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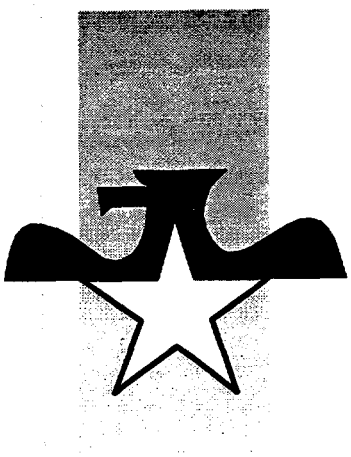

The Department of Energy

and the

Federal Interagency
Energy Policy Committee

Recognizing 21st Century Citizenship: 1997 Federal Energy and Water Management Award Winners

The Secretary of Energy
Washington, DC 20585

September 30, 1997

Dear 1997 Federal Energy Award Winners:

Welcome to Washington, DC, and congratulations on your achievements.

As we celebrate the 20th anniversary of the Department of Energy, I commend the individuals and groups who are bringing us closer to achieving critical energy efficiency and water conservation goals.

Your efforts will help us achieve the President's goal of demonstrating Federal leadership in the efficient and cost effective use of natural resources. I commend you and your colleagues for your outstanding accomplishments in conserving energy and water. By increasing energy efficiency, using clean technologies, and promoting energy awareness, you have helped improve our Nation's energy future.

I take great pleasure in recognizing your efforts with the Federal Energy and Water Management Awards and encourage you to continue this important work.

Sincerely,

Federico Peña

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Acknowledgments

The Department of Energy, Federal Energy Management Program would like to thank the following individuals for their assistance in evaluating the nominations for the 1997 Federal Energy and Water Management Awards:

Tim Arthurs - Department of State

Steve Hochman - General Services Administration

Paul King - Department of Energy

Ed Murtagh - Department of Agriculture

Van Nguygen - National Institutes of Health, Department of Health and Human Services

Sonny White - Department of Defense

Rich Wickman - National Aeronautics and Space Administration

Jim Woods - Department of Commerce

FEMP would also like to thank the National Capital Chapter of the Association of Energy Engineers for their assistance in pre-evaluation screening of the nominations.

Secretary of Energy	Federico Peña
Acting Assistant Secretary Energy Efficiency & Renewable Energy	Joseph Romm
Acting FEMP Director	John Archibald

FEMP
FEDERAL ENERGY MANAGEMENT PROGRAM

21st Century Citizenship: Pursuing Federal Energy Efficiency

Energy is a luxury that no one can afford to waste, and many Federal Government agencies are becoming increasingly aware of the importance of using energy wisely. Thoughtful use of energy resources is important, not only to meet agency goals, but because energy efficiency helps improve air quality. Sound facility management offers huge savings that affect the agency's bottom line, the environment, and workplace quality.

In these fiscally-modest times, pursuing sound energy management programs can present additional challenges for energy and facility managers. The correct path to take is not always the easiest. Hard work, innovation, and vision are characteristic of those who pursue energy efficiency. That is why the Department of Energy, Federal Energy Management Program (FEMP) is proud to salute the winners of the 1997 Federal Energy and Water Management Award.

The 1997 winners represent the kind of 21st century thinking that will help achieve widespread Federal energy efficiency. In one year, the winners, through a combination of public and private partnerships, saved more than $100 million and 9.8 trillion Btu by actively identifying and implementing energy efficiency, water conservation, and renewable energy projects. Through their dedication, hard work, ingenuity, and success, the award winners have also inspired others to increase their own efforts to save energy and water and to more aggressively pursue the use of renewable energy sources. The Federal Energy and Water Management Awards recognize the winners' contributions and ability to inspire others to take action. Please read about these individuals, small groups, and organizations on the following pages. The award winners are the Government's energy champions and FEMP is grateful for their pursuit of excellence in facility management. Congratulations to each winner and thanks to each private sector partner.

Department of Energy
Washington, DC 20585

Dear 1997 Award Winners:

As the Chair of the Federal Interagency Energy Policy Committee, it gives me great pleasure to congratulate the recipients of the 1997 Federal Energy and Water Management Awards.

Each year, Awards are presented by the Department of Energy and the Federal Interagency Energy Policy Committee to Federal facility managers and contributors who have made notable efforts to reduce the consumption of energy and water, expand the use of renewable energy resources, and develop and demonstrate innovative energy efficiency and water conservation technologies. The Awards, established under the Energy Policy Act of 1992, underscore the Administration's as well as the Department's commitment to recognize efforts that save energy, reduce the Federal deficit, promote a cleaner environment, and create a stronger economy. This year's Award recipients were selected from 177 nominations submitted by Federal agencies.

Your collective commitment to implement energy and water conservation projects in your agencies has saved the Federal Government more than $100 million during the past fiscal year. By your dedication, hard work, and success, you inspire us to increase our own efforts to save energy and water.

Again, I congratulate you.

Best regards,

Joseph Romm
Acting Assistant Secretary
Energy Efficiency and Renewable Energy

Printed with soy ink on recycled paper

Beneficial Landscaping Practices Award to Organizations

Central Federal Lands Highway Division and Cibola National Forest
Department of Transportation
Albuquerque, New Mexico
505-761-4650

The Central Federal Lands Highway Division of the Department of Transportation's Federal Highway Administration in partnership with the U.S. Forest Service, Cibola County, and the New Mexico State Highway and Transportation Department completed a project to improve the ecosystem and watershed of a Zuni Canyon meadow which had been degraded by construction of roads and railroads in the early 1900s. The Zuni Canyon Meadow Restoration Project entailed designing and reconstructing a two-lane, 12 mile (19 kilometer) gravel road in the Cibola National Forest, improving the safety, and "rewetting" and restoring 200 acres (81 hectares) of meadow. The roadway grade was raised to eliminate inlet and outlet ditches, arroyos and eroded channels were filled in, rail beds were eliminated, and permeable rock fills were constructed to maintain the natural flow of water across the soil surface. The $500,000 restoration cost, equal to 9 percent of the total roadway contract, was provided by the Forest Highway Program. A monitoring program to measure and evaluate vegetation changes in the meadows has been developed by the Forest Service. Successful components of the project will be duplicated on an adjacent Forest Highway during the reconstruction of more than 40 additional miles (65 kilometers) in the Cibola National Forest, creating up to 1,000 acres of wet lands.

Lake Havasu City Post Office
United States Postal Service
Lake Havasu, Arizona
303-313-5132

The United States Postal Service's Lake Havasu City Post Office formed a successful public-private partnership within their community to replace existing landscape with indigenous desert plants. By using xeriscape landscaping principles, water and landscape maintenance costs will be reduced by approximately $500 per month, a savings of 50 percent. Native plants, obtained by the Bureau of Land Management from local reclamation projects, were positioned around building structures to help reduce energy bills through shading. A leaky, inefficient watering system was replaced with a new irrigation system. To improve the aesthetics of the facility, attractive walkways and benches were designed and plaques identifying the plant species were added. The project offers significant environmental and community benefits by reducing pesticide and fertilizer use and demonstrating xeriscape principles to the local populace and visitors. The community response and support for the project was overwhelming, and included contributions of hundreds of volunteer hours and thousands of dollars worth of supplies and equipment. The Postal Service was able to leverage $10,000 in funding with $10,000 from a SAVEnergy grant through DOE's Federal Energy Management Program, with the remaining $30,000 cost contributed by community organizations and agencies, such as Lake Havasu Area Chamber of Commerce, the City of Lake Havasu, the Bureau of Land Management, and Arbourtech Landscaping.

Santa Barbara Processing and Distribution Center
United States Postal Service
Santa Barbara, California
415-536-6490

When designing its Santa Barbara Processing and Distribution Center, the Postal Service created a demonstration garden that incorporated the use of drought tolerant vegetation and reclaimed water, and protected an environmentally-sensitive, one-acre wetland. The Processing and Distribution Center, which was built in 1995, takes advantage of a nearby reclaimed water supply line for irrigation and for toilets inside the facility. Reclaimed water accounts for approximately 77 percent of total water usage at the Processing and Distribution Center, saving $6,800 annually. There are separate lines and meters for potable and reclaimed water and all plumbing fixtures are low flow. In consultation with biologists and arborists, the Postal Service incorporated mulch-enhanced native and drought-tolerant trees, shrubs, and ground cover. A 100-foot buffer was created to protect and integrate the wetlands into the project with a short fence erected to prevent human intrusion into the natural habitat. The project also included design elements to maintain the natural flow regime into the wetlands during storms. The experience gained from the demonstration garden at the Santa Barbara Center has been applied to other Postal Service facilities and the agency intends to continue the practice of beneficial landscaping in the construction of new facilities.

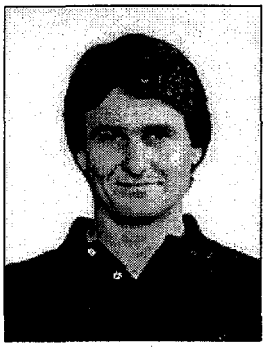
Beneficial Landscaping Practices Award to Small Groups

Raymond Hess
Gilbert Contreras
Cecil Payne, III
56th Civil Engineering Squadron
United States Air Force
Luke Air Force Base, Arizona
602-856-3636

In FY 1996, the Pest Management Shop of the 56th Civil Engineering Squadron developed a new procedure for applying herbicides to control vegetation in desert landscaping, reducing chemical use by 70 percent. The new treatment method uses a combination of a soil sterilant, pre-emergent, and post-emergent herbicide to treat for weeds in one application. This method is more cost-effective than the previous process, saving Luke Air Force Base $30,000 annually in material use and reducing the man-hours needed for spraying by 75 percent. The environmental benefits of this program are also significant. Now that chemicals are applied only once a year, rather than four times, chances of soil and ground water contamination have been reduced significantly.

Water Management Award to an Individual

Gary Johnson
United States Air Force
Kadena Air Base
Okinawa, Japan
011-81-611-734-7256



Mr. Johnson successfully sought funding of a system-wide leak survey of the seriously deteriorating water utility infrastructure at Kadena Air Base. As large leaks were identified, Kadena personnel repaired the leaks, reducing industrial water consumption by more than 400 million gallons per year in FY 1996 and saving more than $3.5 million dollars from significantly lower water and sewage bills. The extensive water system and numerous unidentified leaks made it difficult to calculate the savings-to-investment ratio and payback period needed for project approval. Therefore, Mr. Johnson had a 10,000 linear foot water line replacement project developed where leakage, costs, and savings could be more accurately estimated. An area known to have a high leakage rate was chosen so that the projected savings would be sufficient to cover the cost of a leak survey for that area plus the rest of the base. The exact placement of the project was determined by the leak survey findings. The survey, completed in FY 1996, confirmed the existence of significant leakage in the general area proposed for the waterline replacement project. Leak repairs of the largest leaks were completed and as of mid-April, it was estimated that about 87 percent of water loss was stopped. Through Mr. Johnson's determination and innovation, actual water consumption fell by 37.5 percent in FY 1996 resulting in tremendous savings for Kadena Air Base.

Water Management Awards to Organizations

76th Civil
Engineering Squadron
United States Air Force
Kelly Air Force Base, Texas
210-925-9731

In the midst of a serious drought in the San Antonio area during FY 1996, the 76th Civil Engineering Squadron at Kelly Air Force Base spearheaded an effort that decreased consumption of potable water by 8 percent. In just seven months, 52 million gallons of potable water were conserved, saving almost $21,000. The 76th Civil Engineering Squadron evaluated the golf course irrigation system and implemented measures to improve the reuse water system for the irrigation and replaced existing controls with variable speed drive controllers. The measures, at a cost of $25,000, had a pay back period of 15 months. The improvements increased the reliability of the system, reduced operations and maintenance costs, and allowed the irrigation needs to be met almost entirely through reuse water.

Fort Eustis
Department of the Army
Fort Eustis, Virginia
757-878-3127

In FY 1996, the Directorate of Public Works at Fort Eustis implemented water projects that reduced water consumption by almost 26 percent, saving 147 million gallons of water annually. The Directorate of Public Works formed a water conservation task force that reviewed water use patterns and identified water conservation opportunities. An investment of only $100,000 will save more than $340,000 annually over the next 20 years. The task force commissioned a water detection survey and corrected the identified leaks. Other initiatives included adjusting the operation of the distribution system to reduce water overflow and waste, installing water conservation kits in family housing units, modifying the piping of a large indoor swimming pool to allow filtering and reuse of overflow water, and modifying the chlorine injectors at the sewage treatment plant to use treated effluent instead of potable water. Due to the lower water consumption at Fort Eustis, Newport News Waterworks avoided treating 147 million gallons of water and reduced the use of treatment chemicals by almost 42 tons.

