing, and deployment of the Ballistic Missile Defense System (BMDS). Examples include vehicles and equipment used to transport, operate, and maintain BMDS test assets (e.g., missiles, interceptors, radars and other sensors, etc.). Although many of these non-fleet vehicles and equipment belong to the host installations, MDA has not yet begun a comprehensive review of fuel use by its non-fleet vehicles and equipment.

It is MDA's policy to pursue all opportunities for reducing fuel consumption, including non-fleet vehicles and equipment. MDA's Fleet Directive and Green Procurement Program formally address the acquisition of more fuel efficient vehicles and equipment, and advanced technology vehicles and equipment that reduce our annual petroleum intensity.

While weapons systems are not currently subject to the reporting requirements of EPAct 2005, nor are they the intended focus of EO 13423, MDA recognizes that fuel consumption is a significant aspect of BMDS test assets. The highly specialized nature of these weapons systems generally precludes MDA from making alterations that could impede system operability or functionality.

However, MDA has been working with program staff, wherever possible, to:

- Consider fuel reduction measures early in the weapons system planning and acquisition process.
- Implement upgrades/retrofits that would improve a system's fuel efficiency without compromising its performance.

MDA issued Directive 4500.01 in August 2008, *Management and Use of Motor Vehicles*. This Directive establishes policy and procedures, delegate's authority, and assigns responsibility for official motor vehicles assigned to or leased and/or acquired by MDA. The Directive also includes a requirement for MDA's Operations Directorate to review a representative portion of MDA vehicle contracts and leases to ensure that MDA's fleet management practices promote the use of hybrid and alternative fuel vehicles and alternative fuels.

As part of this ongoing effort, MDA already has modified lease agreements to obtain AFVs and already has acquired several E85 (85% ethanol) flexible fuel vehicles. MDA will increase its use of hybrids and AFVs as soon as practicable.

NGA

Non-fleet equipment fuel use for NGA consists of fixed emergency generators at the Reston and Bethesda sites which provide critical backup emergency power for operational and life safety purposes, and at the Navy Yard for life safety purposes only.

TMA

In FY 2007, TMA reported 7.8 BBtu for Non-Fleet Vehicle and Equipment Fuel use. In FY 2008, consumption decreased to 1.7 BBtus. Installations purchased ENERGY STAR grounds maintenance equipment, electric powered carts, more fuel efficient security vehicles, and installed permanent replacements for generator powered security lights required at main gates. MEDCOM Vehicles were purchased with higher mile-per-gallon ratings.

B. Renewable Energy

DoD

DoD has a goal to procure or produce renewable energy such that it accounts for 25 percent of the Department's facility electrical consumption by 2025. The total renewable energy consumption in 2008 was 4.72 trillion Btu or 4.7 percent of all electricity consumption in the DoD. When all renewable energy is considered, DoD produced or procured 9.89 trillion Btu or 9.8 percent of its electrical consumption. When counting only renewable electricity, DoD consumed 2.9 percent of its electrical consumption, not quite reaching the goal of three percent. This is a significant drop from the 5.5 percent reported in FY 2007. The decrease is almost exclusively the result of fewer REC purchases due to rising REC cost.

DoA

The Army did not meet the renewable requirement of three percent of total electricity use derived from renewable sources as mandated by EPAct 2005, obtaining only 1.1 percent of total electric use from renewable sources. The drop from 2.1 percent in FY 2007 was due to the fact that there were errors in the FY 2007 data overstating the renewable energy and the flooding of the Mississippi River caused the low head hydropower output at Rock Island Arsenal, Illinois to decrease significantly from the prior year. The Army met the EO 13423 requirement that at least half of the renewable electricity used comes from sources established since January 1, 1999. However, when considering renewable energy from all sources including those producing thermal energy, total renewable energy was 3.1 percent as compared to total purchased electrical energy in FY 2008. The Army published a renewable energy handbook on the Army Energy website and highlighted the need for more renewable energy projects at the IMCOM Renewable Energy summit at the Pacific Northwest National Laboratories, Richland, WA, in July 2008.

DoN

Developing renewable systems on DoN land was challenging and marginally successful this year. Progress was hindered by uncertainty in the tax credits being extended, coupled with the uncertainty in the financial market and timing of contracts. The DoN team established a renewable project office to award an Energy Joint Venture (public/private) or Enhanced Use Lease Contract. The renewable tax credits for developers, re-authorized recently by Congress, will go a long way to improving cost/benefit of renewable technology, and recent Navy legal rulings have cleared the way for Navy to use ESPC to generate excess

electricity and sell it via contractor to the local community. This decision will increase the usefulness of this valuable contracting tool.

There are two renewable energy goals, one passed with EPAct 2005 (5 percent renewable electricity consumed FY 2009 and 7.5 percent by 2013). The other goal passed by Congress in National Defense Authorization Act of FY 2007, strives for 25 percent renewable electricity procured or produced on DoD land by 2025. DoN consumed the equivalent of 0.5 percent of annual electricity consumption. These sources include wind energy and solar energy only. DoN is achieving great success toward the DoD goal. Including generation of electricity on DoN land and sold to the grid, the equivalent of 17.6 percent of DoN electric use is renewable.

Research, Development, Test and Evaluation funds for renewable systems has increased and been put to good use validating innovations and managing transitions to use when ready. In FY 2008, the Navy gained experience with thin film solar and began an investigation into other building level renewable systems, energy storage and ocean renewable energy technologies.

TMA

As part of its effort to help Navy and DoD pursue renewable energy initiatives, BUMED and MEDCOM continue to seek opportunities for self-generation and renewable energy purchases. Their ability to contribute in these areas may be limited at its tenant-based facilities, which make up the dominant portion of its portfolio. This occurs, of course, because many of these facilities are connected to district heating and/or cooling systems of the host installation.

1. Self-Generated Renewable Energy

DoA

The Army had 70 active renewable energy projects operating in FY 2008. Of the total, 44 were generating electricity qualifying for credit toward the renewable energy goal and nearly all the energy produced was used on-site in Federal Army facilities. The exception was an Army National Guard site at which some of the electricity generated was used on state-owned buildings. Three new electricity generating projects were implemented in FY 2008:

<u>Location</u>	<u>Project Description</u>	<u>Capacity</u>
Fort Riley, KS	PV Powered Training Range Targets	3.3 kW
Fort Knox, KY	Wind Turbine	1.8 kW
Detroit Arsenal	PV Powered Public Address System	2.0 kW

In addition to the projects implemented in FY 2008, the Army obtains a substantial amount of electricity generated from renewable sources from hydropower at Rock Island Arsenal, IL; PV panels at Fort Irwin, CA; PV and wind power at Fort Huachuca, AZ; a large PV array at Kwajalein Atoll; and eight separate PV and wind power projects implemented by the Arizona Army National Guard with over 60 kiloWatt (kW) of total capacity.

The majority of energy obtained from renewable sources by Army installations is thermal energy, which do not qualify toward the renewable requirement of EAct 2005. Sources of this thermal energy are primarily from GSHPs at Fort Knox and Fort Campbell, KY and Fort Jackson, SC; and scrap wood to produce fuel for the boiler plant at Red River Army Depot, TX. There are also transpired solar walls at Fort Drum, NY; and solar hot water and pool systems at Fort Carson, CO and Fort Huachuca, AZ.

DoAF

The Air Force is proactively pursuing the development and installation of renewable energy. The following are examples of renewable energy at Air Force installations:

- At Nellis AFB, NV, the 14.2 MW PV array produced 28,569 MWh in FY 2008 for a reportable (statutory allowance) of 57,139 MWh.
- Moody AFB, GA, installed an indoor pool solar heater that saves 1.03 million MBtu per year. They installed approximately 4,000 square feet of solar panels for heating pool water, replacing a 3 million-Btu/hr natural gas boiler. The project provides a savings of \$17,000 per year in gas costs.
- Laughlin AFB, TX, purchased six 1 kW architectural wind turbines as a test project for installation on the flight simulator building.
- Tyndall AFB, FL, installed two single-dish concentrated solar collectors for heating domestic hot water under an ESPC.
- Schriever AFB, CO, funded a PV array project through the “Green Dollar” program. This 3 kW project is a demonstration project used for tracking the impact on the child development center’s utility consumption through metering and public displays. This project helped reduce peak demand charges by avoiding purchases during peak use periods, saving more than \$30,000 per month.
- Los Angeles AFB, CA, installed a system which consists of 400 PV modules. The estimated annual system generation is 102,000 kWh. This system will provide enough energy per year to power approximately 13 homes and save approximately \$210,000 over 20 years.
- F. E. Warren AFB, WY, installed two 660 kW wind turbines with ECIP dollars. The base is in the process of installing a 2,000 kW wind turbine demonstration unit funded by a Congressional appropriation. The three wind turbines are capable of generating 6.7 million kWh per year, enough to power 836 homes. The turbine is expected to save the Air Force more than \$4.5 million in energy costs over the next 20 years.
- 611 Civil Engineering Squadron (CES), Tin City, AK, installed a 250 kW wind generator at Tin City Long Range Radar Station. The wind generator will result in annual energy savings of 4,211 MBtu and will greatly assist the 611 CES with meeting EAct 2005 renewable energy goals.

- Hill AFB, UT, increased the capacity of their landfill gas to electricity generation plant from 1.3 MW to 2.3 MW. They also installed solar heat recovery systems in three buildings, supplementing the requirement for heat generated by natural gas, hot water, or steam heating systems.
- Fresno Air National Guard Base (ANGB), CA, installed a 480 kW PV array. The project was undertaken through ECIP to install solar arrays on carport sun shades and operations buildings using over 2,100 single crystal silicon panels. The system produces enough electricity to power 30,000 homes for a day.
- Toledo ANGB, OH, installed a 180 kW PV array. The project resulted from a Congressional research and development appropriation and implemented by the Air Force Advanced Power Technology Office. The 10 acre site will be the largest application using the latest technology, including thin film cadmium telluride solar panels. The project will produce 890,000 kWh or approximately 25 percent of the installation's electrical demand.

DoN

DoN is increasing generation of renewable energy, operating the largest wind/diesel hybrid plant in the world and two of the largest Federal PV systems in the United States. Smaller replicate solar carports and new thin film solar integrated roofs began generating electricity in 2008, building on earlier successes and providing experience with new technology.

In FY 2008, DoN generated and consumed 14,000 MWh of renewable electricity and 731,792 MBtu of renewable thermal energy. Additionally, DoN avoided electrical consumption as a result of renewable day-lighting projects. Including all renewable energy sources (electric and thermal), DoN is consuming the equivalent of 2.8 percent of its total electricity from renewable sources.

The Navy's geothermal plant at Naval Air Weapons Station (NAWS) China Lake, CA, on average, delivers 1.4 million MWh of electricity annually to the state electric grid. Most of this resource was developed prior to 1999 and does not contribute to the 7.5 percent EAct 2005 goal because DoD does not retain the RECs or consume the generation. The generation at China Lake does provide credit toward the DoD renewable goal, and is the vast majority of the 17.6 percent DoN renewable energy achieved to date.

Projects made operational in FY 2008 include:

Solar Thermal

State Application

VA	Naval Air Station Oceana, Dam Neck site
GU	US Naval Base Guam
GR	Naval Support Activity Souda Bay

Photovoltaic

State Application

CA Naval Air Weapons Station China Lake
CA Naval Base Coronado
CA Naval Base Point Loma
CA Naval Base San Diego
CA Naval Air Station Lemoore
HI NAVFAC Hawaii
MD Naval Air Station Patuxent River

Naval Air Weapons Station China Lake installed a 117 kW PV carport project at the Combined Bachelor Housing office. Naval Base Coronado installed a 51.1 kW building integrated PV roof at building 352 and also extended their 750 kW PV carport, adding another 56.5 kW. Naval Base San Diego installed three 56.5 kW PV carports, and Naval Base Point Loma Naval Air Station installed one 56.5 kW PV carport. Naval Air Station Lemoore installed a 10 kW PV system at Building 50. NAVFAC Hawaii installed a 107 kW PV array at Halsey Terrace Community Center. Naval Air Station Patuxent River installed solar PV street lights.

Naval Air Station Oceana installed GSHPs for five buildings at Dam Neck, VA. The heat pumps use effluent from the Hampton Roads Sanitation District as a heat sink/heat source. US Naval Base Guam installed solar water heaters for twenty row barracks. Naval Support Activity Souda Bay installed two solar water heating systems.

DeCA

A PV power project was completed at our Los Angeles AFB Commissary in April, 2008 using ECIP funds. This project provided an average monthly savings of approximately \$1,200. Initial annual electricity generation is 69 MWh which is approximately 3 percent of the facility's annual electrical energy consumption in FY 2007.

Many commissary designs incorporate passive solar features, such as day-lighting. Heat reclaim is always considered and normally used. Day-lighting is also considered in design development. GSHP systems are now analyzed when considering design alternatives since larger capacities have become available.

DIA

DIA had no energy usage from electricity self-generated renewable sources in FY 2008. DIA is considering augmenting controls its new occupancy-based lighting control system in the DIAC-addition with day-lighting. The open floor plan and generous circuiting of the building make appreciable savings a very realistic possibility.

MDA

As a tenant organization, MDA has not pursued projects related to energy use from self-generated electricity or renewable energy thermal projects. To the

extent feasible, MDA will encourage its host facilities to pursue such projects, especially as the Agency acquires new test infrastructure (buildings and test facilities) from host installations in the South Pacific (e.g., Wake Island, Reagan Test Site in the Marshall Islands).

NGA

NGA did not self-generate energy for reuse. NGA does not own property suitable for life-cycle cost effective self-generation.

NSA

NSA does not currently produce any renewable energy. However, there is a pilot project underway, which will be operational in the first quarter of FY 2009 which will serve to evaluate the use of several renewable technologies before further deployment.

WHS

The Pentagon has three PV arrays with a combined capacity of 96 kW and smaller PV systems (solar lights) at 48 various locations that combine to bring the total Pentagon Reservation PV capacity to 110.4 kW. This energy source is connected to the PH&RP grid.

The solar thermal system at the PH&RP guard booth consists of 400 square feet of tiles with a total capacity of 11.7 kW to provide lighting, heat and air conditioning for the PH&RP guard booth. It is estimated that 51.2 MWh were produced by the solar thermal system in FY 2007.

2. Purchased Renewable Energy

DoA

The Army purchased 102 thousand MWh of electricity qualifying toward the renewable energy goal, the majority of which came from a direct purchase of electricity from a 2.0 MW PV array at Fort Carson, Colorado initiated in FY 2008. A substantial amount of renewable energy certificates were also purchased by Fort Lewis, WA; Fort Carson, CO; and US Army Research Lab Adelphi, MD. The Army also purchased a substantial amount of energy from renewable municipal solid waste plants at Redstone Arsenal, AL and Aberdeen Proving Ground, MD. The thermal energy does not qualify toward the renewable energy goal but does help offset the amount of conventional energy counted toward the energy efficiency goal. These purchase decisions were more based on economics, consistent with the Army Energy and Water Campaign Plan for Installations, than due to the source of the energy being renewable. Fort Stewart normally purchases a substantial amount of wood waste as fuel for the central energy plant, however the plant was temporarily shut down in 2007 for refurbishment. The plant is expected to be back in operation in late 2008.

DoAF

The Air Force aggressively searches for and acquires the most economical RECs available on the market. The MAJCOMs and AFCESA work together to budget

for and purchase the number of RECs that balance renewable energy requirements. The increased production of on-base renewable energy has reduced the requirement for REC purchases. In addition the MAJCOMs have reduced funding for RECs because the cost for post 1999 RECs have increased by 6.7 percent and prior 1999 RECs have increased by 193 percent. Nevertheless, the REC purchases have decreased from 2007 by over 480,000 MWh, the AF still exceeds the EAct 2005 mandated goal of three percent. The following table represents the RECs purchased in FY 2008.

Air Force Installation	Biomass (MWh)	Landfill gas (MWh)	Geothermal (MWh)	Solar (MWh)	Wind (MWh)
U.S. Air Force Academy, CO	1,500	1,500	0	0	5
Eglin, FL	0	0	0	0	11,322
Hill, UT	0	0	0	0	3,000
Edwards, CA	0	0	0	0	121,845
Kirtland, NM	3,500	0	0	0	0
Hanscom, MA	0	0	0	0	1,277
Robins, GA	9,906	0	0	0	0
Tinker, OK	0	0	0	0	11,092
Charleston, SC	3,580	0	0	0	1,248
Dover, DE	3,318	0	0	0	0
Fairchild, WA	2,096	0	0	0	0
Grand Forks, ND	2,998	0	0	0	0
MacDill, FL	4,130	0	0	0	0
McChord, WA	5,378	0	0	0	0
McConnell, KS	1,918	0	0	0	0
McGuire, NJ	2,464	0	0	0	0
Pope, NC	1,324	0	0	0	0
Scott, IL	4,138	0	0	0	0
Travis, CA	4,718	0	0	0	0
Altus, OK	1,708	0	0	0	3,074
Columbus, MS	1,348	0	0	0	0
Goodfellow, TX	1,100	0	0	0	11,434
Gunter, AL	2,450	0	0	0	0
Keesler, MS	6,056	0	0	0	0
Lackland, TX	8,184	0	0	0	9,140
Laughlin, TX	5,608	0	0	0	0
Little Rock, AR	2,256	0	0	0	0
Luke, AZ	2,747	0	0	0	0
Maxwell, AL	2,436	0	0	0	0
Randolph, TX	3,039	0	0	0	0
Sheppard, TX	1,546	0	0	0	42,852
Tyndall, FL	3,560	0	0	0	0
Vance, OK	990	0	0	0	0

Air Force Installation	Biomass (MWh)	Landfill gas (MWh)	Geothermal (MWh)	Solar (MWh)	Wind (MWh)
Hurlburt Field, FL	7,570	0	0	0	0
Cannon, NM	5,100	0	0	0	1,800
F.E. Warren, WY	0	0	0	0	1,317
Schriever, CO	0	0	0	4,798	0
Barksdale, LA	2,420	0	0	0	0
Beale, CA	3,223	0	0	0	0
Creech, NV	355	0	0	0	0
Davis-Monthan, AZ	2,735	0	0	0	0
Dyess, TX	2,189	0	0	0	0
Ellsworth, SD	2,439	0	0	0	0
Holloman, NM	2,765	0	0	0	0
Langley, VA	4,095	0	0	0	0
Minot, ND	22,562	0	0	0	0
Moody, GA	1,634	0	0	0	0
Mountain Home, ID	1,903	0	0	0	0
Offutt, NB	5,195	0	0	0	0
Seymour Johnson, NC	2,595	0	0	0	0
Shaw, SC	2,294	0	0	0	0
Tonapah, NV	1,075	0	0	0	0
Whiteman, KS	2,621	0	0	0	0
CONUS Air Force Reserve bases	4,700	0	0	0	407
Air National Guard (all locations)	10,075	0	0	0	10,000
Summary	181,541	1,500	0	4,798	229,813

DoN

DoN installations in Washington State purchased 20,780 MWh of renewable energy in FY 2008 from their electric utility provider, Bonneville Power Administration. This marks the first time DoN has received renewable electricity off the grid; at a price within a penny of conventional power.

DeCA

DeCA normally purchases energy as a third party customer from its host installations and is currently not permitted to take credit for renewable energy purchased from host installations as they are receiving the renewable energy purchase credit.

NGA

NGA did not purchase renewable energy under existing utility contracts. NGA will explore purchasing renewable energy for facilities located in the St. Louis area pending availability from local utility suppliers.

3. Net Zero Energy Installation Initiative

DoA

The Net Zero Energy Installation Initiative is to increase energy independence of Army installations by offsetting the equivalent of total annual energy use through on-site energy production. Goals for this initiative are for five Army installations to be net zero by 2015, 25 installations by 2025, and all Army installations net zero by 2058. Current renewable energy efforts underway in support of this initiative are to develop a large concentrated solar system at Fort Irwin, CA; develop geothermal steam resources at Hawthorne Army Depot, NV; replace 800 petroleum-fueled non-tactical on-post vehicles with neighborhood electric vehicles; and develop consolidated waste to fuel projects at several locations.

C. Water Conservation

DoA

In FY 2008, the Army used 45.9 billion gallons of potable water at a cost of \$55.7 million. The average consumption of water per unit area of building has decreased 6.2 percent since FY 2007.

The Army's total water use and disposal have declined for many years. Greater treatment and testing requirements imposed on water suppliers by the Safe Water Drinking Act of 1974 (and amendments) have increased the cost of providing potable drinking water. Similarly, the vulnerability assessments of installation water supplies, emergency response plans, and protective measures required by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (PL 107-188) have added to the cost.

Water conservation efforts are environmentally responsible and can help installations stretch dwindling operations and maintenance (O&M) dollars. Any water conservation measures that reduce wastewater quantities provide additional cost avoidance as well.

Army installations in areas of the United States affected by drought and those with water restrictions, naturally have reported much lower water consumption figures for FY 2008. Rain water collection and reuse, a matter of course for the Army National Guard in the Virgin Islands, is being looked at on the US mainland, where USGBC LEED credits can be earned for new construction projects.

Many installations have installed water conserving toilets and urinals, low flow faucets and showerheads. All facility projects executed by USACE reference the International Plumbing Code which prescribes water conserving fixtures. Some installations have instituted aggressive leak detection surveys and followed up with repair programs of leaky valves and damaged pipelines, which have significantly reduced water consumption as much as 20 percent at one location.

Although no longer mandated by EO, a number of installations continue to follow the Best Water Management Practices, noted by DoE.

DoAF

The Air Force consumed 32.82 billion gallons of water in FY 2008, a reduction of 1.3 billion gallons from FY 2007 baseline usage and a 3.9 percent reduction in overall consumption.

FEMP guidance requires that the baseline and actual square footage for water include energy excluded facility square footage. The square footage utilized to calculate the water intensity for FY 2007 was 612.012 million square feet resulting in 55.8 gallons per square foot. In FY 2008, the square footage utilized to calculate the water intensity is 580.579 million square feet for 56.5 gallons per square foot increasing the intensity 1.3 percent from last year's intensity metrics.

The baseline year for water consumption was a year with higher rainfall and FY 2008 was a drier year than the baseline year. The Air Force is implementing stronger conservation measures to reduce landscape irrigation and encourage low water plantings. The Air Force continues to aggressively pursue water reduction initiatives to meet the new 2-percent-a-year intensity mandate. Here are some examples for FY 2008:

- Kadena AB, Okinawa, Japan, replaced high-flow showerheads, flush valves, and sinks. Meters installed in each dormitory to accurately measure water usage and savings. Initial data indicates installation of these low-flow devices has resulted in a more than 50 percent reduction in facility water use, with an anticipated total annual water savings of 38.7 million gallons.
- Misawa AB, Japan, installed low-flow showerheads in their fitness centers. Installation of these showerheads limits water flow rates to 2.25 gallons per minute and results in annual water savings of 4.5 million gallons. Energy is saved by reducing the amount of water heated for showers as well. The annual energy savings is projected to be 2,430 MBtu. Several showerheads of various flow rates and manufacturers were tested to ensure the shower heads were acceptable to fitness center patrons.
- Moody AFB, GA, installed a nano-filtration plant allowing wastewater to be used for irrigation. This project will save 9 million gallons of potable water.
- Whiteman AFB, MO, replaced condensate pumps and leaking lines to allow steam condensate to be returned to the boiler rather than lost in the wastewater stream. An estimated 1.2 million gallons of water will be saved per year.

DoN

DoN consumed 74 gallons of water per square foot, a 3.7 percent reduction from the FY 2007 baseline. Most progress this year was made through wider implementation of low flow showerheads and faucets (10,000 units installed). DoN spent \$84.5 million on water consumption.

DoN installations implemented a number of extensive water conservation projects. Some examples follow: Naval Base Point Loma installed over one thousand 1.5 gallon per minute showerheads, which is a considerably lower flow

than the 2.5 gallon per minute federal water-saving standard for showerheads. Naval Base San Diego installed one thousand five hundred 1.5 gallon per minute showerheads and 124 waterless urinals, as well as weather-based irrigation control systems and artificial turf projects. Naval Base Coronado installed over 2,000 1.5 gallon per minute showerheads. Naval Air Facility El Centro installed sixty-nine high efficiency clothes washers at barracks and 256 low flow showerheads at barracks and fitness centers.

Naval Air Station Lemoore xeriscaped approximately eighteen acres of land and implemented a 30 percent mandatory irrigation reduction. Naval Base Kitsap installed 170 freeze protection devices on water distribution lines to piers and drydocks. These devices are saving energy by opening to allow water to flow only during periods of freezing temperatures rather than winter round. Without the devices, water must flow throughout the winter to protect the exposed water distribution system from freezing.

NAVFAC Hawaii installed water meters on all buildings in their main compound and on all irrigation areas. US Naval Base Guam undertook a comprehensive water distribution system leak survey. Seventy-four percent of the leaks were repaired by the end of FY 2008. DoN purchased water-conserving products, including:

Product	Quantity
High-efficiency clothes washers	187
Low-flow toilets	35
Low-flow shower heads	9086
Low-flow aerators	2984
High-efficiency faucets	15
Dual-flush toilet Flushometers	20
Waterless urinals	456
Low-flow urinals	18
.5 gallon per flush performance kits for urinals	1000
Irrigation controllers	79
Hose timers	6
Low-flow hose nozzles	10
Freeze protection devices	170

DCMA

DCMA water usage in FY 2008 was 3.7 million gallons at a cost of \$10,200, compared to the previous year, which was 3.4 million gallons at a cost of \$7,400. This represents a 1.1 percent increase in actual water utilization.

DeCA

DeCA potable water use and cost for FY 2008 is 294.5 million gallons per year and \$985,300, respectively. The water intensity value is 16.5 gallons/square

foot/year, which is a 9.2 percent decrease from FY 2007 consumption of 18 gallons/square foot/year. Only 61 percent of DeCA facilities are billed from dedicated water meters.

DeCA has completed Water Management Plans at 58 percent of our reporting locations. DeCA design criteria require low-flow toilets and urinals with electronic flush sensors for new and renovated commissaries. Electronic sensor control valves are specified on hand-wash lavatories. At locations where host installations maintain “waterless” urinals, the projects may include the “waterless” urinals.

Proposed landscaping for new facilities is closely reviewed during all phases of the design for low maintenance and watering requirements. DeCA Design Criteria includes the requirement for xeriscaping and drip versus sprinkler irrigation systems. Rainwater collection systems are being considered to collect irrigation water.

More emphasis has been placed on the immediate necessity to repair leaky and/or faulty plumbing fixtures as they are identified. If the installation/base maintenance workforce is not available to resolve the problem, outside (off-base) maintenance will be sought to acquire immediate correction of the problem. Closer monitoring and improved quality checking of commissary store quarterly water use and cost reports (DeCA Form 20-1) have been implemented. Store directors continue to stress the importance of conserving water in their daily operations.

The DeCA East Utilities Task Force directed all locations conduct a comparative reading of water meters each month to validate consumption as reported by host installation.

At the DeCA HQ facility, Fort Lee, VA, landscape irrigation has been turned off. We are going “green” by going brown. Our HQ addition under construction does not have a sprinkler system in the design. We will no longer use the sprinkler system. We limit our watering to the flower beds.

DeCA West installed irrigation system timers at various locations set to minimize water usage for lawn and landscaped areas. Landscaped areas that required heavy irrigation to maintain have been reworked to incorporate a desert style landscaping that requires less irrigation.

In DeCA Europe, water conservation is an ongoing initiative with maintenance upkeep, replacing existing valves with new low flow sensor-activated and quick repairs to water leaks.

DFAS

The water consumption declined from the base year of 29.9 million gallons to 4.3 million gallons for 2008 with a corresponding drop in annual cost from \$77,600 to \$11,200.

DIA

DIA potable water usage for FY 2008 was metered and recorded by the 11th CES at 60.3 million gallons per year, which is a 5.8 percent increase as compared to DIA's estimated water consumption in FY 2007 of 56.95 million gallons per year. The reason for the reported increase is linked to the fact that water meter readings are only available for the last quarter of FY 2007; therefore, it is not clear if DIA actually increased its water usage in FY 2008. Installation billing for water in FY 2007 was not based on meter readings, but was allocated per tenant by square footage. Hence, DIA estimates 56.95 million gallons in FY 2007 based on these billings. In FY 2008, the installation began billing its tenants based on actual meter readings. The amount of water consumed by DIA in FY 2008 is 60.3 million gallons.

DIA designs are reviewed for low consumption toilets and urinals, where projects involve new plumbing fixtures.

DIA is planning to replace all fixtures that have 3.5 gallon flush valves with 1.6 gallon valves.

Landscape irrigation is kept to a minimum at the DIAC site.

DLA

DLA estimated water consumption usage for the baseline FY 2003 was 250 million gallons. DLA water consumption use for FY 2008 usage is 180 million gallons used. DLA is currently working on a Water Conservation Management Plan, expected to be completed in FY 2010.

MDA

MDA has very little data for metered energy, water, gas, and other utilities, which are typically provided through full-service leases and ISSAs.

MDA is reporting available water intensity information in the Data Report for FY 2008 based on the available water data provided to us. As stated previously, MDA's current MILCON projects will consolidate the majority of MDA's administrative operations to three new sole-occupancy facilities. These facility designs include metering that will enable MDA to report water use intensity once buildings are completed and occupied in FY 2010 and FY 2011 (scheduled).

NGA

FY 2007 consumption is used as the baseline for future consumption reduction requirements. NGA reports water consumption figures for four of our six active sites, totaling just over 2.9 million GSF. The two sites not reported by NGA are captured by host locations: Washington Navy Yard usage is reported by GSA, which includes water costs in our lease payments. Usage for the NGA College on Fort Belvoir is reported by the Army.

In FY 2008 NGA consumed 110.9 million gallons of water at a cost of \$802,100, an increase in consumption of 12.0 percent compared to FY 2007. The consumption increase is attributed to the increased demands for cooling of energy intensive production equipment and increases in building population at NGA sites.

NGA established a Water Management Program in FY 2003, which incorporated Water Management Plans for each of our 6 major sites. For FY 2008, NGA continued to place emphasis on implementation of Best Management Practices as an efficient and cost effective way to achieve water conservation.

NSA

In FY 2008, NSA paid \$3.95 million for 525 million gallons of water. Water use, calculated in gallons per square foot., increased by 20 percent when compared to FY 2007. This is due to an additional 109.5 million gallons of water per year (estimated) that was included in FY 2008 for a specific building, which was not in the FY 2007 report. If this additional water use is deducted from the FY 2008 report, (to normalize 2007 and 2008) the net difference would be a 5 percent reduction in use which is on target for the 2008 water intensity reduction goal.

NSA continues to implement water-conservation measures, and uses water saving fixtures in lavatories during renovation or repair projects. We are also evaluating several no-water, and low-water use devices for deployment on campus. Plans also include installing separate water meters on each building to determine actual water consumption.

TMA

Water use for BUMED’s standalone installations in FY 2007 was 61.9 gallons/GSF. In FY 2008, the consumption was 52.9 gallons/GSF, a decrease of 14.5 percent (see Table below). Installations repaired leaking outdoor pools and replaced fixtures with water conserving designs. In addition, installations completed various projects (i.e. boiler replacement, domestic water piping replacement, and cooling tower replacement) that aided water conservation.

Water Intensity Reduction Goal	FY 2007 Gallon/GSF	FY 2008 Gallon/GSF	Percent Change 2007 – 2008	FY 2008 Goal Target
Reduction in potable water consumption intensity	62	53	-14.5%	-2.0%

WRAMC. TMA is aggressively looking for all water leaks from water supply points. This is a user assisted program. Fort Detrick has an on-going sonic leak detection initiative, for which it won an award in FY 2007

WHS

In FY 2008, the Pentagon consumed 164.9 million gallons of water resulting in a cost of \$1,076.2 compared to FY 2003 with a consumption of 131 million gallons of water at a cost of \$278,300.

