FEMP FOCUS

Project Financing/ Utility and Natural Gas/ Energy Awareness

U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy

Spring 2004

Read about changes in store for the

Presidential Energy Awards

Summer 2004

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Super ESPC, Super Successful

Super Energy Savings Performance Contracting Sets Records During FY 2003

FY 2003 was the most successful year thus far for FEMP's Super Energy Savings Performance Contracts (ESPC) program. There were 40 delivery orders executed under FEMP's Super ESPCs during FY 2003; the previous record was 31 delivery orders during FY 2001. Last year's $252 million in private investment will produce more than $521 million in cumulative guaranteed cost savings. Net savings to the federal government from this investment (after payments to contractors) total $11.6 million. Cumulative Super ESPC private investment totals $583 million since the program began in 1998.

Annual energy savings from all Super ESPC program investments are 5.2 trillion Btu, equivalent to the energy use of more than 51,000 average households [data corrected since initial publication of printed version of FEMP Focus, Spring 2004].

An impressive number of federal agencies shared the success of Super ESPC during FY 2003 including:

- Department of Agriculture;
- Department of Commerce—National Institute of Standards and Technology;
- Department of Defense—U.S. Air Force, U.S. Army, U.S. Navy, U.S. Marines;
- Department of Energy;
- Department of Health and Human Services;
- Department of Homeland Security—U.S. Coast Guard
- Department of Justice—Bureau of Prisons, Federal Bureau of Investigation;
- Department of Labor—Job Corps;
- Department of Transportation—Federal Aviation Administration, U.S. Merchant Marine;
- Department of Veterans Affairs;
- General Services Administration; and
- National Archives and Record Administration.

FEMP sincerely thanks all the dedicated and hard working energy professionals who contributed to the tremendous energy and cost savings generated by the Super ESPC program.

For more information, please contact Tatiana Strajnic of the Federal Energy Management Program at 202-586-9230.

For the latest on the **Sunset Provision**, visit
www.eere.energy.gov/femp/newsevents/detail.cfm?newsID=304

Special Thanks. . .

Special thanks to Beth Shearer, former FEMP Program Manager, who recently retired from the federal government. We would like to take this opportunity to thank her for her never ending energy, dedication, contributions, and for her leadership role in the federal government and especially in her management position in the Federal Energy Management Program (FEMP). We will strive to continue her successful leadership in accomplishing FEMP's mission.

I am immensely proud of the work that you do each day, and I am humbled by your passion and commitment. I feel most privileged to have been the FEMP Director for the past five years, and I thank you for the support you have shown me.

— Beth Shearer, Former Program Director
Federal Energy Management Program

Earth Day: "Smart Energy Choices for the Future"

FEMP is asking federal facilities and others across the country to celebrate Earth Day on April 22nd and throughout the year. Our theme this year, "Smart Energy, Choices for the Future," is in line with the Secretary of Energy's "Smart Energy" campaign. This message promotes the idea that by helping to spread awareness about the benefits of renewable energy and making smart energy choices, we can help our nation achieve a healthier environment and a stronger economy. We hope that the campaign materials will assist you in spreading this important message. Items available are posters, sunflower seed packs, key tags, and Post It Notes. Limited quantities are available. Please call the EERE Information Center at 1-877-337-3463 to order.

Executive Order 13123 requires Federal agencies to increase their use of renewable energy, and it called for the Secretary of Energy to set a goal for federal use. Therefore, the Secretary directed that federal agencies obtain the equivalent of 2.5% of their electricty from renewable energy by 2005.

Secretary of Energy
Spencer Abraham

Assistant Secretary,
Office of Energy Efficiency
and Renewable Energy
David K. Garman

Deputy Assistant Secretary
for Technology Development
Richard Moorer

FEMP
Acting Program Manager
Schuyler Schell

FEMP Focus Editor
Annie Haskins

Leading by example, saving energy and taxpayer dollars in federal facilities

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Team Develops New Tools for Measurement and Verification (M&V) of Energy Savings

Measurement and Verification (M&V) of energy savings is an evolving practice which requires special planning and engineering approaches. It is also integral to Super ESPC projects. The Federal Energy Management Program continues to provide leadership in developing innovative tools to improve the quality of M&V in federal energy projects. To leverage these efforts across the entire federal sector, FEMP's Super ESPC Program has teamed with the Department of Defense and private sector energy services companies (ESCOs) to create the federal M&V Team.