Renewable Energy Awards to Organizations

Naval Air Weapons Station,
China Lake
Department of the Navy
China Lake, California
619-939-0076

The Naval Air Weapons Station at China Lake has demonstrated its commitment to the use of alternative and renewable fuels through its installation of three photovoltaic/diesel hybrid power systems and the construction of a compressed natural gas fueling station. The hybrid power systems saved $1.1 million in FY 1996 and contributed to China Lake's 38.7 billion Btu energy reduction in FY 1996. The $2 million investment for the initial photovoltaic/diesel hybrid power system will save nearly 3 billion Btu annually. The Radar Range power system, implemented at a cost of $1.5 million, is expected to save 5.7 billion Btu per year and the hybrid power system at Windgate Pass will cost $2.6 million and will save approximately 2.4 billion Btu. Construction of another hybrid power system for which funding was provided in FY 1996 will provide additional savings. The photovoltaic/hybrid systems require 90 percent less diesel fuel, produce fewer emissions, and reduce required system maintenance. In addition, the Naval Air Weapons Station provides training to their energy managers on several renewable/alternative energy technologies, participates in a demand side management program offered by Southern California Edison, and conducts several energy awareness and outreach programs, including newsletters and informational exhibits.

U.S. Army Intelligence Center
and Fort Huachuca
Department of the Army
Fort Huachuca, Arizona
520-533-1861

In FY 1996, the Army Intelligence Center and Fort Huachuca demonstrated their leadership in renewable energy use through implementation of innovative projects that increased the use of renewable energy by more than 18 percent compared to FY 1995. A prototype dish-Stirling solar thermal electric power generator was installed through funding from the Strategic Environmental Research and Development Program. Also under this program, an 18-kilowatt grid-connected, roof-mounted photovoltaic system was installed in partnership with the Environmental Protection Agency and Tucson Electric Power Company. The photovoltaic system, which has produced a maximum 19.9 kilowatts, was strategically placed on the first building visible as visitors come through the main gate of Fort Huachuca. Other renewable energy initiatives included two photovoltaic-powered security lights for a tactical communications equipment and a solar domestic hot water project for the barracks. In FY 1996, designs were also completed for a 225-kilowatt wind turbine with an electrical line connection, and sun-tracking skylights and transpired air solar collectors (solar wall) for an airfield hanger.

Renewable Energy Awards to Small Groups

Vince Juselis
Jeff Leslie
Johnny Bellina
Tom Hodges
Gary Seifert
Craig Miller
Cameron Arnegard

Air Force Space Command
United States Air Force
Peterson Air Force Base, Colorado
719-554-3427

In FY 1996, the efforts of this team resulted in the Air Force Space Command completing construction of four 225-kilowatt wind generators to supplement electrical power supplied by fuel oil engine driven generators at its remote tracking station on Ascension Island. This wind energy project was actively pursued due to the remote location of the island and the cost associated with fuel oil shipments. The wind machines are uniquely designed to allow continued production of electricity at the reduced level of 40 kilowatts for low wind levels that would normally put the generator in a non-producing mode. This feature takes significant advantage of the wind environment at the site. During its first four months of operation, the wind farm produced over 1 million kilowatt hours of electricity. In addition, emissions of the greenhouse gases carbon dioxide and nitrous oxides have been reduced by 930,000 pounds and 32,000 pounds, respectively. With an average wind speed on the island of 16 to 17 miles per hour, the wind generators are expected to produce from 3.0 to 3.5 million kilowatt hours of electrical energy annually. Fuel oil consumption is expected to be reduced by 287,000 gallons for an annual savings of $350,000.

l-r: Arnegard, Juselis, Bellina, Leslie, Miller, Hodges, Seifert

Stephen Snyder
Matt Duston
Tony Mora
R. Will White

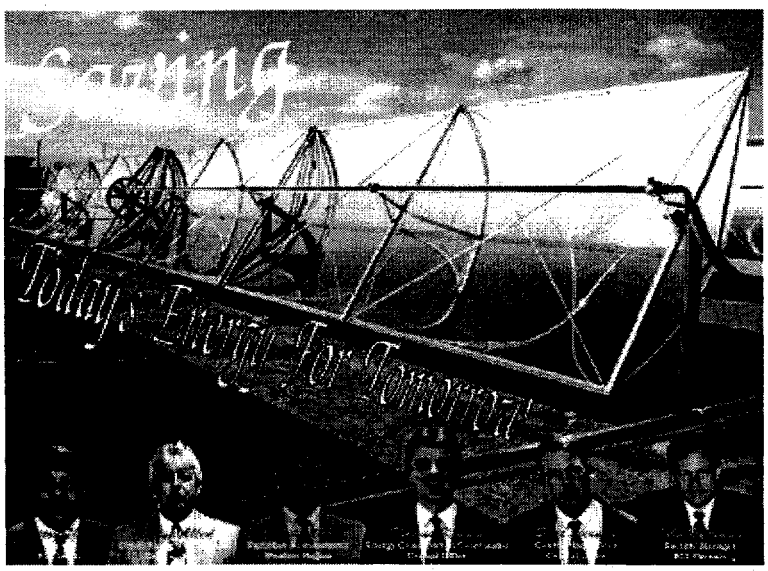
Fort Carson
Fort Carson, Colorado
719-526-1684

Efforts undertaken by this team of individuals at Fort Carson resulted in the first installation of transpired solar collector technology (solar wall) in a large Federal facility. After Military Construction funds were approved for the 74,000 square foot aviation maintenance facility, Mr. Snyder contacted DOE's National Renewable Energy Laboratory and the Army's Construction Engineering Research Laboratory to assist in conducting a feasibility study on the use of solar collectors. The solar wall system, consisting of 7,800 square feet of dark bronze wall-mounted collectors, provided solar preheat make-up air for the maintenance facility at Fort Carson. The innovative partnership provided expertise to evaluate the operation of the solar wall and augmented the expertise of the energy management personnel at the Base. The results of the study demonstrated that the six fans pulled in 63,000 cubic feet per minute of solar-heated ventilation and provided 37.5 million Btu of energy. Based on these positive results, a second solar collector has been designed to supplement the heat of a battery storage facility. To help spread the use of solar wall technology, DOE has produced fact sheets detailing the success of the technology and the Environmental Protection Agency has produced a pollution prevention video featuring the solar wall.

Clifton Floyd
John Rathman
Richard Mekus
Scott Stermer
Thomas Kearns
George Allen

Federal Bureau of Prisons
Department of Justice
Phoenix, Arizona
602-465-9757

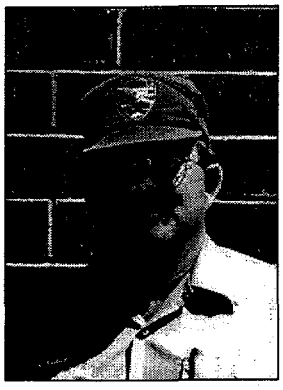
During FY 1996, the Federal Bureau of Prisons awarded an energy savings performance contract for the installation, operation, and maintenance of a solar hot water system at the Federal Correctional Institution in Phoenix. This represents the first renewable energy ESPC awarded by the Federal Government. The state-of-the-art solar system will employ parabolic trough reflectors with a 21,000 gallon thermal storage capacity. Eighty percent of domestic hot water previously supplied by electrical power will be provided by the solar heating system, reducing electrical energy consumption by 1.4 million kilowatt hours per year. Associated savings in electrical charges are expected to be $90,000 annually. The enthusiasm and on-site support provided by Mr. Floyd and Mr. Rathman made the execution of this project possible. Mr. Mekus and his staff were invaluable during the liaison between the Correctional Institution and the Central Office. Mr. Stermer and Mr. Kearns provided the contracting expertise, while Mr. Allen's foresight and coordination provided the impetus to pursue the contract.



l-r: Floyd, Allen, Mekus, Kearns, Stermer, Rathman

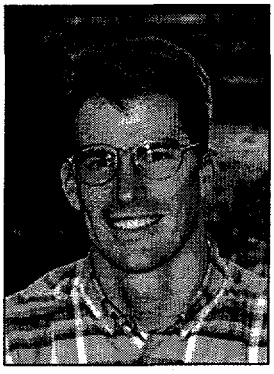
Renewable Energy Awards to Individuals

Kent Bullard
Channel Islands National Park
Department of the Interior
Ventura, California
805-658-5745



In FY 1996, Mr. Bullard initiated a wide variety of energy conservation practices at the Channel Islands National Park, maintaining the Park's position at the forefront of the National Park Service's energy program. Mr. Bullard completed the integration of a stand-alone hybrid wind/photovoltaic energy system, consisting of a 3.5 kilowatt PV array and 900 watts of wind power, and installed an 880-watt PV water pumping system for the new ranger station on San Miguel Island. The Channel Islands National Park currently has 59 renewable energy systems in operation and Mr. Bullard is in the final stages of integrating a 30-kilowatt wind/PV/diesel hybrid system on Santa Rosa Island. In addition, Mr. Bullard implemented water conservation measures that reduced water consumption at the mainland facility by 15 percent, saving over 100,000 gallons per year. Payback of the investment was achieved in 8 months. Water conservation measures incorporated in the design of the San Miguel ranger station include low flow fixtures, low flush toilets, and the collection of rainwater from the structure's roof for toilet flushing. These measures precluded the need to install a larger PV pumping system and reduced the draw on the islands' limited aquifer as well as the size requirements on the storage tanks and effluent field. Mr. Bullard was also personally responsible for implementing a compressed natural gas vehicle program that converted almost half of the mainland's fleet to natural gas. He secured an offer from the Natural Gas Company of Southern California to build the refueling station free of charge and participated in the General Services Administration's incentive program, which reduced the vehicle operating costs by 6 percent annually. Mr. Bullard also negotiated a National Park Service-wide special discount for the procurement of energy conserving refrigeration units, resulting in five other Parks purchasing energy-efficient refrigerators at 30 percent below list price.

Trent Duncan
Bureau of Land Management
Department of the Interior
Salt Lake City, Utah
801-539-4090



Mr. Duncan, the renewable energy coordinator for the Bureau of Land Management, actively sought out a partnership with the DOE through Sandia National Laboratory's Photovoltaic Systems Assistance Center. Through this partnership and under the leadership of Mr. Duncan, 65 pilot projects throughout the Bureau of Land Management have been implemented in FY 1996 at a cost of $400,000. Approximately 1.2 million kilowatt hours a year of diesel engine generated electricity were displaced by photovoltaics. These generators would have consumed 130,000 gallons of diesel fuel, costing $200,000 a year in fuel and maintenance. Based on projected generator usage, the photovoltaic systems have a simple payback of two years. Substantial emissions savings, estimated to have a dollar value of $250,000, are also realized. Additionally, Mr. Duncan has led the effort to provide photovoltaic power for campground hosts and rangers at 25 sites. The PV system allows the remote sites the benefit of a 24-hour presence, reducing potential vandalism damage by an estimated $350,000 a year without the noise, maintenance, and distraction of a diesel engine generator.

Mobility Energy Management Awards to Organizations

USS BOXER (LHD 4)
Department of the Navy
619-437-2735

During FY 1996, the USS BOXER crew saved more than $384,900 through continuous maintenance and process improvements and energy conservation awareness training. By configuring the engineering plant, boiler load at full power was improved and fuel economy was optimized to 14 percent below the standard daily burn rate for this class of ship, saving 533,600 gallons of fuel oil. The Naval Sea Systems Command Ship Energy Conservation Assist Team conducted computer analysis to determine fuel consumption and optimum transit speeds with different plant configurations, which allowed the ship to realize the fuel savings. USS BOXER also implemented an electric load reduction plan in cooperation with the San Diego Public Works Division. Unneeded lighting and machinery were turned off, ventilation fan speeds were reduced, and water chilling was discontinued when the crew was not on board. Maintenance initiatives included repair of steam, water, or oil leaks, improvements to the ventilation systems and ducting, and conducting an extensive evaporator groom which increased water production 2 percent.