D. Metering of Electricity Use

DoA

In FY 2008, the Army started implementing the Army Metering Installation Plan, centrally managed by the Office of the Assistant Chief of Staff for Installation Management and executed by the USACE Support Center Huntsville. The program will install advanced utility meters in buildings where cost-effective, currently determined to be buildings greater than 29 thousand square feet in size, based on average utility cost per unit area of building as compared to the cost of metering. Buildings greater than 29 thousand square feet in size and those occupied by tenants that reimburse for utilities, are classified as buildings appropriate for metering. In the centrally managed program, the Army is only installing advanced meters, or those that record and report meter data to a central location for analysis, including electric, natural gas, steam and water meters. The Army Metering Installation Plan includes development and operation of a meter data management system (MDMS) to collect, compile and analyze meter data at a central location accessible via internet to authorized users, such as installation energy, utility and operation and maintenance program managers. A contract for Army-wide technical and operational support of the MDMS was competed during FY 2008 with contract award expected during first quarter of FY 2009.

During FY 2008, the Army conducted meter surveys and ordered meter installations at 27 locations for over 2,000 advanced electric meters ordered in FY 2008. The FY 2009 schedule includes installing meters at another 19 Army installations.

DoAF

The Air Force developed an economical and life-cycle cost-effective metering strategy for meeting the EAct 2005 mandate of installing electric meters on facilities where economically feasible by October 1, 2012. In FY 2008, the Air Force invested over \$10 million in electric meter installation. A similar amount is programmed in FY 2009, which should provide electric meters for all facilities where cost-effective. EISA requires the equivalent metering of gas, steam, and water meters not later than 2016. Some examples of implementation include:

Type of Meter	Tied to Energy Management Control Systems (EMCS)	Total
Electric	No	457
Electric	Yes	1383
Total Electric Meters		1840
Gas	No	8
Gas	Yes	203
Total Gas Meters		211
Steam	No	24
Steam	Yes	28
Total Steam Meters		52
Water	No	29
Water	Yes	84
Total Water Meters		113
Total Number of Meters Installed in FY 2008		2216

DoN

DoN has electricity meters on over 15,000 buildings. These facilities account for 74 percent of all the electricity consumption within the Department, however very few of these will meet the advanced metering requirements of EAct 2005.

DoN awarded a \$250 million multiple award indefinite delivery/indefinite quantity contract to install advanced metering systems. The first deployment will be at Naval Base Ventura County and is scheduled to be operational by the spring of 2009. Subsequent deployments will build upon the design and leverage lessons learned at the first site. Deployment plans will be sequenced with a goal of completing meter installations by 2012 to comply with EAct 2005 requirements.

DoN identified a 2.4 giga-Hertz wireless solution and is addressing the information technology security issues involved with collecting metered data and controlling loads remotely. DoN partnered with two utility companies to address how to take advantage of demand response bidding and programmable controllable thermostat programs.

DCMA

There are a total of three standard meters at Brathenal, OH and one standard meter at Carson, CA facilities being used for electricity.

DeCA

88 percent of DeCA facilities have electric meters. Our metering plan has been revised to coordinate additional metering and advanced metering with individual host installations as they pursue their DoD metering plans as DeCA is normally a tenant organization. DeCA's goal is to reimburse the host installations for meters installed with the understanding that DeCA will have real time electronic access to metered data for energy monitoring and analysis purposes.

DFAS

Buildings that DFAS currently occupy are all metered.

DIA

DIA is exploring the possibilities of enrolling in a demand response program and implementing advanced metering at the DIAC.

DLA

DLA will have all buildings where found to be cost effective metered by 2012.

MDA

MDA has very little data for metered energy, water, gas, and other utilities, which are typically provided through full-service leases and ISSAs.

NGA

All five reporting NGA sites have standard meters providing consumption information for electricity, natural gas and water. Electricity consumption for the NGA College at Fort Belvoir is reported through the Army. If funding is available in FY 2009, NGA will audit the two western facilities (Arnold and St Louis) with the intent of replacing existing meters with ones meeting FEMP standards for advanced metering. With completion of the New Campus East facilities in FY 2011, all NGA locations will be served by advanced meters.

NSA

NSA is in the process of updating, replacing, and repairing electric meters throughout the campus. Meter installation is being coordinated with the Supervisory Control and Data Acquisition system replacement/expansion program scheduled for completion around FY 2014. Approximately 61 percent of buildings are metered to date, which equates to approximately 85 percent of all power consumed.

TMA

BUMED has an effort in progress to assess the current energy and water metering at all of its buildings and determine the need for advanced meters in accordance with EAct 2005 (requires advanced electric meters where cost-effective to install) and EISA (expands metering requirement to other fuels and water).

WRAMC is completing construction on a new electrical substation that provides metering for all feeders. The metering is being upgraded to provide advanced metering properties. Currently they have 18 standard meters accounting for approximately 39 percent of electrical consumption. At Fort Detrick, USACE, Huntsville Division and their consultant, TENG Associates will be making a survey of the installation for a report on the need for advanced metering. Nine facilities will require advanced electric metering. In the event these cannot be received by 2012, the garrison will purchase these through a future Washington Gas UESC action.

WHS

In FY 2008, all three of the buildings in this report are metered. The PH&RP and Wedge 2 of the Pentagon have advanced metering. This advanced metering is a part of the Pentagon Renovation. Therefore, the amount of advanced metering within the Pentagon will increase as the renovation progresses through each wedge. In the near future, we will be harvesting the data from these advanced meters for trending analysis in order to see any changes in energy usage that may indicate such issues as needed repair and maintenance.

E. Federal Building Energy Efficiency Standards

DoA

The Army Corps of Engineers continues work with the DoE and the Office of the Assistant Chief of Staff for Installation Management to develop design guides for implementing building efficiency standards mandated by EAct 2005. USACE has completed prescriptive design guides for battalion headquarters buildings, permanent party barracks, training barracks, and tactical equipment maintenance facilities, four of the most prevalent types of buildings being constructed in conjunction with Army troop stationing actions. Additional design guides have been developed for dining facilities, company operations facilities, Army reserve centers, and child development centers. Use of these design guides will result in meeting the requirement for new building designs to be 30 percent more energy efficient than ASHRAE Standard 90.1-2004 without having to model each individual project. For most of these facility types, the new EISA requirement for a 55 percent reduction in fossil fuel-generated energy by FY 2010 will also be met by using these design guides.

The requirement to meet EAct 2005 design requirements has been in the model Request for Proposal (RFP) for contracted building design and construction services processed through USACE since May 2006. When using the model RFP for a project the designer of record is required to comply by designing buildings to use 30 percent less energy than ASHRAE 90.1-2004, meet the USGBC's LEED Silver requirements, purchase ENERGY STAR equipment, install metering, and specify premium efficiency electric motors. This includes barracks buildings, which typically would be designed to the International Energy Conservation Code standards for low-rise residential buildings. Although buildings for the Active and Reserve Components are designed to use 30 percent less energy than ASHRAE 90.1-2004 standards, the current standard for National Guard buildings is to meet the USGBC LEED silver standard, due to the mix of federal and state responsibilities and ownership of National Guard facilities.

A list of Army Military Construction projects for which the design was started during FY 2007 or 2008 is included in the Data Report.

DoAF

Of the 81 designs started in FY 2008, 95 percent of them will be life-cycle cost-effective and 30 percent more efficient than required by relevant codes, such as the ASHRAE Standard 90.1 or the International Energy Conservation Code.

DoN

NAVFAC issued Engineering Construction bulletin (ECB 2008-1) that required facilities MILCON projects to meet LEED Silver and EPAAct 2005 requirements. Policy is to strive to achieve 30 percent below the ASHRAE baseline or the most life cycle cost effective percent reduction possible, as required by EISA. Because of the ECB, DoN is beginning to budget properly for energy and water savings in new construction and the results should become evident after FY 2009 designs and FY 2010 construction is complete. DoN is expecting 75 percent of the FY 2010 MILCON facilities to meet or exceed Federal standards and achieve life cycle cost effective sustainable designs.

DeCA

Commissaries have a fixed refrigeration load equal to about 50 percent of their total energy use.

All DeCA facility designs started since the beginning of FY 2007 are designed to meet EPAAct 2005 and EO 13423 and are expected to meet or exceed the Federal building efficiency standards.

Design began on two new commissaries in 2008, Ansbach, GE, and Spangdahlem, GE. They are both expected to exceed the ASHRAE 90.1 requirements by at least 30 percent.

Energy efficiency has historically been given careful attention during the design and construction of commissary facilities. The large energy consumption requirements of commissary equipment has inspired DeCA to pioneer such technologies as heat reclaim and desiccant dehumidification years before the private sector began using them. The DeCA Design Criteria Handbook (DeCAH) 20-1 has been updated to incorporate the latest guidance required by EPAAct 2005 and EO 13423.

DeCAH 20-1 emphasizes life-cycle cost analysis of systems for different types of fuel sources. Designs include other items such as: Occupancy sensors, energy efficient lamps and ballasts, LED exit signs, high efficiency motors on air handling units and display cases, maximized use of glass door refrigerated cases instead of open cases, use of monitoring and control systems for the most efficient operation of Refrigeration Systems and HVAC, automatic water controls for restroom fixtures for efficient use of water, use of dual path and desiccant air handling units for the most economical means of cooling and dehumidification, maximized use of wall and roof insulation, implementation of energy efficient doors and windows, and plastic curtains on refrigerated cooler doors.

DeCA's new 90,000 square foot addition is expected to be certified LEED Silver upon completion in fall 2009. The new four-story addition will bring more than 90,000 square feet of space that includes admin areas, a cafeteria, several multi-purpose rooms, and a warehouse.

DIA

EPAct 2005, Section 109, requires that new Federal buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the ASHRAE Standard 90.1-2004 or the International Energy Conservation Code, as appropriate, if life-cycle cost-effective. Documentation is being prepared by the Designer of Record of the Joint Use Intelligence Analysis Facility at Rivanna Station to address how the project design achieves an energy level of 30 percent better than the baseline building of ASHRAE Standard 90.1-2004.

DLA

All of DLA design and construction of new facilities are done by USACE or NAVFAC, which uses ASHRAE Standard or the International Energy Conservation Code, as appropriate, if life cycle cost-effective.

MDA

In support of BRAC 2005, MDA is presently planning three MILCON projects in support of BRAC 2005:

- Von Braun III (VB III) Complex at the US Army's Redstone Arsenal in Huntsville, AL, scheduled for completion in FY 2011
- MDA HQCC at the US Army's Fort Belvoir post, VA, scheduled for completion in FY 2010, and
- Dahlgren Field Activity Office (Expansion), VA, scheduled for completion in FY 2011.

These buildings have been designed in accordance with EPAct 2005 and the Sustainable Building criteria set forth in EO 13423. Each building is being designed to be LEED certified and MDA is working towards achieving the LEED Silver certification for the HQCC and Dahlgren facilities. Design plans for each building were revised to incorporate metering to provide MDA with credible data and reporting capabilities on its energy, water, and gas usage upon building completion and occupancy. While MDA is responsible for the design, construction, operation, and maintenance of these structures, the legal ownership of these buildings will reside with DoD and be managed through the host military service, as shown in MDA's FY 2008 Energy and Water Management Summary and Data Report.

NGA

In FY 2007 NGA began design of a BRAC project consolidating all sites in the east into a new campus located on the Engineering Proving Ground on Fort Belvoir, VA. The campus is being designed to meet the energy reduction guidelines of ASHRAE 90-1.

TMA

Design work for BUMED's and MEDCOM's new construction and renovation work is accomplished through NAVFAC and USACE. These entities will ensure all new design work will meet those standards where achievable.

Percentages below ASHRAE 90.1 are unknown at this time; however USACE has required the designers to be 30 percent below ASHRAE 90.1 or achieve the maximum level of energy efficiency that is life cycle cost effective. USAMRIID Replacement will be designed to LEED Certification criteria. The level of LEED certification criteria is not yet determined.

WHS

The Center Courtyard Café project was designed in 2006 to exceed ASHRAE Standard 90.1-2004. However, an energy model using the Standard as a baseline was not included in the design scope of work due to project management constraints. Therefore, the actual percentage is unknown. Construction of this project was completed in FY 2008.

F. EISA Covered Facilities and Energy Managers

DoA

The Army and DoD approach to designating facilities covered by EISA energy management provisions is to interpret the word facility as installation. The Army maintains a central database of utility data as reported by installations indicating total energy cost and consumption and building area for each installation. Based on total energy use per unit area of building for each installation and consistent with EISA provisions, the Army considers the most energy intensive installations constituting 75 percent of total Army energy use as its covered facilities. That list is provided in the Data Report. The EISA requirement for energy managers to be designated at each covered facility is accomplished per Army policy as established in Army Regulation 420-1, Army Facilities Management, which requires that commanders ensure each Army installation has an appointed energy manager.

DoAF

The Air Force currently has one energy manager per installation, except for Air National Guard sites. Many energy managers are also responsible for geographically separated locations under installation budgetary control. The Air National Guard has one energy manager for all Air National Guard locations. A complete listing is provided in the data management report.

DoN

DoN is designating one energy manager per installation with sizeable utility costs. Additional support will be provided by increasing use of contracted REMs.

DoN elected to track the comprehensive audit and re-commissioning goal by MBtu surveyed and is reporting 75 percent of total energy consumption at each installation as 'covered' energy facilities. The facilities making up this energy usage will be audited every four years and results reported at the installation level.

DCMA

DCMA is in the process of providing training for all Energy Managers.

DIA

All DIA covered facilities are staffed by personnel engaged in energy management, though not on a full-time basis. Plans are in place to hire a full-time energy manager/environmental engineer in FY 2009.

DLA

DLA is assessing all covered facilities to evaluate their energy use and identify and implement cost-effective energy-saving measures. DLA is also addressing the issue of assigning energy managers to those facilities.

MDA

MDA is largely excluded from reporting energy usage because of its tenant status and lack of facility ownership, but plans to assign energy managers for its new MILCON facilities (described earlier). These managers will be responsible for reporting on energy and water consumption and for reporting on the effectiveness of energy and water conservation measures used in these facilities.

NGA

NGA has reported NGA East (2.4 million GSF) and NGA West (1.2 millions GSF) as designated covered facilities. These covered facilities represent 100 percent of NGA reported energy and water use. NGA East sites (Bethesda, MD; Washington, DC; and Reston, VA) will be consolidated into a single NGA East Campus under BRAC in 2011. NGA West includes our St. Louis and Arnold, MO locations and is under the operational command of a single site manager. Both NGA East and NGA West will have an energy manager identified, although level of reporting to DoE via the web based system may be limited due to operational security concerns.

NSA

For the FY 2008 energy report, EISA covered facilities are identified as a group of facilities at a single location managed as an integrated operation. There is currently only one energy manager for the seven groups identified in the EISA Covered Facilities page of the FY 2008 Energy Management Data Report. However, this program is being expanded in FY 2009 and more Energy Managers will be added.

TMA

BUMED's entire portfolio was evaluated to determine covered facilities. The total energy use of all individual BUMED buildings was estimated. From this list, the largest energy users were selected until the selected group represented 75 percent of BUMED's facility energy use. These buildings, identified in the submitted FY 2008 Energy Management Report, are BUMED's "covered" facilities. Energy managers assigned to these buildings are primarily facility management/engineering-type professionals familiar with each facility.

WHS

Our EISA covered facilities include the Pentagon, PH&RP, and FOB2, with one designated energy manager.

III. IMPLEMENTATION HIGHLIGHTS OF FY 2008

A. Life Cycle Cost Analysis (LCCA)

DoA

An integral part of the design process and installations report options for the best equipment or systems are evaluated using this tool, however fund limitations still force some programming decisions to be made based on initial cost considerations. LCCA is routinely used by installation energy managers to evaluate project economics for proposed ESPC projects, candidate ECIP projects, and general energy saving facility improvement projects.

DoAF

LCCA was used on all new Air Force construction projects and retrofit projects, including ESPC, UESC, and ECIP projects. The Air Force is committed to performing annual facility energy audits on at least 25 percent of Air Force facilities. Examples include:

- ACC conducted audits at 450 facilities covering 8.1 million square feet.
- Buckley AFB, CO, awarded a groundwater supply well water analysis project. On-site wells will be studied for irrigation use, anticipated water production, pumping and storage scenarios, and irrigation line connections. The well water is classified as non-potable and will reduce water costs and consumption to meet the two percent annual EO goals. Elmendorf AFB, AK, converted HVAC control systems to direct digital controls (DDC) by installing state-of-the-art DDCs in six facilities. Installation of these HVAC controls resulted in annual energy savings of 43,171 MBtu.
- Hickam AFB, HI, installed two 155 ton chillers, variable frequency drives, and premium efficiency motors for cooling and hot water production. Challenges overcome during this project involved issues due to historical WWII buildings and construction scheduling difficulties. Installation of this cooling system resulted in annual energy savings of 975,000 kWh.
- Lackland AFB, TX, installed a thermal energy storage tank, new pumps, and EMCS controls in an existing chiller plant serving two dormitories. The base also installed waste heat recovery at the new fitness center for pre-heating hot water and installed a water-cooled condenser on the two 100 ton chillers and 500 gallon storage tank, circulating pump, and piping.
- Los Angeles AFB, CA, tackled a number of energy-saving opportunities, which also enhanced system operations. The base employed a lighting and water-saving system and installed an enhanced EMCS. The completed project will improve demand response to HVAC controls and utilize daylight-harvesting controls for administrative areas combined with occupancy sensors in common use areas. An enhanced automated irrigation system was also installed that will continue to save water over many years of use.

DoN

All DoN energy projects (centrally funded and financed) are required to evaluate savings on a life cycle basis. Projects submitted utilize the National Institute of

Standards and Technology (NIST) publication handbook 135 and DoE energy discount factors as guidance. The NIST guidance and DoE's Building Life Cycle Costing software make up the standards for determining project economics. Sustainable development projects use life cycle costing methodology and follow the whole building design guide. Purchasing agents are encouraged to review guidance and tools available from FEMP, EPA ENERGY STAR, GSA and DLA for purchasing energy efficient products.

DCMA

Recommendations from the SAVEnergy Audit completed in FY 2006 will be evaluated to determine the feasibility or potential for energy/water conservation and renewable energy measures that are life-cycle cost-effective.

DeCA

The DeCA Design Criteria Handbook emphasizes use of life-cycle cost requirements in the design of commissaries, was revised in FY 2007, and is available online at <http://www.decafacilities.com/decadesign/>. The *General Design Information* section states DeCA's policy toward renewable energy. Paragraph 5.11.2 states, "Design facilities to minimize life-cycle cost of the facility using energy efficiency, water conservation, or solar or other renewable energy technologies". It also outlines the requirement for specific criteria for performing the analysis, such as the discount rate, analysis period, etc. The use of life-cycle cost alternatives is a primary focus in the design determination required during major and sustainment project development. The handbook emphasizes life-cycle cost evaluation of HVAC systems for alternate fuel sources and other energy reduction strategies including direct expansion and gas-fired systems.

Siting, building orientation, insulation, and reflective glass coatings are all considered during design to reduce the building heat load and the required capacity of the air conditioning plant and the balance between the system's first cost and its operating costs.

Solar energy systems and passive solar design are considered when the life cycle cost analysis indicates favorable payback. Skylights are considered with respect to cost versus electrical savings and added heat and air conditioning requirements. Computer analysis of planned facilities is used to determine the energy use budget, and life cycle cost of systems and materials.

Designs include occupancy sensors, energy efficient lamps and ballasts, LED exit signs, high efficiency motors on air handling units and display cases, maximized use of glass door refrigerated cases instead of open cases, use of refrigeration monitoring and control systems for the most efficient operation of refrigeration systems and HVAC, automatic water controls for restroom fixtures for efficient use of water, use of dual path and desiccant air handling units for the most economical means of cooling and dehumidification, maximized use of wall and roof insulation, implementation of energy efficient doors and windows, and plastic curtains on refrigerated cooler doors.

Plastic or metal swing air curtain doors are replacing the strip curtains on walk-in refrigeration equipment in the freezers, meat, dairy, and produce rooms in new and renovation projects.

DeCA guide specification Section 01115, DeCA Sustainable Requirements, again requires life-cycle cost analysis to ensure construction technologies are cost effective. DeCA has developed a strategy to reduce energy consumption Agency-wide 30 percent by 2015 as required by EISA.

Submittals during the design phases, including life-cycle analysis of all major construction projects, are reviewed and comments are provided by the region as applicable for the specific location.

In FY 2008, an analysis was conducted relative to fax machine repairs at the Agency's Headquarters. Machines with the lowest life-cycle costs were selected for procurement.

DIA

DIA design criteria emphasize use of life-cycle cost requirements in new facility construction. Life-cycle costs are evaluated in selection of HVAC system design strategy, such as in selection of distributed water-source heat pumps versus central station air handling systems. DIA design guidance places emphasis on compliance with the EPAct 2005 in achieving 30 percent greater energy efficiency than the baseline ASHRAE recommended energy requirements. During major design efforts consideration is given not only to energy-efficient building envelope design, but also to high efficiency chillers, premium efficiency fan and pump motors, heat recovery chillers, condensing boiler and low-temperature heating hot water systems, water-side economizers, variable water flow chiller evaporators, lighting controls and energy efficient lamps and ballasts.

DLA

LCCA is used by USACE and NAVFAC for design of new construction and renovations for all DLA projects.

NSA

Energy audits identify life-cycle issues. NSA maintains this list of potential energy projects, which are prioritized by the Energy Team and Facility Planning Board according to mission, pay back, and O&M cost value. New projects are added to the list and prioritized accordingly.

TMA

BUMED's approach for energy projects is to always make decisions that consider life-cycle cost implications. All Navy energy projects are required to be evaluated on a life-cycle cost basis. Evaluations will use the DoE's Building Life Cycle Costing analysis software.

LCCA was used in ECIP for IMCOM and MEDCOM and evaluation of USEC proposals from Washington Gas.

WHS

None were implemented in FY 2008. However, LCCA has been implemented in prior years in the PENREN Project.

B. Retrofits and Capital Improvement Projects

DoA

Energy conservation is routinely implemented in Army projects when the life cycle cost analysis indicates a valid return on investment. During FY 2008, the Army provided \$123 million in appropriated funds in direct support of initiatives in the Army Energy Strategy for Installations as related to utilities infrastructure: to improve Army-owned utility systems, central energy plants, water distribution systems; increase utility system reliability and improve energy security; and for utility metering.

ECIP, part of the DoD MILCON program, is a key component of the Army's energy management strategy. ECIP projects focus on energy, water, and cost savings; implementing renewable energy; and converting systems to cleaner energy sources. Recently, ECIP projects have primarily been renewable energy projects.

DoAF

Elmendorf AFB, AK, reconfigured ductwork on environmental control units for eight remote Alaska long range radar sites to recover and use waste heat for space heating. Work included installing ducting around condenser coils on environmental conditioning units to capture and vent heat and eliminate the need for energy-inefficient space heaters. The main challenge overcome was timely airlifting and shipping of construction materials to remote work sites to ensure work completion during construction season. This project will result in annual energy savings of 2,992 MBtu.

Hickam AFB, HI, upgraded over 1,330 lighting systems for a major retail facility. Work included replacing inefficient T8 fluorescent fixtures with more energy-efficient T8 fluorescent fixtures and replacing inefficient metal halide lamps with pulse arc lamps. Workers also replaced T12 fluorescent fixtures with T8 fixtures having electronic ballasts. A challenge overcome during this project was working around store activities to complete lighting replacements on schedule. Installation of these lights resulted in an annual energy savings of 403,000 kWh.

Kunsan AB, South Korea, installed automatic lighting controls in various dormitories. The project included installing bi-level lighting fixtures in selected stairways, occupancy sensors, special controls for turning off dormitory televisions when not in use, and improved photocell circuits on street and area lights. A major challenge encountered during this project was scoping and pricing the work on numerous facilities of various ages, each with unique wiring and lamping configurations. Installing these controls resulted in an annual energy savings of over 200,000 kWh.

Kunsan AB, South Korea, insulated a vehicle maintenance shop. The project included installing a new metal roof with six-inch insulation, three-inch wall insulation with gypsum board walls, and insulated curtain roll-up doors. The project also included relocating heating controls away from exits and rewiring exterior lighting switches. A major challenge encountered during this project was integrating improvements in lighting control, HVAC control, and roofing maintenance into a single cost-effective package. Insulating this facility resulted in an energy savings of 2,179 MBtu.

Andrews AFB Air National Guard, DC, accomplished an Air National Guard-wide initiative for installations identified as large energy consumers. Data show that facility systems rapidly go out of balance, even when DDCs are installed, without comprehensive review, analysis, and tune-up and manipulation of those systems. The Air National Guard has approximately 60 million square feet of facilities in its inventory, and this project represents approximately 900,000 square feet. The project audits facilities, analyzes utility bills, and interviews facility personnel. It also diagnostically monitors and conducts functional tests of building systems, analyzes data accordingly, and implements improvements. Retesting and fine-tuning implemented improvements is included.

Davis-Monthan AFB, AZ, installed water-to-water heat pumps in the base fitness center to provide pool heating and domestic hot water. The heat pumps utilize rejected heat from an existing central chiller loop to entirely offset the natural gas heaters previously used for these functions. In the process, the chiller water is cooled and returned to the chiller, providing 120 tons of cooling.

Dyess AFB, TX, installed a Daiken variable refrigerant flow high-efficiency heat pump system. The variable refrigerant flow heat pump uses an advanced fan coil/compressor system that provides over 3,000 modulation set points. This allows the compressor to operate the optimum efficiency even under very low loads, resulting in a continuous conditioning of the space and a more comfortable working environment. The system will provide 75 percent of the designed heat requirements down to 5° F with no auxiliary heat required. This technology is a lower investment alternative to GSHPs.

F. E. Warren AFB, WY, initiated a project to renovate an old warehouse that had no insulation or fire suppression system. The lack of insulation contributed to a poor building envelope that had significant heat loss, thus affecting the functionality of the facility. The installation of attic and wall insulation allowed one-third of the facility to be converted to administrative offices and personnel were relocated to this facility from three similar facilities now slated for demolition. The remaining two-thirds of the building now has a heated storage area with minimal heat loss.

Hurlburt Field, FL, installed a remotely monitored telemetry system on emergency backup generators at 74 facilities, allowing improved situational awareness over running generators, subsequently improving control of their fuel consumption.

Peterson AFB, CO, installed lighting controls. The AFSPC HQ facility had an antiquated lighting control system that was not working properly and kept over 60 percent of the facility's lights on 24 hours a day. A new state-of-the-art control

system was installed that allows the entire building to be centrally managed and controlled. New energy-efficient lighting was installed in various parts of the facility along with daylight harvesting and occupancy sensor controls. This project has the potential to save 50 percent of the facility's lighting load and reduce the cooling requirement.

Peterson AFB, CO, installed a green roof on the wing headquarters facility. This vegetative roof was installed as a case study to evaluate the economic benefits, maintenance requirements, and longevity and effectiveness of a green roof. If the project is successful, green roofs on other Air Force facilities will be recommended. A major advantage of a green roof is the shading of the roof membrane from ultraviolet rays, which in turn reduces thermal stress. The life of the membrane is extended and life cycle costs of the building are reduced.

DoN

Retrofits continue to be performed using primarily alternative financing, and to a lesser extent, but increasingly, through use of installation funds. Implementation ESPC and UESC was difficult this year as credit markets tightened and renewable tax credits were in limbo. DoN awarded \$100 million in financed energy projects. DoN elected to focus the ECIP funds on only renewable projects. In one example, a 1.5 MW wind turbine was awarded at Marine Corp Logistics Base (MCLB) Barstow. This \$6.3 million project will provide wind power to the installation reducing the overall energy purchase from the local utility by over 10,000 MBtu annually (3,066 MWh).

MILCON requests now include costs to cover LEED and EPA 2005 requirements as standard business practice. DoN is budgeting for sustainable construction in Guam facilities and 75 percent of all facilities projects. Policy includes achieving life cycle cost effective reductions below the ASHRAE 90.1-2004 standard. What level DoN achieves will not be known until FY 2009 designs are complete. DoN continues to invest all ECIP MILCON funds in renewable projects and is poised to increase implementation should Congress increase appropriations.

DeCA

DeCA awarded lighting efficiency upgrades through group re-lamping and lighting retrofit projects for DeCA commissaries at Camp Merrill, GA; Dover AFB, DE; NS Newport, RI; Tobyhanna, PA; NAS Pensacola, FL; Hunter AAF, GA; NAWS China Lake, CA; Elmendorf AFB, AK; F.E. Warren AFB, WY; Fort Leavenworth, KS; Mountain Home, AFB, ID; and Vandenberg AFB, CA. Combined and integrated cooling, heating, and refrigeration systems are a standard design concept for installation of new or replacement refrigeration systems in the commissaries.

Significant energy efficient replacement refrigeration system projects were completed in FY 2008 for DeCA commissaries at Barksdale AFB, LA; Fort Detrick, MD; Bolling AFB, DC; Tobyhanna Depot, PA; and Naval Station Norfolk, VA.

In FY 2008, design began on an alteration project for Naval Amphibious Base, Little Creek, VA, to incorporate DeCA's latest energy reduction strategies, including: Lower overall light conditions, light layering, daylight harvesting, night curtains for open refrigerated display cases, and LED lighting in glass door cases, walk-in freezers, and dock lighting.

Construction projects were awarded in FY 2008 which includes motion-detector operated LED lights in glass door display cases. Locations were selected to test this product in small, medium, and large stores sizes.

Several roof projects were completed in FY 2008, including the replacement of the deteriorated insulation and installation of a light reflective roof surface improving the energy efficiency of the entire roof system.

DLA

DLA completed six projects to include lighting upgrades and HVAC control system upgrades.

NSA

Various energy savings projects were undertaken in FY 2008, which include: energy efficient lighting installations, building renovation projects utilizing LEED silver design criteria, EMCS replacement projects, and a renewable energy pilot project.

TMA

Fort Detrick was selected for an Incinerator Steam Waste to Electric Demonstration Pilot Project by USACE, Construction Engineering Research Laboratory (CERL). The FY 2008 Program was temporarily suspended by IMCOM, due to funding complications Fort Detrick will be considered for FY 2009 funding program. The selectee will use a patented high efficiency conversion system. Proximity of the substation to the plant and excess waste steam are major factors to consider.

WHS

The Pentagon is currently going through an extensive renovation of wedges two through five. This renovation includes the replacement of all building systems using more energy efficient technology.

C. Use of Performance Contracts

DoA

ESPC and UESC are valuable to the Army's energy efficiency strategy and are essential for achieving mandated energy reduction goals. The Army awarded a total of \$117.8 million of investment through ESPC and UESC in FY 2008, nearly reaching the DoD goal equivalent to 10 percent of annual energy utility costs (\$110 million based on FY 2007 energy utility costs, yet \$130.5 million based on FY 2008 energy utility costs). This total investment more than doubles

the total awarded in FY 2007. Over \$200 million of alternatively financed projects are in development for potential FY 2009 award.