The M&V Team is a network of experts that meets regularly to improve the quality and consistency of M&V practices. The group operates through working groups that are convened to address specific issues. The M&V Team has been meeting since October 2000, and holds periodic "M&V Summits" to present the findings of the working groups, discuss timely issues related to M&V, and plan future working group activities.

Current active working groups are 1) Commissioning, 2) Advanced Metering, 3) O&M Reporting, and 4) Plan & Reporting Integration. New tools developed by past working groups include the *Annual Reporting Outline*, the *M&V Planning Tool*, and the curriculum for a half-day FEMP M&V training class. These tools and associated materials can be downloaded from http://ateam.lbl.gov/mv.

Annual Reporting Outline

The Annual Reporting Working Group was formed in June 2002 as a result of a due diligence review of Super ESPC annual performance reports. The review was conducted in response to the 2001 FEMP customer survey recommendation stating that FEMP should help participants understand the level of savings actually achieved in projects. The Super ESPC review indicated that annual reports were inconsistent in format and quality and there was opportunity for substantial improvement. Since the purpose of the annual performance report is to confirm the achieved savings, improving the reporting format was an obvious way to help agencies better understand their energy savings.

The Annual Reporting Working Group developed an outline that details a comprehensive reporting format for annual measurement & verification reports for all federal performance based energy projects. In addition to providing placeholders for M&V activities, this outline includes reporting on operations and maintenance activities. Currently, the use of this reporting format is being tested by one of the M&V Team's ESCO partners on an actual Super ESPC project. Although this format is not yet incorporated into federal contracts, it is available and is recommended for use on all projects.

M&V Planning Tool

The M&V Planning Tool Working Group developed an iterative exercise designed to help develop appropriate M&V strategies suited to the unique requirements of individual projects. It is based on a simple flowchart, and provides a flexible framework for introducing key issues related to M&V at an early phase in project development. The four steps to using the M&V Planning Tool are discussed below, and match the step numbers in the flow chart (Figure 1).

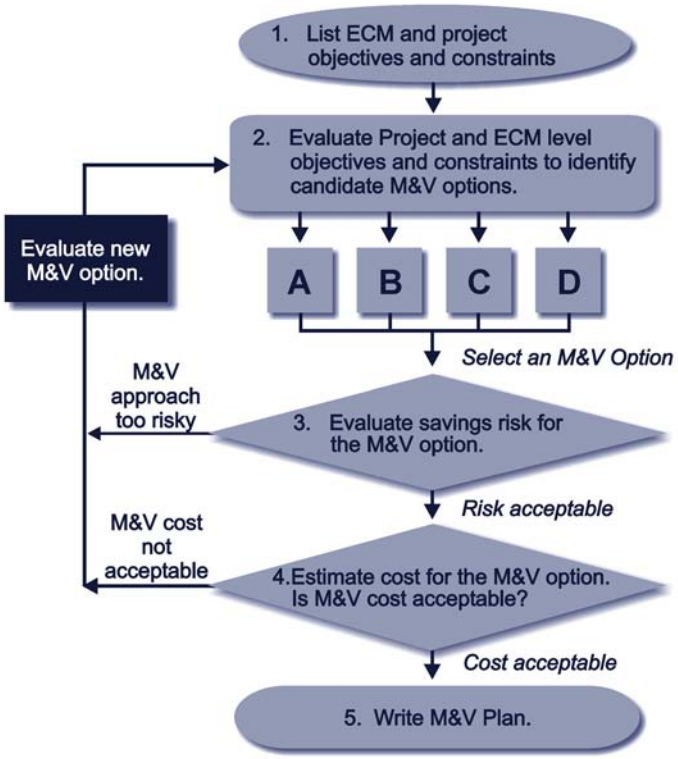

Figure 1: M&V Planning Process

1. The first step requires the development of a custom list of objectives and constraints for the project. Goals and limitations that will affect the M&V plan for individual energy conservation measures (ECMs) as well as for the whole project must be considered and prioritized.

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TEAM DEVELOPS NEW TOOLS FOR M&V OF ENERGY SAVINGS
(continued from page 3)

Some typical objectives and constraints for M&V are listed below.