USS ESSEX (LHD 2)
Department of the Navy
619-437-2770

In FY 1996, the USS ESSEX consumed 18.3 percent less fuel and saved almost $1 million by aggressively training personnel in proper maintenance and operation of the propulsion plant and other auxiliary ship systems. By overhauling the propulsion systems and running the system at economical speeds during long transits, fuel oil consumption was reduced by 1.2 million gallons saving almost $895,000. High and low pressure drain valves were replaced and new valves were installed by the ship's crew, saving over $30,000 in contractor costs. Engineering equipment was monitored weekly and training was conducted to encourage the crew to develop creative ways to improve engineering processes and more efficiently steam the propulsion plant. Other energy conservation measures included reducing lighting in unoccupied spaces, minimizing air conditioning plants to those needed to support electronic equipment, and installing low-flow showerheads to lighten water heating loads.

USS LAKE ERIE (CG 70)
Department of the Navy
808-474-2228

During FY 1996, the USS LAKE ERIE reduced fuel oil consumption 23 percent from the standard daily burn rate. Ship personnel burned less fuel oil by making use of the more efficient trail shaft configuration whenever operational requirements permitted. Trail shaft configuration uses one gas turbine motor for propulsion rather than the usual two. Senior personnel further reduced fuel oil consumption by monitoring all operating machinery for signs of wear or malfunction, establishing a readiness improvement team, and tasking engineering and technical experts to evaluate and ensure that the equipment was operating at peak efficiency. Through these initiatives and preventative maintenance, LAKE ERIE burned almost 844,000 fewer gallons of fuel oil saving $616,000. In addition, ship personnel recycled 4,000 pounds of scrap metals, 1,400 pounds of aluminum cans, and 1,200 pounds of office paper, contributing more than $2,200 to LAKE ERIE's morale, welfare, and recreation fund.

USS MERRILL (DD 976)
Department of the Navy
619-437-2735

In FY 1996 the energy conservation efforts on board the USS MERRILL reduced the fuel burn rate by 22.5 percent compared to FY 1995 and saved $384,800. The crew maximized engineering plant operations within established fuel curves, maintained equipment reliability, improved crew awareness, and evaluated fuel conservation efforts. By taking into account various mission profiles based on ship-specific fuel burn curves, the Ship Energy Conservation Assist Team was able to improve the engineering plant configurations. To maintain equipment efficiency, the crew calibrated the shipboard gauges and engine control system, and conducted preventative maintenance. Detailed evaluations were performed of engine parameters to identify system anomalies. Operational improvements included recommending courses to take advantage of wind and sea conditions during trail shaft operations and declutching two of the four engines, whenever possible, to reduce burn rate.

Energy Management Awards to Organizations

10th Civil Engineering Group
United States Air Force
United States Air Force Academy
Colorado Springs, Colorado
719-333-2430

The 10th Civil Engineering Group's facility energy program saved $794,000 in FY 1996 through the implementation of energy efficiency measures and retrofits. The energy management control system was extended to nine more facilities and upgraded with direct digital controls increasing the savings of the system by $185,000. The new system now saves the Academy $500,000 per year and serves 58 facilities covering 4.9 million square feet. An estimated $176,000 is saved annually through heating, ventilation, and air-conditioning (HVAC) retrofits that included replacing 40-year-old motors with high efficiency induction motors and installing variable-frequency drives on pumps and HVAC fans. As part of an academic facility upgrade, 311 classrooms were retrofited with T-8 lamps, electronic ballasts, and occupancy sensors saving $33,000 annually in energy and $21,000 in maintenance labor costs. The 10th Civil Engineering Group also initiated four major energy projects that will save an additional $479,000 annually, including replacing a central high temperature hot water plant with 11 individual units and upgrading an electricity substation to increase the power factor.

88th Civil Engineering Group
United States Air Force
Wright-Patterson
Air Force Base, Ohio
937-257-6964

In FY 1996, efforts of the 88th Civil Engineering Group (CEG) reduced energy consumption by 95.7 billion Btu compared to FY 1985, a reduction of almost 15 percent per square foot. With top level support of the Base's Energy Management Steering Group, the 88th CEG implemented an electrical demand reduction program, negotiated lower energy rates, and spearheaded an energy awareness campaign. The 88th CEG implemented an aggressive base-wide relamping program for which $77,000 was received in utility rebates and which saved an estimated $68,000 in electricity costs. Approximately 1,500 occupancy sensors were installed, saving an estimated $125,000; and more than 5,100 Energy Star Miser devices installed on computer monitors and printers will save $120,000 annually. Other projects to reduce demand included installing variable frequency drives on heating plants, expanding the energy management control systems to implement night time set-back and enhance capabilities for load shedding. Ten load shedding episodes in FY 1996 saved the Base $123,000 in demand charges. The 88th CEG signed a new utility service agreement with Dayton Power and Light, which will save approximately $500,000 annually when fully implemented. The energy awareness campaign included a competition among 35 facilities to reduce energy consumption, educating and soliciting individuals and organizations to maximize energy savings during major holidays, and ongoing installation of digital electronic meters to better manage energy use.

99th Civil Engineering Squadron
United States Air Force
Nellis Air Force Base, Nevada
702-652-7790

In FY 1996, the 99th Civil Engineering Squadron (CES) implemented energy and water projects valued at more than $1 million at no cost to the Government. This was accomplished through the award of an energy savings performance contract and negotiation of a demand side management agreement with Nevada Power Company. The initial delivery order under the ESPC and the first phase of the DSM agreement will save almost $130,000 annually. Other initiatives include a fuel cell demonstration program and installation of a compressed natural gas fueling station. The fuel cell, installed in partnership with the Army's Construction Engineering Research Laboratory, will supply electricity and domestic hot water to a dormitory complex saving more than $38,000 annually. The compressed natural gas station will reduce vehicle-related emissions and save almost $11,500 annually in lower fuel costs. The 99th Civil Engineering Squadron also identified and implemented water conservation opportunities that will save Nellis Air Force Base 4.4 million gallons of water a year.

Fort Carson
Department of the Army
Fort Carson, Colorado
719-526-1684

The main components of Fort Carson's comprehensive energy management program—Command emphasis, consumer awareness, and project implementation—resulted in an annual cost avoidance of more than $1.6 million in FY 1996 compared to FY 1985. FY 1996 initiatives saved 31.3 billion Btu and lowered energy cost by $144,800. Fort Carson operates and maintains more than 100 photovoltaic systems that are used for environmental monitoring, water pumping, lighting, and educational activities. Renewable energy projects continue to be installed, including a solar wall pre-heating system at an aviation hanger. Other projects implemented in FY 1996 include lighting and occupancy sensor retrofits, installation of direct digital controls in 66 buildings, replacement of 42 boilers with high efficiency boilers and upgrade of boiler plant controls, and retrofit of 94 motors with high efficiency motors. Energy awareness initiatives include the Commander's Energy Award program, publication of an Installation Design Guide Supplement to ensure that suppliers and designers include pollution prevention and energy-efficient technologies, and a partnership with the Air Force Academy and EPA that produced a pollution prevention video. The video is being distributed to Armed Forces commands nationwide. The "Trees for Fort Carson" program encourages facility managers to plant trees and shrubs for windbreaks, erosion control, wildlife habitat, and energy conservation, earning Fort Carson a "Tree City USA" designation for 10 consecutive years.

Headquarters,
National Training Center
Department of the Army
Fort Irwin, California
619-380-5048

The National Training Center at Fort Irwin has averaged a 4 percent annual reduction in energy use during the past four years resulting in energy performance 35 percent below the FY 1985 baseline. Energy efficiency, water conservation, and renewable energy initiatives at the Training Center have improved the quality of life for the 18,000 personnel, significantly reduced pollutants, and eliminated the use of ballasts containing PCBs and the disposal of 800 batteries annually. As part of a demand side management agreement, the local utility completed a lighting retrofit of the entire installation, saving the base more than $1.2 million annually. By installing thermostats with light sensors at 400 administrative locations almost $93,000 will be saved annually. When the lights are turned off in these areas, the thermostats automatically set back room temperatures to 60 degrees in the winter and 80 degrees in the summer. Water conservation initiatives included modifying the operation of the reverse osmosis water production plant which increased its efficiency by 45 percent. As a result, the system will recover approximately 8.3 million additional gallons of product water and eliminate the treatment of 8 million gallons of brine water. The Training Center also performed a water leak detection survey and identified and repaired leaks, saving approximately 2.6 million gallons of water annually. Photovoltaic systems replaced three gasoline-powered engines that are used by Fort Irwin to perform air sampling at three remote sites. The PV system eliminated contamination of the sampling filters and saved 900 gallons of gasoline annually.

Holston Army Ammunition Plant
Department of the Army
Kingsport, Tennessee
423-578-6328

During FY 1996, the Holston Army Ammunition Plant succeeded in reducing its energy consumption by 9.6 percent and its energy costs by 8.5 percent compared to the previous year. The Plant improved steam trap maintenance, added additional insulation to steam line mains and heat generating equipment, consolidated a number of buildings, installed energy-efficient lighting, and implemented projects to reduce electric demand. In FY 1996, the ongoing steam trap program reduced the annual trap failure rate from 18 percent to less than 3 percent, saving $224,116. Automatic valves were added to control river water flow to industrial buildings, saving $97,000 in energy costs by reducing the amount of water pumped by 889 million gallons annually. Previously river water flowed continuously. Another initiative, in which controllers were installed on the river water pumps, saves $58,000 annually by permitting river water to be supplied from a reservoir using gravity flow rather than pumping during peak demand periods. Other cost saving initiatives included installing a $40,000 propane backup system for the acetic anhydride furnaces allowing Holston Ammunition Plant to convert to interruptible natural gas supplies and save more than $135,000 annually through lower natural gas charges.

National Institutes of Health
Department of Health and Human Services
Bethesda, Maryland
301-496-5037

During FY 1996, the Office of Research Services and the Division of Engineering Services teamed together at the National Institutes of Health to retrofit the central heating and cooling plant and upgrade the distribution system. The team expects to save more than $2.4 million annually. By installing high efficiency chillers in the central plant and equipping cooling towers with variable frequency drive fan motors speed controls, energy consumption will be reduced by more than 20 megawatt hours and save $1 million annually. The additional cost for purchasing high efficiency chillers that use the environmentally-friendly refrigerant, R-22, was covered by a rebate from the local utility. Other initiatives included installing variable speed secondary pumping which enhances chilled water distribution and allows chilled water distribution to be decreased during off peak hours, saving $720,000 annually; adding a steam-driven turbine to the electricity-driven chiller, saving $110,000 annually; and incorporating free cooling by using a heat exchanger to generate chilled water from the condenser water. The free cooling system will allow the chillers to remain off line in the winter, saving $340,000 annually. By increasing the chilled water temperature differential in all new buildings, the chilled water flow and heat requirements are reduced, allowing the size of the distribution pipe to be reduced. This initiative saved $6 million in construction costs.

Naval Undersea Warfare Center Division Keyport
Department of the Navy
Keyport, Washington
360-396-5170

In FY 1996, the Naval Undersea Warfare Center Division's broad-based energy and water efficiency program reduced energy consumption by more than 34 billion Btu and lowered energy costs by almost $528,000. Energy efficiency initiatives included installing direct digital controls in 34 buildings saving $122,000 annually, implementing a power factor adjustment project that saved $33,600, and installing a new 700-horsepower packaged steam boiler that saves $14,000 annually. Water conservation initiatives included accessing the underground aquifer to supply the Base's water needs. This allowed Keyport to modify its potable water contract and save more than $30,000 annually. Keyport personnel also saved more than $477,000 by modifying the water and sewer contract to reflect the decrease in water use. Other initiatives included implementing an aggressive facility space planning program that consolidated the use of facilities, purchasing bulk natural gas that saves $100,000 annually, and conducting a study to determine the optimum method of electricity procurement. Puget Sound Energy, the local electric utility, submitted a new electrical rate schedule more in line with projected deregulated rates. Keyport also signed a demand side management contract with Puget Sound Energy that could result in the implementation of energy-related projects valued at more than $2 million.

Naval Air Station, Whidbey Island
Department of the Navy
Oak Harbor, Washington
360-257-5175

In FY 1996, the Naval Air Station, Whidbey Island saved 134 billion Btu, $832,000 in energy costs, and more than 41.6 million gallons of water by investing in energy and water retrofits, improvements, and awareness. Energy projects undertaken included a major boiler plant upgrade, repair of steam and condensate lines, chiller replacements, lighting retrofits, and insulation improvements. In addition to these projects, Whidbey Island saved more than $176,000 by purchasing natural gas on the spot market. Water management projects included the installation of a water reutilization system at the Firefighting School, improvements to the water distribution system, and installation of aircraft washrack water recycling systems. The washrack water recycling project saved 6 million gallons of water and reduced the amount of hazardous waste rinse water by 75 percent, saving the Air Station $200,000 in disposal costs. The success of the energy program at the Air Station is enhanced by an aggressive energy awareness program. The Energy Management Steering Committee initiated a comprehensive network of building energy monitors. Energy personnel also share their expertise and assistance through a Self Help Program that provided design assistance, training, materials, and tools to implement 672 projects and avoided costs of more than $634,000.