- ESPC. A Lean Six Sigma (LSS) study was performed during FY 2008 to determine if the award cycle time for ESPCs could be shortened. Additionally, a study was performed on ESPC Measurement & Verification (M&V) procedures that resulted in a checklist for proper development of baselines and M&V. This checklist was then applied to reviews of 15 task/delivery orders and recommendations for changes to Army ESPC policy were made. An updated Army ESPC Policy Guidance Handbook, incorporating recommendations from both the LSS and M&V studies, has been developed and a preliminary version was distributed to Army commands. Formal publication and distribution will occur first quarter of FY 2009. The USACE, Huntsville ESPC contract and the DoE Super ESPC contract were both used to award delivery/task orders in FY 2008. Project delivery/task orders issued in FY 2008 include the following.
 - Fort Huachuca, AZ awarded a \$6.5 million ESPC task order January 2008. This task order was done under a site specific ESPC contract developed by USACE, Huntsville, specifically for Fort Huachuca. Projects implemented include energy management control systems, energy efficient lighting, a 50 kW vertical axis wind turbine and water conservation measures.
 - Aberdeen Proving Ground, MD awarded an ESPC delivery order for a \$10 million project in April 2008. A second delivery order was awarded in September 2008 for \$16.2 million. Implementation of advanced controls, energy efficient lighting and boiler plan modification were included in the projects. Both projects used the USACE, Huntsville ESPC contract.
 - Fort Stewart, GA awarded a \$17 million ESPC contract in April 2008 for building management system improvements, comprehensive HVAC solutions, energy efficient lighting upgrades, water conservation measures and boiler replacements. This project was accomplished with DoE's Super ESPC program.
 - Fort Dix, NJ awarded a task order for \$17.5 million under the DoE Super ESPC contract. The project includes PV technology for renewable energy, boiler controls, energy management control systems, HVAC improvements, energy efficient lighting and a gray water irrigation system.
 - Fort Bliss, TX awarded a delivery order for \$6 million in September 2008 using the USACE, Huntsville ESPC contract. The project includes an energy monitoring and control system, energy efficient lighting and renewable energy systems.
 - The Adelphi Laboratory Center, MD awarded a delivery order for \$21.4 million in September 2008 using the USACE, Huntsville ESPC contract. The project implemented energy efficient lighting, an energy monitoring and control system, combined heat and power system, electric system modifications and boiler plant modifications.

- Picatinny Arsenal, NJ awarded a task order for \$5 million under the DoE Super ESPC contract in January 2008.
 - U.S. Army Garrison Vicenza, Italy awarded a \$3 million ESPC project for a central heating plant with 1.5 MW of electric cogeneration capability.
- UESC. In FY 2008, the RAND Corporation began work on a study of UESC use by the Army and roadblocks to its use. The study is expected to be published in second quarter FY 2009. In an effort to increase the use of UESC, work was also begun to develop an Army Policy Guidance Handbook for UESC similar to the guidance developed for ESPC. The draft guidance is on track to be staffed for concurrence review in second quarter FY 2009. Notable FY 2008 UESC task orders issued in FY 2008 include the following.
 - Fort Knox, KY awarded six UESC task orders. The total potential investment value is almost \$50 million. The projects include energy efficient lighting, HVAC controls and GSHPs.
 - Fort Rucker, AL awarded four task orders with South Alabama Electric Co-op for an energy monitoring and control system and energy efficient lighting for approximately \$0.5 million.
 - Redstone Arsenal, AL awarded one task order for steam plant decentralization totaling \$9.8 million.

DoAF

The Air Force awarded three new ESPC task orders for FY 2008.

- Lackland AFB, TX, awarded a \$10.6 million investment (\$1.1 million annual cost savings), contributing 9 percent to the energy reduction goal. Some of the work includes converting HVAC to variable air volume (VAV), lighting in 147 buildings, and installing a thermal storage tank with a 1,000-ton chiller.
- Tinker AFB, OK, awarded a \$9.1 million investment (\$1.3 million annual cost savings). Some of the work includes central plant decentralization, installing EMCS metering systems, and HVAC upgrades.
- Lackland AFB, TX, awarded a \$5.9 million investment (\$760,000 annual cost savings). The project includes chilled water system improvements; cooling tower replacement/filtration; EMCS improvements; HVAC rebalancing; and upgrading plumbing fixtures in 17 facilities and lighting upgrades in 28 buildings.

DoN

Based on past projects, DoN estimates it needs to invest \$250 million/year in energy efficient equipment (financed + appropriated) in order to meet EPA Act 2005 and EO 13423 energy reduction goals. UESC and ESPC are invaluable financial mechanisms to fund energy efficiency measures. NAVFAC, utilizing utility, DoE, DoA, and DoN contracts, executes both contract types and makes full use of appropriated project funds.

DoN awarded \$97.6 million (first cost) financed energy projects that will provide about 380,000 MBtu annual energy savings once constructed. A few examples follow.

- A 1.5 MW wind turbine was awarded at MCLB Barstow. This \$6.3 million project will provide wind power to the installation reducing the overall energy purchase from the local utility by over 10,000 MBtu annually (3,066 MWh).
- Naval Station Newport awarded a \$9.8 million ESPC project to install a new chiller plant, retrofit numerous inefficient lighting systems, upgrade their HVAC systems and install low flow plumbing fixtures. The project, once completed, will reduce energy and water consumption aboard the Naval Station by 33,475 MBtus and 2.6 million gallons of water.
- NAVFAC Southwest awarded a \$3.6 million solar PV project for Marine Corps Recruiting Depot San Diego. Once constructed, this rooftop PV array will provide 2,723 MWh of electricity for the installation.

DeCA

DeCA is working with DoE Northeast Region relative to initial ESPC guidance. We have identified two DoE approved energy service companies as potential ESPC contractors to conduct phase 1 project planning, including initial exploration of feasibility of a pay-from-savings project, informal communications between agency and energy service companies, and FEMP permission for Energy Service Companies (ESCOs) to submit initial proposal.

DIA

DIA awarded a UESC to Washington Gas on September 30, 2008 to install lighting controls in the DIAC-Addition.

DLA

DLA will use Defense Working Capital Fund, UESC, and ESPC if and when possible to reduce energy consumption and cost.

MDA

MDA recognizes the value of ESPC and UESC projects in reducing energy consumption and is committed to reducing its annual energy consumption. MDA is also working with its host installations to establish ESPC and UESC contracts as a tool for energy reduction. In 2007, MDA completed two such projects at Schriever AFB, CO. Working with the installation, MDA completed:

- An interior lighting retrofit project under a UESC where all interior lighting was replaced with high efficiency light ballasts and lamps, including automatic sensors to turn off lighting the areas when not in use; and
- An HVAC energy monitoring and control system upgrade project to monitor the building's electrical system and meter other MDA specific utilities.
- While these particular energy savings accrue to Schriever AFB and are reported in its annual energy management report, MDA remains committed to

working with host installations to identify and seize opportunities to reduce energy consumption.

- At Meck Island, a part of the Reagan Test Site, U.S. Army, Kwajalein Atoll, MDA is reducing energy consumption by optimizing air condition run time (i.e., balancing air conditioning operating time and air moisture content without causing damage to equipment sitting in the unconditioned, naturally corrosive, ambient air).

MDA operates as a tenant organization under fully serviced leases and has no significant capital improvement projects underway. However, as MDA begins to occupy LEED compliant facilities in the coming years, the Agency's overall energy and water usage will decrease.

NGA

NGA's St. Louis Site contracted for an ESPC in 1999 and continues to realize savings from this effort. The payback period ends in FY 2012.

TMA

BUMED will utilize performance contract vehicles to help achieve energy and water cost savings. Due to their 24/7 operations and stringent environmental conditions, medical centers and hospitals are complex buildings where energy savings are not as simple to achieve as in other building types. Thus, the level of expertise offered by ESCOs and professional energy auditors will likely be needed to deliver substantial savings in these complex facilities. Addressing BUMED clinics, laboratories, and other diverse building types, particularly those located remotely from larger BUMED facilities, will likely require bundling if addressed via these contracts.

Fort Detrick had a UESC initial survey conducted by Washington Gas. The chief of the Environmental Branch is currently in the final stage of negotiations. Below is a summary of proposed activities.

- Building 810
 - Control secondary side of steam heat exchanger to enable reset based on outdoor air temperature.
 - Install Advanced Electric Meter
 - Upgrade lighting systems to energy efficient 25 Watt T8 bulbs & ballasts.
- Building 1434
 - Control hot water boilers to optimize lead-lag efficiency and reset based on outdoor air temperature.
 - Control Air Handling Units night-time setback. Control selected exhaust fans to maintain proper building pressurization.
 - Control two duplex split units for night setback.
 - Install Advanced Electric Meter
 - Upgrade lighting systems to energy efficient 25 Watt T8 bulbs & ballasts.
 - Install occupancy sensors where applicable & appropriate.

- Building 1507
 - Control package rooftop units, exhaust fans, and make-up air unit to maintain building pressure and allow night setbacks.
 - Solar domestic water heating for showers.
 - Humidity control to reduce the need to run the air conditioning as the primary means of humidity control.
 - Install Advanced Electric Meter
 - Upgrade existing lighting system to more energy efficient lighting system.
 - Use daylight sensors to reduce lighting levels closer to windows and open glass areas.
 - Feasibility study of using T5 high output lighting for basketball courts for better on/off control as well as efficiency.

- Building 1520
 - Control two air handling units to provide night setback.
 - Reset boilers based on outdoor air temperature and optimize lead-lag.
 - Install Advanced Electric Meter
 - Upgrade lighting systems to energy efficient 25 Watt T8 bulbs & ballasts.

- Barracks (Buildings 1532-1538) Seven Facilities
 - Control air handling unit to provide night setback.
 - Install Advanced Electric Meter
 - Solar domestic water heating for showers.
 - Grey-water heat recovery (recovering heat from sewer lines)

WHS

The Energy Savings Performance Program (ESPP) was established between DoE and WHS December 2006. This long term commitment allows WHS to utilize DoE's ESCOs to support the DoD's energy program to develop and implement creative ways to save energy. This program will provide DoD with a unique means to pay for major utility projects while realizing a savings. ESPP relates to one of the strategic goals for WHS and EO 13423 to reduce energy usage in Federal buildings. As a result, installation of Water Side Economizers at PH&RP and boilers at FOB2 were completed in FY 2008. Future projects will include but are not limited to optimizing the PH&RP, energy awareness campaign, and infrastructures improvements. An ESPC partnership has been established with Honeywell to help meet the audit goals of EO 13423. The Pentagon will facilitate energy audits with its ESPC partner to identify energy saving strategies. Upon identifying and evaluating these strategies, the Pentagon will select the most practical strategies and authorize implementation.

D. Use of ENERGY STAR and Other Energy Efficient Products

DoA

An ever-increasing tool used by the Army as an energy savings strategy, ENERGY STAR is a program developed by EPA to promote energy efficiency in buildings.

Installations are required to use ENERGY STAR products where cost-effective when purchasing new or replacement appliances and equipment. The use of ENERGY STAR equipment has been incorporated into the model request for proposal for contracted building design and construction services processed through USACE since May 2006.

DoAF

The Air Force continues to pursue a policy that all purchases of computers, printers, and copiers will be specified as ENERGY STAR-compliant as stated in the EPAct 2005. Design specifications for new and retrofitted equipment are reviewed to ensure they are in the upper 25 percent of efficiency or ENERGY STAR-compliant as stated in Unified Facilities Criteria 3-400-01, Energy Conservation. The following ENERGY STAR and energy-efficient appliances and equipment were installed during FY 2008.

Type of Product	Total
A/C units	47
Boilers	2
Chillers	1
Heat pumps	108
Cold cathode lamps	360
Compact fluorescent lighting	10,158
Linear fluorescent light bulbs	7,500
Dehumidifiers	506
Desktops/monitor/printers	1,516
ENERGY STAR Appliances	1,425
Vending machine power miser	20
Total ENERGY STAR Products	21,643

ENERGY STAR and energy efficient products are not tracked by AFCESA but are provided through rollup of MAJCOM reporting data.

DoN

The DoN eBusiness Office, Card Management Group, incorporates in their guidance relevant information about federal buyers being directed to purchase products that are ENERGY STAR labeled or FEMP identified products. GSA is a regular instructor at the Navy in-house energy manager’s course and has partnered with the DoE and the EPA to offer the federal community a broad range of energy efficient products. They have identified energy efficient products in catalogs and on GSA Advantage, an online shopping and ordering system that provides access to thousands of contractors and millions of products and services.

A survey was conducted of energy efficient products use. Approximately 1/3 of DoN installations report strong use of available information and incorporation of energy efficient products. ENERGY STAR performance criteria are included in acquisition requirements for systems and appliances in privatized family housing

units. Energy efficient operations are included in some Base Operating Support contracts.

DeCA

DeCAH 20-1 incorporates energy efficient criteria guide specifications and product specifications developed for new commissary construction and renovation.

The ENERGY STAR Finder for Supermarkets was used to evaluate the design for the new commissary at Fort Bliss, TX. The DeCA design performs better than 88 percent of commercial supermarkets, uses 41 percent less energy, and produces 40 percent less carbon emissions.

Motors and other equipment are specified to comply with the ENERGY STAR requirements, when available.

The DeCA Headquarters Facility Manager replaced 13 old, inefficient refrigerators with new, ENERGY STAR compliant refrigerators and installed a new hot water heater for the Nichols Wing. The control shuts the hot water off 12 hours a day and on the weekends.

DeCA's Contracting Directorate procures energy efficient products, such as paper grocery bags made up of a minimum of five percent pre-consumer or post-consumer recycled products.

New or replacement balers are purchased for our commissaries in consideration of efficient disposal of cardboard products.

Since FY 2006, the DeCA GPC began requiring all new GPC program participants complete training on the ENERGY STAR Program prior to being issued an account.

In FY 2009, DeCA projects all contracting series, GS-1102, will be required to take the mandatory green procurement class, Continuous Learning Center course number 046, Green Procurement.

The DeCA GPC Program requires 100 percent of new candidates to complete training on Greening the Government, Recycled Content Products, Environmentally Preferable Purchasing, ENERGY STAR, Bio Based Products, and Low Stand-by Devices prior to being appointed as a participant. In FY 2008, ENERGY STAR products continued to receive utmost consideration when developing specifications and issuing acquisitions for energy using products.

Information technology hardware and computer and copying equipment are acquired under the ENERGY STAR program using GSA schedules and either government-wide or service contracts.

All DeCA GPC participants are required to view the self-paced training entitled Mandatory Sources and Products, a PowerPoint slide presentation. Training is posted in DeCA Public Folders for easy availability. The GPC self-study training modules provide the Web site addresses for EPA ENERGY STAR.gov, GSA Advantage, and DoD Emall for easy access to products with 25 percent energy efficiency. GPC hands-on training classes include hands-on practice with Web sites searching for compliant products.

GPC training is also presented in 3-day GPC hands-on training conducted as a classroom course. This module is presented on site to students as a 4 hour lesson including sample green and biobased products and brochures, hands-on tools and practice searching for Green products using Internet sites, and shopping services such as ENERGY STAR.gov, DoD Emall, and GSA Advantage.

Since FY 2007, all current GPC participants were required to complete the ENERGY STAR training module regardless of how long they have been a participant. Benefits are reduced energy costs as more energy efficient products are purchased, improved efficiency in purchasing ENERGY STAR products, and better understanding of Agency energy usage. Costs for the training include lost productivity while completing the training for self-study module, and TDY costs for hands-on training. Benefits are reduced energy use and costs, increased knowledge of product availability and tools, and more efficient purchasing of Green products and services. The DeCA GPC Agency Program Coordinator developed Agency training to meet this requirement as a part of duties and responsibilities of the Agency/Organization Program Coordinator. Samples of green and bio based products used in class are obtained without cost from sources such as the Susquehanna Association for the Blind and Vision Impaired, GSA, and US Department of Agriculture, Office of the Assistant Secretary for Administration.

Higher level Affirmative (Green) Procurement Training sponsored by the Air Force has been taken by: Chief, Contract Policy and Systems Division; contracting's environmental point of contract; as well as by the GPC Agency Program Coordinator to further the training and education of energy management policies at the mid and upper levels of DeCA management.

ENERGY STAR products continue to receive utmost consideration when developing specifications and issuing acquisitions for energy using products.

Information technology hardware and computer and copying equipment are acquired under the ENERGY STAR program using GSA schedules and either government-wide or service contracts.

DeCA continues to review and pursue opportunities to utilize electronic communication and data transfer, which conserves the use of paper, postage, and personal resources.

ENERGY STAR compliance is a requirement for vendors to participate. One hundred percent of the Program Management (PM) Directorate acquisitions are energy efficient. DeCA PM published a hardware standards document to assure 100 percent energy efficient hardware purchases.

DeCA design criteria requires premium efficiency fan motors for HVAC systems, electronically commuted fan motors on the refrigeration display cases, and T- 8 fluorescent light fixtures with electronic ballasts in display cases and in new and renovated facilities.

Incremental cost for implementing ENERGY STAR in new designs in DeCA is very low. It is estimated at less than 2 percent of the project cost. Daylight harvesting would be one area DeCA is being driven to by EPC Act 2005 and EISA that would probably not otherwise be pursued due to the future maintenance issues.

DFAS

DFAS promotes all sites to use Energy-Efficient Products when replacing items.

DIA

DIA's Directorate for Mission Services (DA) procures energy efficient products. Information technology hardware and computer and copying equipment are acquired under the ENERGY STAR program using GSA schedules and either government-wide or service contracts. DIA continues to review and pursue opportunities to utilize electronic communication and data transfer to conserve on resources. DIA awarded an FY 2008 project to install an industrial shredding and briquetting system for disposal and recycling of its classified waste; this project has entered the construction phase.

DIA has no buildings designated as ENERGY STAR Buildings. Appliance-measures printers and personal computers not being used as servers are turned off. ENERGY STAR power-down features are activated on most electronic equipment. Personal appliances such as coffee pots and radios are secured at the end of the workday. Personal electric space-heating devices and desk fans are prohibited. Standard practice at DIA is to install motion sensors and separate lighting circuits to allow turning off unneeded lights.

DLA

DLA uses ENERGY STAR products such as computers, printers, etc.

NGA

NGA annually procures approximately 10,000 personal computers and monitors with ENERGY STAR enabled features. All of the products listed on NGA's approved hardware list include ENERGY STAR features.

NSA

NSA utilizes ENERGY STAR and energy-efficient products for all new installation, renovation, and O&M projects. Energy efficiency language is incorporated in all new construction and renovation project specifications.

WHS

The Pentagon encourages the procurement of ENERGY STAR office equipment such as ENERGY STAR computers, copiers, and printers.

E. Sustainable Building Design and High Performance Buildings

DoA

The Army has embraced this concept and has identified projects since FY 2002 as Army sustainable building design showcase facilities. USACE has incorporated sustainability principles into its design and military construction transformation process.

The Army is following the memorandum issued in 2006 by the Assistant Secretary of the Army (Installations and Environment) on Sustainable Design and Development Policy to update the Army strategy for integrating the principles and practices of sustainability on our installations and minimize the impacts and total ownership costs of Army systems, material, facilities, and operations. Accordingly, the Army used the USGBC LEED rating system for buildings in the FY 2008 MILCON program.

DoAF

The Air Force Sustainable Design and Development (SDD) Policy was signed on July 31, 2007, expanding and reinforcing sustainable development concepts in planning, design, construction, and operation of facilities and infrastructure. Engineering Technical Letter 08-13, Incorporating SDD and Facility Energy Attributes in the Air Force Construction Program, was published September 2008. This new guidance provides recommendations and requirements for sustainable strategies and energy reduction practices for Air Force facilities.

More than a dozen MILCON projects applied for the rating of “Silver” from the USGBC LEED program. The first Air Force “Gold” rating was approved for the Air Force Weather Agency facility at Offutt AFB, NE. Beginning in FY 2009, 100 percent of each of MAJCOM’s MILCON vertical construction projects with climate control shall be designed to be capable of achieving LEED Silver certification. Below is a sampling of other projects applying for LEED certification of Silver or better:

- Shaw AFB, SC: Library, LEED Silver level.
- Hill AFB, UT: Addition to Software Support Facility, LEED Silver level. The base constructed a 145,000-square foot addition to Building 1515. Facilities include avionics systems labs and testing laboratory, flight simulator, and engineering test stations.
- Buckley AFB, CO: Addition and Alteration to the Communication Facility. Originally LEED Bronze level developed to LEED Silver level. Notable energy measures include thermal energy storage, motion sensors, and EMCS controls. The building square footage and LEED Silver measures were reduced so the project budget could meet the programmed amount.

- Buckley AFB, CO: Leadership Development Center. Originally LEED Bronze level developed to LEED Silver level. Notable energy measures include building orientation for optimal lighting, daylight harvesting, motion sensors and lighting controls, EMCS controls, and an efficient mechanical system. The building square footage and LEED Silver measures were reduced and the parking removed so the project budget could meet the programmed amount.
- Buckley AFB, CO: Consolidated Service. Originally LEED Bronze level developed to LEED Silver level. Notable energy measures include light-tubes, motion sensors and lighting controls, EMCS controls, and an efficient mechanical system. The building square footage and LEED Silver measures were reduced and the parking removed so the project budget could meet the programmed amount.
- Los Angeles AFB, CA: Design Civil Engineer and Logistics Facility. LEED Silver Design is intended to consolidate several base support organizations within one facility thereby reducing utility consumption by decreasing overall facility square footage. The facility will incorporate occupancy sensors, compact fluorescent lighting, EMCS controls, VAV HVAC system, and low-E fenestrations.
- Duluth International Airport, ANGB, MN: Replace Fuel Cell Hangar, LEED Silver level. The existing fuel cell facility is an antiquated metal building lacking required fire suppression and fire detection systems. This has resulted in a Risk Assessment Code 2 and a Fire Safety Deficiency Code II. Ventilation and environmental controls are outdated, fail regularly, and the building lacks sufficient thermal insulation. The facility has a multi-level roof system and water infiltration is a significant problem; the building envelope is showing signs of major distress. Lighting fixtures are inefficient and the facility is currently heated via a centrally located steam plant. The facility will be demolished and replaced with a state-of-the-art conforming facility.
- Dane County Regional-Truax Field, ANGB, WI: Communications and Audio Visual Training Facility, LEED Silver level. This project constructs a new facility for the base communications and audio/visual functions. They are currently undersized by 25 percent and poorly configured. The new facility will be of reinforced concrete foundation and floor slab with load-bearing pre-cast concrete panels and standing seam metal roof with interior walls and utilities. The architectural style will match surrounding buildings and base style. Exterior work includes utility access, pavements, fire protection, site improvements, communication systems, and other support.

DoN

NAVFAC Instruction 9830.1, Sustainable Development Policy, June 9, 2003, implements sustainable development principles and strategies to reduce the total cost of ownership of facilities. The policy requires the use of the USGBC LEED Green Building Rating System. The ASN(I&E) Memorandum of August 4, 2006, directs Navy and Marine Corps Commanders to take steps to plan, program and budget to meet the requirements in EPAct 2005, the Federal Leadership in High

Performance and Sustainable Buildings Memorandum of Understanding and achieve at least LEED Silver level rating performance is achieved in new and replacement facilities.

The Navy has provided sustainable development training to over 680 of their staff since 2004 and continues to provide this training by classroom and online techniques. NAVFAC currently has 80 LEED Accredited Personnel. The Navy has ten USGBC certified buildings and 30 registered with USGBC for certification. A few examples are:

- Building 850, Ventura County, CA., Gold
- Personnel Support Facility, Virginia Beach, VA., Silver
- Police and Security Operations Facility, Norfolk, VA., Silver
- Naval Training Center, Great Lakes, IL., Bronze
- Bachelor Enlisted Quarters, Bremerton, WA., Certified
- Bachelor Enlisted Quarters, Yorktown, VaA, Certified
- Office Building, Washington DC, Certified

Case studies of six of the USGBC certified buildings are shown on FEMP's High performance Federal Building Database <http://femp.buildinggreen.com/>

DoN budgeted \$46 million for sustainable construction in FY 2010 MILCON, a significant improvement over previous years, and including these requirements is now standard business practice. Sustainability Guidelines for Reconstruction of Navy Facilities and Sustainable Installation Guidelines are tools that NAVFAC is developing to implement sustainable design in existing buildings.

DeCA

DeCA incorporates sustainable development principles into every major project designed and constructed by DeCA. DeCA Design Criteria, Guide Specifications, and Master Architect-Engineer Statement of Work all require incorporation of sustainable principles. The DeCA Design Criteria Handbook emphasizes use of life-cycle cost requirements in the design of commissaries, was revised in FY 2007, and is available on line at <http://www.decafacilities.com/decadesign/>. Division 1, Section 01115, details sustainable design requirements that include renewable energy.

Design criteria have included sustainable principles for several years. The criteria emphasize use of life-cycle costs, pollution prevention, and other environmental and energy costs associated with the construction and life-cycle operation of the facility. Detailed requirements are incorporated for items such as energy efficient lighting, dual-path HVAC, premium efficiency fan motors, refrigeration monitoring and control systems, lighting controls, and roof membrane materials. DeCA design criteria are reviewed and updated annually. Standard design principles used are as follows:

- Storm Water Management
- During site selections, sensitivity to habitat of endangered species and wetlands, preference to urban areas with existing infrastructure

- Advocate alternative transportation by providing bicycle racks and size automobile parking to meet, but not exceed, what is needed
- Maximize water efficiency by using automatic water controls for restroom fixtures
- Implementation of a building commissioning plan
- Maximizing use of energy saving techniques to include implementing heat reclaim from the refrigeration systems to provide space heating and water heating, using refrigeration compressor systems
- Implementing a RMCS for control of the refrigeration system and HVAC system to ensure efficient operation
- Maximizing use of more efficient glass door refrigerated display cases rather than open cases
- Maximizing use of the most energy efficient lighting systems and implementing the most advanced lighting equipment available
- Use of lighting occupancy sensors to ensure lighting is off when rooms are not in use
- Dual path HVAC unit for the sales area which allows for a more efficient method of cooling
- Maximum use of wall and roof insulation
- Implementation of the most energy efficient doors and windows
- Maximum use of utility metering
- Chlorofluorocarbon (CFC) reduction in HVAC and refrigeration equipment
- Use of fire suppression systems that use no Hydro chlorofluorocarbons (HCFCs) or halons
- Use of cardboard balers
- Maximum use of existing building structures, rather than replacing, through our major add/alt projects
- During building demolitions recyclable materials are saved
- Use of materials with recycled content
- Meet indoor air quality standards

DIA

All new construction and design projects initiated in FY 2008 used sustainable development and design principles as a standard for DIA intelligence construction. Standard design principles used are as follows:

- Storm Water Management
- During site selections, sensitivity to habitat of endangered species and wetlands, preference to urban areas with existing infrastructure
- Advocate alternative transportation by providing bicycle racks and size automobile parking to meet, but not exceed, what is needed
- Maximize water efficiency by using automatic water controls for restroom fixtures
- Implementation of a building commissioning plan
- Maximize use of energy saving techniques to include maximum use of the most energy efficient lighting systems, maximum use of lighting occupancy sensors and maximum use of utility metering

- CFC reduction in HVAC and Refrigeration equipment
- Use of fire suppression systems that use no HCFCs or halons
- Maximum use of existing building structures, rather than replacing, through our major add/alt projects
- During building demolitions recyclable materials are saved
- Use of materials with recycled content
- Meet indoor air quality standards

DIA is committed to sustainable development and incorporating sustainable principles in all major design and construction projects.

NGA

As part of the FY 2005 BRAC mandated New Campus East project, NGA is actively committed to the guiding principles set forth in the Federal Leadership in High Performance and Sustainable Buildings MOU signed in 2006.

Key activities completed in FY 2008 include:

- Implementation of an independent Commissioning Authority to provide design, construction, and occupancy/operations phase services following guidelines published in ASHRAE Guideline 0-2005: the Commissioning Process.
- Identification during design of best practices, methods, processes, and technologies required to meet LEED Silver criteria for new buildings.

NSA

NSA did not construct any new facilities during FY 2008. However, LEED Silver criteria are used in engineering designs. NSA will also be pursuing certification on selected projects.

TMA

Sustainable building design principles are part of the design, and construction processes for Navy facilities. NAVFAC is designing facilities at the LEED Silver level. BUMED policy follows Navy policy and will therefore design its buildings to these criteria as well.

BUMED's NMC San Diego was the first DoD hospital to be recognized as ENERGY STAR. Today, it is the first of only three DoD hospitals awarded this distinction. BUMED will rate the current energy performance of its medical centers and hospitals using the ENERGY STAR performance rating tool. This assessment will give BUMED an indication of the performance of these facilities relative to their peers and help BUMED identify its primary targets for energy improvements. Building size and energy costs by themselves, the general metrics used for targeting, are not sufficient for effective targeting. Knowledge of building performance, which is an indicator of efficiency, is key information for successful targeting.

As BUMED moves to assess its secondary targets (clinics), it will develop its own method for rating energy performance, as a rating system for clinics is not

available from ENERGY STAR. BUMED will pursue data from the Veterans Administration so that its clinic benchmarking capability will have a broad development basis. Benchmarking will allow BUMED to identify its best targets in its portfolio of approximately 200 clinics so its limited efficiency resources can be strategically deployed. This will substantially improve a simple approach like sending auditors to all facilities in decreasing order of size or perhaps the largest 50 which are prioritization strategies that can easily be improved upon.

WHS

PENREN incorporates sustainability requirements and goals in each of their design-build RFPs. Currently, the Pentagon wedges are being renovated and where feasible has incorporated sustainable design and construction practices. As a way to benchmark these sustainable measures, PENREN is using the USGBC LEED Green Building Rating System as the primary metric for determining sustainability success in buildings. The wedges and other structures built in association with the Pentagon have chosen to submit for certification under the LEED rating system. The following projects are ongoing: 1) Wedge 4 construction has started and like Wedge 3, the building's design has required LEED certification. 2) The Pentagon Memorial started construction in late FY 2006 and was completed in FY 2008. Because it is an outdoor facility, LEED certification is unattainable.

F. Energy Efficiency / Sustainable Design in Lease Provisions

DoA

The Army emphasizes that energy and water conservation be included in all facility leases and requires that these leased facilities meet energy and water goals. The intent is to have the landlord make appropriate investments in energy efficiency, which can be amortized in the lease, provided the new total cost (energy costs plus lease cost) does not exceed total costs without improvements. Leases should amortize the investments over the economic life of the improvements. Build-to-lease solicitations for Army facilities contain criteria encouraging sustainable design and development, energy efficiency, and verification of building performance.

DoN

Leased space must also comply with the energy and water efficiency requirements of the Energy Policy Act of 1992. The Navy partners with GSA to ensure the above provisions are included in buildings that they lease for the Navy. The Department of Navy currently leases 57.5 million square feet of building facilities.

DeCA

DeCA uses GSA as a leasing agent for its few leased facilities. Lease-back facilities include the Harrison Village Commissary, IN; DeCA West office facilities, Sacramento, CA; and the McClellan Commissary, Sacramento, CA. Consideration was given on all procurements to include high efficiency systems

for HVAC and water use. Devices that meet or reduce current flow rates for water use are used.

No new DeCA West facility leases were negotiated or started in FY 2008. DeCA Europe did not negotiate new lease agreements in FY 2008, but will work with the base/installation command or the US Army Garrisons to negotiate with the property owners for obtaining sustainable and energy efficient facilities. They ensure the current facilities meet energy efficiency and water conservation requirements, by requiring all plumbing fixtures to be water saver types, with energy efficient lighting when the lesser is required to upgrade facility systems.

DIA

DIA continues to request that building owners incorporate current commercial energy efficient design with set back thermostats and minimum 13 seasonal energy efficiency ratio ratings and the plumbing fixtures to be low-flow type. The energy and utility costs are included in a given lease agreement so the corresponding rental fee includes these costs, where applicable. This provides a built-in incentive to the owner to use the most cost effective energy-using equipment to maximize energy savings.

