

Additional information.

The global community as well as BAE Systems' expectations have risen for sustainable operations in corporations. BAE Systems recognizes sustainable workplaces rank higher in productivity, employee engagement & instill customer loyalty. In the midst of a flattening defense budget & soaring energy costs, the ES Sector instituted a robust Sustainability Initiative to identify opportunities to reduce resource use, save money, & re-invest that savings into the business. Today, Sustainability is a critical part of the ES' Operations Strategy. Leadership is established to guide facilities in their sustainability efforts. One of the major challenges in making a sustainability program truly sustainable is stakeholder engagement. Team members engaged Sectors & business functions by teaching & encouraging them to look for ways to reduce waste & save money in their operations. This team's actions represent the future state of BAE Systems. The Sustainability Team creates a business culture that makes the wisest use of resources not only for the health of the company's finances but to benefit the environment & society as a whole.

Sustainability Initiative

BAE Systems has significantly lowered energy consumption and achieve sector targets for energy water and waste reductions. BAE Systems' employee engagement programs educates employees to be more socially, environmentally and economically active.

BAE Systems Electronic Systems (ES) sector-wide Sustainability Initiative: Facilities-driven sustainability initiatives such as utility cost take-out (UCT) programs provide a unique approach to the triple bottom line that emphasizes economics.

BAE Systems ES sector routinely engages our employees with Earth day, energy day and brown bag employee educational programs with giveaways. In addition, we have developed practical web based training for all personnel to encourage sustainability best practices.

UCT is our quick and efficient office / building audit process where each and every room ("room by room") is examined for short simple payback period items that can be implemented. We rapidly go through the entire building. We execute every project with less than a 1 year payback and document 2-3 years Return On Investment items for future action. This is a very practical common sense program that yields big results. \$1-\$2 per square foot is typical. We have realized over 6.1 million dollars in savings over the past 4 years.

Steps taken to save energy in office space under the program:

* Implementation and exercising of our sector wide energy policy & program

Strict temperature set point adherence and off hours set back.

Personal appliance program. Removal of numerous coffee pots, fish tanks, refrigerators and other non-business related personal appliances.

Installed "Smart" power strips in offices to control non-essential cubical loads

Annual compressed air leak surveys

Energy Star rating of many of our buildings

* Replacement of facilities infrastructure equipment & energy efficiency innovation

Motors

Pumps

Chemical free boiler feed water and closed loop water conditioning

HVAC package units

Variable speed drives (VSD)

LED lighting for displays

Installation of water saving bath fixtures and irrigation systems

Parking lot / exterior lighting retrofits that consume 75% less energy

Comprehensive indoor lighting retrofits that consume 30% less energy

Capture and utilization of waste heat for domestic hot water applications

Solar thermal domestic water heating

Active management of electrical demand and charges

Complex connectivity of systems and subsystems to the BAS.
Commercial cafeteria coffee urns are connected to the BAS saving \$10K / year.

- * Replacement of older PCs with all EPA EPEAT qualified products
- * Removal of redundant office equipment
- * Space rationalization. (better utilization of buildings & consolidation of space)
- * Educated all employees in energy use and stopping waste (waste = cost):
 - Monthly sustainability success stories published on internal company website
 - Production of internal training video tools for employee education
 - “Did you know” sustainability facts published on digital signage around sector facilities
 - Sustainability Initiatives brochure published and utilized at BAE Systems recruiting events

This approach has decreased utility consumption by over 58% at some sites.

The Manufacturing (MOE) piece activities are relatively new and are not the primary driver in our application. Most of the work has not been with Manufacturing. It has been accomplished by our Facilities group.

The 5 Million+ dollars saved & the 14% carbon reduction have been 99.97% executed by our Facilities group via creative innovation Facilities management practices and subject matter expertise with BAS (building automation systems) . Our award winning UCT program (utility cost takeout) has been the mature driver of these Facility savings. Our manufacturing sites are typically 80% office and 20% production. Much of our space is commercial. Our ½ million F2 Hybrid drive commercial bus facility in Endicott NY and our 700K F2 commercial aircraft engine controls plant in Fort Wayne Indiana come to mind. BAE Systems has numerous commercial customers.