



**Fort Buchanan
Directorate of Public Works
Environmental Division**

The Directorate of Public Works Environmental Division's goal is to fully establish the Army Strategy for the Environment (Army Sustainability) and achieving optimum environmental controls in order to ensure healthier and safer environmental management standards that strengthen and sustains the US Army Garrison Fort Buchanan's mission of providing Soldiers, Civilians and their Family with a quality of life commensurate with the quality of their service.



**U.S. Army Garrison
Fort Buchanan**

**DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL DIVISION
81 MILES LOOP
FORT BUCHANAN, PR 00934**



For additional information, visit the Directorate of Public Works Environmental Division at Fort Buchanan Internet Site;

<http://www.buchanan.army.mil/dpw/home.html>

If you have any questions regarding this program, please contact DPW Environmental Division at (787) 707-3575 / 3522.



Sustaining the Environment

**Directorate of Public Works
Environmental Division**

**Conserving
Energy...**



**U.S. Army Garrison
Fort Buchanan**

**Sustaining the Environment,
for a Secure Future.**

SUSTAINABILITY & ENVIRONMENTAL MANAGEMENT SYSTEM

REVIEWS

Energy conservation and renewable energy production has become a worldwide priority upon discovery of the effects of greenhouse gases on the depletion of the Earth's protective ozone layer and the effect of petroleum gases on air, land and water quality. Furthermore, recent models suggest that as per the current fuel demand the existing petroleum reserves might be depleted by mid century. In response to this concerns, the President and the Congress of the United States has set forth several energy conservation and leadership in green construction acts and Executive Orders (EO) to promote resource conservation, curb green house gases, broaden alternative energy production and procurement in order to become a more sustainable nation.

To comply with these requirements, Fort Buchanan has established several Sustainability and Energy Conservation initiatives to speed compliance. Fort Buchanan's Strategy includes: Implementation of the Sustainability and Environmental Management System (SEMS) as the overarching management tool to ensure sustainable practices are applied to the design of new facilities and to daily operations in order to

reduce our environmental footprint, along with implementing energy conservation projects like the ongoing Energy Savings Performance Contract (ESPC) and Energy Conservation Improvement Program (ECIP), projects which will help us surpass EO 13423's energy and water reduction targets and meet Fort Buchanan's Net Zero Water program goals.

To fulfill the requirements contained under this Executive Order we have established quarterly Environmental Quality Control Committee meetings with our Directorate's and Tenant's and have constituted Significant Aspect Workgroups which seek to implement at building occupant level the goals of the SEMS Action Plan. The Workgroup's help us ensure program awareness and compliance that lead to a sustainable green operation and the widest goal dissemination.

**Wind Turbines: To be Installed at:
South Gate Rd. and Old DPW site
Rated Capacity: 275 KW**



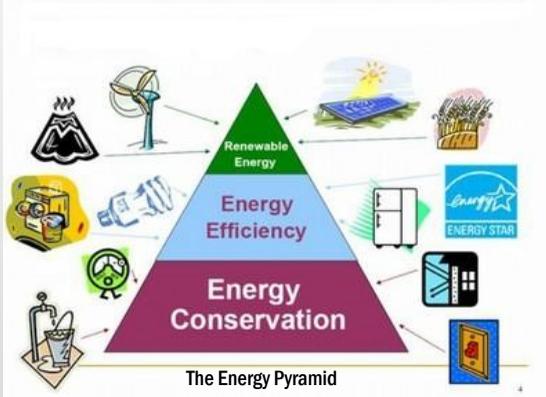
**AAFES-DeCA Building 689 Solar PV
Array, Approx. Production: 1 MW**



IMPLEMENTATION OF ENERGY CONSERVATION AT FORT BUCHANAN AND ARMY RESERVE CENTERS

The Environmental Management System is a continual cycle of planning, implementing, reviewing and improving the actions an organization takes to make its environmental aspects for the activities, products, and services.

The facilities acquire these Energy Reduction Program objectives in accordance with the Army Energy Program established under Army Regulation 11-27 and Executive Order (EO) 13423 Strengthening Federal Environmental,



Energy, and Transportation Management. The EO 13423 refers to the improvement of energy efficiency which must be achieved to at least three (3) percent per year or thirty (30) percent through FY 2015. The Environmental Division will implement this energy reduction measures in Fort Buchanan and ARCs by implementing Energy Conservation Action Plans contained within the SEMS Significant Aspect #3; Energy Consumption, its Energy Conservation Management Action Plan, and the Army Energy Management Program.