DIA has no combined heat and power systems, GSHP systems, PV systems or use of biomass or other naturally occurring energy sources. Energy monitoring and control systems to ensure energy efficiency of the facility's overall operation are installed in all new/renovated facilities as standard design criteria. Standard motor starters were replaced with variable speed drives for all variable air flow systems in the DIAC facility, in conjunction with air handling unit replacements. The savings are considerable as the motors use far less power when responding to system dynamics by decreasing speed as opposed to letting fans simply ride their characteristic pressure-airflow curve at 100 percent.

DLA

On facilities where DLA is a tenant, our activities have been instructed to follow the host energy program.

NGA

NGA did not enter into any new leases during FY 2008. NGA continues to work with existing leasing agents to insure building systems are maintained in optimal working condition in order to gain the full benefit from installed energy efficient technologies.

NSA

NSA has several leases where energy efficient methods and products have been used for renovations and repairs. Employees working in these spaces follow all existing agency energy policies. When entering into a lease for unfinished space that NSA will fit-up, we employ the same design standards used for our new buildings and renovation projects.

TMA

Pursuant to EISA requirements, BUMED will seek ENERGY STAR certified buildings in leasing arrangements. ENERGY STAR certification in the most recent year is the standard.

WHS

Most of the space leased for WHS uses GSA leases. There are however, three DFD leases, which use the same GSA lease provisions. The typical Solicitation for Offerors informs the lessors to comply with the government's energy conservation guidelines. The Lease Facilities Division (LFD) supports that in their day-to-day lease administration. When the LFD adds equipment for special requirements, they try to influence the lessors to use energy efficient applications.

G. Distributed Generation

DoA

Army policy calls for high efficiency equipment in the operation of central heating and cooling systems where large quantities of energy are used. The Army budgeted FY 2008 funds to begin a centrally funded program to modernize aging central heating systems. Some installations continue to add DDC and other automated controls to better monitor and control energy. Installations also use O&M funds to implement energy saving projects such as: upgrading boilers and distribution systems, improving high efficiency pumps and motors, and updating control system. Army regions and installations, along with the USACE, evaluate the use of high-efficiency energy systems for new construction and major retrofit projects and incorporate these systems where cost-effective.

Using distributed generation, Fort Gordon, GA employs diesel generators to manage the peak load at the installation by leasing 13.5 MWs of diesel generator assets from the Army Prime Power Program. Aberdeen Proving Ground has a 15 MW distributed generation facility they use to help offset peak electrical demand cost and participate in the regional electric utility's economic load response program. Fort Huachuca, AZ has a combined cooling, heating and power system consisting of four fuel cells that produce 200 kW of power.

DoN

DoN makes significant use of distributed generation cogeneration systems. 40 MW of capacity are on-line and another 39 MW will begin generation in Yokosuka Japan in FY 2009. The Yokosuka plant is the largest ESPC implemented by DoN. The \$105 million project brought natural gas to the installation, installed 2 reciprocating engines, and 2 gas turbines with heat recovery, will save 8 million gallons of fuel oil annually, and the contract price includes all major overhauls for 22 years, all paid for out of energy savings. Cogeneration credits provide four percent of DoN's energy reduction progress and this will increase in FY 2009. DoN also utilizes distributed generation for island installations, remote applications, and technology demonstrations.

Wind farms and PV systems continue to provide power at numerous installations. New renewable PV power systems were made operational at several locations in California, Hawaii and Maryland. A 1.5 MW wind turbine is under construction at MCLB Barstow. DoN is installing wind anemometers at 13 installations to evaluate feasibility of mid-size wind turbines. DoN is working with the DoE National Renewable Energy Laboratory to develop software to evaluate cost/benefit of wind, PV, solar wall, and solar thermal systems at all installations. A DoN renewable plan will be completed in FY 2010.

DoN continues to validate the performance of fuel cells. Marine Corps Base Camp Pendleton, CA has total capacity of 750 kW of Molten Carbonate Fuel Cells operating in a combined heat and power configuration.

As requested by Congress, NAVFAC Engineering Service Center (ESC) is helping to develop a linear magnetic generator wave energy buoy and a horizontal axis tidal flow generator. The Office of Naval Research is funding a DoN survey of wave heights and current flows to match up with emerging technology and project ocean renewable energy potential. DoE is funding NAVFAC ESC to evaluate feasibility of Ocean Thermal Energy Conversion in Guam.

DeCA

Combined and integrated cooling, heating, and refrigeration systems are a standard design concept for installation of new or replacement refrigeration systems in the commissaries.

If the installation cannot provide dependable power to the commissary, DeCA's programming and design team reviews what other sources are available to supplement the power for the commissary building. DeCA typically uses generators for backup power of point of sale and emergency lighting systems only.

No combined heat and power systems were designed or installed in FY 2008.

GSHP systems are considered as design alternatives when cost effective.

PV systems are considered in the new construction process and as DoD ECIP candidates.

A PV project at Los Angeles AFB Commissary was completed in FY 2008.

Utilities are normally provided by host installations to DeCA.

New refrigeration systems utilize electronic controls, heat reclaim for HVAC and domestic hot water, and refrigeration compressor "floating head" to reduce energy usage.

DIA

DIA has on-site generation capability for 100 percent backup power. Peak shaving is not performed due to the lack of a considerable demand charge for electricity. DIA is in contact with two consultants regarding energy curtailment.

TMA

NMC San Diego is BUMED's premier site for distributed generation to date. One of BUMED's largest medical facilities, this facility has a 4.5 MW onsite combined heat and power generation system that provides both electricity and heating to the facility. BUMED will seek other opportunities to replicate this success and utilize distributed generation where site demands and rate structures make it practical. Assessments will be a part of performance contracts considered at BUMED's medical centers and hospitals.

At BUMED tenant sites, distributed generation improvements will certainly have to be coordinated with the host installation, as self-generating electricity and heat on the hospital campus could substantially reduce the electricity and heating energy needs from the installation's distribution systems for these utilities. While distributed generation might provide substantial cost savings to BUMED at these sites, it could have both positive and negative impacts to an installation due to these reduced demands.

Fort Detrick completed its Centralized Utility Plant for the new Bio-Defense Campus. The plant provides chilled water, steam, and electricity when needed.

H. Facility Energy Audits

DoA

Army installations are actively pursuing energy efficiency of industrial facilities. Ongoing measures include improving combustion efficiency in the large coal-fired plant at Radford Army Ammunition Plant, VA; wash water recycling to reduce steam cleaning requirements at Letterkenny Army Depot, PA; and ventilation system improvements for the vehicle painting facility at Rock Island Arsenal, IL.

DoAF

Misawa AB, Japan: Replaced a section of direct buried steam/condensate return line under a prime vendor contract for Building B357. The steam line is used to provide space heat and domestic hot water to family housing. A condensate leak resulted in both water and energy loss since condensate return water temperature was approximately 140 °F. Make-up water temperature was approximately 55 °F and required more energy to create steam. This initiative resulted in an annual energy savings of 14,600 MBtu and annual water savings of 18 million gallons.

Eielson AFB, AK: Upgrade Building B-3113 weatherized one of the oldest remaining structures at Eielson AFB. Work included replacing exterior wooden sectional garage doors with overhead insulated doors, replacing non-insulated wooden siding with insulated metal siding, replacing the steam heating system

with a controlled glycol heating system, installing a steam and condensate meter to compare the technologies, installing new T8 lighting with motion sensor controls, and demolishing over one-third of the building's unused footprint. A challenge overcome during this project was remaining within the budget while overcoming unforeseen site conditions in a facility constructed in 1947. Weatherizing this facility resulted in annual energy savings of 7,438 MBtu.

Hickam AFB, HI: Insulation on ducts and piping, thermostat adjustments, and air curtain sensor adjustments. Installing insulation on ducts and pipes potentially generates an annual energy savings of 7,500 kWh. As part of low-cost/no-cost energy initiatives, the in-house staff reinsulated chilled water piping and domestic hot water systems at various facilities in response to base work orders. These actions were necessary because existing insulation was removed and not replaced during construction projects, routine HVAC maintenance, or HVAC retrofits.

Hickam AFB, HI: Thermostat adjustments. This initiative generated annual energy savings of 8,000 kWh. As part of low-cost/no-cost small energy conservation measures, Hickam AFB energy managers briefed facility managers at monthly meetings and conducted walk-thru audits to ensure facility air conditioning thermostats were set at 76 °F. Energy savings calculations indicated one percent energy savings on HVAC energy consumption for each additional degree increase in thermostat set point. Actions to check and monitor thermostat settings were necessary because thermostat settings were improperly set or adjusted lower for comfort during routine building operations. Some of the challenges with maintaining thermostat settings were getting acceptance from building tenants and making sure that proper settings were maintained over time.

Hickam AFB, HI: Air curtain sensor adjustments. This initiative resulted in an annual energy savings of 2,500 kWh. Workers adjusted and calibrated mechanical switch sensors to ensure air curtain motors shut off when occupants closed the building's doors. This initiative eliminated unnecessary facility electrical loads and reduced air curtain motor wear and tear. Major challenges overcome to implement this initiative were determining proper sensor settings and ensuring sensors operated properly.

DFAS

Due to BRAC, and DFAS Transformation, DFAS will delay the initiation of an energy audit until after enduring sites have reached their end state.

TMA

BUMED will strive to conduct facility audits in the quantity required at agencies by EISA. This legislation, if interpreted rigidly, will force all agencies to perform comprehensive audits on 25 percent of their facilities annually leading to comprehensive audits in 100 percent of an agency's facilities every four years. Implementation needs to be more flexible to improve effectiveness in the face of limited resources. An across-the-board strategy will force an agency to conduct comprehensive audits on its great performers and to repeat this exercise every

four years. Thus, the great performers, which need little attention, will be competing alongside the poor performers for auditing resources.

BUMED will focus its limited resources toward facilities with the most benefits as best possible. For BUMED's hospitals, this may not be such an issue since even efficient facilities, due to their large size, often have sizeable opportunities that can be uncovered by skilled assessors. For the hundreds of medium- to smaller-sized BUMED facilities (200,000 square feet and less), however, focused targeting will be important strategy for improving program effectiveness.

BUMED will utilize energy performance benchmarking to help prioritize its audits and guide strategic energy and water management decisions. Improved targeting is essential when dealing with mid-sized to smaller buildings where audit costs can represent a sizeable portion of improvement costs. Standard practice, both in the government and private sector, often deploys audit teams to buildings without having any idea of building performance. For maximum effectiveness, it is critical to minimize deployment of audit teams to higher performing buildings. For its mid-sized to smaller buildings, BUMED will target those in the lowest performance quartile for immediate auditing and improvements and assign the lowest priority to those in the highest performance quartile. EPA's ENERGY STAR benchmarking capability will be utilized to quantify the performance of buildings.

BUMED does not have facilities that would be considered significant industrial facilities.

IV. DATA TABLES AND INVENTORIES

A. FY 2008 Annual Energy Management Data Report

Attachment A

B. Excluded Facilities Inventory

DoAF

DoE guidance for implementing EPA 2005 allows excluding energy-intensive loads that are driven by mission or operational requirements, not necessarily buildings, and not influenced by conventional building energy conservation measures; cold iron support to ships; structures and processes not qualified as federal buildings; and energy consumed by transmitters and simulators. The guidelines also permit excluding private party consumption that the government does not control. The following are DoAF exclusions:

Exemption	MAJCOM/Application
Private Party Simulators	MFH/Military Family Housing ACC, AETC, AMC and other Flight Simulators
Mission and Operation Driven	AFMC wind tunnels, testing labs and data centers
Mission and Operation Driven	AMC radar, telecom, street and airfield lighting
Mission and Operation Driven	PACAF Alaskan radar and radar support
Mission and Operation Driven	AETC data servers

DoN

DoE guidance for implementing EPA 2005 allows excluding mission critical facilities such as cold iron support to ships, and energy consumed by transmitters and simulators. The guidelines also permit excluding private party consumption that the government does not control. The following are DoN exclusions:

Exemption	Installation Name
Cold Iron	NSB NEW LONDON CT
Cold Iron	NSY NORFOLK VA
Cold Iron	NAVFAC MID-ATLANTIC, VA
Cold Iron	LANTORDCOM DET CHARLESTON SC
Cold Iron	NAS KEY WEST FL
Cold Iron	NAVSUPACT PORTSMOUTH, NH
Cold Iron	NSB KINGS BAY GA
Cold Iron	NAVSURFWARREN COASTSYSTA PANAMA CITY FL
Cold Iron	NAB LITTLE CREEK VA
Cold Iron	NAVSTA NEWPORT RI
Cold Iron	NAVSTA ROTA SP
Cold Iron	NAVSTA INGLESIDE TX
Cold Iron	NAVBASE SAN DIEGO CA

Cold Iron	NAVBASE CORONADO SAN DIEGO CA
Cold Iron	NAVSHIPYD PUGET SOUND WA
Cold Iron	NAVMAG INDIAN ISLAND WA
Cold Iron	COMFLEACT CHINHAE KS
Cold Iron	COMFLEACT YOKOSUKA JA
Cold Iron	NAVBASE GUAM
Cold Iron	COMFLEACT SASEBO JA
Cold Iron	NAVSTA PEARL HARBOR HI
Cold Iron	NAVBASE POINT LOMA, CA
Cold Iron	SUBASE BANGOR WA
Cold Iron	NAVSTA EVERETT WA
Cold Iron	NAVBASE VENTURA COUNTY, CA
Simulator	LANTORDCOM DET CHARLESTON SC
Simulator	NAVBASE SAN DIEGO CA
Simulator	NAVBASE CORONADO SAN DIEGO CA
Simulator	NAS KINGSVILLE TX
Simulator	NAS LEMOORE CA
Simulator	NAVSURFWARCENDIV PORT HUENEME CA
Simulator	NAVBASE POINT LOMA, CA
Simulator	MCAS MIRAMAR, CA
Simulator	NAVAIRENGCEN LAKEHURST NJ
Transmitter	NAVBASE CORONADO SAN DIEGO CA
Transmitter	NAVRADTRANFAC SADDLEBUNCH KEYS, FL
Transmitter	NAVAIRENGCEN LAKEHURST NJ
Transmitter	NAVRADSTA T JIM CREEK OSO WA
Private Party	NAVBASE SAN DIEGO CA
Private Party	NAVBASE CORONADO SAN DIEGO CA
Private Party	NAVMEDECEN SAN DIEGO CA
Private Party	NAVAIRWARCENWPNDIV CHINA LAKE CA
Private Party	COMFLEACT YOKOSUKA JA
Private Party	NAF ATSUGI JA
Private Party	CBC GULFPORT MS
Private Party	MCAS IWAKUNI JA
Private Party	NAVFAC HAWAII
Private Party	NAVSTA ROTA SP
Private Party	NAS LEMOORE CA
Private Party	NAVBASE POINT LOMA, CA
Private Party	CG MCAGCC TWENTYNINE PALMS CA
Private Party	MCAS MIRAMAR, CA
Private Party	SUBASE BANGOR WA
Private Party	NAVBASE VENTURA COUNTY, CA

C. List of Acronyms/Symbols Used in Body of Report

Acronym/Symbol	Meaning
A7C	Air Force Civil Engineer
A7CAE	HQ United States Air Force, Office of the Civil Engineer, Asset Management and Operations Division, Energy Management Branch
ACC	Air Combat Command
AEE	Association of Energy Engineers
AEGIS	State-of-the-art radar and missile system
AETC	Air Education and Training Command
AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
AFCESA	Air Force Civil Engineer Support Agency
AFFEC	Air Force Facility Energy Center
AFIT	Air Force Institute of Technology
AFMC	Air Force Material Command
AFSO 21	Air Force Smart Operations for the 21 st Century
AFSPC	Air Force Space Command
AFV	Alternative Fuel Vehicle
ANGB	Air National Guard Base
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASN(I&E)	Assistant Secretary for Installations and Environment
BMDS	Ballistic Missile Defense System
BRAC	Base Realignment and Closure
BBtu	Billion British thermal units
Btu	British thermal unit
BUMED	Bureau of Medicine and Surgery
CDC	Central Distribution Center
CEM	Certified Energy Manager
CEMT	DFAS Corporate Energy Management Team
CEU	Continuing Education Unit
CES	Civil Engineering Squadron
CFC	Chlorofluorocarbons
CMA	Court of Military Appeals
CNIC	Commander, Navy Installations Command
CONUS	Contiguous United States
COR	Contracting Officer Representative
DASA(E&P)	Deputy Assistant Secretary of the Army for Energy and Partnerships
DASA(I&H)	Deputy Assistant Secretary of the Army for Installations and Housing

DASN(I&F)	Deputy Assistant Secretary Navy for Installations and Facilities
DCMA	Defense Contract Management Agency
DDC	Direct Digital Controls
DeCA	Defense Commissary Agency
DeCAH	DeCA Design Criteria Handbook
DFAS	Defense Finance and Accounting Service
DFD	Defense Facilities Directorate (WHS)
DIA	Defense Intelligence Agency
DIAC	Defense Intelligence Analysis Center
DLA	Defense Logistics Agency
DoA	Department of the Army
DoAF	Department of the Air Force
DoD	Department of Defense
DoE	Department of Energy
DoN	Department of Navy
DUSD(I&E)	The Deputy Under Secretary of Defense (Installations and Environment)
E85	85% ethanol fuel
ECD	Estimated Completion Date
ECIP	Energy Conservation Investment Program
EISA	Energy Independence and Security Act
EMCS	Energy Management Control Systems
EMSG	Energy Management Steering Group
EO	Executive Order
EPA	Environmental Protection Agency
EPAct	Energy Policy Act
EPEAT	Electronic Products Environmental Assessment Tool
ESC	Engineering Service Center
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
ESPP	Energy Savings Performance Program
ETSD	Engineering and Technical Services Division
FEMP	Federal Energy Management Program
FES	Facility Energy Supervisor
FOB2	Federal Office Building #2 (Navy Annex)
FY	Fiscal Year
GPC	Government Purchase Card
GSA	General Services Administration
GSF	Gross Square Feet
GSHP	Ground Source Heat Pump
HCFC	Hydro chlorofluorocarbons
HQ	Headquarters
HQCC	Headquarters Command Complex (MDA)
HQDA	Headquarters Department of the Army
HVAC	Heating, Ventilating, and Air Conditioning
HYBLA	Hybla Valley Office Building (WHS)

IESP	Infrastructure Energy Strategic Plan
IMCOM	Army Installation Management Command
ISSA	Inter-Service Support Agreement
kW	kiloWatt
kWh	kiloWatt-hour
LCCA	Life-Cycle Cost Analysis
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LFD	Lease Facilities Division (WHS)
LFF-1	USMC, Facilities and Services Division Facilities Branch
LSS	Lean Six Sigma
M&V	Measurement & Verification
MAJCOM	Major Command
MBtu	Million British Thermal Units
MCLB	Marine Corps Logistics Base
MDA	Missile Defense Agency
MDA/DOH	MDA Office of Human Resources
MDMS	Meter Data Management System
MEDCOM	Medical Command (DoA)
MEO	Most Efficient Organization
MILCON	Military Construction
MW	MegaWatt, 1 million Watts
MWh	MegaWatt-Hour, 1 million Watt-hours
NAVFAC	Naval Facilities Engineering Command
NAVSTA	Naval Station
NAWS	Naval Air Weapons Station – China Lake
NGA	National Geospatial-Intelligence Agency
NH	Naval Hospital
NIST	National Institute of Standards and Technology
NMC	Naval Medical Center
NSA	National Security Agency
O&M	Operations and Maintenance
OMB	Office of Management and Budget
PACAF	Pacific Air Forces
PBMO	Pentagon Building Management Office
PENREN	Pentagon Renovation Office
PH&RP	Pentagon Heating & Refrigeration Plant
PM	Program Management
PV	Photovoltaic
QSR	Quality Surveillance Representative
RAF	Royal Air Force
RDF	Remote Delivery Facility (WHS)
REAP	Reduced Energy Appreciation Program
REC	Renewable Energy Certificate
REM	Resource Efficiency Manager
RFP	Request for Proposal
RMCS	Refrigeration Monitoring and Control Systems

SAF/IE	Secretary of the Air Force for Installations, Environment and Logistics
SDD	Sustainable Design and Development
SECNAV	Secretary of the Navy
SE ITP	Sustainability and Environment Integrated Product Team
SFG	Senior Focus Group
SIOQ	Quality Assurance Division (NGA)
TMA	Tricare Management Agency
UESC	Utility Energy Services Contract
USACE	US Army Corp of Engineers
USAF	United States Air Force
USAMRIID	United States Army Medical Research Institute for Infectious Diseases
USGBC	United States Green Building Council
VAV	Variable Air Volume
WRAMC	Walter Reed Army Medical Center
WHS	Washington Headquarters Service

V. OFFICE OF MANAGEMENT AND BUDGET (OMB) CIRCULAR A-11

ENERGY AND TRANSPORTATION EFFICIENCY MANAGEMENT

**FY 2009 FUNDING REQUEST FOR
ENERGY AND TRANSPORTATION EFFICIENCY MANAGEMENT**

Agency: Department of Defense
Date: 18 December 2008

Prepared by: CDR Brad Hancock
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1.1 IDENTIFICATION OF FUNDS FOR ENERGY EFFICIENCY MANAGEMENT AS REQUIRED BY E.O. 13423

Activity Classification/ Organization	DoD	2008		2009		2010		Comments
		Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	
ESPC and/or UESC negotiation/administration								
Air Force		3,714.0	O&M	2,662.0	O&M	4,776.0	O&M	
Army		343.0		240.0		250.0		Installation initiatives, centrally managed programs
DeCA		1.0	DWCF	2.0	DWCF	2.0	DWCF	
DeCA		1.0	Surcharge	60.0	Surcharge	100.0	Surcharge	
DIA				8.0				
TMA						150.0	DHP	
WHS		533.6	PX13	492.0	PX13	250.0	PX13	
ESPC and/or UESC negotiation/administration- Total		4,592.6		3,464.0		5,528.0		
Direct spending on energy efficiency								
Air Force		19348.8	O&M	30808.2	O&M	34724.1	O&M	
Army		117966.0		111090.5		176457.0		Installation initiatives, FY10 requirements per Army Energy and Water Campaign Plan for Installations
Navy (Projects)		10747.1	MCON					
Navy (Projects)		12628.0	O&M	5000.0	O&M	2000.0	O&M	
Navy (Metering, Audits, REM)		7812.0	O&M	36000.0	O&M	23000.0	O&M	
DCMA		120.0	O&M	140.0	O&M	160.0	O&M	
DeCA		320.0	MILCON/ ECIP	131.6	MILCON/ ECIP	640.0	MILCON/ ECIP	
DeCA		2388.0	Surcharge	1475.0	Surcharge	2913.0	Surcharge	
DLA		1516.0	DWCF	1000.0	DWCF	1000.0	DWCF	
NGA		2354.0	O&M	2009.0	O&M	2000.0	O&M	
NSA		5130.0	O&M/ GWOT	6000.0	O&M	6500.0	O&M	
TMA		2900.0	DHP	4800.0	DHP	5150.0	DHP	
Direct spending on energy efficiency-Total		183,229.9		198,454.3		254,544.1		

Energy Star ® building design/ construction incremental costs							
Air Force	4,365.4	O&M	7,593.4	O&M	9,512.4	O&M	
Army	8,131.0						Installation initiatives
Navy	6,340.0	MCON			48,650.0	MCON	
DeCA	28.4	Surcharge	30.0	Surcharge	30.0	Surcharge	
NGA	9,800.0	BRAC MILCON	8,850.0	BRAC MILCON	8,850.0	O&M	
Energy Star ® building design/ construction incremental costs-Total	28,664.8		16,473.4		67,042.4		
Renewables Purchases							
Air Force	19450.0	O&M	16898.4	O&M	23597.8	O&M	
Army	387.5		388.0		2285.0		Installation initiatives, FY10 requirements per Army Energy and Water Campaign Plan for Installations
Navy	218.0	O&M					
DCMA	10.0	O&M	10.0	O&M	10.0	O&M	
DeCA	0.3	DWCF	2.0	DWCF	2.0	DWCF	
Renewables Purchases - Total	20,065.8		17,298.4		25,894.8		
On-site generation and renewable power generation							
Air Force	9651.0	O&M	8539.0	O&M	30848.0	O&M	
Army	458.4		458.0				Installation initiatives
Navy	10133.0	MCON	28768.0	MCON	30508.0	MCON	
Navy	2227.0	O&M	15000.0	O&M	2000.0	O&M	
DeCA					2000.0	MILCON/ ECIP	
NSA	600.0	O&M	500.0	O&M	750.0	O&M	
On-site generation and renewable power generation -Total	23069.4		53,265.0		66,106.0		
Other (please specify)							
Air Force	4692.3	O&M	2200.0	O&M	1280.0	O&M	Advanced Meters
NGA - LEEDS/NCE Commissioning Costs	2500.0	BRAC MILCON	2500.0	BRAC MILCON	2500.0	BRAC MILCON	
NGA - Energy			150.0	O&M			
NGA - Existing Facilities			75.0	O&M			
TMA - DOE Energy Management Support	127.0	DHP	400.0	DHP	140.0	DHP	
Other - Total	7,319.3		5,325.0		3,920.0		
Total - Section 1-1	266,941.8		294,280.1		423,035.3		

1.2 IDENTIFICATION OF FUNDS FOR TRANSPORTATION EFFICIENCY MANAGEMENT AS REQUIRED BY E.O. 13423

Activity Classification/DoD Organization	2008		2009		2010		
	Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	Page(s) in Budget Submission to OMB
Acquisition of alternative fuel vehicles							
Air Force	7,022.3	3040/3080	7,303.2	3040/3080	7,595.3	3040/3080	Centrally managed programs
Army	61500.0		60905.0		60800.0		
Navy	1664.0	O&M	2200.0	O&M	2050.0	O&M	
DCMA	205.0	Procurement	217.0	Procurement			
NGA	40.0	O&M	64.0	O&M	71.0	O&M	
NSA	81.0	O&M	150.0	O&M	150.0	O&M	
Acquisition of alternative fuel vehicles - Total	70,512.3		70,839.2		70,666.3		
Infrastructure development and use of alternative fuels							
Air Force	5,950.5	SRM	3,141.8	SRM	1,604.2	SRM	
Navy	1664.0	O&M	2200.0	O&M	2050.0	O&M	
Infrastructure development and use of alternative fuels - Total	7,614.5		5,341.8		3,654.2		
Implementation of compliance strategy, including any modifications							
Navy	850.0	O&M	925.0	O&M	1050.0	O&M	
Implementation of compliance strategy, including any modifications - Total	850.0		925.0		1050.0		
Direct spending on training							
Navy	500.0	O&M	525.0	O&M	625.0	O&M	
DCMA	5.0	O&M	5.0	O&M	5.0	O&M	
TMA	12.0	DHP	20.0	DHP	70.0	DHP	
Direct spending on training - Total	517.0		530.0		630.0		
Procurement of environmentally preferable motor vehicle products							
Air Force	3,676.0	3400/619	3,823.8	3400/619	3,976.0	3400/619	
Navy	125.0	O&M	150.0	O&M	175.0	O&M	
Procurement of environmentally preferable motor vehicle products-Total	3,801.0		3,973.8		4,151.0		
Other (please specify)							
Navy (contract support, hybrid & neighborhood electrics)	550.0	O&M	600.0	O&M	650.0	O&M	
Other (please specify) - Total	550.0		600.0		650.0		
Total - Section 1-2	83,844.8		82,209.8		80,801.5		

1.3 IDENTIFICATION OF FUNDS FOR STRENGTHENING OTHER MANAGEMENT DIRECTIVES AS REQUIRED BY E.O. 13423

	2008		2009		2010		
	Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	Amount (thou. \$)	Account(s)	Page(s) in Budget Submission to OMB
Implementation of EMS							
Air Force	13,906	O&M	13,323	O&M	14,490	O&M	
Army	3405.0		3634.0		3737.0		
DeCA	349.8	Surcharge	340.0	Surcharge	400.0	Surcharge	
NSA	10.0	O&M	10.0	O&M	10.0	O&M	
Implementation of EMS - Total	17,670.6		17,307.3		18,637.0		
Water efficiency							
Air Force	4,705	O&M	13,493	O&M	14,186	O&M	
Navy	330.0	MCON					
Navy	1320.0	O&M	2000.0	O&M			
DCMA	14.0	O&M	15.0	O&M			
DeCA	18.0	Surcharge	10.0	Surcharge	10.0	Surcharge	
TMA	50.0	DHP	105.0	DHP	110.0	DHP	
Water efficiency - Total	6,436.7		15,623.0		14,306.0		
Waste prevention (hazardous and non-hazardous) and recycling programs							
Air Force	10,043	O&M	9,296	O&M	7,501	O&M	
Army	80739.0		80154.0		35767.0		
DeCA	271.9	DWCF	230.0	DWCF	237.0	DWCF	
Waste prevention (hazardous and non-hazardous) and recycling programs-Total	91,053.9		89,680.3		43,505.0		
Electronics Stewardship							
Air Force	2,594	O&M	2,735	O&M	4,344	O&M	
DeCA	1.5	DWCF	1.0	DWCF	1.0	DWCF	
DeCA	2.7	Surcharge	2.0	Surcharge	2.0	Surcharge	
Electronics Stewardship -Total	2,598.2		2,738.0		4,347.0		
Direct spending on training							
Air Force	1,208	O&M	825	O&M	975	O&M	
Army	391.5		87.0		244.0		Installation initiatives, Centrally managed programs
DCMA	2.0	O&M	2.0	O&M			
DeCA	120.0	Surcharge	125.0	Surcharge	130.0	Surcharge	
DIA	12.0		25.0				
NSA	2.0	O&M	2.0	O&M	2.0	O&M	
Direct spending on training - Total	1,735.5		1,066.4		1,351.0		

Acquisition of green products and services							
Air Force	848	O&M	406	O&M	454	O&M	
DeCA	2.3	DWCF	2.3	DWCF	2.3	DWCF	
Acquisition of green products and services- Total	850.3		408.6		456.4		
Other (please specify)							
Air Force	4,098	O&M	3,854	O&M	4,087	O&M	Cool roofs & REM contracts
Other (please specify) - Total	4,098.1		3,854.0		4,086.5		
Total - Section 1-3	124,443.2		130,677.6		86,688.8		

1.4 SAVINGS IDENTIFIED IAW FY 2004 DEFENSE AUTHORIZATION ACT

Activity Classification/DoD Organization	2008
	Amount (thou. \$)
Amount of FY 07 energy cost savings realized, including financial benefits resulting from shared energy savings contracts	
Air Force	36636.6
Army	72775.0
Navy	7,024.0
DeCA	78.0
NSA	965.0
TMA	6,280
Amount of FY 08 energy cost savings realized, including financial benefits resulting from shared energy savings contracts - Total	123,758.5

Attachment A:

DoD FY 2008 Annual Energy Management Report Data

Department of Defense FY 2008 Energy Management Performance Summary

Goal Performance

Energy Management Requirement	FY 2003 Btu/GSF	FY 2008 Btu/GSF	Percent Change 2003 - 2008	FY 2008 Goal Target
Reduction in energy intensity in facilities subject to the EPACK and E.O. 13423 goals	116,134	103,692	-10.7%	-9.0%

Renewable Energy Requirement	Renewable Electricity Use (MWH)	Total Electricity Use (MWH)	Percentage	FY 2008 Goal Target
Eligible renewable electricity use as a percentage of total electricity use	874,558.3	29,730,478.8	2.9%	3.0%