Puget Sound Naval Shipyard
Department of the Navy
Bremerton, Washington
360-476-1165

As a result of a number of initiatives in FY 1996, the Puget Sound Naval Shipyard reduced its energy consumption 7 percent compared to the previous year. Shipyard personnel converted the central utility plant from coal to natural gas and installed a boiler plant exhaust-gas monitoring system that automatically adjusts the burner, thereby optimizing boiler combustion efficiency. To provide natural gas for the utility plant, a spot market natural gas supply contract was signed in September 1996 with the Defense General Supply Center. The natural gas contract combined with the conversion of the central plant will save more than $2 million annually. Due to the large load requirement of the Shipyard, the Supply Center was able to negotiate a lower natural gas price for the eight agencies using this contract. The Shipyard also signed a demand side management agreement with the Bonneville Power Administration. A unique feature of this agreement provides a Resource Conservation Manager to assist the Shipyard with initiatives in energy awareness and efficiency, solid waste reduction and recycling.

Radford Army
Ammunition Plant
Department of the Army
Radford, Virginia
540-931-8683

Efforts undertaken in FY 1996 to improve energy efficiency and increase energy awareness at the Radford Army Ammunition Plant resulted in fuel cost savings of more than $283,000 and utility operating cost savings of more than $849,000. Projects implemented at Radford, including installation of voltage controls for five electrostatic precipitators, lighting retrofits, and the consolidation of plant compressor houses, provided combined energy savings of $127,000. In addition to reducing energy required to heat water, an automatic continuous blowdown control project will save approximately 3 million gallons of water per year. A steam trap preventative maintenance program was reactivated and a steam condensate return line was installed. More than $56,700 is saved annually by returning condensate to the powerhouse for reuse rather than disposal. The proactive employee energy awareness program has resulted in the implementation of a number of no cost/low cost suggestions, such as deactivating unneeded steam lines, turning off unneeded lighting, and identifying and eliminating steam losses.

U.S. Army Aberdeen Proving Ground
Department of the Army
Aberdeen, Maryland
410-278-1151

In FY 1996, Aberdeen Proving Ground saved more than $2 million in energy costs by forming a partnership with Baltimore Gas and Electric (BG&E) and incorporating innovative energy measures that provide ongoing savings. The partnership with BG&E helped to identify, implement, and fund energy efficiency projects, including a lighting retrofit that saved $540,000 in energy costs and provided a $500,000 utility incentive; the installation of radio-controlled air conditioner switches to control air conditioning during peak demand periods—resulting in a $50,000 credit; and the design of geothermal heat pumps for a 32-unit housing court. Aberdeen Proving Ground also received a $100,000 utility rebate for the implementation of an ice storage system that allows the post to generate ice during off-peak hours when electricity is less expensive and use the ice for cooling during on-peak periods. The utility will also fund the construction of a sub-station that will allow the purchase of higher voltage electricity at a cheaper rate, with savings projected to be $800,000 annually. Many of the initiatives at Aberdeen Proving Ground provided environmental benefits, such as the conversion of 16 oil-fired boiler to dual fuel use. By using natural gas, this project helped lower emissions and saved the Army $850,000 by reducing the need for expensive fuel oil. As part of its active energy awareness program, Aberdeen Proving Ground and BG&E developed an educational energy video to be used as part of the orientation of all incoming personnel.

U.S. Army Intelligence Center
and Fort Huachuca
Department of the Army
Fort Huachuca, Arizona
520-821-1140

Through a proactive energy management program, Fort Huachuca has succeeded in reducing its energy consumption per square foot by 25.4 percent from the FY 1985 baseline. In FY 1996, Fort Huachuca implemented numerous renewable energy and energy efficiency projects, initiated programs to reduce energy costs, and maintained an active energy awareness program. Fort Huachuca installed a prototype dish-Stirling solar thermal electric power generator through the Strategic Environmental Research and Development Program and installed an 18-kilowatt grid-connected, roof-mounted photovoltaic system in partnership with the Environmental Protection Agency and the local electric utility. Other renewable energy initiatives included a solar domestic hot water project for the barracks as well as active and passive residential solar systems. Designs were completed for a 225-kilowatt wind turbine, a transpired air solar system, and sun tracking skylights for an airfield hanger. Fort Huachuca completed lighting retrofits in 39 buildings, saving more than $122,000 annually and installed a base-wide energy management control system, saving $52,000 annually. Fort Huachuca reduced their energy costs by $500,000 annually by signing a contract to buy natural gas competitively and negotiated a transportation agreement. Fort Huachuca strives to maintain the high visibility of the energy program and increase personnel's awareness of the benefits of energy efficiency. A Tucson television station provided coverage of the dish-Stirling solar thermal generator project and the Fort and local newspapers printed articles on energy efficiency measures.

Energy Management Awards to Small Groups

Nicholas Malik
James Specht
Jon Garcia
Anne Reuter

Argonne National Laboratory
Department of Energy
Argonne, Illinois
630-252-6883

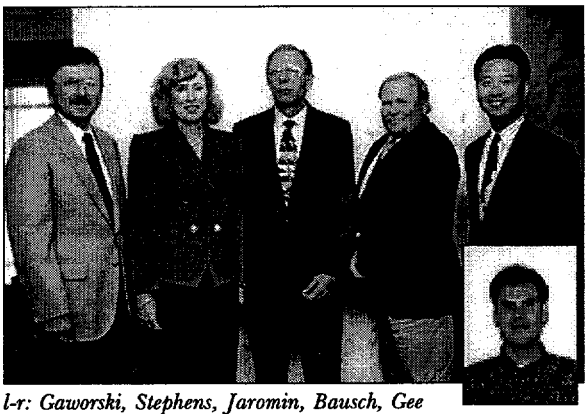
l-r: Reuter, Malik, Specht, Garcia

The Physics and Plant Facilities & Services Divisions at Argonne National Laboratory collaborated to improve helium refrigeration efficiency at the world's first superconducting heavy ion accelerator, saving $170,200 in energy costs annually. By increasing the cooling efficiency, liquid nitrogen use also decreased by 144,000 gallons per year saving $36,000 annually. The refrigeration project replaced the Joule-Thompson expansion valves with a reciprocating expander on each of the three liquid helium refrigerators used to cool helium gas. Additionally, interconnecting vacuum piping, valve boxes, and controls were installed to control the routing of cold helium gas and liquid helium, and variable speed drives were added to one compressor in each refrigerator to increase efficiency when the refrigerators were operating at less than full capacity. The net result is a 29 percent increase in overall cooling efficiency for total energy savings of approximately 2.8 million kilowatt hours. Continuing operating costs saved each year can be redirected to research efforts to advance the mission of the Laboratory.

Dennis Jaromin
Robert Bausch
Jennifer Stephens
Lindsey Evans
Jack Gaworski
Greg Fudala
Richard Gee

Federal Building, Carbondale
General Services Administration
Carbondale, Illinois
217-492-4270

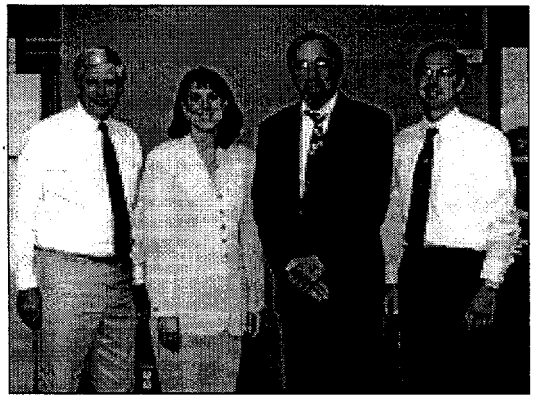
By replacing a leaking solar collector system with electric chillers, the General Services Administration reduced energy use by 53 percent in the Federal Building in FY 1996 compared to the previous year. The Federal Building, which had a roof-mounted solar collector system, needed a new roof. This presented GSA with the opportunity to repair the existing collector system or replace it. GSA partnered with DOE's Sandia National Laboratories to identify the most life-cycle cost effective option. Sandia determined that rebuilding or installing a new solar system was not feasible and that the most life-cycle cost effective alternative was to install electric chillers for cooling and gas-fired boilers for heating and hot water. As a result, two chillers using scroll compressors that allow precise load control and rapid response to changing load conditions were installed along with 12 modular gas-fired boilers with 87 percent annual fuel utilization efficiency. An additional benefit of the modular boiler system is a piping design that assures equal return water temperature to each boiler providing steady control. In addition to energy savings of more than 2 billion Btu, this project reduced annual utility costs at the Federal Building by $10,700 and maintenance costs by $38,000.



l-r: Gaworski, Stephens, Jaromin, Bausch, Gee Fudala

Alan Kirby
Donna Maffeo
Steven Connolly
Karen Curran
Michael Harrington
Ed Roach
Roman Piaskoski

Federal Records Center, Waltham
General Services Administration
Waltham, Massachusetts
617-565-7255

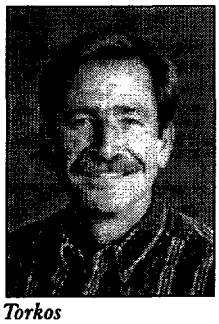


l-r: Connolly, Curran, Harrington, Piaskoski

This group of dedicated Federal employees obtained funding and completed an extensive lighting retrofit of the Frederick Murphy Federal Record Center, vastly improving working conditions and saving nearly $39,000 in FY 1996. After identifying energy project opportunities, the group used an existing area-wide contract with Boston Edison that had been negotiated by the GSA New England Region to procure the project. Using Boston Edison to design the layout and prepare the solicitation reduced procurement time and saved the Government considerable money. By replacing the T-12 lamps with T-8 lamps and installing electronic ballasts, reflectors, and occupancy sensors, more than 334,000 kilowatt hours are saved annually. This project has been extremely successful in improving readability of records and has eliminated worker complaints when accessing, filing, and maintaining the millions of files stored at the Center.

Doug Lockhart
Geoffrey Bell
Steve Greenberg
Dennis Kincy
Rachel McGee
Charles Taberski
Bela Torkos

Lawrence Berkeley National Laboratory
Berkeley, California
510-486-5120



Torkos

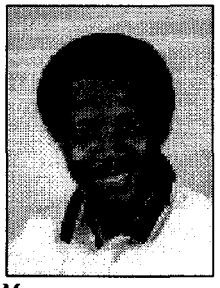
McGee

Lockhart

This team of seven dedicated individuals at Lawrence Berkeley National Laboratory developed and completed six energy retrofit projects during FY 1996 producing an estimated annual savings of $318,000. Efforts to reduce energy consumption included replacing the pneumatic HVAC control system with an electronic control system, installing variable frequency drives on all central plant pumps, replacing a boiler with two high-efficiency modular boilers, retrofitting the lighting with T-8 lamps and electronic ballasts, installing occupancy sensors, and converting constant flow exhaust systems to variable flow. The variable volume ventilation system is part of a technology demonstration to integrate carbon dioxide levels into the control algorithms of the ventilation system. This innovative feature is one of the first applications of carbon dioxide monitoring in an office building. The projects implemented by the team will reduce energy consumption by more than 59.4 billion Btu annually, 27.6 percent of the pre-retrofit annual energy consumption. The energy efficient projects undertaken at Lawrence Berkeley National Laboratory are expected to remain in effect for a minimum of 25 years, reducing atmospheric emissions by an estimated 193,000 tons.

Tai Voong
Charles Taberski
Mack Morgan
Marshall Hilburn
Matthew Wilson

Lawrence Berkeley National Laboratory
Department of Energy
Berkeley, California
510-486-5015



Morgan

Through the efforts of this group of energy professionals, a site-wide lighting upgrade was completed during FY 1996 at Lawrence Berkeley National Laboratory improving the efficiency of lighting systems in 40 buildings. The project included retrofitting T-12 lamps and magnetic ballasts with T-8 lamps and electronic ballasts, installing occupancy sensors which use both infrared and ultrasonic sensing technologies to minimize the risk of a "false-off" condition, and replacing incandescent exit signs with light-emitting diode (LED) signs. Mr. Morgan facilitated the lighting retrofit by designing an effective, low-cost system of retrofitting existing fixtures to accept T-8 technology. Total annual cost savings associated with these projects are approximately $126,000 with an energy savings of 9 billion Btu. During the lifetime of the project, emissions into the atmosphere will be reduced by an estimated 124,000 tons.