Typical Objectives	Typical Constraints
Desire to track energy savings through utility metering (or)	Historical utility data not available
Desire to verify energy performance continuously (or)	Lack of building level utility meters
Desire to verify energy performance periodically	High degree of interaction between ECMs
Track post-retrofit consumption and adjust baseline for changes in weather, occupancy, mission, etc.	ECMs scope affects a small portion of overall utility baseline
Maximize infrastructure improvements by utilizing least-cost M&V option	No energy management control system available for data acquisition
Ensure equipment performance for life of contract	
Quantify savings from ECM	

2. The next step requires evaluating various M&V Options in light of the objectives and constraints identified. If one of the high priority project level objectives or constraints is not met, then another M&V Option should be selected for evaluation.
3. If objectives and constraints are properly satisfied, then the savings risk associated with the selected M&V Option(s) should be evaluated. To properly assess and allocate risks, a custom list of variables should be developed based on project specifics. Example variables are operating hours, equipment performance, weather, building occupancy, environmental/process loads, changes to the facilities, etc. A carefully-crafted M&V plan will disseminate these risks appropriately. Another document, the *Responsibility Matrix* from the *FEMP M&V Guidelines*, includes a detailed discussion of the risk elements and how they should be allocated.
4. The next step requires estimating the cost of using the selected M&V Option(s) in relation to savings risks. Consider whether or not the M&V requirements and the savings risk justify the M&V expenses. If not, another method should be selected for evaluation. If all the M&V requirements are met and the savings risk justifies the M&V expenses, proceed with the development of the M&V plan for the project.

M&V Training Class

The M&V Training Working Group has developed an M&V course that specifically targets the needs of federal projects. The working group developed the curriculum and materials for such a class after federal needs were evaluated against commercially-available courses, and it was determined that a FEMP-specific introductory class to M&V was required.

This half-day FEMP M&V course, Measurement and Verification for Super ESPC Projects, is offered with the Super ESPC Delivery Order (DO) Workshop, March 23-24, in Golden CO.

The training materials developed for this class, in the form of PowerPoint slides and notes, are available for all to use from http://ateam.lbl.gov/mv.

For more information, please contact Satish Kumar at 202-646-7953.

Get Started on a Project!

FEMP's project financing experts can help guide you through the process of developing and implementing a super energy savings performance contract or utility energy services contract.

A representative can help you:

- Determine which contracting mechanism best fits your needs;
- Partner with an energy service company or utility;
- Form an agency acquisition team and get training;
- Select an agency project decisionmaker;
- Provide education and advisory support to agency staff on legal, technical, financial, and contractual issues;
- Find resources such as software, videos, and user-friendly guidance documents;
- Assist in developing requests for proposals, initial proposals, and task or delivery orders; and
- Review price and technical proposals.

For more information and to get started, please contact your DOE Regional Office Representative (See listing on page 19).

FEMP Project Facilitators Optimize the Value of Super ESPC Projects

FEMP Project Facilitators (PFs) are qualified, experienced guides who can lead and support an agency acquisition team to provide expert oversight in developing, implementing, and verifing savings from energy conservation measures (ECMs) using DOE Super Energy Savings Performance Contracts. FEMP PFs are objective, expert consultants for technical, financial, and contractual issues who help to optimize the financial value of ESPC projects. Factors influencing the best financial value and benefits of direct PF support include:

- Reducing procurement process cycle time;
- Achieving fair and reasonable pricing of ECMs;
- Minimizing interest rates and life-cycle costs;
- Employing cost-effective Measurement & Verification (M&V) protocols; and
- Providing technical knowledge of advanced technologies—geothermal heat pumps, biomass and alternative methane fuels (BAMF), solar, photovoltaic.

PFs reduce cycle time and the use of agency resources by helping to assemble the right team; providing education and dedicated assistance to reduce agency workload for Delivery Order (DO) Request for Proposals (RFP) preparation, proposal review, and pricing evaluation; and evaluating "what-if" scenarios. They enhance communication with routine conference calls and by facilitating key meetings. They also have the experience to guide agencies to the best resources and practices, and ensure that agency partnerships with ESCOs are balanced. Other Super ESPC program resources include FEMP training on how to place an ESPC DO and ensure energy and cost savings throughout the contract term, *Practical Guide to Savings and Payments in Super ESPC Delivery Orders*, Delivery Order Guidelines, M&V Guidelines, and sample documents and templates.