Water Intensity Reduction Goal	FY 2007 Gallon/GSF	FY 2008 Gallon/GSF	Percent Change 2007 - 2008	FY 2008 Goal Target
Reduction in potable water consumption intensity	59.8	58.1	-2.9%	-2.0%

Metering of Electricity Use	Cumulative # of Buildings Metered	Cumulative % of Electricity Metered	Cumulative % of Appropriate Buildings Metered	FY 2012 Goal Target
Standard Electricity Meters in FY 2008	32,120	45.8%	127.7%	100%
Advanced Electricity Meters in FY 2008	10,087	13.8%	40.1%	Maximum Extent Practicable
Total Electricity Meters in FY 2008	42,207	59.6%	167.8%	

Federal Building Energy Efficiency Standards	Percent of New Building Designs	FY 2007 forward Goal Target
Percent of new building designs started since beginning of FY 2007 that are 30 percent more energy efficient than relevant code, where life-cycle cost effective:	93%	100%

Investments in Energy and Water Management

Sources of Investment	Investment Value (Thou. \$)	Anticipated Annual Savings (Million Btu)
Direct obligations for facility energy efficiency improvements	\$198,323.8	1,470,360.0
Investment value of ESPC Task/Delivery Orders awarded in fiscal year	\$158,762.1	883,927.0
Investment value of UESC Task/Delivery Orders awarded in fiscal year	\$97,312.4	595,586.1
Total	\$454,398.3	2,949,873.1

	Percentage
Total investment as a percentage of total facility energy costs	11.5%
Financed (ESPC/UESC) investment as a percentage of total facility energy costs	6.5%

FY 2008 ENERGY MANAGEMENT DATA REPORT

Agency: Department of Defense
 Date: 18-Dec-08

Prepared by: CDR Brad Hancock
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PART 1: ENERGY/WATER CONSUMPTION AND COST DATA

1-1. NECPA/E.O. 13423 Goal Subject Buildings

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. \$)	Unit Cost (\$)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. GHG Emissions (MTCO ₂ e)	
Electricity	MWH	27,207,094.4	\$2,309,915.0	\$0.08 /kWh	92,830.61	322,404.1	17,400,389	
Fuel Oil	Thou. Gal.	159,730.6	\$437,704.6	\$2.74 /gallon	22,154.6	22,154.6	1,625,042	
Natural Gas	Thou. Cubic Ft.	65,668,291.9	\$684,429.9	\$10.42 /Thou Cu Ft	67,704.0	67,704.0	3,598,468	
LPG/Propane	Thou. Gal.	14,590.3	\$28,173.6	\$1.93 /gallon	1,393.4	1,393.4	86,849	
Coal	S. Ton	598,929.9	\$55,772.3	\$93.12 /S. Ton	14,721.7	14,721.7	1,412,400	
Purch. Steam	BBtu	5,881.2	\$150,200.0	\$25.54 /MMBtu	5,881.2	8,174.8	784,254	
Other	BBtu	85.2	\$9.8	\$0.12 /MMBtu		85.2		
Purch. Renew. Electric.	MWH	208,392.1	\$14,152.5	\$0.07 /kWh	711.0			
Purch. Renew. Other	BBtu	1,517.7	\$19,906.9	13.11668196 /MMBtu	1,517.7			
		Total Costs:	\$3,700,264.6		Total:	206,999.4	436,637.8	24,907,402
FY 2008 Goal Subject Buildings Gross Square Feet (Thousands)		1,939,728.8			Btu/GSF:	106,716	225,102	
Goal Subject Buildings FY 2003 Baseline (Btu/GSF)		116,134.4			Btu/GSF w/ RE Purchase Credit:	104,997		
					Btu/GSF w/ RE & Source Btu Credit:	103,692		

1-2. NECPA/E.O. 13423 Goal Excluded Facilities

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. \$)	Unit Cost (\$)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. GHG Emissions (MTCO ₂ e)	
Electricity	MWH	2,314,992.3	\$212,852.6	\$0.09 /kWh	7,898.8	27,432.7	1,498,394	
Fuel Oil	Thou. Gal.	5,642.2	\$14,917.7	\$2.64 /gallon	782.6	782.6	57,402	
Natural Gas	Thou. Cubic Ft.	1,698,961.2	\$17,039.0	\$10.03 /Thou Cu Ft	1,751.6	1,751.6	93,099	
LPG/Propane	Thou. Gal.	97.4	\$234.7	\$2.41 /gallon	9.3	9.3	580	
Coal	S. Ton	6,779.3	\$672.2	\$99.15 /S. Ton	166.6	166.6	15,987	
Purch. Steam	BBtu	260.2	\$3,115.8	\$11.98 /MMBtu	260.2	361.7	34,695	
Other	BBtu	0.0	\$0.0	#DIV/0! /MMBtu	0.0	0.0		
Purch. Renew. Electric.	MWH	0.0	\$0.0	#DIV/0! /kWh	0.0	0.0		
Purch. Renew. Other	BBtu	0.0	\$0.0	#DIV/0! /MMBtu	0.0	0.0		
		Total Costs:	\$248,832.0		Total:	10,869.1	30,504.4	1,700,156
FY 2008 Excluded Facilities Gross Square Feet (Thousands)		43,926.4			Btu/GSF:	247,438	694,445	
Goal Excluded Facilities FY 2003 Baseline (Btu/GSF)		0			Btu/GSF w/ RE Purchase Credit:	247,438		
					Btu/GSF w/ RE & Source Btu Credit:	247,438		

1-3. Non-Fleet Vehicles and Other Equipment (Does not include Fleet Vehicle Data Captured by FAST System)

	Consumption Units	Annual Consumption	Annual Cost (Thou. \$)	Unit Cost (\$)	Btu (Billion)	Est. GHG Emissions (MTCO ₂)
Auto Gasoline	Thou. Gal.	80,842.1	\$263,532.7	\$3.26 /gallon	10,105.3	716,261
Diesel-Distillate	Thou. Gal.	249,998.0	\$843,802.1	\$3.38 /gallon	34,674.7	2,536,456
LPG/Propane	Thou. Gal.	1,130.2	\$2,675.2	\$2.37 /gallon	107.9	6,728
Aviation Gasoline	Thou. Gal.	1,278.8	\$5,102.4	\$3.99 /gallon	159.9	11,060
Jet Fuel	Thou. Gal.	3,840,551.4	\$11,982,520.4	\$3.12 /gallon	499,271.7	35,388,377
Navy Special	Thou. Gal.	733,781.9	\$2,260,048.3	\$3.08 /gallon	101,775.6	7,444,881
Other	BBtu	13,218.7	\$359,017.5	\$27.16 /MMBtu	13,218.7	
		Total Costs:	\$15,716,698.7		659,313.7	46,103,763

Optional 1-3a. Fleet Vehicle Consumption and Costs Captured by the FAST System (Input reflects format of Section IV, Part C, Annual Fuel Consumption Report, by Fuel Type of FAST SF 82 - Aggregate Combined Report)

Description	Consumption Units	Annual Consumption	Annual Cost (Actual \$)	Btu (Billion)
Biodiesel	GEG	5,332,616.0	\$17,613,523.0	578.6
Diesel	GEG	18,136,545.0	\$57,368,415.0	1,982.1
Electric	GEG	880.0	\$2,221.0	0.0
E-85	GEG	1,389,738.0	\$5,772,932.0	173.0
Gasoline	GEG	76,388,422.0	\$237,697,104.0	9,117.2
Hydrogen	GEG	20.0	\$80.0	0.0
M-85	GEG	0.0	\$0.0	0.3
LPG	GEG	2,419.0	\$7,722.0	0.3
NG	GEG	294,209.0	\$576,780.0	36.7
Other	GEG	0.0	\$0.0	0.3
TOTAL	GEG	101,544,849.0	\$319,038,757.0	11,888.4

1-4. RENEWABLE ENERGY GENERATED ON FEDERAL OR INDIAN LAND WHERE RECS ARE RETAINED BY THE GOVERNMENT

(New renewable energy is from projects placed in service after January 1, 1999. Include projects that did not retain RECs if they qualify under the grandfather clause.)

Renewable energy project types in service during FY 2008, by age and source	Number of Projects	Annual Energy Produced	Energy Produced on Federal or Indian Land and Used at a Federal Facility
Electricity from <i>New Solar</i> projects (MWH)	164.0	39,953.6	39,931.7
Electricity from <i>New Wind</i> projects (MWH)	16.0	9,714.9	9,714.9
Electricity from <i>New Biomass</i> projects (MWH)	0.0	0.0	0.0
Electricity from <i>New Landfill Gas</i> projects (MWH)	1.0	6,808.0	6,808.0
Electricity from <i>New Geothermal</i> projects (MWH)	4.0	45.8	34.2
Electricity from <i>New Hydro/Ocean</i> projects (MWH)	1.0	15,894.7	15,894.7
Electricity from <i>Old Solar</i> projects (MWH)	14.0	2,432.9	2,431.6
Electricity from <i>Old Wind</i> projects (MWH)	1.0	964.0	964.0
Electricity from <i>Old Biomass</i> projects (MWH)	0.0	0.0	0.0
Electricity from <i>Old Landfill Gas</i> projects (MWH)	0.0	0.0	0.0
Electricity from <i>Old Geothermal</i> projects (MWH)	0.0	0.0	0.0
Electricity from <i>Old Hydro/Ocean</i> projects (MWH)	0.0	0.0	0.0
Natural Gas from <i>New Landfill/Biomass</i> projects (Million Btu)	0.0	0.0	0.0
Renewable Thermal Energy from <i>New</i> projects (Million Btu)	104.0	1,054,865.2	747,973.8
Other <i>New</i> Renewable Energy (<i>Specify Type</i>) (Million Btu)	85.0	13,785.0	0.0
Natural Gas from <i>Old Landfill/Biomass</i> projects (Million Btu)	0.0	0.0	0.0
Renewable Thermal Energy from <i>Old</i> projects (Million Btu)	28.0	453,449.6	379,812.9
Other <i>Old</i> Renewable Energy (<i>Specify Type</i>) (Million Btu)	0.0	0.0	0.0
Total New Renewable Electricity (MWH)	186	72,417.0	72,383.5
Total Old Renewable Electricity (MWH)	15	3,396.9	
Total New Non-Electric Renewable Energy (Million Btu)	189	1,068,650.2	
Total Old Non-Electric Renewable Energy (Million Btu)	28	453,449.6	
Total Renewable Energy Generation (Million Btu)	418	1,780,777.0	

1-5. ON-SITE RENEWABLE ENERGY GENERATION WHERE RECS ARE NOT RETAINED BY THE GOVERNMENT

(This energy is only counted toward the renewable energy goal if the agency has enough new RECs to qualify for the on-site bonus.)

	Amount Produced or Used	Amount Qualified for Goal
Renewable energy reported here comes from projects: 1) placed in service after 1/1/1999 (New) ; 2) where RECs have not been retained by the government; 3) where the amount has not been reported elsewhere on this data report; and 4) where the energy or RECs have not been sold to another agency that is counting it toward their renewable energy goal. (MWH)	0.0	0.0
Renewable energy reported here must come from projects: 1) placed in service before 1/1/1999 (Old) ; 2) where RECs have not been retained by the government; 3) where the amount has not been reported elsewhere on this data report; and 4) where the energy or RECs have not been sold to another agency that is counting it toward their renewable energy goal. (MWH)	1,400,000.0	190,964.0

1-6. RENEWABLE ENERGY/RENEWABLE ENERGY CERTIFICATE PURCHASES IN FY 2008
(New renewable energy is from resources developed after January 1, 1999)

Type of Renewable Energy Purchase (Two rows are provided for each type. Insert additional rows as necessary for purchases of same type for different end-use categories (Goal or Excluded) or purchase terms (Short or Long). Insert rows between each color-coded category.)	Total Amount Purchased (MWH)	Total Amount Purchased (Million Btu)	Annual Cost (Thou. \$)	Portion of Total Purchased from Projects on Federal or Indian Lands	FY 2008 Goal Application Renewable Energy Goal (RE) Energy Efficiency Goal (EE) Credit	Purchase Term (Enter: Short or Long)	End Use Category (Enter: Goal or Excluded)	Total Amount Purchased for Goal Buildings (Billion Btu)	Total Amount Purchased for Excluded Fac. (Billion Btu)
Electricity from <i>New</i> Renewable Source	183,371.8		\$12,011.9	12.0	RE: 100% EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	625.7	0.0
Electricity from <i>New</i> Renewable Source	3,240.7		\$209.4	3,200.0	RE: 100% EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Goal	11.1	
Electricity from <i>New</i> Renewable Source	0.0		\$0.0	0.0	RE: 100% EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
Electricity from <i>Old</i> Renewable Source	21,779.6		\$1,931.3	0.0	RE: Up to 1.5% of total electricity use. EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	74.3	0.0
Electricity from <i>Old</i> Renewable Source	0.0		\$0.0	0.0	RE: Up to 1.5% of total electricity use. EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
RECs from <i>New</i> Renewable Source	190,964.0		\$6,550.0	0.0	RE: 100% EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	651.6	0.0
RECs from <i>New</i> Renewable Source	0.0		\$0.0	0.0	RE: 100% EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
RECs from <i>Old</i> Renewable Source	132,828.7		\$142.8	0.0	RE: Up to 1.5% of total electricity use EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	453.2	0.0
RECs from <i>Old</i> Renewable Source	0.0		\$0.0	0.0	RE: Up to 1.5% of total electricity use EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
Non-Electric Energy from <i>New</i> Renewable Source		0.0	\$0.0	0.0	RE: no contribution to goal (see comment) EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	0.0	0.0
Non-Electric Energy from <i>New</i> Renewable Source		530,777.0	\$5,732.6	0.0	RE: no contribution to goal (see comment) EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Goal	530.8	0.0
Non-Electric Energy from <i>New</i> Renewable Source		0.0	\$0.0	0.0	RE: no contribution to goal (see comment) EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
Non-Electric Energy from <i>Old</i> Renewable Source		471,414.0	\$2,980.0	0.0	RE: no contribution to goal EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Short	Goal	471.4	0.0
Non-Electric Energy from <i>Old</i> Renewable Source		515,490.0	\$11,194.3	0.0	RE: no contribution to goal EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Goal	515.5	0.0
Non-Electric Energy from <i>Old</i> Renewable Source		0.0	\$0.0	0.0	RE: no contribution to goal EE-Credit: Up to 5.4% reduction for short-term and 7.2% reduction for long-term.	Long	Excluded	0.0	0.0
Total Purchases of <i>New</i> Renewable Electricity	186,612.5		\$12,221.2	3,212.0	Eligible Short-Term Purchase				
Total Purchases of <i>New</i> RECs	190,964.0		\$6,550.0	0.0	Goal Building EE Credit (BBtu):	2276.2			
Bonus for Purchases from New Projects on Federal or Indian Land	3,212.0				Eligible Long-Term Purchase				
Total Purchases of <i>Old</i> Renewable Electricity	21,779.6		\$1,931.3	0.0	Goal Building EE Credit (BBtu):	1057.3			
Total Purchases of <i>Old</i> RECs	132,828.7		\$142.8	0.0	Total Goal Building EE Credit (BBtu):	3333.5			
Total Purchases of <i>New</i> Non-Electric Renewable Energy		530,777.0	\$5,732.6		Eligible Short-Term Purchase				
Total Purchases of <i>Old</i> Non-Electric Renewable Energy		986,904.0	\$14,174.3		Excluded Fac. EE Credit (BBtu):	0.0			
Total Purchases for Goal Buildings	532,184.8	1,517,681.0	\$40,752.2		Eligible Long-Term Purchase				
Total Purchases for Excluded Facilities	0.0	0.0	\$0.0		Excluded Fac. EE Credit (BBtu):	0.0			
Total All Purchases	532,184.8	1,517,681.0	\$40,752.2		Total Excluded Fac. EE Credit (BBtu):	0.0			

1-7. GOAL-ELIGIBLE RENEWABLE ELECTRICITY USE AS A PERCENTAGE OF FACILITY ELECTRICITY USE
(Calculated from input above per FEMP Renewable Energy Guidance)

Components of Eligible RE Use	Renewable Electricity Use (MWH)	Total Facility Electricity Use (MWH)	RE as a Percentage of Electricity Use
Eligible Renewable Electricity Total	874,558.3	29,730,478.8	2.9%
New Renewable Electricity (without Bonus)	449,993.5		
Bonus, Federal or Indian Land	75,595.5		
Eligible Old Renewable Electricity	348,969.2		

1-8. ALL RENEWABLE ENERGY USE (INCLUDING NON-ELECTRIC) AS A PERCENTAGE OF FACILITY ELECTRICITY USE (WITHOUT BONUS)
(Calculated from input above for information only)

All Renewable Energy Use (Billion Btu)	Total Facility Electricity Use (Billion Btu)	RE as a Percentage of Energy Use
4,720.0	101,440.4	4.7%

1-8a. ALL RENEWABLE ENERGY PROCURED OR PRODUCED (DOD 25% BY 2025 GOAL)

Renewable Energy Use (Billion Btu)	Electricity Use (Billion Btu)	RE as a Percentage of Energy Use
9,891.1	101,440.4	9.8%

1-9. WATER USE INTENSITY AND COST

Potable Water	Annual Consumption (Million Gallons)	Annual Cost (Thou. \$)	Facility Gross Square Feet (Thou.)	Gallons per Gross Square Foot
Buildings & Facilities Subject to Water Goal	114,627.4	\$225,704.6	1,973,774.2	58.1
Approx. percentage of reported water consumption that is estimated:				Percent
Is the FY 2007 agency water intensity baseline preliminary or final?				Final

PART 2: ENERGY EFFICIENCY IMPROVEMENTS

2-1. DIRECT AGENCY OBLIGATIONS

	FY 2008		Projected FY 2009	
	(Million Btu)	(Thou. \$)	(Million Btu)	(Thou. \$)
Direct obligations for facility energy efficiency improvements, including facility surveys/audits		\$198,323.8		\$418,114.6
Estimated annual savings anticipated from obligations	1,470,360.0	\$24,197.3	3,340,532.6	\$40,667.8

2-2. ENERGY SAVINGS PERFORMANCE CONTRACTS (ESPC)

	Annual savings (Million Btu)	(number/Thou. \$)
Number of ESPC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	883,927.0	16
Investment value of ESPC Task/Delivery Orders awarded in fiscal year.		\$158,762.1
Amount privately financed under ESPC Task/Delivery Orders awarded in fiscal year.		\$154,403.9
Cumulative guaranteed cost savings of ESPCs awarded in fiscal year relative to the baseline spending.		\$222,790.6
Total contract award value of ESPCs awarded in fiscal year (sum of contractor payments for debt repayment, M&V, and other negotiated performance period services).		\$230,688.0
Total payments made to all ESPC contractors in fiscal year.		\$161,075.8

2-3. UTILITY ENERGY SERVICES CONTRACTS (UESC)

	Annual savings (Million Btu)	(number/Thou. \$)
Number of UESC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	595,586.1	38
Investment value of UESC Task/Delivery Orders awarded in fiscal year.		\$97,312.4
Amount privately financed under UESC Task/Delivery Orders awarded in fiscal year.		\$80,374.1
Cumulative cost savings of UESCs awarded in fiscal year relative to the baseline spending.		\$102,040.6
Total contract award value of UESCs awarded in fiscal year (sum of payments for debt repayment and other negotiated performance period services).		\$116,427.3
Total payments made to all UESC contractors in fiscal year.		\$75,843.4

2-4. METERING OF ELECTRICITY USE

FY	Standard Meters		Advanced Meters		Appropriate Buildings	
	Cumulative # of Buildings Metered	Cumulative % of Electricity Metered	Cumulative # of Buildings Metered	Cumulative % of Electricity Metered	# of Appropriate Buildings for Metering	Cumulative % of Buildings Metered
2008	32,120.0	45.8%	10,087.0	13.8%	25,152.0	167.8%
2009 planned	30,775.0	35.7%	12,683.0	32.7%	25,152.0	172.8%
				Percent		
Percentage of agency metering plan milestones met in FY 2008:				100%		

2-5. FEDERAL BUILDING ENERGY EFFICIENCY STANDARDS

	Number of New Building Designs
Total new building designs started since beginning of FY 2007:	449
Total new building designs started since beginning of FY 2007 that are expected to be 30 percent more energy efficient than relevant code, where life-cycle cost	419
Percent	
expected to be 30 percent more energy efficient than relevant code, where life-cycle cost effective:	93%

2-6. TRAINING

	(number)	(Thou. \$)
Number of personnel trained in FY 2008/Expenditure	23,501	\$2,558.5

AGENCY COMPILATION WORKSHEET FOR CREDIT FOR PROJECTS THAT INCREASE SITE ENERGY USE BUT SAVE SOURCE ENERGY

(See http://www.eere.energy.gov/femp/pdfs/sec502e_%20guidance.pdf)

EPACT Goal Subject Buildings

Name of Project Saving Source Energy in Current Fiscal Year (insert additional rows as necessary)	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
	(Million Btu)	(Million Btu)	(Million Btu)
Air Force			
Biomass at Hill AFB UT	23,228.0	80,264.0	57,445.0
Wind at FE Warren AFB WY	7,653.0	26,579.0	18,926.0
Air Force Totals	30,881.0	106,843.0	76,371.0
Army			
Fort Huachuca	5,271.0	5,672.0	4,039.0
Army Totals	5,271.0	5,672.0	4,039.0
Navy			
NSB New London	389,476.0	181,772.0	270,252.3
NSWC Indian Head	69,938.0	245,879.0	312,248.2
NSA Portsmouth	389,187.0	109,145.0	513,038.8
NAVFAC Midwest	175,311.0	272,670.0	660,501.3
Twentynine Palms CA	80,220.0	602,752.0	481,109.4
Navy Totals	1,104,132.0	1,412,218.0	2,237,150.1
TMA			
San Diego Cogeneration Plant	0.0	0.0	214,644.0
TMA Totals	0.0	0.0	214,644.0
EPACT Goal Subject Buildings DoD Totals	1,140,284.0	1,524,733.0	2,532,204.1

EPACT Excluded Facilities - No Submissions

Name of Project Saving Source Energy in Current Fiscal Year (insert additional rows as necessary)	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
	(Million Btu)	(Million Btu)	(Million Btu)
Project No. 1	0.0	0.0	0.0
Project No. 2	0.0	0.0	0.0
Project No. 3	0.0	0.0	0.0
Totals	0.0	0.0	0.0

Department of Defense

List of New Federal Building Designs and Construction

(Note: Only new buildings which began the design phase after the beginning of FY 2007 need to be listed. Buildings for which construction was completed in FY 2007 and after do not need to be listed if they were designed prior to FY 2007.)

New Construction Project Information			Design		Completed New Construction		
Project ID	Building Name	Location (City, State)	Design Started (FY)	Percentage below ANSI/ASHRAE/IESNA Standard 90.1--2004 in terms of energy use	If not at least 30% below ANSI/ASHRAE/IESNA Standard 90.1--2004, will design achieve maximum level of energy efficiency that is life-cycle cost-effective? Yes or No	Date Construction Completed (FY)	In terms of energy use, percentage below ANSI/ASHRAE/IESNA Standard 90.1--2004 achieved
			20??	0%		20??	0%
Air Force							
AGGN063002	C-17 Sheet Metal/Composite Shop	ALTUS, Altus City, OK	2007	30%		2012	
SAKW335780	Combat Communications Maintenance	ANDERSEN, Yigo, Guam	2007	30%		2012	
AJXF103002	NCR Relocation - Administration Facility	ANDREWS, Camp Spring, MD	2007	30%		2010	
AJXF103003	BRAC - Administration Facility	ANDREWS, Camp Spring, MD	2007	30%		2012	
AJXF103003	BRAC - Administration Facility	ANDREWS, Camp Spring, MD	2007	30%		2012	
CRWU048002	Pharmacy	BUCKLEY, Denver, CO	2007	30%		2010	
CRWU073001	BRAC Construct Mississippi Gate Additional Lane	BUCKLEY, Denver, CO	2007	30%		2012	
CYRB093570	BRAC - BULLIS Medical Field Training Complex	CAMP BULLIS, San Antonio, TX	2007	30%		2012	
CYRB093570	BRAC - BULLIS Medical Field Training Complex	CAMP BULLIS, San Antonio, TX	2007	30%		2012	
CZQZ073006	Add/Alter C-130 Hangar	CANNON, Clovis, NM	2007	30%		2012	
CZQZ093002	ADAL Child Development Center	CANNON, Clovis, NM	2007	30%		2012	
EEPZ053002	Child Development Center	COLUMBUS, Columbus, MS	2007	30%		2012	
EEPZ073002A	Addition to Mission Support Complex, PH II	COLUMBUS, Columbus, MS	2007	30%		2010	
LKTC093101	UAS Operations Facility	CREECH, Indian Springs, NV	2007	30%		2012	
LKTC093103	UAS Dining Hall	CREECH, Indian Springs, NV	2007	30%		2012	
FBNV053002	CSAR EC-130 Maintenance Hangar/AMU	DAVIS-MONTHAN, Tucson, AZ	2007	30%		2012	
FBNV079004	BRAC - Construct TSSC Storage Facility (3546)	DAVIS-MONTHAN, Tucson, AZ	2007	30%		2012	
FJXT993002	Fitness Center	DOVER, Dover, DE	2007	30%		2010	
FSPM063509A	Wing Replacement, Sections 1 & 2	EDWARDS, Lancaster, CA	2007	30%		2012	
FTFA053021	F-35 Add/Alter 53RD Joint Reprogramming Facility	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA073914	BRAC - F-35 (JSF) Renovate Warehouse B1404 (3798)	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA073915	BRAC - F-35 (JSF) Renovate Maintenance Dock B1318	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA083941	BRAC - Dental Clinic Replacment	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA083950	BRAC - F-35 Integrated TRNG Center Academics BLG	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA083952	F-35 Squadron Operations/AMU/Hangar	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA093916	BRAC - Eglin MCP Child Development Center	EGLIN, Valpariso, FL	2007	30%		2012	
FTFA093953	BRAC - JSF F-35 Tech Training Dining Facility	EGLIN, Valpariso, FL	2007	30%		2012	
FXBM003007	Base Engineer Admin Facility	ELLSWORTH, Box Elder, SD	2007	31%		2012	
FXSB073008B	F-22 Corrosion Control / LO MX / Composite RPR F	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073010	F-22 Flight Simulator	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073014	F-22 Jet Engine Inspection and Maintenance Facility	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073015	F-22 Field Training Detachment	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073018	F-22 8-Bay Aircraft Shelter	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073020	F-22 Squad Operations / AMU / 6-Bay Hangar	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB073027	F-22 7-Bay Aircraft Shelter	ELMENDORF, Anchorage, AK	2007	30%		2012	
FXSB083009	Replace Alaska Regional PME Center	ELMENDORF, Anchorage, AK	2007	30%		2012	
GJKZ880015	Physiological Training Facility	FAIRCHILD, Spokane, WA	2007	30%		2010	
MPLS083561	BRAC - FSH METC Dining Facilities (2 @ 2400 PN), INCR 1	FORT SAM HOUSTON, San Antonio, TX	2007	30%		2012	
MPLS083562	BRAC - FSH METC Student Dorm 1 (1200PN)	FORT SAM HOUSTON, San Antonio, TX	2007	30%		2012	
MPLS083563	BRAC - FSH METC Student Dorm 2 (1200PN)	FORT SAM HOUSTON, San Antonio, TX	2007	30%		2012	
MPLS103567	BRAC - FSH METC Physical Fitness	FORT SAM HOUSTON, San Antonio, TX	2007	30%		2012	
GHLN053034	BRAC Construct Overwatch ESF/GOV/POV Ck, Canopy and GH	FRANCIS E WARREN, Cheyenne, WY	2007	30%		2012	
GHLN063010	Renovate Historic Dormitory	FRANCIS E WARREN, Cheyenne, WY	2007	43%		2012	
JCGU043001	ADAL Fitness Center	GOODFELLOW, San Angelo, TX	2007	30%		2012	
JFSD200609	BRAC - Convert Hangar for UAV Control	GRAND FORKS, Grand Forks, ND	2007	30%		2012	
MXRD013000	Construct Acquisition Mgt Facility, Phase I	HANSCOM, Bedford, MA	2007	30%		2012	
KRSM043013	Munition Maintenance Facility	HILL, Ogden, UT	2007	30%		2010	
KRSM043029	F-22 Heavy Maintenance Facility and Composite Back Shop	HILL, Ogden, UT	2007	30%		2011	
KRSM070070	BRAC - Renovate LANTIRN CIRF, Building 584 & 578	HILL, Ogden, UT	2007	30%		2012	
KRSM073004	DMTR Aircraft Power Systems Repair Facility	HILL, Ogden, UT	2007	30%		2010	
KRSM073011	Hydraulic Flight Control Facility	HILL, Ogden, UT	2007	30%		2010	