Nicholas Jurosic
Ronald Wildermuth
Jack Morrisey
Michele Dickerson
Bryce Atkinson

Lima Army Tank Plant
United States Army
Lima, Ohio
419-221-9562

Three energy efficiency retrofit projects completed in FY 1996 by the energy team at the Lima Army Tank Plant produced savings estimated at $103,000. Funding for these projects was provided by the Department of Defense energy management program and the Center for Public Works. The projects included replacing four steel overhead doors with rapid-roll industrial doors equipped with automatic receivers and transmitters, replacing 260 exit signs with energy-efficient LED signs, and replacing T-12 fluorescent lamps with T-8 fluorescent lamps and electronic ballasts. All projects undertaken at the Lima Army Tank Plant have saved 33.9 billion Btu, a 7.4 percent reduction from the previous year.

l-r: Wildermuth, Dickerson, Morrisey, Atkinson

Glen Balog
David Madrid
Roy Simpson
Larry Emmons

Marine Corps Logistics Base
United States Marine Corps
Barstow, California
760-577-6736

These individuals, representing the Housing Office, Public Works Department, and the Energy Manager at the Marine Corps Logistics Base in Barstow, teamed together to participate in a technology demonstration program for Triathalon natural gas heating and cooling systems. The Triathalon systems use a special low-noise, compressed natural gas-fired engine and recapture exhaust heat for heating. The systems were installed and tested in 28 family housing units reducing energy consumption by 252,000 kilowatt hours and 7,000 therms annually, avoiding costly peak demand charges, and saving $25,000. The air flow in homes was also improved, providing occupants with desired comfort levels. Southwest Gas Corporation funded the service contract and installed meters for monitoring the performance of the new cooling units. In FY 1996, the Triathalon natural gas systems contributed to the Marine Corps Logistics Base's 100.6 billion Btu energy reduction and $1.2 million cost avoidance since 1985.

Militza Jennings
Jane Rodgers
Peter Gaddy
Terry Pierce
John Tate
Channing Tucker
Edward Wasielewski

General Services Administration
San Francisco, California
415-522-3280

The partnership established between the General Services Administration and Southern California Edison implemented a comprehensive energy retrofit of the 30-year-old Chet Holifield Federal Building in Laguna Nigel, California saving more than $600,000 in FY 1996. The energy efficiency projects included a 12,000 ton thermal energy storage system, lighting retrofits with improved lighting controls, installation of high efficiency motors and chillers, upgrade of the energy management control system, conversion from dual duct to variable air volume, rebalancing of air systems, and other heating, ventilation, and air-conditioning measures. Electricity usage at the facility has decreased by 25 percent or 3.7 million kilowatt hours, with a 1,840 kilowatt reduction of on-peak demand. Annual emissions of sulfur and nitrous oxides and carbon dioxide have been reduced by more than 32,000 tons. Southern California Edison contributed $900,000 as a co-investment and financed the $4 million capital cost of the project. The contracting mechanism, which used a pre-qualified pool of third-party contractors, significantly shortened the lengthy Federal procurement and construction process.

l-r: Rodgers, Tucker, Wasielewski

l-r: Pierce, Jennings, Tate

Cy Houston
Mitchell Akers
Patricia Pelikan
Karen Poole
Perry Boeschen
Kim Unfried

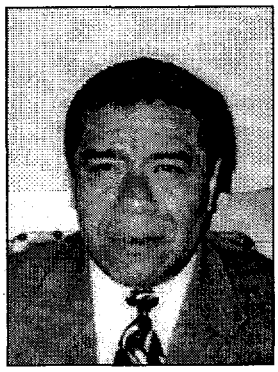
St. Louis Federal Center
General Services Administration
St. Louis, Missouri
314-263-3001

The project team at the St. Louis Federal Center designed and implemented three major projects to upgrade and improve the mechanical systems at the 60-acre, 25-building complex. In FY 1996, the team installed a sophisticated energy management control system with direct digital controls, applied variable frequency drives to the majority of the variable volume systems, and converted 14 of the largest multizone systems to variable volume multizone operation. These initiatives will save more than $439,000 annually. The control system provides a management tool to conduct maintenance inspections and verify environmental conditions in all buildings at the complex. For the first time, facility managers at the Federal Center can accurately control the energy using equipment and systems and reduce annual energy use by an estimated 15 to 17 percent.

l-r: Pelikan, Akers, Poole, Houston, Unfried, Boeschen

Energy Management Awards to Individuals

Victor Arroyo
United States Postal Service
Jamaica, New York
718-990-1125



Under the leadership of Mr. Arroyo, the Jamaica Postal facility, in partnership with Consolidated Edison Company, achieved a 51 percent reduction in energy use. Energy efficiency initiatives included lighting upgrades, the installation of high-efficiency chillers, chiller plant control modifications, and restoration of economizer operations. These initiatives reduced energy use by 695,800 kilowatt hours from the baseline consumption of 1,357,000 kilowatt hours and generated cost savings of $90,000 per year, 51 percent of the baseline $178,000 annual electric costs. More than 1,000 lighting fixtures were replaced with state-of-the-art models, achieving savings of $73,000. The chiller retrofit saves 107,400 kilowatt hours per year, equivalent to $14,400, which is 8 percent of the Jamaica Postal facility's annual energy cost. The control modification and economizer restoration projects saved 54,000 kilowatt hours and $3,000 for the U.S. Postal Service. These modifications were made in an environmentally-sound manner without disruption to the processing of mail. The Jamaica facility will serve as a prototype for the remaining 300 Postal Service facilities in New York City and Westchester County.

John Scott Bly
Department of the Army
Schofield Barracks, Hawaii
808-655-6383

Under the leadership of Mr. Bly, the United States Army Garrison, Hawaii's total energy consumption dropped from 37,600 Btu per square foot in FY 1985 to 33,950 in FY 1996, a reduction of almost 10 percent in almost 30 million square feet of building space. Through the implementation of a comprehensive energy program, including a partnership with private industry, energy retrofits, low cost/no cost measures, and an active energy awareness program, energy costs of almost $2.9 million were avoided during this period. Mr. Bly helped develop a Basic Ordering Agreement with Hawaiian Electric Company (HECO) to provide utility-financed surveys, design, and installation of energy-efficient equipment. The U.S. Army Garrison received more than $550,000 in rebates from HECO. Lighting fixtures in 100 buildings were retrofit using T-8 fluorescent lamps with electronic ballasts and LED exit signs. Heat pumps for domestic water heating were installed in new family housing units, with each heat pump saving $250 per year. Mr. Bly assisted in developing a project to construct a photovoltaic system to support range equipment in isolated areas of the Pohakuloa Training Area and coordinated with the Army Construction and Engineering Research Laboratory to conduct a wind energy assessment at the Training Area. Mr. Bly also coordinated with the vending machine company to de-lamp indoor vending machines providing an estimated annual savings of $24,500.

Carlos Campos
National Aeronautics and Space Administration
Washington, DC
202-358-1310

During FY 1996, Mr. Campos was responsible for a number of significant accomplishments in support of NASA's energy management program. He spearheaded the development of NASA's Renewable Energy Plan and led the development of NASA's strategy for using energy savings performance contracting (ESPC). He established a partnership with DOE's National Renewable Energy Laboratory to train NASA energy managers and procurement specialists in ESPC and drafted an interagency agreement with DOE to encourage use of its regional Super ESPC by NASA facilities. The interagency agreement eliminates the need for each of the NASA Centers to have separate agreements with DOE. Prior to establishing the agreement outlining the roles, responsibilities, and procedures for NASA Centers, Mr. Campos obtained the support of Center energy managers and approval of NASA headquarters management. Mr. Campos has made the NASA/DOE agreement available to other agencies as a model for developing their own Super ESPC agreements. To transfer his accomplishments and help other Federal personnel use and better manage Super ESPCs, Mr. Campos is currently developing an Internet website on NASA Super ESPC activities.

Joseph Chup
Chamberlain Manufacturing Corporation
Scranton Army Ammunition Plant
Department of the Army
Scranton, Pennsylvania
717-342-7801

In FY 1996, the energy conservation program implemented by Mr. Chup at the Scranton Army Ammunition Plant reduced energy consumption 20 percent compared to the previous year and saved almost $150,000 in energy costs. By installing an induction heater to supplement a natural gas-fired furnace, labor requirements were reduced, saving an additional $70,000. Under Mr. Chup's aggressive utilities conservation program, electricity and natural gas consumption is monitored on a daily basis allowing the Ammunition Plant to participate in interruptible utility rate schedules, control electricity demand to minimize costs, and purchase natural gas on the spot market. Infrared surveys of the steam system, furnaces, and electrical system are performed annually to identify heat losses and make repairs. Facility staff also identify and repair compressed air leaks and implement building envelope improvements. Mr. Chup initiated numerous energy efficiency projects, including replacing motor-generator sets used in the forging process with more efficient solid state converters, saving nearly 1.4 million kilowatt hours per year; retrofitting metal halide lighting with high pressure sodium lighting, saving about 158,400 kilowatt hours annually; and raising the temperature of cooling water to minimize equipment run time, allowing one 200-horsepower pump to be shut down, saving 396,000 kilowatt hours annually.

George Denslow
United States Air Force
Dyess Air Force Base, Texas
915-696-5628

Mr. Denslow's aggressive energy program at the 7th Civil Engineering Squadron at Dyess Air Force Base reduced energy consumption for three years in a row even though energy requirements increased due to new energy-intensive missions and severe weather conditions. Mr. Denslow analyzed the lighting systems and determined it was more economical to install 2,500 lighting diffusers than retrofit with T-8 lamps. The diffusers reduced the wattage in half, improved the lighting quality, and save the base $22,000 annually in energy cost. As the result of the success of this low cost measure, other Department of Defense installations are evaluating and using diffusers. Despite the low electricity rates at Dyess Air Force Base, Mr. Denslow was able to obtain DOD funding to install infrared heating in two aircraft hangers, install 155 solar day-lighting units with a sun-tracking device in nine buildings, and retrofit lighting in a precision laboratory. The infrared heating systems consumed 40 percent less natural gas, saving more than 5 billion Btu. Mr. Denslow initiated a spot market natural gas contract which saved the Air Force $53,000 in FY 1996 and began negotiating a demand side management agreement with West Texas Utilities which is expected to reduce consumption by 10 to 20 percent.

Tim Dickes
Federal Prison Camp
Department of Justice
Yankton, South Dakota
605-665-3262

During FY 1996, Mr. Dickes directed several energy conservation projects at the Federal Prison Camp in Yankton, South Dakota, which resulted in projected annual energy savings of 500,000 kilowatt hours of electricity and 50,000 therms of natural gas. These projects have an expected payback of three years. The energy used by the Federal Prison Camp was less than 65 percent of the Bureau of Prisons' average energy use per square foot of conditioned space. Projects implemented included upgrading mechanical HVAC controls throughout the Prison Camp, using an enhanced energy management system, replacing T-12 fluorescent lamps and magnetic ballasts with T-8 fluorescent lamps and electronic ballasts, and installing advanced lighting controls. All of the work, except the replacement of HVAC controllers and the programming of the enhanced energy management system, was completed by staff and inmate labor. Limiting contracted work is beneficial in a correctional setting from a logistical standpoint and also resulted in significant cost savings. The work of Mr. Dickes exemplifies the efforts of the Bureau of Prisons to meet the mandated energy conservation goals.

Ben Hawkins
National Park Service
Department of the Interior
Grand Lake, Colorado
910-627-8781

Mr. Hawkins created and implemented a comprehensive energy management program designed to assist eight National Parks in the Intermountain Field Region reduce energy use and utility costs. Mr. Hawkins developed partnerships with key energy stakeholders, including several DOE offices and National Laboratories as well as six State energy offices, to assist the Parks in identifying and funding cost-effective energy efficiency and renewable energy projects. He obtained SAVEnergy audits for 20 sites through DOE's Federal Energy Management Program and Denver Regional Support Office. In FY 1996, nearly $311,000 was invested in energy projects, saving $66,000 annually. Energy consumption was reduced by an estimated 5.1 billion Btu or 20 to 30 percent in the respective buildings. Other initiatives included combining efforts of the National Park Service's Intermountain Field Region and Pacific West Field Area to develop a joint super energy savings performance contract. Bundling delivery orders across the two regions will facilitate energy project financing for the Parks. Mr. Hawkins also initiated a pilot project based on the DOE's Weatherization Assistance Program to provide energy audits and install energy conservation measures in National Park residential dwellings. Fifty-eight housing units and eight apartments received insulation, furnace upgrades, and other weatherization measures.