PFs assist the ordering agency in achieving fair and reasonable pricing with tools and resources including ECM price benchmarks from previous projects, ECM locators, the Financial Value Calculator, and the Geothermal Heat Pump (GHP) Construction Cost & Maintenance database.

Finally, PFs understand financing and know how to minimize costs. Their expertise includes contract clauses; structuring the financing and timing the payments; using FEMP's Financing Value Calculator to compare financing offers; and determining price reasonableness. Finance rates depend on term, investment size, and index rates. Factors that influence the interest rate include financier's perception of project risk, ESCO's creditworthiness, ESCO's track record, technical risk, level of M&V, and terms and conditions of contract. Strategies to lower interest rates include make-whole and no-offset clauses to reduce risk to the financier.

FEMP also has M&V specialists who can help agencies use cost effective strategies to ensure persistent savings. FEMP M&V resources include documented best practices and guidance for:

- Assigning responsibility;
- Determining accurate baselines;
- Developing a site-specific M&V plan;
- Developing a detailed commissioning plan;
- Determining project acceptance;
- Verifying equipment performance; and
- Providing guidance for GHP-specific M&V protocols.

PF support is free through agency review of the initial proposal. Beyond the initial proposal, support is on reimbursable basis through tailored PF support packages to meet their needs. The typical ESPC project support package includes the following services for $30,000:

- Develop delivery order RFP;
- Assist with Notice of Intent to Proceed;
- Facilitate kickoff meeting for Detailed Energy Survey;
- Continue to review project development;
- Review final proposal—technical feasibility, energy models, price reasonableness;
- Assist in technical and price negotiations;
- Revise delivery order RFP (negotiation changes);
- Facilitate post-award kick-off meeting;
- Review post-construction M&V report;
- Make project acceptance recommendations; and
- Review yearly M&V report.

Using a FEMP PF is the most effective best practice for achieving a best-value Super ESPC project. As experienced players, PFs instill confidence in team members and decision makers to ensure success.

For more information about FEMP Project Facilitators, please contact Tatiana Strajnic at 202-586-9230.

FEMP Commits to Quality Assurance and Continuous Improvements for ESPC Program

FEMP is continuously implementing a process of cost reduction and process improvement strategies to better serve federal agency customers interested in energy savings performance contracts (ESPCs). There are six focus areas for quality assurance and continuous improvement:

- measurement and verification;
- performance period administration;
- financing of ESPCs;
- price reasonableness of ECMs;
- cycle time; and
- education.

Measurement and Verification (M&V)—In recent years, FEMP has expended considerable resources through the bi-annual, multi-laboratory, and multi-industry M&V summits to make M&V replicable, reliable, and practical enough to apply cost-effectively. Improved areas include: 1) how the government will verify that an installed project has the potential to "perform" prior to acceptance, and 2) how the government will verify periodically (usually annually) that the required "performance" is occurring regardless of the year in the contract term and the turnover in facility managers. Commonly, the required performance includes standards of service (temperature, humidity, lighting levels, etc.) and a specified level of guaranteed annual cost savings accruing to annually budgeted and appropriated energy and related operations and maintenance accounts. M&V addresses commissioning of the newly installed energy conservation measures (ECMs), cost baseline definition, and periodic verification that the guaranteed savings relative to the baseline is occurring.

Performance period administration—ESPC award/post-award submittal documents are lengthy and not optimized for performance period administration during a 15- to 25-year period, given that government staff often change every few years. FEMP is working to specify a more concise set of performance period administration documents that can be included as required deliverables from ESCOs in ESPCs. The new deliverables are not necessarily additional deliverables, but rather they will be the essential subset of existing information organized more concisely, and specifically written with performance period administration in mind. This experience will result in more streamlined, practical, cost-effective, and enforceable performance period administration of ESPCs.

Financing of ESPCs—After the price of the ECMs themselves, financing costs represent the next largest portion of the ESPC cost structure. With lower financing costs, government customers are able to implement more ECMs and more comprehensive projects on a pay-from-savings basis than would otherwise be possible. FEMP is working to refine the DOE indefinite delivery, indefinite quantity contract provisions and develop financing structures to minimize financing costs in ESPC.