KRSM083008	BRAC - Alter BLDG. 295 for BRAC Engine CIRF	HILL, Ogden, UT	2007	30%		2012
KWRD083002	F-22 Alter Hangar Bay for LO/Composite Repair Facility	HOLLOMAN, Alamogordo, NM	2007	30%		2012
KWRD093003	F-22 Add/Alter Jet Engine Maintenance Shop	HOLLOMAN, Alamogordo, NM	2007	30%		2012
MHMV053106	Construct PJ/CRO Logistics Bldg	KIRTLAND, Albuquerque, NM	2007	30%		2012
MPLS073510A	BRAC - Headquarters Admin Center	LACKLAND, San Antonio, TX	2007	30%		2012
MPLS081501	BRAC ADAL B5075 for Defense Courier Service	LACKLAND, San Antonio, TX	2007	30%		2012
MPLS081502	BRAC Construct Equipment Warehouse Tops in Blue	LACKLAND, San Antonio, TX	2007	30%		2012
MPLS083737R	BMT Recruit Dormitory	LACKLAND, San Antonio, TX	2007	30%		2012
MSET023002	Large Vehicle Inspection Station	LAKENHEATH, Brandon, UK	2007	30%		2012
ACC093030	UAS Field Training Unit Operations Complex	LANGLEY, Hampton, VA	2007	30%		2012
ACC093035	UAS Field Training Unit Operations Complex	LANGLEY, Hampton, VA	2007	30%		2012
MXDP073000	Consolidated Student Activity Center/Library	LAUGHLIN, Del Rio, TX	2007	30%		2012
NKAK083009	BRAC - C-130 Maintenance Facility	LITTLE ROCK, Jacksonville, AR	2007	30%		2012
NKAK943002	Education Center Complex	LITTLE ROCK, Jacksonville, AR	2007	30%		2012
NVZR063713B	CENTCOM Joint INTE Center, Ph III	MACDILL, Tampa, FL	2007	22%	Yes	2012
NVZR053714B	Replace USCENCOM Headquarters	MACDILL, Tampa, FL	2007	30%		2012
NVZR923703	SOCCENT Headquarters & Commandant Facilities	MACDILL, Tampa, FL	2007	34%		2012
PQWY103000	C-17 ADAL Flight Simulator	MCCHORD, Tacoma, WA	2007	30%		2010
PRQE075110P	MXG Consolidation and Forward Logistics Ph1	MCCONNELL, Wichita, KS	2007	30%		2012
QJVF062006	Dormitory (144 RM)	MINOT, Minot, ND	2007	30%		2012
QSEU083019R	BRAC - Dormitory, 120-PN(A-10)	MOODY, Valdosta, GA	2007	30%		2012
QSEU093016	BRAC - TF-34 Engine Shop (A 10 BD)	MOODY, Valdosta, GA	2007	30%		2012
QSEU093022	BRAC - Child Development Center (A-10)	MOODY, Valdosta, GA	2007	30%		2012
QSEU093026	BRAC - Add/Alter Dental Clinic	MOODY, Valdosta, GA	2007	30%		2012
QSEU093027	BRAC - Transient Lodging Facility	MOODY, Valdosta, GA	2007	30%		2012
QSEU093028	BRAC - Visiting Quarters	MOODY, Valdosta, GA	2007	30%		2012
QSEU093029	BRAC - Community Activity Center	MOODY, Valdosta, GA	2007	30%		2012
RKMF083001	JTAC Virtual Training Facility	NELLIS, Las Vegas, NV	2007	30%		2012
RKMF083011	F-16 Aggressor Squadron Operations	NELLIS, Las Vegas, NV	2007	30%		2012
RKMF093016	F-16 Aggressor Hanger/Aircraft Maintenance Unit	NELLIS, Las Vegas, NV	2007	30%		2012
SAKW059099	NW Field Technical Training Facility	NORTHWEST GUAM	2007	30%		2012
SGBP023004	ADAL Intelligence Squadron Facility	OFFUTT, Bellview, NB	2007	30%		2012
SXHT013006A	Child Development Center	PATRICK, Cocoa Beach, FL	2007	30%		2012
TYFR043053	Joint Mobility Processing Center	RAMSTEIN, Ramstein, Germany	2007	30%		2012
USAFE083000	Tactical Leadership Program Dorm (400 RM)	RAMSTEIN, Ramstein, Germany	2007	30%		2012
TYMX063002	BRAC Admin Center (CPO)	RANDOLPH, San Antonio, TX	2007	21%	Yes	2010
TYMX063004	BRAC IFF BDDN Hanger 6 RENO	RANDOLPH, San Antonio, TX	2007	21%	Yes	2010
TYMX063002	BRAC - Administrative Center	RANDOLPH, San Antonio, TX	2007	30%		2012
TYMX063002	BRAC - Administrative Center	RANDOLPH, San Antonio, TX	2007	30%		2012
TYMX073710	BRAC - Pensacola USAF Navigator Training Hangar	RANDOLPH, San Antonio, TX	2007	30%		2012
TYMX073720	BRAC - Pensacola CSO Applied Instruction Facility	RANDOLPH, San Antonio, TX	2007	30%		2012
TYMX073730	BRAC - CSO Bachelor Housing	RANDOLPH, San Antonio, TX	2007	30%		2012
ULDF063001	BRAC - Add to and alter Information Directorate Lab	ROME LABORATORY, Rome, NY	2007	30%		2012
GLEN063002P	Space Test and Evaluation Facility, PHASE 2	SCHRIEVER, Colorado Springs, CO	2007	35%		2012
VDYD063001	Security Forces Operations	SCOTT, Belleville, IL	2007	30%		2012
VDYD953021B	Child Development Center	SCOTT, Belleville, IL	2007	30%		2012
VKAG063014	BRAC - Construct Flightline Kitchen	SEYMOUR JOHNSON, Goldsboro, NC	2007	30%		2012
VLSB043001R	Physical Fitness Center	SHAW, Sumter, SC	2007	30%		2012
VLSB073007	BRAC Fitness Center	SHAW, Sumter, SC	2007	30%		2012
VLSB073007	BRAC Fitness Center	SHAW, Sumter, SC	2007	30%		2012
VLSB073009	BRAC Child Development Center	SHAW, Sumter, SC	2007	30%		2012
VLSB073009	BRAC Child Development Center	SHAW, Sumter, SC	2007	30%		2012
VLSB073010	BRAC Transient Lodging Facility	SHAW, Sumter, SC	2007	30%		2012
VLSB073010	BRAC Transient Lodging Facility	SHAW, Sumter, SC	2007	30%		2012
WWYK083004	Medical Facility	TINKER, Midwest City, OK	2007	10%	Yes	2012
WWYK043008	Consolidated Fuel Overhaul, Repair and Test Facility	TINKER, Midwest City, OK	2007	30%		2010
WWYK063012	Aircraft Hangar	TINKER, Midwest City, OK	2007	30%		2011
XLWU023001	FITNESS CENTER	TYNDALL, Panama City, FL	2007	31%		2012
XTLF063301	Fuel System Maintenance Hangar	VANCE, Enid, OK	2007	30%		2012
UHHZ023005	Aircraft Hangar	WARNER ROBINS, Warner Robins, GA	2007	30%		2011
UHHZ053002	Command Post Facility	WARNER ROBINS, Warner Robins, GA	2007	30%		2010
UHHZ983000	Aircraft Component Repair Facility	WARNER ROBINS, Warner Robins, GA	2007	30%		2010
YWHG031001	Consolidated Communications Facility	WHITEMAN, Knob Noster, MO	2007	14%	Yes	2012
ZHTV083102	BRAC - Alter Materials Laboratory (HSG/YA Labs)	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012
ZHTV083104	BRAC - Radiation Calibration Facility	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012
ZHTV083108	BRAC - AFRL/HE (Brooks)	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012
ZHTV083111	BRAC - USAFSAM (INC 2)	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012

ZHTV083113	BRAC - Add to and Alter Sensors Laboratory (AFRL/SN)	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012
ZHTV083114	BRAC - Pipeline Dormitory	WRIGHT PATTERSON, Fairborn, OH	2007	30%		2012
AJXF059145	BRAC - HQ ANG and Readiness Center Addition	MARYLAND, MD	2007	30%		2010
ATQZ039181	(a)CE Pavements and Grounds Facility	FORT WAYNE, IN	2007	30%		2009
AXQD09011	Add to and Alter Fire Crash/Rescue Station	WESTFIELD, MA	2007	n/a	Yes	2009
AXQD059345	BRAC - Explosive Ordnance Disposal Facility	WESTFIELD, MA	2007	30%		2012
AXQD059359	BRAC - Air Sovereignty Alert (ASA) Complex	WESTFIELD, MA	2007	30%		2011
CURZ069220	Security Forces and Communications	BURLINGTON, VT	2007	30%		2012
CURZ079497	Regional Mission Training Center	BURLINGTON, VT	2007	30%		2010
FWJH059032	Replace Crash/ Fire Station Facility	HOUSTON, TX	2007	30%		2012
FWJH069090	Predator Operations Complex	HOUSTON, TX	2007	30%		2008
FWJH069154	TFI - ASOS Beddown	HOUSTON, TX	2007	30%		2012
FXSB069007	BRAC Replicate C-17 Engine Shop	ANCHORAGE, AK	2007	30%		2009
FXSB069016	BRAC-Aircraft Maintenance Complex	ANCHORAGE, AK	2007	30%		2009
HKRZ059318	BRAC- A-10 Munitions Load Crew Training Facility	FT SMITH, AR	2007	30%		2009
HKRZ069001	BRAC - A-10 Fuel Cell and Corrosion Control Hangar	FT SMITH, AR	2007	30%		2009
JKSE059009	BRAC - Squadron Operations Facility	GREAT FALLS, MT	2007	30%		2009
JLWS019053	Replace Aircraft Maintenance Hangar	WILMINGTON, DE	2007	30%		2010
JLWS019057	Replace C130 Aircraft Maintenance Shops	WILMINGTON, DE	2007	30%		2012
JLWS069047	Information Operations Squadron (IOS) Facility	WILMINGTON, DE	2007	30%		2012
KKGA069089	Predator Operations Complex	FARGO, ND	2007	30%		2009
KNMD059350	BRAC-Flight Simulator Training Facility	HONOLULU, HI	2007	30%		2012
LKLW069103	TFI- Air Support Operations Squadron (ASOS) Beddown	ANNVILLE, PA	2007	30%		2009
LUXC001390	Replace Base Civil Engineer Maintenance Complex	SIOUX FALLS, SD	2007	30%		2010
NKAK049051	Replace Engine Shop	LITTLE ROCK, AR	2007	30%		2012
NLZG029199	Security Forces and Comm Training Complex	COLUMBUS, OH	2007	30%		2010
PJVY009074	C-5 Fuel Cell Maintenance Hangar and 262d Information Warfare Aggressor Squadron Facility	MARTINSBURG, WV	2007	30%		2010
PQWY059045	BRAC - STAMP Relocation	TACOMA, WA	2007	30%		2012
PRQE059126	BRAC - STRAPP Relocation	WICHITA, KS	2007	30%		2012
PRQE059348	BRAC - STRAPP Relocation	WICHITA, KS	2007	30%		2012
PSXE069161	MILSTAR Beddown-Relocate Base Access Road	KNOXVILLE, TN	2007	30%		2009
PSXE999134	Replace Squadron Operations	KNOXVILLE, TN	2007	30%		2012
RQLH069035	BRAC- Relocate 214 EIS Operations	NEW ORLEANS, LA	2007	30%		2009
SZCQ989023	Replace Ops and Training Facility	PORTSMOUTH, NH	2007	30%		2010
UCTL919637	Replace Fire Station	RENO, NV	2007	30%		2012
VUBV059124	Smoky Hill Range Support Facility Complex	SALINA, KS	2007	30%		2012
VUBV069101	TFI- Air Support Ops Squadron Beddown(ASOS)	SALINA, KS	2007	30%		2009
XDOU069146	Troop Training Quarters	SAVANNAH, GA	2007	30%		2012
YZEU069106	TFI-ASOS Beddown	OKLAHOMA CITY, OK	2007	30%		2012
ACC083006	Air Support Operations Squadron Complex	LANGLEY, Hampton, VA	2008	30%		2012
AJXF103004	Administration Facility Addition	ANDREWS, Camp Spring, MD	2008	30%		2010
BAEY041006R	Child Development Center	BEALE, Marysville, CA	2008	30%		2011
DKFX093008	C-17 Flight Simulator Addition	CHARLESTON, Charleston, SC	2008	30%		2012
DKFX963008	Child Development Center	CHARLESTON, Charleston, SC	2008	30%		2012
EEPZ053002	Child Development Center	COLUMBUS, Columbus, MS	2008	30%		2012
EEPZ073002A	Addition to Mission Support Complex	COLUMBUS, Columbus, MS	2008	30%		2012
LKTC093106	UAS Flight Simulator and Academics Facility	CREECH, Indian Springs, NV	2008	30%		2012
LKTC093107	UAS 432 Wing HQ Mission Support Facility	CREECH, Indian Springs, NV	2008	30%		2012
FTFA073901	BRAC - MC CNST JSF Munitions MX Phase I	EGLIN, Valporiso, FL	2008	30%		2012
FTFA073916	BRAC - F-35 (JSF) Renovate Maintenance Dock B1344(3797)	EGLIN, Valporiso, FL	2008	30%		2012
FTFA083951	F-35 Student Dormitory	EGLIN, Valporiso, FL	2008	30%		2012
FTFA083953	BRAC - JSF Marine Corps/Navy Hangar (3548)	EGLIN, Valporiso, FL	2008	30%		2012
FTFA913008	Child Development Center	EGLIN, Valporiso, FL	2008	30%		2010
FXSB073013	F-22 Aerospace Ground Equipment Shop	ELMENDORF, Anchorage, AK	2008	30%		2012
FXSB073016	F-22 7-Bay Aircraft Shelter	ELMENDORF, Anchorage, AK	2008	30%		2012
CNBC083002	BRAC - TRI-Service Research Facility	FORT SAM HOUSTON, San Antonio, TX	2008	30%		2012
MPLS083560A	BRAC - FSH METC Medical Instruction Facilities (INCR 1)	FORT SAM HOUSTON, San Antonio, TX	2008	30%		2012
MPLS083560B	BRAC - FSH METC Medical Instruction Facilities (INCR 2)	FORT SAM HOUSTON, San Antonio, TX	2008	30%		2012
MPLS093564	BRAC - FSH METC Student Dorm 3 (1200PN)	FORT SAM HOUSTON, San Antonio, TX	2008	30%		2012
GHLN053039	Renovate Historic Dormitories	FRANCIS E WARREN, Cheyenne, WY	2008	30%		2012
JFSD200502	Control Tower/Rapcon	GRAND FORKS, Grand Forks, ND	2008	30%		2012
KNMD093000	DGS INTEL Squadron Operations Facility	HICKAM, Honolulu, HI	2008	30%		2012
KWRD093004	F-22 Add/Alter Aircraft Maintenance Unit	HOLLOMAN, Alamogordo, NM	2008	30%		2012

KWRD093005	F-22 Add/Alter Flight Simulator Facility	HOLLOMAN, Alamogordo, NM	2008	30%		2012
KWRD963003	F-22 Aerospace Ground Equipment (AGE) Facility	HOLLOMAN, Alamogordo, NM	2008	30%		2012
MHMV043103	Construct PJ/CRO Rescue & Recovery Training Center	KIRTLAND, Albuquerque, NM	2008	30%		2012
MHMV053096	BRAC - Kirtland Battlespace Environment Lab	KIRTLAND, Albuquerque, NM	2008	30%		2012
MHMV053096	BRAC - Kirtland Battlespace	KIRTLAND, Albuquerque, NM	2008	30%		2012
MPLS083115	BRAC ADAL Lak Tech Training AS IAAFA Airfield training	LACKLAND, San Antonio, TX	2008	30%		2012
MSET083003	Small Diameter Bomb - Storage Igloo	LAKENHEATH, Brandon, UK	2008	30%		2012
MSET963014	F-15C Squad OPS/AMU (493 FS)	LAKENHEATH, Brandon, UK	2008	30%		2012
ACC093010	Joint Air Ground Center	LANGLEY, Hampton, VA	2008	30%		2012
ACC083001	Air Support Operations Squadron Complex	LANGLEY, Hampton, VA	2008	31%		2012
NVZR063715A	Explosive Ordnance Disposal Facility	MACDILL, Tampa, FL	2008	30%		2012
NZAS013003A	Community Activity Center	MALMSTROM, Great Falls, MT	2008	30%		2012
PNQS099362	ASBC CATM Training Facility	MAXWELL, Montgomery, AL	2008	30%		2012
PTFL083004	USAF EC JIEDDO Training Facility	MCGUIRE, Cookstown, NJ	2008	30%		2010
MWHL080003	Add/Alter Operations & Technical Facility	MENWITH HILL, Harrogate, UK	2008	30%		2012
TYFR043059	Dormitory - 128 RM	RAMSTEIN, Ramstein, Germany	2008	30%		2012
VLSB073011	BRAC Visiting Officers Quarters	SHAW, Sumter, SC	2008	30%		2012
VLSB073011	BRAC Visiting Officers Quarters	SHAW, Sumter, SC	2008	30%		2012
VLSB093003	BRAC Renovate HQ Third Army Dormitory 401	SHAW, Sumter, SC	2008	30%		2012
XLWU063009	1 AF AFFOR Center, PH 3	TYNDALL, Panama City, FL	2008	30%		2012
XQPZ060111	Upgrade Academic Facility, Phase V	USAF ACADEMY, Colorado Springs, CO	2008	30%		2012
XQPZ950311	Upgrade Academic Facility, Ph 4B	USAF ACADEMY, Colorado Springs, CO	2008	30%		2012
ZHTV083101	BRAC - Alter Acquisition Mgt Fac (HQ HSG/YA & Fixed Wing)	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
ZHTV083105	BRAC - AFIOH Facility	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
ZHTV083106	BRAC - AFRL/HE (Mesa)	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
ZHTV083110	BRAC - USAFSAM Consult Service	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
ZHTV083111	BRAC - USAFSAM	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
ZHTV083118	BRAC - Dining Facility	WRIGHT PATTERSON, Fairborn, OH	2008	30%		2012
AQRC039059	Operations and Training Facility	PLEASANTVILLE, NJ	2008	30%		2012
AQRC059017	Munitions Administrative Facility	PLEASANTVILLE, NJ	2008	30%		2012
AQRC069153	TFI ASOS Beddown,	PLEASANTVILLE, NJ	2008	30%		2010
ATQZ049049	Aircraft Ready Shelters /Fuel Fill Stands	FORT WAYNE, IN	2008	30%		2012
DPEZ019148	TFI - C-130 Squadron Operations Facility	CHEYENNE, WY	2008	30%		2012
FBNV069124	TFI - Predator Beddown - FOC	TUCSON, AZ	2008	30%		2012
FFAN079065	Relocate Avionics and ECM Pod Shops	DES MOINES, IA	2008	30%		2012
FMKM079051	Replace Storage Facilities	DULUTH, MN	2008	30%		2012
FXSB069017	BRAC-Pararescue Operations Facility	ANCHORAGE, AK	2008	30%		2010
FXSB069018	BRAC-Operations and Training Facility	ANCHORAGE, AK	2008	49%		2012
FXSB069100	BRAC-Medical Training Facility	ANCHORAGE, AK	2008	38%		2012
FXSB069105	BRAC-Add to Aerial Port	ANCHORAGE, AK	2008	30%		2012
FXSB093016	BRAC-Aircraft Support Equipment Shop	ANCHORAGE, AK	2008	30%		2012
FXSB093017	BRAC-Construct Training Fire Station	ANCHORAGE, AK	2008	30%		2012
FXSB093022	BRAC-Fuel Cell/Corrosion Control Complex	ANCHORAGE, AK	2008	30%		2012
FXSB093034	BRAC-Vehicle Maintenance Complex	ANCHORAGE, AK	2008	30%		2012
HAAW069167	TFI- Reaper IOC/FOC Beddown	SYRACUSE, NY	2008	30%		2012
HAYW069174	Construct ECM Pod Shop	FRESNO, CA	2008	30%		2012
HTUV059003	Security Forces CATM and CATS	MILWAUKEE, WI	2008	31%		2012
KNMD069208	TFI - F-22 LO/Composite Repair Facility	HONOLULU, HI	2008	30%		2012
LYBH009131	Aircraft Maintenance Hangar and Shops	CHARLESTON, WV	2008	30%		2009
NTEA969576	Communications Training Complex	CHATTANOOGA, TN	2008	30%		2012
PBXP069219	TFI - RED HORSE Beddown	MANSFIELD, OH	2008	30%		2012
PJMS959554	Replace Fire Station	BALTIMORE, MD	2008	30%		2012
TWLR069142	Special Operations Training Facility	NORTH KINGSTOWN, RI	2008	30%		2009
WAAR009098	Combat Communications Training Facility	SPRINGFIELD, OH	2008	30%		2012
WEFM069122	235th Air Traffic Control Squadron Facility	ALBEMARLE, NC	2008	30%		2010
WKVB029123	Replace Pararescue Training Facility,	WEST HAMPTON BEACH, NY	2008	30%		2010
WKVB079038	Replace Pararescue Ops Facility, PH2	WEST HAMPTON BEACH, NY	2008	30%		2012
XGFG059041	Communications and Audio Visual Training Facility	MADISON, WI	2008	30%		2012
AJXF049104	Replace Munitions Maintenance and Storage Complex	MARYLAND, MD	2009	30%		2012
DDPM009116	Security Forces Training Facility	Fort Worth, TX	2009	30%		2012
FKNN089019	Replace Aircraft Maintenance Hangar and Shops	BANGOR, ME	2009	30%		2012
FMKM059001	Replace Fuel Cell Hangar	DULUTH, MN	2009	30%		2012

FWJH059084	BRAC-Relocate 272 Engineering Installation Squadron	HOUSTON, TX	2009	30%		2012	
HFHA069130	TFI - Predator LRE Beddown	SIERRA VISTA, AZ	2009	30%		2012	
JTVE039116	Relocate Munitions Storage Complex	GULFPORT, MS	2009	30%		2012	
KNMD069209	TFI - F-22 Hangar, Squadron Operations and AMU	HONOLULU, HI	2009	30%		2012	
LUXC079089	Aircraft Ready Shelters/AMU	SIOUX FALLS, SD	2009	30%		2012	
LUXC079133	Conventional Munitions Storage Complex	SIOUX FALLS, SD	2009	30%		2012	
LYBH009134	Fuel System/Corrosion Control Hangar	CHARLESTON, WV	2009	30%		2012	
SCLA069165	TFI - Predator Beddown - FTU/LRE Site	SOUTHERN CALIFORNIA	2009	30%		2012	
SPBN079049	TFI - Distributed Common Ground Station FOC Beddown	FALMOUTH, MA	2009	30%		2012	
TWLR039186	Construct Air Traffic Control Tower	NORTH KINGSTOWN, RI	2009	30%		2012	
PJMS909928	Replace Composite Training Facility - Building 1080	BALTIMORE, MD	2007 DSG Hold	30%		2012	
XDOU949500	C-130 Squadron Operations Facility	SAVANNAH, GA	2007 DSG Hold	30%		2012	

Army

46622	General Instruction Building	Presidio of Monterey, California	2007	30%			
67468	Range Control Facility	Fort Hunter Liggett, California	2007	30%			
62812	Indoor Range	Fort Carson, Colorado	2007	30%			
90045	Army National Guard Readiness Center	Niantic, Connecticut	2007	30%			
60241	Joint Personal Effects Depot	Dover Air Force Base, Delaware	2007	30%			
68264	Southern Command Headquarters Facility	Miami Doral, Florida	2007	30%			
120250	Army National Guard Aviation Support Facility	Jacksonville, Florida	2007	30%			
61920	Brigade Complex-Headquarters	Hunter Army Air Field, Georgia	2007	30%			
68863	Barracks Complex	Hunter Army Air Field, Georgia	2007	30%			
67648	Simulations Training Facility	Fort Benning, Georgia	2007	30%			
65041	Trainee Barracks Complex	Fort Benning, Georgia	2007	30%			
64462	Reception Station, Phase 1	Fort Benning, Georgia	2007	30%			
50950	Barracks Complex	Wheeler Army Air Field, Hawaii	2007	30%			
59557	Barracks Complex	Schofield Barracks, Hawaii	2007	30%			
61873	Barracks Complex	Schofield Barracks, Hawaii	2007	30%			
64316	Barracks Complex	Fort Leavenworth, Kansas	2007	30%			
55118	Digital Multipurpose Range Complex	Fort Riley, Kansas	2008	30%			
63483	Indoor Range	Fort Campbell, Kentucky	2006	30%			
64903	Vehicle Maintenance Shop	Fort Campbell, Kentucky	2007	30%			
67577	Army Reserve Center	Butte, Montana	2007	30%			
67430	Combined Maintenance Facility	Fort Dix, New Jersey	2006	30%			
65796	Brigade Complex-Barracks/Operations	Fort Drum, New York	2006	30%			
65797	Brigade Complex Maintenance Facility	Fort Drum, New York	2006	30%			
65795	Brigade Complex-Company Operations	Fort Drum, New York	2006	30%			
67433	Army Reserve Center	Fort Drum, New York	2007	30%			
65558	Student Barracks	Fort Bragg, North Carolina	2007	30%			
63437	Indoor Range	Fort Bragg, North Carolina	2007	30%			
410030	Army National Guard Readiness Center	Ontario, Oregon	2007	30%			
420913	Army National Guard Field Maintenance Shop Stryker Brigade Combat Team	Graterford, Pennsylvania	2008	30%			
420189	Army National Guard Field Maintenance Shop, Add/Alter Stryker Brigade Combat Team	Philadelphia, Pennsylvania	2008	30%			
420191	Army National Guard Readiness Center, Add/Alter Stryker Brigade Combat Team	Lebanon, Pennsylvania	2008	30%			
420199	Army National Guard Readiness Center, Add/Alter Stryker Brigade Combat Team (SBCT)	Hanover, Pennsylvania	2008	30%			
420190	Army National Guard Readiness Center, Add/Alter Stryker Brigade Combat Team (SBCT)	Kutztown, Pennsylvania	2008	30%			
420181	Army National Guard Readiness Center Stryker Brigade Combat Team (SBCT)	Army National Guard, Huntingdon	2008	30%			
420359	Army National Guard Readiness Center Add/Alter Stryker Brigade Combat Team (SBCT)	Hazelton, Pennsylvania	2008	30%			
420180	Army National Guard Readiness Center Stryker Brigade Combat Team (SBCT)	Gettysburg, Pennsylvania	2008	30%			
420220	Army National Guard Readiness Center Stryker Brigade Combat Team (SBCT)	Carlisle, Pennsylvania	2008	30%			
420183	Army National Guard Readiness Center Stryker Brigade Combat Team (SBCT)	East Fallowfield Township, Pennsylvania	2008	30%			
420223	Army National Guard Readiness Center, Alteration Stryker Brigade Combat Team (SBCT)	Philadelphia, Pennsylvania	2008	30%			

420198	Army National Guard Readiness Center Stryker Brigade Combat Team (SBCT)	Holidaysburg, Pennsylvania	2008	30%			
68793	Barracks Complex	Fort Hood, Texas	2008	30%			
66824	Battle Command Training Center, Phase 1	Fort Sam Houston, Texas	2007	30%			
66690	Maneuver Systems Sustainment Center, Phase 2	Red River Army Depot, Texas	2007	30%			
	Army Reserve Center	Naval Air Station, Joint Reserve Base, Fort Worth, Texas	2007	30%			
43088	Digital Multipurpose Range Complex	Yakima Training Center	2006	30%			
63327	Indoor Range	Fort Lewis, Washington	2007	30%			
65933	Brigade Complex, Increment 2	Fort Lewis, Washington	2007	30%			
67432	Regional Medical Training Facility	Fort McCoy, Wisconsin	2007	30%			
560992	Army National Guard Qualification Training Range	Camp Guernsey, Wyoming	2007	30%			
	Aviation Task Force Complex, Phase 2	Fort Wainwright, Alaska	2008	30%			
66011	Forensic Laboratory Expansion	Fort Gillem, Georgia	2008	30%			
60555	Information Systems Facility	Wiesbaden, Germany	2008	30%			
57179	Regional SATCOM Support Center	Wheeler AFB, Hawaii	2007	30%			
65504	Child Development Center	Fort Knox, Kentucky	2008	30%			
58625	SATCOM Facility	Fort Detrick, Maryland	2007	30%			
61470	Access Control Point	Detroit Arsenal, Michigan	2007	30%			
68815	Child Development Center	Fort Leonard Wood, Missouri	2008	30%			
65202	Company Headquarters Building	Fort Bragg, North Carolina	2007	30%			
53389	Igloo Storage, Installation	McAlester, Oklahoma	2008	30%			
58350	High Explosive Magazine, Installation	McAlester, Oklahoma	2008	30%			
64608	Fire Station/MP Station Biggs	Fort Bliss, Texas	2008	30%			
68779	Training Aids Support Center	Fort A.P. Hill, Virginia	2008	30%			

Navy

P266	Provide T-6 Solo Capable Outlying Landing	NAS WHITING FLD MILTON FL SUMMERDALE, ALABAMA	2009	Each of these projects have LEED/EPAAct budget requests. Policy on all projects is to design to maximum life cycle cost effective efficiency reduction that the final budget will support	NO	2010	
P447	Aircraft Maint. Hangar	MCAS YUMA AZ	2009	Unknown till design complete	YES	2010	
P600	Naval Operational Support Center (NOSC) reserves	NAF EL CENTRO DET, PHOENIX AZ	2009	Unknown till design complete	YES	2010	
P928	Waterfront Development Phase 2	NAVSUPPACT BAHRAIN	2009	Unknown till design complete	YES	2010	
P550	FIRE STATION - RENOVATION	BRIDGEPORT, CA	2009	Unknown till design complete	YES	2010	
P543	Comm/Elec Shop - Addition	BRIDGEPORT, CA	2009	Unknown till design complete	YES	2010	
P1012	ANGLICO OPERATIONS COMPLEX	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1016	RECON BN OPERATIONS COMPLEX	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1019	Counter Battery Radar Facility	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1040	Expansion of SRTTP to 7.5 MGD	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1044	Conveyance/Water Treatment Incr 1 OF 2	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1045	New Potable Water Conveyance incr 1 of 2	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1048	Electrical Upgrades	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1067	BEQ - Las Flores	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1069	Recruit Barracks - Edson Range	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P107	Aviations transmitter/receiver site	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1084	ENLISTED DINING FACILITY (Chappo)	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1093	Communications upgrades	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P532	ARMORY, 1ST MARDIV	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P637	Infantry Squad Defense Range	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
107	Aviation Transmitter/Receiver Site	CAMP PENDLETON, CA	2009	Unknown till design complete	NO	2010	
532	Armory, 1st MARDIV	CAMP PENDLETON, CA	2009	Unknown till design complete	NO	2010	
610	Recruit Marksmanship Training Facility	CAMP PENDLETON, CA	2009	Unknown till design complete	NO	2010	
1029	WFTBn Support Facilities - Edson Range	CAMP PENDLETON, CA	2009	Unknown till design complete	NO	2010	
P1029	WFTBn Support Facilities - Edson Range	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1086	Recruit Field Barracks	CAMP PENDLETON, CA	2009	Unknown till design complete	NO	2010	
P1033	Enlisted Dining Facility - Edson Range	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P1043	Tertiary Treatment/Conveyance (Incr.1)	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
P610	Recruit Marksmanship Training Facility	CAMP PENDLETON, CA	2009	Unknown till design complete	YES	2010	
126	Station Comm. Fac. and Infrastructure	TWENTYNINE PALMS, CA	2009	Unknown till design complete	NO	2010	
P129	Elec. Power Plant/Co-Gen/Gas Turbine	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
173	Armory - 1st Tanks	TWENTYNINE PALMS, CA	2009	Unknown till design complete	NO	2010	
P171	Laydown Site Work - North Mainside	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P930	Combat Vehicle Repair Facility	MCLB BARSTOW	2009	Unknown till design complete	YES	2010	
P294	Recruit Barracks	MCRD SAN DIEGO, CA	2009	Unknown till design complete	YES	2010	
P296	Mess Hall Expansion	MCRD SAN DIEGO, CA	2009	Unknown till design complete	YES	2010	
P049	Marine Reserve Center Addition	NAS LEMOORE CA	2009	Unknown till design complete	YES	2010	
P750	Rotary Hangar	NAVBASE CORONADO, CA	2009	Unknown till design complete	YES	2010	
P129	Public Works Shops Consolidation	NAVBASE POINT LOMA, CA	2009	Unknown till design complete	YES	2010	
P101	Maintenance Shop - Wheeled	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P103	Maintenance Sunshades - Wheeled	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P105	Maintenance Sunshades - Tracked	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P107	Comm/Elect Maint/Storage	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	