Ronald Higgins
Department of Veterans Affairs
Portland, Oregon
503-721-7831

During FY 1996, Mr. Higgins was instrumental in the funding, procurement, design, and project management for several energy efficiency projects at the Veterans Affairs Medical Centers in Portland, Oregon and Vancouver, Washington. These projects included a complete lighting retrofit at the Portland Medical Center that is saving over $100,000 annually in energy and operating costs. This project was designed and completed at a cost of $1 million with funding from the Veterans Affairs Central Office rebate fund and from local utility rebates. Rebates of more than $240,000 were made directly to the contractors by the local utilities to offset construction costs. Additional operating cost savings are expected to be about $75,000 per year at the 1.8 million square foot facility. Other projects, now in progress, include cooling tower retrofits, installation of variable speed drives and energy efficient motors, and heat pumps to replace single-pass water-cooled equipment. Projections place yearly energy savings at over 50 billion Btu.

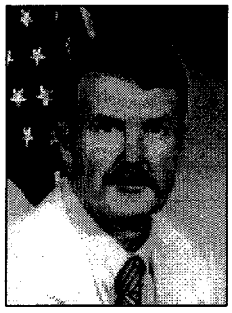
Walter Kain
General Services Administration
New York City, New York
212-264-4256

Mr. Kain formulated and directed a partnership between the General Services Administration and Consolidated Edison Company of New York to install and evaluate an energy efficient integrated lighting system as part of a building space renovation for the Immigration and Naturalization Service. According to Electric Power Research Institute estimates, the project will reduce annual energy consumption for the 1 million square foot facility by 4.8 million kilowatt hours and utility costs for lighting and heating, ventilation, and air-conditioning by $587,000. The system consists of 2-square-foot parabolic troughs using 40-watt T-5 lamps with high color rendering indices, electronic dimming ballasts for daylight harvesting, and occupancy sensors. Lighting power consumption was reduced from 2.7 watts per square foot to only 0.9 watts, a 64 percent power density reduction. Lighting quality was improved and electricity costs were reduced by 58 percent, from $21,356 to $8,892 annually. The installation costs of the project amounted to $91,350, only marginally more than a typical T-8 lamp system. Upon completion and final evaluation of the project, Mr. Kain will meet with GSA personnel to incorporate the system design into the GSA *Facilities Standards for Public Buildings Service* handbook as a recommended lighting system for future deployment.

Ken McKenzie
Department of Health and Human Services
Oklahoma City Area
Indian Health Service
Oklahoma City, Oklahoma
405-951-3857

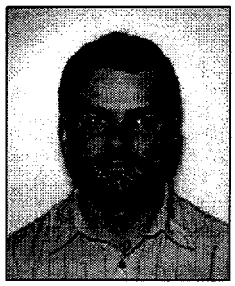
In FY 1996, Mr. McKenzie, Deputy Director of the Indian Health Service's (IHS) Oklahoma Service Area, initiated an innovative project to conduct energy audits at four IHS facilities by using engineering graduate students and in-house personnel. As a result of these audits, lighting retrofits were planned and designed for six facilities. The three projects completed in FY 1996 are expected to save 880 million Btu and $37,500 per year. The total cost of the projects was $193,250, which results in a simple payback of 5.2 years. Mr. McKenzie completed the four facility energy audits by partnering graduate students from the Oklahoma State University's Energy Analysis and Diagnostic Center with IHS personnel. The four audits cost $8,000 with the students focusing on lighting and water systems and IHS personnel providing additional analysis of the building envelope and the heating, ventilation, and air-conditioning system. The audits confirmed that lighting retrofits would provide the greatest energy savings, and the projects were funded using IHS non-recurring maintenance and improvement funds.

Vincent Moreau
Department of the Army
Fort Huachuca, Arizona
520-821-5779



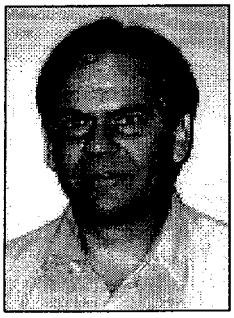
In FY 1996, Fort Huachuca consumed 84,790 Btu per square foot, a 25.4 percent decrease from the FY 1985 base year. As project manager on a variety of energy efficiency efforts, Mr. Moreau contributed significantly to this achievement. The total cost of these projects was approximately $1.4 million and they are expected to save about 10 billion Btu annually for the next 20 years. Mr. Moreau implemented boiler and chiller replacements, conversion of electric dryers to natural gas, lighting retrofits, building envelope upgrades, and the installation of replacement windows. Efficiency gains from four chiller replacements ranged from 10 to 20 percent, with one resulting in a rebate of $5,000 from the local utility. The lighting upgrade projects entailed low and high pressure sodium lighting for warehouse and perimeter applications and the installation of T-8 fluorescents in offices. The installation of a low nitrous oxide type boiler increased efficiency by 15 percent. Mr. Moreau designed a 6,000 square foot building using fiberglass skylight panels, evaporative coolers for warehouse and office areas, and natural gas unit heaters and furnaces. In addition, more than 120 leaky windows were replaced and evaporative coolers were relocated in two buildings to improve efficiency. Annual cost savings from all of these projects are more than $150,000 per year.

James Paton
Department of the Army
Alexandria, Virginia
703-806-6091



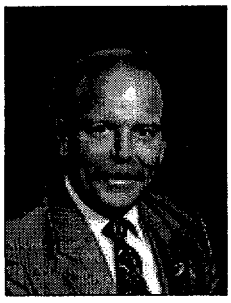
During his three year involvement with the Army Energy Team, Mr. Paton oversaw energy conservation programs that avoided energy costs of over $1.2 million and a reduced consumption by 52 billion Btu. He executed lighting retrofit projects in 400 buildings (comprising over seven million square feet at 12 installations) resulting in an electrical demand reduction of over 3.2 megawatts and an energy cost avoidance of $659,000. Mr. Paton administered the Army's Energy Audit and Retrofit Program at 12 locations during 1996—successfully marketing potential consumers, securing sufficient customer funding to meet contractual cost requirements and maximizing energy savings by using services offered under the contract to their full potential. Mr. Paton also managed the Army PROSPECT training course for energy management in existing Federal buildings, which prepares energy managers to meet the requirements of the Energy Policy Act and Executive Order 12902. Through the efforts of Mr. Paton, the Army's Energy Audit and Retrofit Program resulted in an annual energy savings of 32.8 billion Btu for a contract cost of $2.47 million and an expected payback period of 3.75 years.

Craig Priest
United States Air Force
Hill Air Force Base, Utah
801-777-5944



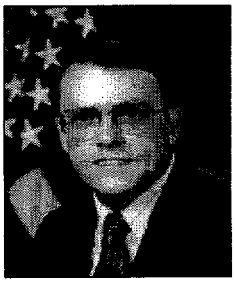
Through his aggressive and concerted efforts, Mr. Priest contributed significantly to energy reduction at Hill Air Force Base in FY 1996. In July 1996, Mr. Priest stepped in as the Base Energy Manager in addition to his usual capacity as Utilities Manager. He served as Energy Manager until the position could be filled in February 1997. As a direct result of his successful negotiations, energy audits, and partnering activities for the energy savings performance contract at Hill Air Force Base, electricity consumption was reduced 3.5 percent from FY 1995. A 1.2 percent reduction in natural gas consumption over the same period resulted from Mr. Priest's continual emphasis on taking full advantage of "free" heating and cooling by maximizing the use of outside air flow to heat or cool facilities. Also due to his efforts, Hill AFB reduced purchases of steam by 12.1 percent, and is supplementing its steam requirements with lower cost, locally-produced steam. Mr. Priest initiated a water storage project that has reduced water consumption (both produced and purchased) by 13 percent for FY 1996 by connecting a deep well into an on-base storage reservoir. The reduction in water consumption and production resulted in an 11 percent reduction in domestic sewer outflow to the county treatment facility.

Daniel Switzer
United States Postal Service
Miami, Florida
305-470-0282



Mr. Switzer, maintenance manager for the Postal Service Processing and Distribution Center in Miami, was instrumental in implementing an extensive lighting retrofit in partnership with Florida Power and Light. The project resulted in annual energy cost savings of $144,000. With the receipt of a $94,328 incentive from the utility, the expected payback period for the $316,000 project is less than nine months. The project entailed the replacement of 1,300 T-12 fluorescent fixtures with standard magnetic ballasts and 2,246 mercury vapor lamps with 1,120 metal halide units. Mr. Switzer coordinated with Florida Power and Light the testing of several lighting technologies from a host of manufacturers and selected the metal halide units on the basis of the utility's Business Energy Evaluation. Lighting quality was dramatically improved and the units generate less heat, which leads to lower overall cooling costs. Furthermore, Mr. Switzer's accomplishments will allow the facility to meet Congressionally-mandated requirements despite rapidly expanding operations.

Thomas Waller
United States Air Force
Columbus Air Force Base,
Mississippi
601-434-7434



Mr. Waller effectively managed the Columbus Air Force Base energy program to produce an outstanding reduction in Base facility energy consumption of 16.1 percent in FY 1996 compared to the previous year. He initiated, justified, and managed a fuel conversion project to natural gas for both the Base industrial area and family housing that saved the Air Force over $400,000 in the first year. Mr. Waller also aggressively pursued and secured alternate energy funding for a desiccant dehumidification system for the Base commissary. This desiccant system has provided excellent control of humidity in conditioned space, increased customer satisfaction, and saved the commissary over $40,000 in energy costs in its first year of operation.

Energy Savings Performance Contracting Awards to Small Groups

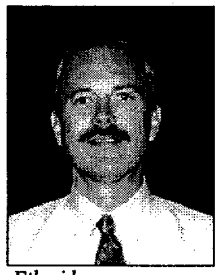
Gordon Greene
Margaret Simmons
Jimmy Haywood
John Lamb
Henry Stanley
Jonathan Etheridge
Adrian Gillespie

Barnes and SAGE Buildings Project
Department of the Army
Huntsville, Alabama
205-895-1719

This team put in place a requirements contract for the Barnes Building in Boston, Massachusetts and the SAGE Complex in Syracuse, New York. In this delivery order contract, specific measures are identified by the contractor and proposed to the Government. Once agreement on the terms and conditions is reached, a task order is issued to implement the proposal. Using a performance contractor to provide comprehensive energy services for these facilities will save thousands of dollars in project identification and administration. During FY 1996 the contractor developed a proposal for installing high efficiency lighting, lighting controls, occupancy sensors, HVAC controls, and variable frequency drives for the chiller pumps. An estimated $1.6 million of energy-efficient equipment will be installed in the Barnes Building, generating savings of approximately $290,000 annually.


Simmons

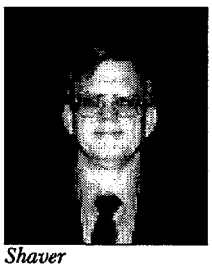

Haywood

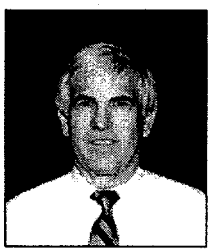

Etheridge

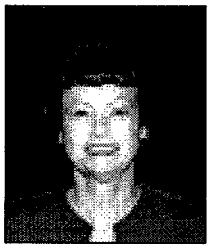
Kenneth Shaver
Herbert Harman
Lynda Bonds
Martin Dwyer
Robert Kronk
Arkie Fanning
Samuel McManus, Jr.