Price reasonableness of ECMs—FEMP is identifying approaches to determine price reasonableness that have been successful within the context of ESPC, and to document the approaches, lessons learned, and "best practices." The price of the ECMs is the largest component of the ESPC cost structure. Public entities have considerable experience determining price reasonableness for traditional government-funded building retrofit projects. In this case, the government at its own expense—either internally or with use of direct-funded contractors—audits the buildings, identifies the ECMs, develops ECM designs and drawings to 100 percent completion, and develops specifications to communicate to construction contractors how to implement the project. In this scenario, the government goes to considerable expense to fully define the project, which enables construction contractors at modest expense to develop their price and bid competitively for the project. This long history of government experience, verifying price reasonableness through price competition, is not directly transferable to ESPC. Generally when the government uses ESPC it does not have adequate budgets to fully define the project, and even if it did the ESCO would be reluctant to adopt the government's design and guarantee the government's estimated savings and pricing. In ESPC, generally the ESCO defines the project with government oversight and the parties agree to firm fixed prices and guaranteed savings at an early stage of project development, such as 30 percent design completion.

Cycle time—The time it takes from initial consultation to award of an ESPC is an area that still needs attention. FEMP is working to minimize the time from kickoff meeting to ESPC award without sacrificing value to the government. In ESPC, the time required for an ESCO to get through the procurement process is reflected in the project price, which the government ultimately pays. Given that the site teams performing facilities management and procurement tasks for the government are multi-tasked and have high turnover, it is easy to understand why they need help with ESPCs which are generally not business-as-usual. When properly staffed, trained, and managed, centralized focused ESPC teams have been able to add value by guiding site-level teams to the resources they need to effectively implement ESPCs.

Education—FEMP is devoting considerable resources for Education and Outreach, through Alternative Financing Representatives and Project Facilitators, and is in a position to document the

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New! Energy Rate Escalation Calculator

Anyone familiar with energy savings performance contracts (ESPC) or utility energy service contracts (UESC) knows that it can be time-consuming to calculate a rate of change for contract payments. For a simple spreadsheet analysis, you would want a single rate that is related to the energy cost savings projected over the contract term and to the share each fuel type contributes to the savings. An obvious criterion on which to base this rate of change would be the energy price escalation rates projected annually by the DOE Energy Information Administration (EIA). But these rates vary from year to year by region, fuel type, and rate schedule, and it is tedious to condense these variables into one annual average rate. The DOE team at the National Institute of Standards and Technology (NIST), together with the ESPC team at the National Renewable Energy Laboratory (NREL), has just created a tool that lets you compute a contract escalation rate in a matter of minutes.

The Energy Escalation Rate Calculator (EERC) prompts you for a few readily available inputs, such as percentage of base-year cost savings attributable to each fuel in the project, commercial or industrial rate type, project location, and start and duration of performance or contract period. It then retrieves the matching EIA rates and calculates the weighted average escalation rate in real terms (excluding inflation) and nominal terms (including inflation). The default inflation rate, which can be edited, is the long-term inflation rate published annually on April 1 by FEMP for use in life-cycle cost analyses of energy and water conservation and renewable energy projects.

The EERC-calculated average annual escalation rate, when applied to the base-year costs or savings of ESPC or UESC projects, results in approximately the same future total amounts over the contract period as do the EIA-projected variable rates, making the EERC rate a reasonable proxy rate for escalating contract payments. EERC1.0-03 can be downloaded from the FEMP Web site (www.eere.energy.gov/femp) from the Technical Assistance or Financing sections. It will be updated on April 1 of each year with the latest EIA energy price data.

For more information, please contact Ted Collins, FEMP, at 202-586-8017 or theodore.collins@ee.doe.gov; Sieglinde Fuller, NIST, at sieglinde.fuller@nist.gov; or Jeff Dominick, NREL, at 303-384-7307.

Alternative Financing Q&A

You've asked. . .

What is the legislative status of energy savings performance contracts authority?

The Secretary of Energy's energy savings performance contracts (ESPC) authority sunset clause became effective October 1, 2003. FEMP is waiting for ESPC authority in a continuing resolution or other legislation providing temporary or permanent ESPC authority.

What is the current status of energy savings performance contract projects?

No new delivery orders can be awarded until the ESPC authority is reinstated. Work can continue on delivery orders that were awarded before October 1, 2003. Alternative Finance Representatives and Project Facilitators are continuing to market new projects and work with customers up to and including the Initial Proposal stage of the ESPC process. They are continuing to work with customers as required on awarded delivery orders.