P114	DINING FACILITY	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P116	BEQ, 1st Tanks	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P121	Maintenance Shop - Tracked	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P126	Station Comm. Fac. And Infrastructure	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P127	Sub-Station and Electrical upgrades	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P130	Water Improvements and Storage	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P131	SEWAGE SYSTEM IMP. AND LIFT STATION	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P132	HTHW/Chilled Water System	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P133	Natural Gas System Extension	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P143	Construct Roads - North	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P146	Industrial Waste Water	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P170	BEQ, 1st Tanks	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P173	Armory, 1st Tanks	TWENTYNINE PALMS, CA	2009	Unknown till design complete	YES	2010	
P210	Unspecified Minor Construction	MINOR CONSTRUCTION WASHINGTON, DC	2009	Unknown till design complete	NO	2010	
P210	Planning & Design	PLANNING /DESIGN WASHINGTON, DC	2009	Unknown till design complete	NO	2010	
P510	Planning and Design (reserves)	RESERVE PLANNING/DESIGN, DC	2009	Unknown till design complete	NO	2010	
P006	Port Operations Facility, Blount Is.	JACKSONVILLE, FL	2009	Unknown till design complete	YES	2010	
P630	Modify Facilities for P-8A (MMA)	NAS JACKSONVILLE FL	2009	Unknown till design complete	YES	2010	
782	Flight Simulator Addition	NAS PENSACOLA FL	2009	Unknown till design complete	NO	2010	
906F	F-35 POL Ops Facility	NAS PENSACOLA FL	2009	Unknown till design complete	NO	2010	
P782	Flight Simulator Addition	NAS PENSACOLA FL	2009	Unknown till design complete	YES	2010	
P906F	F-35 POL Ops Facility	NAS PENSACOLA FL	2009	Unknown till design complete	NO	2010	
266	Provide T-6 Solo Capable Outlying	NAS WHITING FLD MILTON FL	2009	Unknown till design complete	NO	2010	
P1003	Military Working Dog Relocation	Apra Harbor, Guam	2009	Unknown till design complete	YES	2010	
P1000	North Ramp Utilities, Anderson AFB Inc 1 of 2	NAVBASE GUAM	2009	Unknown till design complete	YES	2010	
P528	Torpedo Exercise Support Building	NAVBASE GUAM	2009	Unknown till design complete	YES	2010	
P1029	STORAGE AIR-GROUND-ORGANIC UNITS MARCOR	KANEOHE BAY, HI	2009	Unknown till design complete	YES	2010	
P816	WATERFRONT OPERATIONS FACILITY	KANEOHE BAY, HI	2009	Unknown till design complete	YES	2010	
816	Waterfront Operations Facility	MARINE CORPS BASE HAWAII	2009	Unknown till design complete	NO	2010	
P587B	Sub Drive-in MSF, Beckoning Point Inc 3 of 3	NAVSTA PEARL HARBOR HI	2009	Unknown till design complete	NO	2010	
P048	Marine Corps Reserve Center	Joliet, IL	2009	Unknown till design complete	YES	2010	
P263	Broad Area Maritime Surveillance T & E Fac	NAS PATUXENT RIVER MD	2009	Unknown till design complete	NO	2010	
P510	Surveillance T & E Fac	Patuxent River, MD	2009	Unknown till design complete	YES	2010	
P1160	Physical Fitness Center (Hadnot point)	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1194	BEQ - HADNOT POINT	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1233	MAINTENANCE/OPS COMPLEX	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1247	BEQ - Wallace Creek	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1262	New Base Entry Point and Road	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1268	SOI-EAST Facilities, Camp Geiger	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1269	Field Training Fac. - Devil Dog - SOI	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1298	Road Network - Wallace Creek	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1304	MP Working Dog Kennel	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1310	Detainee Facility	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P1311	Consolidated Info Tech/Telecom complex	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P652	VMMT-204 Maintenance Hangar	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P714	Physical Fitness Center ((MCAS NEW RIVER))	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P141	EMS Fire Vehicle Facility	CHERRY POINT, NC	2009	Unknown till design complete	YES	2010	
1269	Field Training Fac. - Devil Dog - SO	CAMP LEJEUNE, NC	2009	Unknown till design complete	NO	2010	
1311	Consolidated Info Tech/Telecom	CAMP LEJEUNE, NC	2009	Unknown till design complete	NO	2010	
P445	Motor Transportation Facility - HQ Bn	CAMP LEJEUNE, NC	2009	Unknown till design complete	YES	2010	
P146	Ordnance Magazines	MCAS CHERRY POINT NC	2009	Unknown till design complete	NO	2010	
P148	Missile Magazine	MCAS CHERRY POINT NC	2009	Unknown till design complete	NO	2010	
P860	NOSC Pittsburgh (reserves)	NAVSUPFACT MECHANICSBURG PA	2009	Unknown till design complete	YES	2010	
P451	Officer Training Command (OTC) Quarters	NAVAL STATION NEWPORT RI	2009	Unknown till design complete	YES	2010	
P427	Ground Support Equipment Shop	Beaufort, SC	2009	Unknown till design complete	YES	2010	
P196	Marine Corps Reserve Vehicle Maintenance Facility	MARINE AIRCRAFT WING 4, Goose Creek, SC	2009	Unknown till design complete	YES	2010	
6	Port Operations Facility - Blount	MCSF BLOUNT ISLAND	2009	Unknown till design complete	NO	2010	
P437	Operational Facilities for T-6	Corpus Christi, TX	2009	Unknown till design complete	YES	2010	
437	Operational Facilities for T-6	NAS CORPUS CHRISTI TX	2009	Unknown till design complete	NO	2010	
P105	Parachute and Survival Equipment Shop (reserves)	NAS CORPUS CHRISTI TX	2009	Unknown till design complete	YES	2010	
406	Operational Flight Simulator	MCB QUANTICO, VA	2009	Unknown till design complete	NO	2010	
620	Battalion Training Facility - MSGBN	MCB QUANTICO, VA	2009	Unknown till design complete	NO	2010	
P548	Student Dining Facility, The Basic School	MCB QUANTICO, VA	2009	Unknown till design complete	YES	2010	
P620	Battalion Training Facility - MSGBN	MCB QUANTICO, VA	2009	Unknown till design complete	YES	2010	
P625	MC Information Operations Center (MCIOC)	MCB QUANTICO, VA	2009	Unknown till design complete	YES	2010	
P837	Construct C-40 Aircraft Hangar (reserves)	NAS OCEANA VA	2009	Unknown till design complete	YES	2010	
851	Naval Construction Div Operations	NAVPHIBASE LITTLE CREEK VA	2009	Unknown till design complete	NO	2010	
P851	Naval Construction Div Operations Control	NAVPHIBASE LITTLE CREEK VA	2009	Unknown till design complete	YES	2010	
16	E-2D Aircrew Training Facility	NAVSTA NORFOLK VA	2009	Unknown till design complete	NO	2010	
P838	E-2D Facilities Upgrade	NAVSTA NORFOLK VA	2009	Unknown till design complete	YES	2010	
P016	E-2D Aircrew Training Facility	NORFOLK, VA	2009	Unknown till design complete	YES	2010	
P406	Operational Flight Simulator	QUANTICO, VA	2009	Unknown till design complete	YES	2010	
P565	STUDENT QUARTERS - TBS (PHASE 4)	MCB QUANTICO, VA	2009	Unknown till design complete	YES	2010	
P973E	Limited Area Prod & Strg Complex Inc 6 of 7	NAVAL BASE KITSAP BREMERTON WA	2009	Unknown till design complete	NO	2010	

P977A	Waterfront Security Enclave Incr 2 of 3	NAVAL BASE KITSAP BREMERTON WA	2009	Unknown till design complete	NO	2010	
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DeCA

	New Commissary	Saratoga Springs, NY	2007	30%		2009	
	New Commissary	Ansbach, GE	2008	30%		2011	
	New Commissary	Fort Bliss, TX	2007	30%		2011	
	New Commissary	Fort Campbell, KY	2009	30%		2012	
	New Commissary	Fort Carson, CO	2009	30%		2012	
	New Commissary	Portsmouth, VA	2009	30%		2012	
	New Commissary	Spangdahlem, GE	2008	30%			

DIA

P-64115/P-66204	Joint Use Intelligence Analysis Facility	Charlottesville, VA	2005	21%	Yes		
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NGA

	Von Braun III	Huntsville, AL	2008	30%			
	MDA HQCC	Ft. Belvoir, VA	2008	30%			
	Dahlgren Expansion	Dahlgren, VA	2009	30%			

TMA

P-933	NEPMU2	NS Norfolk, VA	2007	3%	Yes		
P-005V	Walter Reed NNMC Buildings A & B	Bethesda, MD	2007	34%			
	SATCOM	Ft Detrick	2007	Unknown	Yes		

	Total new building designs started since beginning of FY 2007:	449
	Total new building designs started since beginning of FY 2007 expected to be 30% more energy efficient than relevant code, where life-cycle cost effective:	419

Department of Defense

Designated Covered Facilities for 42 USC 8253(f), Use of Energy and Water Efficiency Measures in Federal Buildings

Air Force

Identification Information			Location Information		Building Characteristics		Unique Identifier
Agency Facility Number (Optional)	Facility Name	MAJCOM	City	State	Zip Code	Annual Energy Use (Site Billion Btu)	
FXSB	ELMENDORF AFB	PACAF	Anchorage	AK	99506	1,222	DoD-04-0FXSB
DXEB	CLEAR AFS	SPACECOM	Clear	AK	99704	873	DoD-04-0DXEB
Multi	ARWS (611th)	PACAF	Anchorage	AK	99506	559	DoD-04-0FXSB
FTOW	EIELSON AFB	PACAF	Fairbanks	AK	99702	2,621	DoD-04-0FTOW
JUBJ	GUNTER AFB	AETC	Montgomery	AL	36112	304	DoD-04-0JUBJ
PNQS	MAXWELL AFB	AETC	Montgomery	AL	36112	582	DoD-04-0PNQS
ALMY	ANTIGUA TS	SPACECOM	St Johns	Antigua	NA	70	DoD-04-0ALMY
OKKA	MISAWA AB	PACAF	Misawa	Japan	96319	1,363	DoD-04-0OKKA
MLWR	KUNSAN AB	PACAF	Kunsan	South Korea	96264	373	DoD-04-0MLWR
SMYU	OSAN AB	PACAF	Osan	South Korea	96266	780	DoD-04-0SMYU
LXEZ	KADENA AB	PACAF	Okinawa	Japan	96368	1,397	DoD-04-0LXEZ
ZNRE	YOKOTA AB	PACAF	Yokota	Japan	96328	1,473	DoD-04-0ZNRE
NKAK	LITTLE ROCK AFB	AETC	Jacksonville	AR	72099	186	DoD-04-0NKAK
YXTK	ASCENSION TS	SPACECOM	Ascension	AK	NA	165	DoD-04-0YXTK
NUEX	LUKE AFB	AETC	Glendale	AZ	85309	275	DoD-04-0NUEX
FBNV	DAVIS MONTHAN AFB	ACC	Tucson	AZ	85707	392	DoD-04-0FBNV
XUN?	ANDERSON PEAK	SPACECOM	Big Sur	CA	93920	0	DoD-04-0XUN?
XDAT	TRAVIS AFB	AMC	Fairfield	CA	94535	636	DoD-04-0XDAT
TFWY	PILLAR POINT AFS	SPACECOM	Half Moon Bay	CA	94019	5	DoD-04-0TFWY
FSPM	EDWARDS AFB	AFMC	Lnacaster	CA	93539	599	DoD-04-0FSPM
XUMU	VANDENBERG AFB	SPACECOM	Lompoc	CA	93437	976	DoD-04-0XUMU
ACJP	LOS ANGELES AFS	SPACECOM	Los Angeles	CA	90009	95	DoD-04-0ACJP
PDPG	MARCH AFB	AFRES	Riverside	CA	92518	177	DoD-04-0PDPG
BAEY	BEALE AFB	ACC	Marysville	CA	95903-1713	410	DoD-04-0BAEY
WMSJ	ONIZUKA AFB	SPACECOM	Onizuka	CA	94008	97	DoD-04-0WMSJ
XUNL	SANTA YNEZ PEAK	SPACECOM	Santa Barbara	CA	93130	0	DoD-04-0XUNL
GLEN	SCHRIEVER AFB	SPACECOM	Colorado Springs	CO	80912	427	DoD-04-0GLEN
SAXC	CHEYENNE MTN AFB	SPACECOM	Colorado Springs	CO	80916	108	DoD-04-0SAXC
XQPZ	USAF ACADEMY	ACD	Colorado Springs	CO	80840	1,014	DoD-04-0XQPZ
TDKA	PETERSON AFB	SPACECOM	Colorado Springs	CO	80914	613	DoD-04-0TDKA
CRWU	BUCKLEY ANNEX	AFRES	Denver	CO	80012	118	DoD-04-0CRWU
CRWU	BUCKLEY AFB	SPACECOM	Denver	CO	80011	675	DoD-04-0CRWU
BXUR	BOLLING AFB	AFDW	Washington	DC	20032	226	DoD-04-0BXUR
FJZT	DOVER AFB	AMC	Dover	DE	19902	528	DoD-04-0FJZT
SXHT	PATRICK AFB	SPACECOM	Cocoa Beach	FL	32925	315	DoD-04-0SXHT
DBEH	CAPE CANAVERAL	SPACECOM	Cocoa Beach	FL	32920	438	DoD-04-0DBEH
FTEV	HURLBURT FLD	SOC	Fort Walton	FL	32544-5244	490	DoD-04-0FTEV
KYJM	HOMESTEAD AFB	AFRES	Homestead	FL	33176	73	DoD-04-0KYJM
NVZR	MACDILL AFB	AMC	Tampa	FL	33621	525	DoD-04-0NVZR
XLWU	TYNDALL AFB	AETC	Panama City	FL	32403	401	DoD-04-0XLWU
FTFA	EGLIN AFB	AFMC	Valporiso	FL	32580	1,228	DoD-04-0FTFA
FGWB	DOBBINS ARB	AFRES	Atlanta	GA	30069	103	DoD-04-0FGWB
QSEU	MOODY AFB	ACC	Valdosta	GA	31699-1509	207	DoD-04-0QSEU
UHHZ	ROBINS AFB	AFMC	Warner Robins	GA	31095	2,018	DoD-04-0UHHZ
TYFR	RAMSTEIN AFB	USAFE	Ramstein	Germany	66877	1,305	DoD-04-0TYFR
VYHK	SPANGDAHLEM AB	USAFE	Spangdahlem	Germany	D-54529	587	DoD-04-0VYHK
WWCX	THULE AB	SPACECOM	Thule	Greenland	AE 09704	968	DoD-04-0WWCX
AJJY	ANDERSEN AFB	PACAF	Yigo	Guam	96543	392	DoD-04-0AJJY
KNMD	HICKAM AFB	PACAF	Honolulu	HI	96853	321	DoD-04-0KNMD
QNKY	MOLOKAI AFS	SPACECOM	Molokai	HI	96729	3	DoD-04-0QNKY
OYZH	MT HOME AFB	ACC	Mountain Home	ID	83648-5261	515	DoD-04-0OYZH
VDYD	SCOTT AFB	AMC	Belleville	IL	62225	658	DoD-04-0VDYD
CTGB	GRISSOM AFB	AFRES	Grissom	IN	46971	115	DoD-04-0CTGB
ASHE	AVIANO AB	USAFE	Aviano (Pordenone)	IT	33081	395	DoD-04-0ASHE
PRQE	MCCONNELL AFB	AMC	Wichita	KS	67002	363	DoD-04-0PRQE
AWUB	BARKSDALE AFB	ACC	Bossier City	LIA	71110	381	DoD-04-0AWUB
MXRD	HANSCOM AFB	AFMC	Bedford	MA	017311	459	DoD-04-0MXRD
YTPM	WESTOVER ARB	AFRES	Chicopee	MA	1022	347	DoD-04-0YTPM
OANG	Air National Guard	ANG	Andrews	MD	20761	4,230	DoD-04-0OANG
AJZF	ANDREWS AFB	AFDW	Camp Spring	MD	20762	591	DoD-04-0AJZF
QJKL	MPLS-ST PAUL IAP	AFRES	Minneapolis	MN	55450	75	DoD-04-0QJKL
YWHG	WHITEMAN AFB	ACC	Knob Noster	MO	65305	680	DoD-04-0YWHG
MAHG	KEESLER AFB	AETC	Biloxi	MS	39534	1,035	DoD-04-0MAHG
EEPZ	COLUMBUS AFB	AETC	Columbus	MS	39710	212	DoD-04-0EEPZ
NZAS	MALMSTROM AFB	SPACECOM	Great Falls	MT	59402	671	DoD-04-0NZAS
SGBP	OFFUTT AFB	ACC	Bellview	NB	68113	962	DoD-04-0SGBP
WKAG	SEYMOUR JOHNSON AFB	ACC	Goldsboro	NC	27531	365	DoD-04-0WKAG

TMKH	POPE AFB	AMC	Fayetteville	NC	28308	185	DoD-04-0TMKH
JFSD	GRAND FORKS AFB	AMC	Grand Forks	ND	58205	802	DoD-04-0JFSD
OJVF	MINOT AFB	ACC	Minot	ND	58705-5049	889	DoD-04-0OJVF
RNGF	NEW BOSTON	SPACECOM	New Boston	NH	03855	18	DoD-04-0RNGF
PTFL	MCGUIRE AFB	AMC	Cookstown	NJ	08641	762	DoD-04-0PTFL
MHMV	KIRTLAND AFB	AFMC	Albuquerque	NM	87117	740	DoD-04-0MHMV
CZOZ	CANNON AFB	SOC	Clovis	NM	88103	366	DoD-04-0CZOZ
KWRD	HOLLOMAN AFB	ACC	Alamogordo	NM	88330	473	DoD-04-0KWRD
LKTC	CREECH AFB	ACC	Indian Springs	NV	89070	60	DoD-04-0LKTC
RKMF	NELLIS AFB	ACC	Las Vegas	NV	89191-6522	495	DoD-04-0RKMF
RKMF	TONOPAH RANGE	ACC	Las Vegas	NV	89049-1281	193	DoD-04-0RKMF
RVKQ	NIAGARA FALLS	AFRES	Niagara Falls	NY	14304	81	DoD-04-0RVKQ
ZHTV	WRIGHT PATTERSON AFB	AFMC	Fairborn	OH	45433	3,173	DoD-04-0ZHTV
ZOEL	YOUNGSTOWN MAP	AFRES	Vienna	OH	44473	83	DoD-04-0ZOEL
AGGN	ALTUS AFB	AETC	Altus City	OK	73523	307	DoD-04-0AGGN
XTLF	VANCE AFB	AETC	Enid	OK	73705	157	DoD-04-0XTLF
WWYK	TINKER AFB	AFMC	Midwest City	OK	73145	3,138	DoD-04-0WWYK
JLSS	PITTSBURGH IAP	AFRES	Coraopolis	PA	15108	60	DoD-04-0JLSS
MQNA	LAJES FIELD	USAFE	Azores	Portugal	9720	112	DoD-04-0MQNA
DKFX	CHARLESTON AFB	AMC	Charleston	SC	29404	341	DoD-04-0DKFX
VLSB	SHAW AFB	ACC	Sumter	SC	29152-5041	365	DoD-04-0VLSB
FXMB	ELLSWORTH AFB	ACC	Box Elder	SD	57706-4701	698	DoD-04-0FXMB
QUUG	MORON AB	USAFE	Morón	Spain	IP28 8RN	51	DoD-04-0QUUG
ANZY	ARNOLD AFB	AFMC	Tullahoma	TN	37389	1,863	DoD-04-0ANZY
LJYC	INCIRLIK AB	USAFE	Adana	Turkey	9824	321	DoD-04-0LJYC
LRKC	IZMIR AS	USAFE	Izmir	Turkey	IP28 8RN	16	DoD-04-0LRKC
MXDP	LAUGHLIN AFB	AETC	Del Rio	TX	78840	155	DoD-04-0MXDP
FNWZ	DYESS AFB	ACC	Abilene	TX	79607	354	DoD-04-0FNWZ
JCGU	GOODFELLOW AFB	AETC	San Angelo	TX	76908	201	DoD-04-0JCGU
MPLS	LACKLAND AFB	AETC	San Antonio	TX	78236	1,375	DoD-04-0MPLS
MPLS	WILFORD HALL M.C.	AETC	San Antonio	TX	78236	900	DoD-04-0MPLS
TYMX	RANDOLPH AFB	AETC	San Antonio	TX	78150	394	DoD-04-0TYMX
VNPV	SHEPPARD AFB	AETC	Wichita Falls	TX	76311	627	DoD-04-0VNPV
MSET	RAF LAKENHEATH	USAFE	Brandon	UK	IP27 9PN	666	DoD-04-0MSET
GKVB	RAF FAIRFORD	USAFE	Fairford	UK	IP28 8RN	93	DoD-04-0GKVB
QFOE	RAF MILDENHALL	USAFE	Mildenhall	UK	IP28 8RN	294	DoD-04-0QFOE
EXSW	RAF CROUGHTON	USAFE	Brackley, Hampton	UK	NN13 5NQ	144	DoD-04-0EXSW
AEDY	RAF ALCONBURY	USAFE	Alconbury	UK	PE28 4DA	187	DoD-04-0AEDY
KRSM	HILL AFB	AFMC	Ogden	UT	84056	2,193	DoD-04-0KRSM
MUHJ	LANGLEY AFB	ACC	Hampton	VIR	23665-2291	610	DoD-04-0MUHJ
GJKZ	FAIRCHILD AFB	AMC	Spokane	WA	99011	677	DoD-04-0GJKZ
POWY	MCCHORD AFB	AMC	Tacoma	WA	98438	614	DoD-04-0POWY
GHLN	F E WARREN AFB	SPACECOM	Cheyenne	WY	82005	544	DoD-04-0GHLN

Total 66,541

Army

Identification Information		Location Information		Building Characteristics		Energy Manager Inform	
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage (Thous.)	Annual Energy Use (Site Billion Btu)	Unique Identifier
01012	Anniston Army Depot	Anniston	AL		9,064	958.8	DoD-01-01012
01202	Redstone Arsenal	Redstone Arsenal	AL		11,011	1681.1	DoD-01-01202
01252	Fort Rucker	Fort Rucker	AL		5,558	607.2	DoD-01-01252
020NG	Alaksa ARNG		AK		345	258.2	DoD-01-020NG
02341	Fort Greely	Fort Greely	AK		1,581	356.3	DoD-01-02341
02781	Fort Richardson	Fort Richardson	AK		8,047	1064.4	DoD-01-02781
02871	Fort Wainwright	Fort Wainwright	AK		9,687	3780.9	DoD-01-02871
04005	Fort Huachuca	Fort Huachuca	AZ		7,417	640.9	DoD-01-04005
05087	Pine Bluff Arsenal	Pine Bluff	AR		3,588	1172.6	DoD-01-05087
06225	Fort Irwin	Fort Irwin	CA		3,989	435.8	DoD-01-06225
08005	Fort Carson	Fort Carson	CO		9,042	1152.6	DoD-01-08005
11605	Fort McNair	Washington	DC		1,118	135.1	DoD-01-11605
1281A	USAG Miami	Miami	FL		227	30.5	DoD-01-1281A
13025	Fort Benning	Fort Benning	GA		14,424	1293.7	DoD-01-13025
13055	Fort Gordon	Fort Gordon	GA		8,042	862.6	DoD-01-13055
13305	Fort Stewart	Fort Stewart	GA		11,960	1175.8	DoD-01-13305
17775	Rock Island Arsenal	Rock Island	IL		6,233	888.0	DoD-01-17775
18375	Newport Chemical Depot		IN		648	93.4	DoD-01-18375
20395	Fort Leavenworth	Fort Leavenworth	KS		4,095	478.6	DoD-01-18950
20605	Fort Riley	Fort Riley	KS		9,391	1045.5	DoD-01-190NG
21145	Fort Campbell	Fort Campbell	KY		14,588	1521.5	DoD-01-19105
21405	Fort Knox	Fort Knox	KY		10,571	1020.7	DoD-01-200NG
22725	Fort Polk	Fort Polk	LA		8,118	683.6	DoD-01-20325
24015	Aberdeen Proving Ground	Aberdeen	MD		13,789	2378.3	DoD-01-20395
24234	Army Research Lab Adelphi	Adelphi	MD		1,191	305.6	DoD-01-20605
24355	Fort Meade	Fort Meade	MD		4,311	564.0	DoD-01-20820

25152	Devens Training Area	Devens	MA		1,173	105.3	DoD-01-21045
25690	Soldier Systems Center, Natick	Natick	MA		975	146.4	DoD-01-210NG
26155	Detroit Arsenal	Detroit	MI		1,579	314.9	DoD-01-21145
27864	88th Regional Readiness Center		MN		5,336	448.9	DoD-01-21405
29995	Fort Leonard Wood	Fort Leonard Wood	MO		10,356	1380.0	DoD-01-220NG
340NG	New Jersey ARNG		NJ		2,446	260.3	DoD-01-22725
34245	Fort Dix	Fort Dix	NJ		5,226	558.9	DoD-01-230NG
34855	Picatinny Arsenal	Picatinny	NJ		3,099	615.0	DoD-01-240NG
35955	White Sands Missile Range	White Sands	NM		4,453	424.8	DoD-01-24225
36205	Fort Drum	Fort Drum	NY		9,616	1090.6	DoD-01-24234
36325	Fort Hamilton	Fort Hamilton	NY		713	79.9	DoD-01-24355
36990	Watervliet Arsenal	Watervliet	NY		1,993	358.6	DoD-01-250NG
36993	West Point Military Reservation	West Point	NY		9,841	1183.3	DoD-01-25140
37225	Fort Bragg	Fort Bragg	NC		25,123	2666.0	DoD-01-25152
39335	Lima Military Center	Lima	OH		1,608	525.8	DoD-01-25690
40755	Fort Sill	Fort Sill	OK		14,019	1208.1	DoD-01-260NG
42155	Carlisle Barracks	Carlisle	PA		970	122.5	DoD-01-26155
42345	Letterkenny Army Depot	Letterkenny	PA		4,592	468.3	DoD-01-270NG
42560	99th Regional Readiness Center		PA		3,319	270.6	DoD-01-27864
42610	Kelly Support Facility		PA		221	24.1	DoD-01-280NG
42780	Tobyhanna AD	Tobyhanna	PA		4,458	601.7	DoD-01-28310
45455	Fort Jackson	Fort Jackson	SC		10,729	1104.0	DoD-01-290NG
460NG	South Dakota ARNG		SD		1,699	199.2	DoD-01-29405
48125	Fort Bliss	Fort Bliss	TX		13,269	1394.4	DoD-01-32225
48186	Corpus Christi AD	Corpus Christi	TX		2,290	358.2	DoD-01-330NG
48255	Fort Hood	Fort Hood	TX		20,653	2028.2	DoD-01-33450
48265	Fort Sam Houston	Fort Sam Houston	TX		9,082	986.1	DoD-01-340NG
48515	Red River AD		TX		7,479	905.1	DoD-01-34555
49245	Deseret Chemical Depot		UT		1,355	659.0	DoD-01-350NG
49295	Dugway Proving Ground	Dugway	UT		2,220	315.4	DoD-01-360NG
51105	Fort Belvoir	Fort Belvoir	VA	22060	8,718	977.6	DoD-01-36990
51215	Fort Eustis	Fort Eustis	VA		6,213	705.7	DoD-01-36993
51315	Fort Lee	Fort Lee	VA		5,394	607.3	DoD-01-37225
51375	Fort Myer	Fort Myer	VA		2,523	273.5	DoD-01-380NG
51421	ARNG Readiness Center		VA		264	50.0	DoD-01-38521
51565	Radford AAP	Radford	VA		3,325	3105.2	DoD-01-390NG
53465	Fort Lewis	Fort Lewis	WA		16,960	2081.2	DoD-01-40520
55425	Fort McCoy	Fort McCoy	WI		6,136	514.5	DoD-01-41725
JA210	Camp Zama Japan		JP		8,639	694.2	DoD-01-JA210
KS284	Camp Red Cloud - Area I		KO		10,018	1315.3	DoD-01-A3530
KS792	Camp Humphreys - Area III		KO		5,677	729.7	DoD-01-A35BR
KS948	Yongsan Garrison - Area II		KO		8,145	1125.5	DoD-01-A3638
NQ100	Kwajalein Atoll				3,180	914.3	DoD-01-A3895

Total 58483.3

Navy & Marine Corps

Identification Information		Location Information			Building Characteristics		Unique Identifier
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	
	MCAS CHERRY PT NC	CHERRY POINT	NC	28533-0003	4,484,250	532	DoD-02-00146
	MARCORCRUITDEP SAN DIE	SAN DIEGO	CA	92140-5001	2,024,250	220	DoD-02-00243
	MARCORCRUITDEP PARRIS	PARRIS ISLAND	SC	29905-9001	2,685,000	482	DoD-02-00263
	CG MCCDC QUANTICO VA	QUANTICO	VA	22134-5063	4,206,750	730	DoD-02-00264
	MCB HAWAII KANEHOE BAY	KANEHOE BAY	HI	96863-3002	4,803,750	281	DoD-02-00318
	CG MCB CAMP PENDLETON	CAMP PENDLETON	CA	92055-5150	11,921,250	889	DoD-02-00681
	MCAS BEAUFORT SC	BEAUFORT	SC	29904-5001	1,899,750	142	DoD-02-60169
	MCLB BARSTOW CA	BARSTOW	CA	92311-5050	3,573,750	221	DoD-02-62204
	MCAS IWAKUNI JA	IWAKUNI	JA	96310-0018	3,900,000	440	DoD-02-62613
	MCAS YUMA AZ	YUMA	AZ	85369-9100	1,911,000	169	DoD-02-62974
	CG MCB CAMP LEJEUNE NC	CAMP LEJEUNE	NC	28542-0004	15,010,500	1,983	DoD-02-67001
	CG MCLB ALBANY GA	ALBANY	GA	31704-0302	4,860,750	313	DoD-02-67004
	FIRST MCD GARDEN CITY LI	LONG ISLAND	NY	11530-	124,500	55	DoD-02-67011
	MARFORRES NEW ORLEANS	NEW ORLEANS	LA	70146-5400	377,250	58	DoD-02-67021
	MARBKS WASHINGTON DC	WASHINGTON	DC	20390-5000	267,750	41	DoD-02-67029
	HQBN HQMC ARLINGTON VA	ARLINGTON	VA	22214-5000	530,250	23	DoD-02-67353
	MARCORSUPACT KANSAS CI	KANSAS CITY	MO	64147-1207	275,250	28	DoD-02-67386
	MCB CAMP ELMORE NORFO	NORFOLK	VA	23551-2596	284,250	23	DoD-02-67391
	CG MCAGCC TWENTYNINE P	TWENTYNINE PALMS	CA	92278-8100	3,965,250	681	DoD-02-67399
	CG MCB CAMP BUTLER JA	CAMP BUTLER	JA	96373-5001	13,675,500	870	DoD-02-67400
	MCAS MIRAMAR	SAN DIEGO	CA	92145-2001	4,209,000	237	DoD-02-67865
	LANTORDCOM YORKTOWN V	YORKTOWN	VA	23691-0410	4,972,500	162	DoD-03-00109