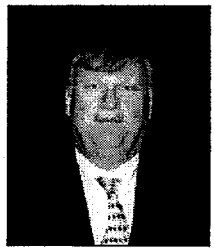
U.S. Military Academy
Department of the Army
West Point, New York
914-938-5219

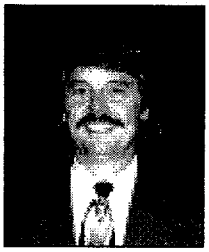
This team of energy and contracting professionals put in place a requirements contract at the United States Military Academy at West Point to accomplish energy conservation measures for the entire base. Task orders issued under this contract allow energy-efficiency measures proposed by the contractor to be put in place quickly. In addition to contractor up-front financing for the agreed-upon measures, this contract includes the ability to implement multiple projects without the lengthy solicitation period and expense of preparing a separate contract for each new project. During FY 1996, five task orders have been awarded with the contractor providing $1.8 million of energy-efficient equipment at West Point. Total savings over the term of the task orders is projected to be $3.9 million.


Shaver


Harman


Bonds


Fanning


McManus

Larry Stevenson
CoJean Sprouse
Michael Martin

VA North Texas Health Care System
Department of Veterans Affairs
Dallas, Texas
214-372-7032

l-r: Martin, Sprouse, Stevenson

Taking advantage of a demand side management program offered by T.U. Electric, the Dallas Veterans Affairs Medical Center constructed a $1.9 million stratified water thermal storage system, substantially lowering energy costs at the hospital. At the core of the thermal storage system is a 3.3 million-gallon tank, considerably larger than an Olympic-sized swimming pool, from which the Medical Center draws its chilled water during peak electrical demand hours. The system doubled the capacity of the Medical Center's energy plant by providing 25,000 ton-hours of storage, reducing any future need for expansion. Savings from the thermal storage system are expected to be approximately $250,000 per year, with a simple payback of 6 years. In addition, the local utility provided $475,000 in rebates for this endeavor. The Veterans Affairs Medical Center project is T.U. Electric's first partnership with a customer to design, build, and assist in obtaining third-party financing.

Alline Norman
Frank Campbell
Greg Retrossa
Jay Friedman
Susan Little

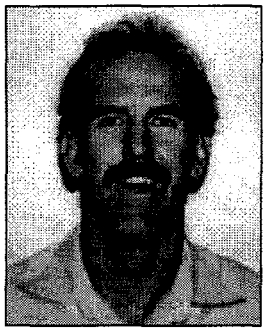
Veterans Affairs Medical Center
Department of Veterans Affairs
Lake City, Florida
904-755-3016

This team of dedicated individuals, in partnership with Florida Power and Light Company, completed a lighting project at the Lake City Veterans Affairs Medical Center. After conducting an energy audit and feasibility study, approximately 4,000 light fixtures throughout the facility were retrofitted with new energy-efficient electronic ballasts, lower wattage fluorescent lamps, and light-magnifying reflectors. Although the lighting level remained essentially the same, electricity consumption was greatly reduced. It is estimated that savings from this project will be $54,000 annually. No capital investment was required for this energy saving project. The cost of the project will be paid for over a 7-year period by monthly electric bill savings, with the Medical Center receiving full monetary benefits of the reduced energy consumption once payback is complete.

l-r: Norman, Retrossa, Campbell, Friedman, Little.

Steve Kromer
Doug Dahle
Steve Schiller

Lawrence Berkeley
National Laboratory
Department of Energy
Berkeley, California
510-486-6619



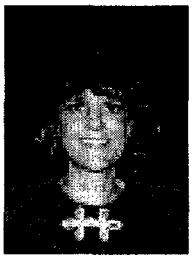
Dahle

During FY 1996, this group of individuals worked together to create a national standard for determining energy savings from performance contracts. The DOE Federal Energy Management Program's *Measurement and Verification Guidelines,* developed in close cooperation with the North American Energy Measurement and Verification Protocol, provide standard procedures to quantify the savings resulting from the installation of energy conservation measures. The scope of the project included defining the requirements of the standard energy savings performance contract, creating a range of measurement and verification options to address those requirements, developing draft documents for review by Government and industry experts, publishing the final document, and conducting training for Federal and industry workers. The total cost of developing the *Guidelines* was $150,000. The *Guidelines* have been widely adopted and are used in Federal ESPCs, by utilities across the nation in demand side management programs, and by energy service companies in public and private sector contracts. Projected total energy savings resulting from projects that employ the *Guidelines* are an estimated 642 billion Btu annually, generating savings of approximately $3.4 million, based on an expected $4.5 billion investment.

Dave Heinrichs
Bill Nutting
Jeremiah Haley
Carol Eaves
Fred Nakahara
Mary Dowling
Nicola Freeman

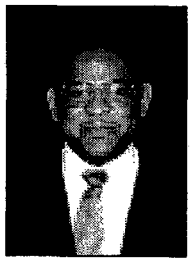
Marine Corps Base Hawaii
United States Marine Corps
Kaneohe Bay, Hawaii
808-257-2171

This team at the Marine Corps Base Hawaii was responsible for developing and executing a base-wide, 25-year indefinite delivery/ indefinite quantity contract that will implement up to $24 million of energy saving measures. The contract provides rapid identification, design, execution, and maintenance of cost-effective energy improvements under a single, pre-qualified, competitively-selected, energy-related services contractor. The contractor will propose, finance, and execute the measures guaranteed to produce annual energy and ancillary cost savings of approximately $4 million. This will significantly reduce the Marine Corps Base's $8 million annual energy cost and its $9 million maintenance and repair costs. A contractor proposal is presently being evaluated that includes high efficiency lighting fixtures in four buildings. The contractor will provide $55,000 of energy efficient equipment, generating savings of almost $8,500 annually.



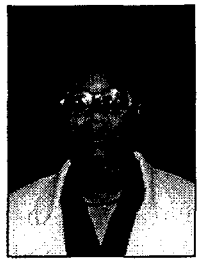
Eaves

Nutting



Haley

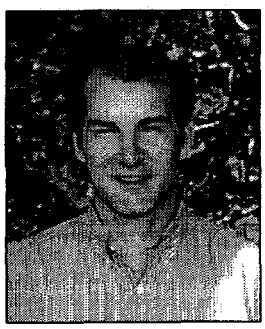
Dowling



Freeman

Energy Savings Performance Contracting Awards to Individuals

Brett Langlois
Department of the Army
Fort Lewis, Washington
206-967-5237



Mr. Langlois was the principal developer and project manager of the Fort Lewis demand side management agreement between Fort Lewis and Tacoma Public Utilities. This Basic Ordering Agreement, the first of its kind within the Department of Defense, identifies and implements electricity-saving projects. Mr. Langlois reviewed, made recommendations for improvement, and approved all project submittals for more than 200 energy conservation measures proposed by Tacoma Public Utilities. As a result of Mr. Langlois' efforts, Tacoma Public Utilities has installed more than $9.2 million of electrical equipment at Fort Lewis at a cost of $1.5 million to the Government. Projects during FY 1996 included installing energy-efficient lighting and motors in 103 buildings and installing direct digital controls in eight buildings. These projects reduced energy consumption by 27.2 billion Btu and saved $209,963, bringing total annual savings through the fourth year of this five year project to 81.5 billion Btu and nearly $630,000. This represents 11 percent of the total electricity consumption for Fort Lewis. Furthermore, in FY 1995 and 1996, when Fort Lewis was unable to commit inspection and engineering services staff to this project, Mr. Langlois took charge of all Public Works activity on the project, keeping the program active and maximizing the benefits to Fort Lewis.

Special Awards to Small Groups

Brian Magden
William Klebous
Vilma Schifano-Milmoe
John Mitchell

Region 2
General Services Administration
New York City, New York
212-264-4273

The General Services Administration Region 2 in partnership with the Department of Energy and Consolidated Edison of New York established the first Federal Partner Resource Center. The services of the Resource Center are designed to assist Federal customers in meeting mandated energy efficiency goals by FY 2005. Since the inception of the Resource Center, GSA has held a number of seminars and workshops focusing on important issues including: utility-sponsored demand side management programs, achieving energy savings from a State perspective, energy efficient procurement, the Environmental Protection Agency's Green Lights and Energy Star Programs, and finally, procurement initiatives under GSA's area-wide utility contract. As a result of this innovative partnership, lighting retrofits and dozens of energy savings performance contracting projects are underway or under development.

l-r: Mitchell, Schifano-Milmoe, Magden, Klebous.

Kelly Cahill
Arlin Krogstad
Tom Cluff
Chris Dennison
Jeanne Harrison
Dennis Garcia

Kaibab National Forest
United States Department of Agriculture
Williams, Arizona
520-635-8371

This group of dedicated individuals from the Headquarters, Kaibab National Forest in rural Williams, Arizona was responsible for implementing a phone switch installation project that will save $8,000 annually. By using 0.29 kilowatt hours of energy per switch, 5 percent of the energy consumption of the old system, the phone switch installation provides significantly lower operating costs while providing internal and external customer benefits. Customer service continues to increase with voice mail and pre-recorded information for clients and employees. The switch also sets the stage to move toward digital technology voice applications, data development, expansion to satellite offices, and use as a local area network for communication.

Bernard Denno
Anthony Hufford

United States Postal Service
Washington, D.C.
202-268-6188

l-r: Denno, Hufford

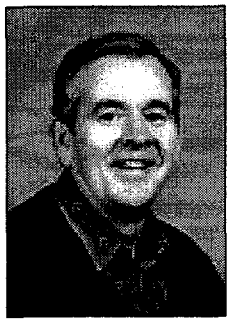
In FY 1996, Mr. Denno and Mr. Hufford launched an ambitious program to retrofit 15,000 exit signs in Postal Service facilities nationwide with energy-efficient light-emitting diode (LED) signs. This project is part of the Postal Service's commitment to the EPA/DOE Energy Star program. By soliciting directly with exit sign manufacturers, the Postal Service was able to purchase exit signs at 45 percent below the Federal supply schedule price, saving an additional $375,000 in material cost. The Postal Service is the first Federal buyer to require that exit signs qualify for the Energy Star label in an open solicitation. As of May 1997 more than 18,000 LED exit signs have been purchased. The LED exit signs operate on less than 5 watts per face and will reduce the Postal Service's energy consumption by 3.5 million kilowatt hours, saving more than $300,000 annually. The reduced energy consumption will also avoid emissions of more than 5 million pounds of carbon dioxide annually.

Special Awards to Individuals

Richard Carter
National Institutes of Health
Department of Health and Human Services
Frederick, Maryland
301-846-1106

Under Mr. Carter's leadership, energy use at the National Institute of Health's Frederick Cancer Research and Development Center decreased 17 percent over the past decade, saving 70 billion Btu. In FY 1996, more than $129,000 of funding obtained from DOE's Federal Energy Efficiency Fund in FY 1995 was used by Mr. Carter to implement a lighting retrofit. By installing energy-efficient lamps and electronic ballasts, light-emitting diode exit signs, and motion sensors, lighting costs were reduced by approximately 47 percent. In addition, Mr. Carter took the lead in obtaining energy savings performance contracting training for a team of engineering, finance, and contract officials at the Cancer R&D Center. As a result of this training, a Basic Ordering Agreement was signed with the local utility, Allegheny Power, for the performance of energy services. The utility will perform comprehensive energy audits and recommend specific energy and water efficiency projects. The National Institutes of Health will select projects to be financed and implemented by Allegheny Power.

Douglas DeNio
National Park Service
Department of Interior
Denver, Colorado
303-969-2162

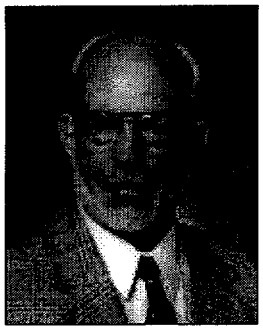


Mr. DeNio championed the increased use of photovoltaic systems throughout the National Park Service through a partnership between the National Park Service and DOE's Sandia National Laboratory. He authored *Renew the Parks,* a 50-page vision document for expanding photovoltaics in the National Parks and was the primary advocate of 32 photovoltaic projects located at 28 National Park Service sites. Twelve of the 20 implemented projects were completed in 1996. More than half of these projects replace diesel-powered systems that were costly to operate, created considerable air emissions and noise, and had a high potential for hazardous spills. Mr. DeNio continues to provide technical assistance in the design, procurement, construction, training, and monitoring of installed photovoltaic power systems. His work on photovoltaic projects helps the National Park Service accomplish its mission and serves to further the understanding of renewable energy by many of the 270 million visitors to the National Parks each year.