In the absence of the authority to award delivery orders, it is not advisable for federal agencies to issue a Notice of Intent. The Notice of Intent instructs an Energy Service Company (ESCO) to complete a Detailed Energy Survey (DES). The DES can cost the ESCO a significant amount of investment dollars. Without the delivery order award, the agency would not have a mechanism to repay the ESCO. DOE defers to the agency to continue past the initial proposal, should the agency decide to do so.

Why have I not received my annual Qualified List of Energy Service Company re-certification?

The sunset provision for energy savings performance contracts authority became effective October 1, 2003. Due to this hiatus in the federal government's authority to enter into energy savings performance contracts, the re-certification process for the Qualified List of Energy Service Companies is postponed. DOE will implement the re-certification process when ESPC authority is restored by the U.S. Congress.

If you have any questions regarding what ESPC activities are permissible during the hiatus, please contact Tatiana Strajnic at 202-586-9230.

Federal Correctional Institution Victorville ESPC Project Deploys RE Technologies

In 2001, the Bureau of Prisons chose the Federal Correctional Institution (FCI) Victorville, CA, for a pilot project to determine if the facility had sufficient potential for energy savings to warrant a detailed analysis, design, and implementation of an energy efficiency and facility upgrade project. Given that FCI Victorville was a brand new facility, its energy savings potential was unknown. A detailed analysis revealed significant energy savings potential through use of renewable wind and solar energy sources and re-engineering of existing facility energy equipment.

One year later, the design was complete for installation of a wind turbine, a photovoltaic (PV) covered parking array, and several cost-efficient upgrades to the HVAC system. The project is being built and financed under an energy saving performance contract (ESPC). NORESCO, a national energy services company, finished the preliminary design and will complete the installation on a turnkey basis. NORESCO will provide all of the investment capital, guarantee energy savings, and provide ongoing maintenance services to ensure successful long-term operation.

The wind turbine will be located on the south side of the Federal Communications Commission (FCC) building and as close to the FCI facility as allowed by the Federal Aviation Administration. The 750-kilowatt wind turbine will be 180 feet to the center of the rotor blades and have a diameter of about 160 feet, for a total height of about 260 feet. When operating at full power, the wind turbine will generate enough electricity for several hundred homes, while eliminating all of the air pollution that would be generated in serving these homes with conventional electric generation. The wind turbine will produce up to 30 percent of the peak electric demand and nearly 10 percent of the annual electric consumption of the facility, providing a good degree of energy independence. With the maturity of the wind power industry and improvements made during the past decade, this turbine should remain operational for the next 30 years.

In making this project cost-effective while ensuring reliability, NORESCO along with Victorville's in-house staff will provide an optimal blend of maintenance services. NORESCO will train selected maintenance staff on basic operations and maintenance procedures of the wind turbine. Victorville operational support will be limited to "first responder" or "eyes-on-the-ground" type of support. This will eliminate the cost of an expert having to drive 5 hours for simple tasks such as resetting a breaker. In addition, this local operational support will increase the amount of time that the wind turbine is on-line generating electricity. The time requirement to provide this operational support will be minimal and the results will be effective.

Recognizing the dual benefit of environmentally "free" solar energy and covered parking in the Mojave Desert, a PV carport array will provide shade for two to four rows of staff parking while producing about 50 kilowatts of electricity on sunny summer days.

Upgrades to the HVAC system include converting the air systems from conventional constant volume to variable airflow via the addition of variable speed drives and improved computer controls. These changes provided a very significant reduction in fan power, and they will provide flexibility in meeting heating and cooling loads. These improvements, along with the ability to monitor and display outside and total airflows, should help address comfort complaints while saving energy and money.

The Victorville project is targeted to receive more than $2 million in incentives from the local utility. This project is eligible for these funds under California programs that allocate some of the utility bill payments in order to encourage energy efficiency and renewable (green) technologies. The 750-kilowatt wind turbine will be the first utility-scale wind turbine to be installed under California's Self-Generation Incentive Program (SGIP). It will also be the first combined wind and solar renewable project completed under this program, making FCI Victorville unique. Potential benefits to recruitment, community relations, and education are significant.