	NSB NEW LONDON CT	GROTON	CT	06349-5000	2,862,000	988	DoD-03-00129
	NAS JRB WILLOW GROVE PA	WILLOW GROVE	PA	19090-5021	1,091,250	61	DoD-03-00158
	USNA ANNAPOLIS MD	ANNAPOLIS	MD	21402-5000	4,575,000	586	DoD-03-00161
	NAVSURFWARREN CARDER	WEST BETHESDA	MD	20817-5700	1,432,500	140	DoD-03-00167
	COMNAVDIST WASHINGTON	WASHINGTON NAVY	DC	20374-5021	4,860,000	401	DoD-03-00171
	NRL WASHINGTON DC	WASHINGTON	DC	20375-5320	2,712,000	760	DoD-03-00173
	NSY NORFOLK VA	NORFOLK	VA	23505-	2,937,750	814	DoD-03-00181
	LANTORDCOM DET CHARLE	GOOSE CREEK	SC	29445-8601	6,037,500	304	DoD-03-00193
	NAS ATLANTA GA	MARIETTA	GA	30060-5099	561,000	46	DoD-03-00196
	NAS PENSACOLA FL	PENSACOLA	FL	32508-5217	8,961,750	807	DoD-03-00204
	NAVSUPACT NEW ORLEAN	NEW ORLEANS	LA	70142-5007	3,318,000	250	DoD-03-00205
	NAS JACKSONVILLE FL	JACKSONVILLE	FL	32212-5000	7,307,250	738	DoD-03-00207
	NAVSTA GREAT LAKES IL	GREAT LAKES	IL	60088-5000	8,331,000	1,688	DoD-03-00210
	NAS KEY WEST FL	KEY WEST	FL	33040-9001	3,425,250	272	DoD-03-00213
	NAS CORPUS CHRISTI TX	CORPUS CHRISTI	TX	78419-5021	2,362,500	214	DoD-03-00216
	NAVBASE SAN DIEGO CA	SAN DIEGO	CA	92136-5084	5,946,750	201	DoD-03-00245
	NAVBASE CORONADO SAN D	SAN DIEGO	CA	92135-7033	9,119,250	416	DoD-03-00246
	PSNS & IMF	BREMERTON	WA	98314-	4,431,394	1,287	DoD-03-00251
	NUWC KEYPORT	KEYPORT	WA	98345-	1,089,963	176	DoD-03-00253
	NSA PHILADELPHIA PA	PHILADELPHIA	PA	19111-5098	2,787,750	291	DoD-03-00383
	NAS PATUXENT RIVER	PATUXENT RIVER	MD	20670-	4,720,005	789	DoD-03-00421
	NAVAL AIR STATION WHIDBE	OAK HARBOR	WA	98278-	2,221,742	422	DoD-03-00620
	NAVSUPACT MID SOUTH M	MILLINGTON	TN	38054-5045	2,692,500	263	DoD-03-00639
	AFRADBIOBSCHINST BETHE	BETHESDA	MD	20889-5603	131,250	30	DoD-03-0431A
	PMRF BARKING SANDS	KAUAI	HI		523,000	56	DoD-03-0534A
	NIOC SUGAR GROVE WV	SUGAR GROVE	WV	26815-5000	197,250	12	DoD-03-31188
	NAVMAG INDIAN ISLAND	PORT TOWNSEND	WA	98358-	218,505	20	DoD-03-32013
	NSA MECHANICSBURG	MECHANICSBURG	PA	17050-	2,555,528	240	DoD-03-32414
	NAVSUPACT PORTSMOUTH	PORTSMOUTH	NH	03801-	2,968,500	814	DoD-03-32446
	COMFLEACT CHINHAE KS	CHINHAE	KS	96269-1100	240,750	25	DoD-03-32778
	NSB KINGS BAY GA	KINGS BAY	GA	31547-2606	4,066,500	508	DoD-03-42237
	NAVJNTSERVACT NS TOKYO	TOKYO	JA	96337-0110	127,500	41	DoD-03-43666
	NSA NORFOLK VA	NORFOLK	VA	23551-2419	913,500	242	DoD-03-57095
	NAF EL CENTRO CA	EL CENTRO	CA	92243-5001	792,000	46	DoD-03-60042
	NAS BRUNSWICK ME	BRUNSWICK	ME	04011-5009	1,296,750	159	DoD-03-60087
	NAS OCEANA VA	VIRGINIA BEACH	VA	23460-2191	5,460,000	804	DoD-03-60191
	NAVSTA MAYPORT FL	MAYPORT	FL	32228-0112	3,466,500	237	DoD-03-60201
	NAS KINGSVILLE TX	KINGSVILLE	TX	78363-5053	916,500	95	DoD-03-60241
	LANTORDCOM DET EARLE C	COLTS NECK	NJ	07722-5021	927,000	82	DoD-03-60478
	NAS FALLON NV	FALLON	NV	89406-5000	2,049,000	173	DoD-03-60495
	NAS WHITING FIELD MILTON	MILTON	FL	32570-6155	1,191,750	86	DoD-03-60508
	NAVSTA GUANTANAMO BAY	GUANTANAMO BAY	CU	09593-0100	4,922,250	1,044	DoD-03-60514
	NAVAIRWARCENWPNDIV CH	CHINA LAKE	CA	93555-6001	3,552,750	398	DoD-03-60530
	NAVWPNSTA SEAL BEACH C	SEAL BEACH	CA	90740-	1,455,000	51	DoD-03-60701
	NAVSUPACT CRANE	CRANE	IN	47522-	4,302,776	645	DoD-03-61018
	COMNAVFLTACT OKINAWA	OKINAWA	JA		1,588,408	135	DoD-03-61029
	NAF MISAWA	MISAWA	JA	96319-	907,661	107	DoD-03-61032
	NSA SOUTH POTOMAC	DAHLGREN	VA	20670-	1,768,968	1,621	DoD-03-61151
	NSA PANAMA CITY	PANAMA CITY	FL	32408-	1,028,746	107	DoD-03-61331
	NAVAIRWARCEN TRASYS DIV	ORLANDO	FL	32826-3224	243,750	22	DoD-03-61339
	NAB LITTLE CREEK VA	NORFOLK	VA	23521-3297	3,051,750	561	DoD-03-61414
	COMFLEACT YOKOSUKA JA	YOKOSUKA	JA	96349-1100	10,065,000	1,307	DoD-03-61581
	NAVBASE GUAM	GUAM	GU	96540-1000	6,285,000	426	DoD-03-61755
	NSWC DET WHITE SANDS NM	WHITE SANDS MISSI	NM	88002-5510	148,500	10	DoD-03-61762
	NAVSURFWARREN DET BAY	BAYVIEW	ID	83803-	51,000	12	DoD-03-62182
	NSD MONTEREY CA	MONTEREY	CA	93943-5001	1,198,500	130	DoD-03-62271
	NAVOBSY WASHINGTON DC	WASHINGTON	DC	20392-5100	99,000	17	DoD-03-62285
	NAF ATSUGI JA	ATSUGI	JA	96306-1209	3,304,500	499	DoD-03-62507
	NAVSUPACT NAPLES IT	NAPLES	IT	09619-1000	3,940,500	363	DoD-03-62588
	NAVAL CONSTRUCTION BAT	GULFPFORT	MS	39501-	19,397,266	145	DoD-03-62604
	NAVSTA NEWPORT RI	NEWPORT	RI	02841-1644	4,962,750	614	DoD-03-62661
	NAVSTA NORFOLK VA	NORFOLK	VA	23511-2727	9,717,000	1,927	DoD-03-62688
	NAVSURFWARREN DET DAN	DANIA	FL	33004-3033	15,750	2	DoD-03-62701
	COMFLEACT SASEBO JA	SASEBO	JA	96322-1100	3,087,750	289	DoD-03-62735
	NSA ATHENS	ATHENS	GA	30606-2205	341,250	33	DoD-03-62741
	NAVSTA PEARL HARBOR HI	PEARL HARBOR	HI	96860-5102	11,219,000	498	DoD-03-62813
	NAVSTA ROTA SP	ROTA	ES	09645-1000	2,733,750	196	DoD-03-62863
	NAS SIGONELLA IT	SIGONELLA	IT	09627-1000	3,807,750	342	DoD-03-62995
	NAVAL SUPPORT ACTIVITY B	MANAMA	BH	09834-	1,874,770	183	DoD-03-63005
	NAS LEMOORE CA	LEMOORE	CA	93246-5001	5,017,500	389	DoD-03-63042
	NAS MERIDIAN MS	MERIDIAN	MS	39309-5003	1,718,250	202	DoD-03-63043
	NAVBASE POINT LOMA	SAN DIEGO	CA	92106-3521	2,109,000	188	DoD-03-63406
	NAVUNSEAWARREN DET AU	ANDROS ISLAND	AA	34058-9998	567,000	151	DoD-03-63821
	NAVSECGRUACT NORTHWE	NORTHWEST	VA		584,250	64	DoD-03-63891
	NAVWPNSTA SEAL BEACH C	CORONA	CA	92878-	243,568	39	DoD-03-64267
	FLEET READINESS CENTER	SAN DIEGO	CA	92135-7058	774,947	235	DoD-03-65888

	NAVAVNDEPOT CHERRY PT	CHERRY POINT	NC	28533-0021	1,427,250	436	DoD-03-65923
	SPAWARSSYSCEN SAN DIEGO	SAN DIEGO	CA	92152-5001	2,274,000	155	DoD-03-66001
	NAVSUPPACT SOUDA BAY G	SOUDA BAY	GR	09865-0102	352,500	27	DoD-03-66691
	SINGAPORE AREA COORDIN	SINGAPORE	SG	96534-2100	324,000	16	DoD-03-68047
	NAVRESREDCOM MIDLANT V	NORFOLK	VA	23511-4092	537,000	61	DoD-03-68306
	NSU SARATOGA SPRINGS N	SARATOGA SPRINGS	NY	12866-	161,250.00	6	DoD-03-68317
	NAVAIRENGCEN LAKEHURST	LAKEHURST	NJ	08733-	2,061,000	246	DoD-03-68335
	UNISERUOFHEASCN BETHE	BETHESDA	MD	20889-	991,500	149	DoD-03-68336
	NAVAL BASE KITSAP BANGO	SILVERDALE	WA	98315-	1,833,820	475	DoD-03-68436
	NAVSUPPFAC DIEGO GARCIA	DIEGO GARCIA	DG	96595-0002	2,078,250	526	DoD-03-68539
	NAVSTA INGLESIDE TX	INGLESIDE	TX	78362-5001	649,500	78	DoD-03-68891
	NAVAL STATION EVERETT	EVERETT	WA	98207-	1,173,144	184	DoD-03-68967
	NAVAL BASE VENTURA COU	PORT HEUNEME	CA	93043-	5,618,330	429	DoD-03-69232
	NAS JRB FORT WORTH TX	FORT WORTH	TX	76127-5000	3,151,500	227	DoD-03-83447

Total 40,131

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Identification Information		Location Information			Building Characteristics		Energy Manager Inform
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage (Thous.)	Annual Energy Use (Site Billion Btu)	Unique Identifier
	ABERDEEN PG	Baltimore	MD	21005-0387	62	11.9	DoD-06-24015
	ANCHORAGE	Anchorage	AK	99506	105	20.7	DoD-06-0FXSB
	ANDERSEN AFB	Yigo		96543	102	11.2	DoD-06-0AJJY
	ANDREWS AFB	Camp Springs	MD	20762-6302	113	16.7	DoD-06-0AJXF
	AVIANO AB	Pordenone		09604	64	10.5	DoD-06-0ASHE
	BANGOR NSB	Silverdale	WA	98315-2604	61	9.2	DoD-06-68436
	BITBURG	Bitburg/Trier		54634	63	11.6	DoD-06-0BSHF
	BOLLING AFB	Washington	DC	20332-6220	72	11.6	DoD-06-0BXUR
	BUCKLEY AFB	Aurora	CO	80011	100	11.7	DoD-06-0CRWU
	CAMP FOSTER	Naha		96368	59	11.4	DoD-06-67400
	CAMP LEJEUNE	Jacksonville	NC	28547-2513	76	14.5	DoD-06-67001
	CAMP PENDLETON	Oceanside	CA	92055-5212	113	14.4	DoD-06-06081
	CHARLESTON AFB	Charleston	SC	29404-2198	86	16.6	DoD-06-0DKFX
	CHARLESTON NWS	Charleston	SC	29445-8601	64	12.7	DoD-06-69214
	CHIEVRES	Chievres		7950	33	8.9	DoD-06-BE215
	CORPUS CHRISTI	Corpus Christi	TX	78419-5104	46	11.4	DoD-06-00216
	DAVIS-MONTHAN AFB	Tucson	AZ	85707	115	15.1	DoD-06-0FBNV
	DECA HQ	Petersburg	VA	23801	176	23.1	DoD-06-51315
	DECA WEST HQ	North Highlands	CA	95652-1002	63	9.1	DoD-06-0PRJY
	DOVER AFB	Dover	DE	19902	78	11.1	DoD-06-0FJXT
	DYESS AFB	Abilene	TX	79607-1250	73	8.9	DoD-06-0FNWZ
	EGLIN AFB	Niceville	FL	32542	107	15.1	DoD-06-0FTFA
	ELLSWORTH AFB	Rapid City	SD	57706	72	11.6	DoD-06-0FXBM
	F. E. WARREN AFB	Cheyenne	WY	82005-2452	77	9.1	DoD-06-0GHLN
	FAIRCHILD AFB	Spokane	WA	99011-6290	76	13.0	DoD-06-0GJKZ
	FT BELVOIR	Alexandria	VA	22060-6209	129	22.4	DoD-06-51105
	FT BENNING	Columbus	GA	31905-6203	118	15.5	DoD-06-13025
	FT BLISS	El Paso	TX	79916-5000	123	18.7	DoD-06-48125
	FT BRAGG NORTH	Fayetteville	NC	28310-5000	95	12.4	DoD-06-37225
	FT BRAGG SOUTH	Fayetteville	NC	28310	118	17.2	DoD-06-37225
	FT BUCHANAN	San Juan		00934-5075	95	18.3	DoD-06-RQ327
	FT CAMPBELL	Clarksville	TN	42223-5639	105	18.9	DoD-06-21145
	FT CARSON	Colorado Springs	CO	80913	102	13.3	DoD-06-08005
	FT DRUM	Watertown	NY	13602-5006	83	12.4	DoD-06-36205
	FT EUSTIS	Newport News	VA	23604-5542	103	11.8	DoD-06-51215
	FT GORDON	Augusta	GA	30905-5665	92	14.3	DoD-06-13055
	FT HOOD I	Killeen	TX	76544-5050	128	15.5	DoD-06-48255
	FT HOOD II	Killeen	TX	76544-5056	106	18.7	DoD-06-48255
	FT HUACHUCA	Sierra Vista	AZ	85613-7044	78	9.5	DoD-06-04005
	FT JACKSON	Columbia	SC	29207-6060	130	10.4	DoD-06-45455
	FT KNOX	Louisville	KY	40121-5680	122	17.2	DoD-06-21405
	FT LEAVENWORTH	Leavenworth	KS	66027	74	11.9	DoD-06-20395
	FT LEE	Petersburg	VA	23801	81	14.3	DoD-06-51315
	FT LEONARD WOOD	Waynesville	MO	65473-8954	71	11.8	DoD-06-29995
	FT LEWIS	Tacoma	WA	98433-5000	105	13.9	DoD-06-53465
	FT MEADE	Laurel	MD	20755-5210	118	21.6	DoD-06-24355
	FT MONMOUTH	Eatontown	NJ	07703-5609	54	9.2	DoD-06-34555
	FT POLK	Leesville	LA	71459	82	13.5	DoD-06-22725
	FT RILEY	Junction City	KS	66442-0520	68	14.9	DoD-06-20605
	FT RUCKER	Daleville	AL	36362	85	10.7	DoD-06-01252
	FT SAM HOUSTON	San Antonio	TX	78234-5006	104	19.9	DoD-06-48265
	FT SILL	Lawton	OK	73503-7400	102	12.0	DoD-06-40755
	FT STEWART	Hinesville	GA	31314	95	12.0	DoD-06-13305
	FT WAINWRIGHT	Fairbanks	AK	99703	104	12.7	DoD-06-02871
	GERMERSHEIM CDC	Germersheim		09095	789	31.1	DoD-06-GE30J

	GRAFENWOEHR	Grafenwoehr		09114	14	12.4	DoD-06-GE186
	GREAT LAKES NTC	Waukegan	IL	60088-3303	60	11.9	DoD-06-00128
	GUAM (OROTE)	Agat		96540-2300	57	13.1	DoD-06-61755
	GUAM CDC	Yigo		96540-1040	187	15.6	DoD-06-61755
	HANSCOM AFB	Bedford	MA	01731-6290	73	12.2	DoD-06-0MXRD
	HARRISON VILLAGE	Indianapolis	IN	46216	54	9.0	DoD-06-18175
	HEIDELBERG	Heidelberg		09102	58	13.7	DoD-06-GE654
	HICKAM AFB	Honolulu	HI	96853-5255	115	15.1	DoD-06-0KNMD
	HILL AFB	Ogden	UT	84056-5704	87	11.2	DoD-06-0KRSM
	HOLLOMAN AFB	Alamogordo	NM	88330-8286	69	9.9	DoD-06-0KWRD
	HUNTER AAF	Savannah	GA	31409	58	9.5	DoD-06-13070
	HURLBURT FIELD	Fort Walton Beach	FL	32544	63	11.5	DoD-06-0FTEV
	IMPERIAL BEACH	Imperial Beach	CA	91932	78	9.7	DoD-06-00246
	JACKSONVILLE NAS	Jacksonville	FL	32212-0042	88	15.0	DoD-06-00207
	KADENA AFB	Naha		96368	87	11.4	DoD-06-0LXEZ
	KAISERSLAUTERN CDC	Kaiserslautern		09094-3397	178	21.5	DoD-06-0TYFQ
	KANEHOE BAY	Kanehoe Bay	HI	96863-3080	77	11.9	DoD-06-00318
	KANTO PLAIN CDC	Kanto Plain		96338-5008	210	10.9	DoD-06-JA705
	KIRTLAND AFB	Albuquerque	NM	87117	108	15.3	DoD-06-0MHMV
	LACKLAND AFB	San Antonio	TX	78236-1039	117	19.5	DoD-06-0MPLS
	LANGLEY AFB	Hampton	VA	23665-2078	103	20.4	DoD-06-0MUHJ
	LITTLE CREEK NAB	Virginia Beach	VA	23521-2699	100	18.5	DoD-06-61414
	LITTLE ROCK AFB	Jacksonville	AR	72099	100	16.9	DoD-06-0NKAK
	MACDILL AFB	Tampa	FL	33621-5009	171	18.0	DoD-06-0NVZR
	MALMSTROM AFB	Great Falls	MT	59402-7510	68	9.6	DoD-06-0NZAS
	MARCH AFB	Riverside	CA	92518-6290	117	15.5	DoD-06-0PDPG
	MAXWELL AFB	Montgomery	AL	36112	83	13.9	DoD-06-0PNQS
	MAYPORT NS	Atlantic Beach	FL	32233	71	13.2	DoD-06-60201
	MCCHORD AFB	Tacoma	WA	98438-1316	148	13.7	DoD-06-0PQWY
	MCCLELLAN AFB	North Highlands	CA	95652-1130	88	12.1	DoD-06-0PRJY
	MCCONNELL AFB	Wichita	KS	67221-3622	56	10.4	DoD-06-0PRQE
	MCGUIRE AFB	Wrighttown	NJ	08641-5308	103	17.3	DoD-06-0PTFL
	MID-SOUTH NSA	Memphis	TN	38054-5006	61	10.8	DoD-06-00639
	MINOT AFB	Minot	ND	58705	56	8.9	DoD-06-0QJVF
	MIRAMAR NAS	San Diego	CA	92145-2015	91	14.0	DoD-06-67865
	MISAWA AB	Misawa		96319-5030	82	19.5	DoD-06-0QKKA
	NAPLES	Naples		81030	85	14.4	DoD-06-62588
	NELLIS AFB	Las Vegas	NV	89191-7041	130	16.5	DoD-06-0RKMF
	NEW ORLEANS NSA	New Orleans	LA	70142-5000	44	12.0	DoD-06-00205
	NORFOLK NB	Norfolk	VA	23511-3899	79	14.3	DoD-06-62688
	NORTH ISLAND	San Diego	CA	92135	46	10.3	DoD-06-00246
	OCEANA NAS	Virginia Beach	VA	23454	110	19.3	DoD-06-60191
	OFFUTT AFB	Bellevue	NE	68113-2130	120	16.4	DoD-06-0SGBP
	OKINAWA CDC	Naha		96368-5156	291	13.3	DoD-06-67400
	ORD COMMUNITY	Monterey	CA	93944	111	9.0	DoD-06-06307
	OSAN AFB	Osan		96278-6290	103	21.0	DoD-06-0SMYU
	PATRICK AFB	Cocoa Beach	FL	32925-3604	103	10.2	DoD-06-0SXHT
	PATUXENT RIVER	Lexington Park	MD	20670	56	11.4	DoD-06-0428A
	PEARL HARBOR	Honolulu	HI	96860-6000	98	15.9	DoD-06-62813
	PENSACOLA	Pensacola	FL	32507-1072	74	13.7	DoD-06-00204
	PETERSON AFB	Colorado Springs	CO	80914-1610	102	22.9	DoD-06-0TDKA
	QUANTICO	Woodbridge	VA	22134	88	15.9	DoD-06-00264
	RAF LAKENHEATH	St. Edmunds		09464	68	10.7	DoD-06-0MSET
	RANDOLPH AFB	San Antonio	TX	78150	97	16.8	DoD-06-0TYMX
	REDSTONE ARSENAL	Huntsville	AL	35898-7210	81	13.5	DoD-06-01202
	ROBINS AFB	Macon	GA	31098	81	13.7	DoD-06-0UHHZ
	SAN DIEGO NS	San Diego	CA	92136	93	16.5	DoD-06-00245
	SCHOFIELD BARRACKS	Wahiawa	HI	96786-3699	92	13.0	DoD-06-15815
	SCOTT AFB	Belleville	IL	62225-5362	114	18.8	DoD-06-0VDYD
	SELFRIDGE ANG	Mt Clemens	MI	48045-5011	76	11.6	DoD-06-26740
	SELFRIDGE ANG	Mt Clemens	MI	48045-5011	76	11.6	DoD-06-0VGLZ
	SEYMOUR-JOHNSON AFB	Goldsboro	NC	27534-6290	66	11.5	DoD-06-0VKAG
	SHEPPARD AFB	Wichita Falls	TX	76311-3048	81	10.1	DoD-06-0VNVP
	SIGONELLA	Catania		09627	68	11.0	DoD-06-62995
	SMOKEY POINT NS	Marysville	WA	98271-7853	60	9.3	
	TINKER AFB	Oklahoma City	OK	73145	87	17.5	DoD-06-0WVYK
	TRAVIS AFB	Fairfield	CA	94535-1905	97	12.6	DoD-06-0XDAT
	TYNDALL AFB	Panama City	FL	32403-5530	76	10.1	DoD-06-0XLWU
	USAF ACADEMY	Colorado Springs	CO	80840-2750	67	12.9	DoD-06-0XQPZ
	VICENZA	Vicenza		36100	55	9.4	DoD-06-IT240
	VOGELWEH AB	Kaiserslautern		09094	59	10.0	DoD-06-0YANB
	WEST POINT	Highland Falls	NY	10996	73	14.8	DoD-06-36993
	WHIDBEY ISLAND NAS	Oak Harbor	WA	98278	66	9.6	DoD-06-00620
	WHITEMAN AFB	Knob Noster	MO	65305	61	8.9	DoD-06-0YWVG
	WRIGHT-PATTERSON AFB	Dayton	OH	45433-5442	123	17.2	DoD-06-0ZHTV
	YOKOSUKA NESC	Yokosuka		96349-2300	86	15.2	DoD-06-61028

	YOKOTA AB	Tokyo		96328-6290	81	27.4	DoD-06-0ZNRE
	YONGSAN	Seoul		96205	183	19.2	DoD-06-KS948
						Total	1,859.0

DFAS

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	Unique Identifier
Building # 3502	DFAS Limestone	Limestone	ME	04751	141,204	143.0	DoD-07-0NRCH
Building # 1	DFAS Rome	Rome	NY	13441	343,764	93.0	DoD-07-0ULDF
						Total	236.0

DIA

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	Unique Identifier
Bldgs 6000, 6000E	Defense Intelligence Analysis Center	Washington	DC	20340	1,325,600	286.2	DoD-08-00001

NGA

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	Unique Identifier
	NGA East	Reston	VA	20191	2,440,172	508.1	DoD-10-0001
	NGA West	Arnold	MO	63010	1,172,087	199.2	DoD-10-0002
						Total	707.3

NSA

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	Unique Identifier
	Main campus	Annapolis Junction	Md.	20755	6,310,955	2057.0	DOD-11-JNSTURLA
	NBP bldgs	Annapolis Junction	Md.	20755	880,876	97.4	DOD-11-JNSTURLA
	Friendship Annex bldgs	Linthicum	Md.	21090	1,040,100	167.3	DOD-11-JNSTURLA
	CANX bldgs	Columbia	Md.	21046	164,487	28.0	DOD-11-JNSTURLA
	Kent Island bldgs	Kent Island	Md.	21619	6,640	4.9	DOD-11-JNSTURLA
	Dorsey Warehouse	Hanover	Md.	21076	278,264	15.3	DOD-11-JNSTURLA
	Misc bldgs	Various	Various	Various	773,633	57.0	DOD-11-JNSTURLA
						Total	2426.9

TMA

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage	Annual Energy Use (Site Billion Btu)	Unique Identifier
9	NCA, NNMC Bethesda (N00168), Hospital (Service Block of Repl Hospital), Bldg-9	Bethesda	MD	20889	585,473	188.1	DoD-12-563801
10	NCA, NNMC Bethesda (N00168), Hospital (Nursing Tower of Repl Hosp), Bldg-10	Bethesda	MD	20889	328,000	105.4	DoD-12-563810
70	NCA, NNMC Bethesda (N00168), USUHS Building A, Bldg-70	Bethesda	MD	20889	311,099	20.8	DoD-12-563856
72	NCA, NNMC Bethesda (N00168), USUHS Building C, Bldg-72	Bethesda	MD	20889	287,080	19.2	DoD-12563874
71	NCA, NNMC Bethesda (N00168), USUHS Building B and Garage, Bldg-71	Bethesda	MD	20889	282,955	18.9	DoD-12563865
1	NCA, NNMC Bethesda (N00168), Dental Clinic, Bldg-1	Bethesda	MD	20889	244,846	36.1	DoD-12-563507
2	NCA, NNMC Bethesda (N00168), Personnel Support and Services, Bldg-2	Bethesda	MD	20889	105,104	33.8	DoD-120563491
8	NCA, NNMC Bethesda (N00168), Hospital, Bldg-8	Bethesda	MD	20889	100,235	20.1	DoD-12-563632
23	NCA, NNMC Bethesda (N00168), Commissioned Mess Recreation Building, Bldg-23	Bethesda	MD	20889	90,756	29.2	DoD-12-563482

7	NCA, NNMC Bethesda (N00168), Medical/Hospital, Bldg-7	Bethesda	MD	20889	83,575	26.9	DoD-12-563623
57	NCA, NNMC Bethesda (N00168), Navy Exchange Retail Store, Bldg-57	Bethesda	MD	20889	48,029	15.4	DoD-12-563829
53	NCA, NNMC Bethesda (N00168), Environmental Health Effects, Bldg-53	Bethesda	MD	20889	35,209	18.4	DoD-12-563794
47	NCA, NNMC Bethesda (N00168), AFRI Building 47, Bldg-47	Bethesda	MD	20889	32,940	17.2	DoD-12-563892
1	NME, NH Beaufort (N61337), Hospital, Bldg-1	Beaufort	SC	29902	361,668	116.2	DoD-12-1071699
1	NME, NH Charleston (N68084), Naval Health Clinic Charleston, Bldg-1	Charleston	SC	29405	367,688	73.8	DoD-12-1407319
2	NME, NMC Portsmouth (N00183), Charette Health Care Center, Bldg-2	Portsmouth	VA	23708	1,016,000	326.5	DoD-12-604802
3	NME, NMC Portsmouth (N00183), Medical Support Facility, Bldg-3	Portsmouth	VA	23708	497,500	73.3	DoD-12-604946
1	NME, NMC Portsmouth (N00183), Medical Support, Bldg-1	Portsmouth	VA	23708	139,493	20.5	DoD-12-604848
3505	NME, NMC Portsmouth (N00183), Branch Healthcare Clinic - Little Creek, Bldg-3505	Portsmouth	VA	23708	86,077	17.3	DoD-12-1076248
285	NME, NMC Portsmouth (N00183), Medical/Dental Clinic - Oceana, Bldg-285	Portsmouth	VA	23708	75,847	15.2	DoD-12-984321
1	NMW, NH Bremerton (N68095), Naval Hospital Bremerton, Bldg-1	Bremerton	WA	98312	254,500	81.8	DoD-12-1408586
17	NMW, NH Bremerton (N68095), Family Practice Clinic, Bldg-17	Bremerton	WA	98312	69,053	22.2	DoD-12-77186
1	NMW, NH Guam (N68096), Hospital, Bldg-1	Agana Heights	GU	96910	306,775	98.6	DoD-12-1408960
1H	NMW, NMC San Diego (N00259), Main Hospital Complex, Bldg-1H	San Diego	CA	92136	867,271	278.7	DoD-12-778839
26	NMW, NMC San Diego (N00259), Bachelor Enlisted Quarters (26), Bldg-26	San Diego	CA	92136	334,710	22.4	DoD-12-778642
3N	(N00259), North Clinic, Bldg-3N	San Diego	CA	92136	159,941	51.4	DoD-12-778820
2S	(N00259), South Clinic, Bldg-2S	San Diego	CA	92136	152,883	49.1	DoD-12-778811
624	NMW, NMC San Diego (N00259), Medical Clinic (NTC), Bldg-624	San Diego	CA	92136	92,906	18.7	DoD-12-1587151
2	Walter Reed Main Post, Walter Reed AMC	Washington	DC	20307	2,584,063	627.2	DoD-12-00002
503	Walter Reed Forest Glen, Medical Research Lab	Silver Spring	MD	20307	520,411	205.3	DoD-12-00503
1425	Fort Detrick, Medical Research Lab	Fort Detrick	MD	21702	406,172	160.2	DoD-12-01425
54	Walter Reed Main Post, Medical Research Lab	Washington	DC	20307	315,367	124.4	DoD-12-00054
40	Walter Reed Main Post, Medical Research Lab	Washington	DC	20307	279,182	110.1	DoD-12-00040
14	Walter Reed Main Post, Enlisted UPH	Washington	DC	20307	144,014	35.0	DoD-12-00014
1412	Fort Detrick, Medical Research Lab	Fort Detrick	MD	21702	73,920	29.2	DoD-12-01412
511	Walter Reed Forest Glen, Medical Research Lab	Silver Spring	MD	20307	67,518	26.6	DoD-12-00511
162	Walter Reed Forest Glen, Commissary	Silver Spring	MD	20307	57,971	22.9	DoD-12-00162
568	Fort Detrick, Medical Research Lab	Fort Detrick	MD	21702	44,638	17.6	DoD-12-00568
1054	Fort Detrick, Medical Research Lab	Fort Detrick	MD	21702	39,338	15.5	DoD-12-01054

11	Walter Reed Main Post, Admin Gen Purp	Washington	DC	20307	99,589	15.1	DoD-12-00011
7	Walter Reed Main Post, Laboratory	Washington	DC	20307	36,661	14.5	DoD-12-00007
161	Walter Reed Forest Glen, Exchange Main Store	Silver Spring	MD	20307	32,501	12.8	DoD-12-00161
0001F	Walter Reed Main Post, Admin Gen Purp	Washington	DC	20307	68,418	10.4	DoD-12-0001F
6	Walter Reed Main Post, Health Clinic	Washington	DC	20307	65,549	9.9	DoD-12-00006
T0002	Walter Reed Main Post, Televideo Center	Washington	DC	20307	40,950	9.9	DoD-12-0002
1422	Fort Detrick, Info Proc Cntr	Fort Detrick	MD	21702	25,162	9.9	DoD-12-01422
1405	Fort Detrick, Exchange Main Store	Fort Detrick	MD	21702	22,955	9.1	DoD-12-01405
83	Walter Reed Main Post, Info Proc Cntr	Washington	DC	20307	21,574	8.5	DODWRDPW00083
						Total	3289.3

WHS

Identification Information		Location Information			Building Characteristics		Energy Manager Informa
Agency Facility Number (Optional)	Facility Name	City	State	Zip Code	Gross Square Footage (Thous.)	Annual Energy Use (Site Billion Btu)	Unique Identifier
	Pentagon	Arlington	VA	20301	6,885	555.0	DoD-13-00001
	Pentagon H&RP	Arlington	VA	20301	106	844.0	DoD-13-00002
	Federal Office Building #2	Arlington	VA	20301	799	67.0	DoD-13-00003
						Total	1466.0

Total Estimated Energy Use for Covered Facilities (Billion Btu):	175426.0
Percentage of Total Facility Energy Use:	80.5%