Betsy Gayle
Defense Supply Center
Department of Defense
Richmond, Virginia
804-279-5540

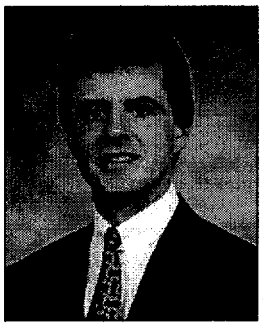
In 1996, Ms. Gayle, on her own initiative, began cataloguing the energy efficiency ratios of new air conditioners in the Federal Logistics Information Service (FLIS) database. The database catalogues all collected information on products supplied by the Defense Logistics Agency and the General Services Administration so the items can be evaluated prior to purchase. Previously, energy efficiency information was rarely included as part of the FLIS data for energy-using products, effectively precluding Federal customers from evaluating DLA products based on energy consumption and efficiency. The amount of savings resulting from the inclusion of energy efficiency ratings is enormous. After including the energy efficiency ratios of air conditioners in a miscellaneous section of each record, Ms. Gayle instituted an official "Master Requirement Code" for the efficiency ratios. This information will be requested automatically of all manufactures and will be available to Federal customers to differentiate products based on efficiency. Ms. Gayle's model is being duplicated by DOE's Federal Energy Management Program for dozens of other energy-using products and equipment for the Federal Procurement Challenge.

Joe Hattabaugh
Lawrence Livermore
National Laboratory
Department of Energy
Livermore, California
510-423-7759



Mr. Hattabaugh's dedication was instrumental to the completion of a lighting retrofit of 100,000 fixtures at DOE's Lawrence Livermore National Laboratory. The retrofit will reduce lighting costs by an estimated 20 percent annually. In addition to energy cost savings, Mr. Hattabaugh worked closely with Lawrence Livermore's Energy Management Program to maximize the operations and maintenance (O&M) savings associated with the lighting retrofit. For the exit sign retrofit, he recommended specifying self-testing diagnostics. The light-emitting diode signs are automatically tested every month and illuminate a small LED on the face if maintenance is needed. The cost of this feature added 10 percent to the cost of the sign, but this cost was more than offset by maintenance savings which were 70 percent greater than the energy savings. By standardizing lighting maintenance and work processes, O&M savings for the exterior lighting retrofit were significant, exceeding energy savings by about 50 percent. Maintenance savings for interior T-8 lamps and electronic ballasts also exceeded the energy savings by about 35 percent. In addition, he lead the effort to educate end-users about lighting issues.

Thomas Kearns
Federal Bureau of Prisons
Department of Justice
Washington, D.C.
202-514-6652



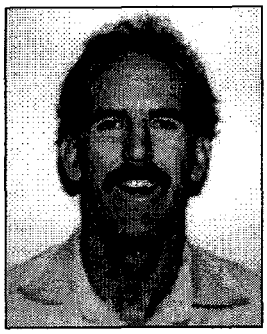
Mr. Kearns has been instrumental in the success of the Bureau of Prison's effective energy management program. In FY 1996, he provided training to 65 Bureau staff in building life-cycle cost methodology and reviewed the resulting applications for energy efficiency projects. He quickly identified viable energy conservation projects, assisted in the compilation of necessary documentation, and helped identify funds to enable the projects to be successfully completed. As a result, more than $1.5 million was obligated for energy projects in FY 1996, which will save more than 23 billion Btu annually as well as provide additional cost savings from reduced maintenance. Mr. Kearns also served as the Contracting Officer's Technical Representative in the procurement and execution of a contract for eight energy conservation surveys. These surveys have resulted in the identification of several energy conservation projects that will assist the Bureau in meeting the mandated energy reduction goals.

Chester Kowalczyk
Department of the Army
Alexandria, Virginia
703-614-3915

Mr. Kowalczyk has made an outstanding contribution to the Army's Energy Program while serving as Assistant Director for Energy and Troop Support. In this position, which he has held since 1981, he has been instrumental in guiding the development and execution of the Army's Energy Program. His personal commitment to the program and his leadership in energy management, contributes to the Army's continued path toward achieving the mandated FY 2005 energy goals. Mr. Kowalczyk's personal involvement with the Army Energy Program has been the critical factor in ensuring that energy management and awareness retained a proper and viable position within the U.S. Army.

Director's Award to Individuals

Doug Dahle
National Renewable Energy Laboratory
Department of Energy
Golden, Colorado
303-384-7513



Mr. Dahle, a nationally-recognized expert in the alternative financing of energy projects, was instrumental in the development and implementation of super energy savings performance contracting procedures for DOE's Federal Energy Management Program. In addition to playing an important role in developing the initial concept, Mr. Dahle helped secure DOE procurement approval for the Super ESPC procurement mechanism. Super ESPCs streamline the execution of performance contracts by pre-approving energy service companies on a regional basis, which expedites the implementation of energy projects. Mr. Dahle coordinated the development of the Request for Proposals for the first Super ESPC covering the Western Region of the United States. He lead the team, consisting of DOE procurement officials, FEMP staff, the DOE Golden Field Office, the DOE Seattle Support Office, the National Renewable Energy Laboratory and other national laboratories and subcontractors, that issued the Request for Proposals and evaluated responses. This activity resulted in the successful award of the Western Region Super ESPC in May 1997.

Bobby Starling
Huntsville Division
U.S. Army Corps of Engineers
Huntsville, Alabama
205-895-1531

Under the leadership of Mr. Starling, energy program manager at the Huntsville Corps of Engineers, the Huntsville Engineering and Support Center developed and awarded three base-wide energy savings performance contracts. The ESPCs, located at the Army Military Academy at West Point, New York; the SAGE/Barnes Buildings in Boston, Massachusetts and Syracuse, New York; and at the Marine Corps Base, Hawaii, have a total ordering capacity of $37.5 million. Mr. Starling directed the new process for developing and awarding performance based contracts that reduced the time required to develop and award a contract from 24 months to 5 months and reduced the administrative costs by 30 percent. The contracts provide rapid identification, design, execution, and maintenance of cost-effective energy initiatives under a single, pre-qualified, competitively-selected energy services contractor. As a result, each of these installations will receive new energy efficient equipment without having to pay the up-front capital investment costs and will benefit from substantially reduced utility bills over the next 20 to 25 years.

1997 FEDERAL ENERGY AND WATER MANAGEMENT AWARDS

CERTIFICATES OF RECOGNITION

ENERGY EFFICIENCY/MANAGEMENT

Individual

Robert Bateman, USPS, Pittsburgh, PA
Patrick Buckley, National Guard Bureau, Ft. Richardson, AK
David Burns, US Army, Ft. George C. Meade, MD
Gerald Ferranti, DOT, Sacramento, CA
Leslie Fish, USPS, Portland, OR
James Hedin, DOE, Carlsbad, NM
Wyman Jong, USPS, Pembroke Pines, FL
Robert McClain, USPS, Chapel Hill, NC
Kathryn McPherson, US Army, Ft. Hood, TX
K.D. Murrell, USDA, Beltsville, MD
Lisa Myers, DOE, Livermore, CA
Jerry Osborne, USPS, East Pittsburgh, PA
Walter Parks, NASA, Stennis Space Center, MS
Charles Transley, USAF, Nellis Air Force Base, NV
James Watson, Jr., GSA, Washington, DC
John Wyman, DOJ, Lexington, KY

Small Group

61st Civil Engineering Squadron, El Segundo, CA
78th Civil Engineering Squadron, Robins AFB, NM
877th Civil Engineering Squadron, Kirtland AFB, NM
Billings District, USPS, Billings, MT
Bishop Henry Whipple Federal Building, GSA, Ft. Snelling, MN
Camp Pendleton Team, USMC, Camp Pendleton, CA
Entergy & Little Rock AFB, Little Rock AFB, AR
Goddard Space Flight Center, NASA, Greenbelt, MD
Johnson Space Center, NASA, Houston, TX
Long Range Forecasts Dept., US Navy, Norfolk, VA
Marine Corps Air Station, USMC, Cherry Point, NC
Marshall Space Flight Center, NASA, AL
Mechanical Utility Cross Functional Team, NASA, Kennedy Space Center, FL
National Institutes of Health, DHHS, Bethesda, MD
North Property Management Center, GSA, Washington, DC
Office Building Construction, CDC, DHHS, Atlanta, GA
Pacific Rim Region, GSA, San Francisco, CA
Region 7, GSA, Ft. Worth, TX
Savannah River Site, DOE, Aiken, SC
Suncoast District, USPS, Tampa, FL
US Army Training Doctrine Command, US Army, Ft. Jackson, SC

Organization

12th Flying Training Wing, Randolph AFB, TX
6th Civil Engineering Squadron, MacDill AFB, FL
81st Civil Engineering Squadron, Keesler AFB, MS
92nd Civil Engineering Squadron, Fairchild AFB, WA
95th Civil Engineering Squadron, Edwards AFB, CA
American Embassy - Manilla, DOS, Washington, DC
American Embassy, Honduras, DOS, Washington, DC
American Embassy Tokyo, DOS, Washington, DC
Atlantic Fleet Headquarters, US Navy, Norfolk, VA
Badger Army Ammunition Plant, US Army, Baraboo, WI
Beltsville Research Center, USDA, Beltsville, MD
Brookhaven National Laboratory, DOE, Upton, NY
Carlisle Barracks, US Army, Carlisle, PA
Energy Conservation Committee, TVA, Chattanooga, TN
Fleet Anti-Submarine Warfare Training Center, US Navy, San Diego, CA
Ft. Hood, US Army, Ft. Hood, TX
Great Lakes Region PMD, GSA, Chicago, IL
Hill Air Force Base, Hill AFB, UT
Lawrence Livermore National Laboratory, Livermore, CA
Letterkenny Army Depot, US Army, Chambersburg, PA
Marine Corps Recruit Depot, USMC, Parris Island, SC
Minnesota Army National Guard, Little Falls, MN
Naval Air Station, US Navy, Kingsville, TX
Naval Air Station Miramar, US Navy, San Diego, CA
Naval Air Station, Oceana, US Navy, Virginia Beach, VA
Naval Air Warfare Center, US Navy, Lakehurst, NJ
Naval Amphibious Base Little Creek, US Navy, Norfolk, VA
Naval Construction Battalion Center, US Navy, Port Hueneme, CA
Naval Education Training Center, US Navy, Newport, RI
Naval Hospital Bremerton, US Navy, Bremerton, WA
Naval Industrial Reserve, US Navy, Minneapolis, MN
Naval Medical Center, GSA, Washington, DC
Naval Submarine Base, US Navy, Kings Bay, GA
Naval Technical Training Center, US Navy, Pensacola, FL
Naval Weapons Station, US Navy, Yorktown, VA
New Jersey International Bulk Mail Center, USPS, Jersey City, NJ
Oak Ridge Y-12 Plant, DOE, Oak Ridge, TN

Picatinny Arsenal, US Army, Picatinny Arsenal, NJ
Portsmouth Naval Shipyard, US Navy, Portsmouth, NH
Public Building Service, GSA, Atlanta, GA
Scranton Army Ammunition Plant, US Army, Scranton, PA
Smithsonian Institution, Washington, DC
US Army Training Doctrine Command, US Army, Ft. Jackson, SC
USPS Headquarters, Washington, DC

Renewable Energy

Individual

Rick Rampi, DOI, Denver, CO

Small Group

Lawrence Livermore National Laboratories, DOE, Livermore, CA

Organization

71st Flying Training Wing, Vance AFB, OK
Iowa Army Ammunition Plant, US Army, Middletown, IA
US Army Yuma Proving Ground, US Army, Yuma, AZ

Energy Savings Performance Contracting

Individual

Dennis Klekar, NASA, Houston, TX

Mobility Energy

Small Group

Lawrence Berkeley National Laboratory Transportation Services, DOE, Berkeley, CA

Organization

Training Support Squadron TEN, US Navy, Pensacola, FL

Water Conservation

Individual

Cedreck Davis, NASA, MSFC, AL

Small Group

Denver Federal Center, GSA , Denver, CO
Embassy Lima Irrigation Project, DOS, Lima, Peru
Federal Records Center, GSA, Kansas City, MO
Ft. Irwin, US Army, Ft. Irwin, CA
Naval Facilities Engineering Command, US Navy, San Diego, CA
Sandia National Laboratories, DOE, Albuquerque, NM

Organization

47th Flying Training Wing, Laughlin AFB, TX
Michigan PMC, GSA, Battle Creek, MI
San Antonio District, USPS, San Antonio, TX
Scranton Army Ammunition Plant, US Army, Scranton, PA
Stockton Processing and Distribution Center, USPS, Stockton, CA

Beneficial Landscaping

Organization

47th Flying Training Wing, Laughlin AFB, TX