The wind turbine, solar photovoltaic carport array, and HVAC upgrades will be paid for entirely from incentives and energy cost savings. This places no additional financial burden on FCI Victorville and, in fact, will produce significant net cost savings once the project has been fully paid for through its savings. The benefits of this financing method, combined with state incentives for small alternative energy projects, is a unique and viable approach to the federal market that is currently overlooked by the wind and solar industries and some government agencies. This showcase project has the potential to significantly increase awareness and demand for this niche application of small wind and solar projects at both new and older, less efficient facilities.

For information on the Victorville ESPC Project, contact Noel Fenlon at nfenlon@bop.gov. For more information on project financing, please contact Tatiana Strajnic, FEMP, at 202-586-9230 or tatiana.strajnic@ee.doe.gov.

Landfill Gas-to-Energy Project Awarded at Hill Air Force Base

A Super ESPC Delivery Order was awarded on September 30, 2003 under the FEMP Biomass and Alternative Methane Fuels (BAMF) program. The award was made by the Hill Air Force Base to Exelon Services Federal Group. The principal energy conservation measure (ECM) is use of landfill gas to generate electricity. The delivery order will bring $4.9M of private capital investment to the base resulting in $17M of energy cost savings over the 20 year period covered by the contract. This is the first delivery order awarded under the BAMF program.

Background

Landfill gas is an alternative fuel source that is domestic, renewable, and can be less expensive to use than conventional fuels. It is the product of the natural decomposition of organic materials in landfills that results in formation of methane and carbon dioxide. These gases are waste products and are typically vented to the atmosphere or flared resulting in increased greenhouse gases. Landfill gas can instead become a long-term source of energy that can be used to generate electricity, steam or both in combined heat and power (CHP) applications. Hence, these energy products are generated with zero net increase in greenhouse gas emissions. In addition to the environmental benefits, the use of landfill gas for on-site power generation can decrease a facility's vulnerability to grid interruptions.

The use of landfill gas involves proven, commercially available equipment. Since it is a waste product, the cost to acquire landfill gas is normally much less than natural gas on an equivalent Btu basis. Like all low-Btu fuels (landfill gas has about half the energy density of natural gas), the primary limiting factor is the distance from the landfill to the point of use.

Application of landfill gas-to-energy at the Hill Air Force Base

The Hill Air Force base is located in Layton, Utah. Approximately 2 miles from the base property line is the Davis County landfill. This landfill was opened in 1984 and currently has approximately 2.2M tons of waste in place and is planned to accept about 410 tons of waste per day over the next 20 years. The current gas venting system will be modified to permit the collection, conditioning, compression, and pipeline transport of the gas to the Hill Air Force Base grounds. Historically the landfill gas composition has been 50 percent methane and 50 percent carbon dioxide. In support of the project, the State of Utah Department of Natural Resources will provide funds to help pay for the engineering costs incurred by Davis County. An agreement was reached in November 2003 between Exelon and Davis County/Wasatch Energy to modify the venting system, install all necessary mechanical equipment, and construct an underground pipeline from the landfill to the site with the expense shared by Davis County and Exelon. In addition Exelon has acquired the rights to all gas generated at the landfill for the next 20 years at a pre-determined price.

Groundbreaking ceremony held November 7, 2003, at Hill Air Force Base. From left to right: Keith Derrington, Exelon Services Federal Group; General Denny Eakle, Hill Air Force Base; Governor Olene Walker, State of Utah; Bill Becker, DOE's Denver Regional Office Director; Jerry Stevenson, Mayor of Layton, Utah.

After transport to the Air Force property, the landfill gas will be combusted in two reciprocating engines that will drive dual generators. The engine-generator sets have been sized to produce 1200 kW of electricity at maximum load and will be operated 98 percent of the year.

Project Benefits

- Renewable Energy—8,584,800 kilowatthour annual production, enough to replace the electricity consumed by 850 homes.
- Energy Cost Savings—approximately $650,000 per year in energy cost savings including payment of the annual cost for the landfill gas.
- Hedge against utility rate volatility—20 year contract at set electric rates.
- Environmental—overall reduced air emissions from renewable energy project and other ECMs projected to be:

  CO_2 - 5,000 tons per year
  NOx - 5.5 tons per year
  SOx - 19 tons per year
  CO - 4.8 tons per year

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Natural Gas Markets: How Federal Agencies Can Reduce Gas Utility Bills

Public attention focuses on U.S. natural gas markets in the winter, particularly the impact of projected higher gas prices and possible gas supply shortfalls on the economy. The sharp increase in wholesale prices earlier this year and record low levels of gas in storage have prompted strong statements by Federal Reserve Chairman, Alan Greenspan, warning that "we are not apt to return to earlier periods of relative abundance and low prices any time soon." These comments are mirrored by trends in natural gas forward contracts for the next 3 to 5 years, which are currently trading at nearly twice historical prices.