The Energy Conservation Action Plan establishes best management practices and user awareness programs to instill a sustainable and energy conscious culture that seeks to minimize its effect on the environment.

TIPS FOR REDUCING ENERGY CONSUMPTION:

The Directorate of Public Works offers different alternatives for implementing the Energy Conservation Program. Every facility must take initiative in implementing the Army Energy Program, Army Regulation 11-27 establishes policies, procedures, and responsibilities for the Army Energy Program. The Regulation applies to All Active Duty, Reserve, and National Guard organizations and facilities. The purpose of the Energy Awareness Training is to educate personnel in relation to Energy Consumption and the achievement of SEMS program goals and objectives. You can do your part by:

- Participate in the EMS Awareness Training and the Environmental Management Action Plans (EMAPs) Working Groups in addition to other related Environmental Quality Control Committee activities.
- Ensure Building Managers monitor energy use, Identify areas of opportunity and participate in the EQCC and at the EQCC Energy Conservation Committee.
- Implement the Energy Conservation Management Action Plan.
- Make maximum use of daylight. Encourage workers to take advantage of available natural lighting of windows instead of blocking natural light.
- Ensure office areas occupancy sensors and lights are working properly, and if not notify DPW.
- Implement purchase of green and efficient products. (Energy Star Rated)
- Participate in energy reduction issues campaigns,



etc.

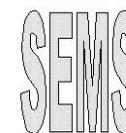
GOALS

The Executive Orders requires Federal agencies to lead by example in advancing the nation's energy security and environmental performance by achieving these goals:

- **VEHICLES:** Increase purchase of alternative fuel, hybrid, and plug-in hybrid electric vehicles by 5% by FY15. Reduce petroleum consumption in fleet vehicles by 2% annually for a total 30% reduction through 2020.
- **WATER USE REDUCTION:** Decrease water use and consumption at least 60% by 2020, as required under Net Zero Water Installation Program.
- **ENERGY EFFICIENCY:** Reduce energy intensity by 3% annually through 2015 or by 30% by 2015.
- **GREENHOUSE GASES:** By reducing energy intensity reduce greenhouse gas emissions by 34% on scope 1 and 2 GHG emissions in absolute terms by FY20 Baseline FY08.
- **RENEWABLE POWER:** Increase 5% (by FY12) and 7.5% (by FY13) of renewable energy generation. At least 50% of current renewable energy purchases must come from new renewable sources (in service after January 1, 1999).
- **BUILDING PERFORMANCE:** Construct & renovate buildings in a sustainable manner (Implement the Leadership in Energy & Environmental Design (LEED) and Army Net Zero Program) to promote resource conservation and indoor environmental quality.
- **ELECTRONICS MANAGEMENT:** Annually, Purchase and enable Energy Star® features on 100% of computers, monitors, printers and copiers; reuse, donate, sell, or recycle 100% of electronic products using environmentally sound management practices.
- **SUSTAINABILITY & ENVIRONMENTAL**



Fort Buchanan



Sustainability &
Environmental
Management
System



ENERGY CHECKLIST

- Use **natural lighting** or **daylight**. When feasible, turn off lights near windows
- Turn off your **computer monitor** at the end of the work day. If you leave your desk for an extended time, turn off your monitor.
- Turn off printers and photocopiers at night or purchase new ones with energy saving standby mode features and Energy Star program compliant.
- Unplug equipment** that drains energy when not in use (i.e. cell phone chargers, fans, coffee makers, desktop printers, radios, etc.).
- Save paper.** Photocopy only what you need. Always use the second side of paper, either by printing on both sides or using the blank side as scrap paper.
- Close or adjust window blinds to block direct sunlight to reduce cooling needs during warm months.
- Use **task lighting**; instead of brightly lighting an entire room, focus the light where you need it, to directly illuminate work areas.
- Set your thermostat to 72 degrees.
- Turn off the lights in unoccupied areas or areas of infrequent occupancy.
- Be conscious of energy conservation and of your role at the workplace.
- Immediately report leaking showerheads, fixtures and toilets
- Make maximum use of daylight. Encourage workers to use natural lighting not blocking windows and skylights. Where glare from sunlight might be an issue use window shades that blocks out the rays but transmit light into the interior, do not use blackouts.