This trend has implications for consumers, both in terms of their natural gas and electricity bills. Throughout the country, natural gas has been the fuel of choice for virtually all new power plants built over the past decade. As a result, electricity prices are increasingly sensitive to the price of natural gas. While "regulatory lag" will in many cases delay the effect of rising natural gas prices on consumers' electricity bills, a sustained increase in natural gas prices will almost certainly lead to an eventual rise in electricity rates.

Because of the long lead-time needed to develop significant new natural gas supplies and infrastructure, the most promising near-term strategy for putting downward pressure on prices is to reduce natural gas demand. Federal agencies can play a decisive role in responding to this situation by undertaking targeted energy conservation efforts at their facilities. Such efforts can benefit the agencies directly, by reducing their exposure to rising electricity and natural gas prices. Agencies can consider a number of general strategies:

- *Natural gas efficiency and conservation*: The American Council for an Energy Efficient Economy (ACEEE) estimates the cost-effective potential for natural gas efficiency in the U.S. to be approximately one trillion cubic feet per year, equivalent to 4 to 5 percent of current annual consumption. Among commercial and institutional customers, retrofitting HVAC systems and furnaces or boilers, recommissioning, and installing window glazing represent some of the more promising opportunities for reducing natural gas use on site. Facility managers may want to re-examine the economics of projects involving these measures, based on current and projected higher natural gas prices.
- *Electric efficiency and conservation*: Throughout most of the U.S., natural gas power plants operate on the margin at least half of the time—and in a number of regions (the West, Southwest, Texas, Florida, and New England), they operate on the margin 80 to 90 percent of the time. Electricity users can therefore indirectly decrease natural gas consumption—and thus help to put downward pressure on prices—by reducing their electricity use, particularly during daytime hours when natural gas is most likely to be the marginal fuel source for electricity generation. In fact, in many cases, electric efficiency efforts provide the "biggest bang for the buck." Federal agencies can build on their reputation as leaders in promoting the efficient use of electricity by engaging in measures such as retrofitting lighting and HVAC systems, installing or recommissioning energy management systems, and establishing energy-smart operational practices.
- *Demand response and load management*: In a number of regions, electricity users have the opportunity to receive payment for reducing their electricity use during specific periods by participating in demand response programs offered by the regional grid operator or their electricity provider. Two types of programs are typically offered: "emergency" programs that pay customers to reduce their load during periods when the reliability of the grid is potentially jeopardized, and "economic" programs that give customers the opportunity to offer load curtailments in exchange for market-based payments. The importance of such programs is heightened by the recent run-up in natural gas prices, which is likely to put upward pressure on peak period electricity prices in many parts of the country. By participating in demand response programs, federal customers can help to dampen this effect.

Agencies can leverage their efficiency and demand response efforts with financial and/or technical resources funded through public benefits funds or demand side management programs. These programs have historically been administered by the local utility, although in a number of states (New York, Vermont, Oregon, Wisconsin) the programs are administered by a statewide agency or non-governmental organization.

Current ratepayer funding for electric energy efficiency tops $1 billion annually—providing for a range of resources to federal agencies, from rebates for energy-efficient equipment and retrofits, to facility audits and project evaluation. Funding for natural gas efficiency is also available in many gas utility service territories. Information on those programs most relevant to federal customers is available on the FEMP Web site, at http://www.eere.energy.gov/femp/utility/energy_management.html.

For more information, please contact Charles Goldman of LBNL at 510-486-4637.

Improve Your Facility's Power Reliability and Environmental Performance, While Saving Money—Can it Be Done?

In recent years, as the digital revolution has made its mark on manufacturing and commerce, there has been heightened interest in power quality and reliability. The computer software and hardware, that underpins modern manufacturing, electronic databases and e-commerce, provides two key benefits: automation and, in the case of databases and e-commerce, instantaneous access to information. However, the degree to which these benefits can impact productivity is directly related to the quality and reliability of the power supply. This is also true in the federal sector where many facilities rely on electronic databases and communications systems to provide critical services. For example, information contained in Federal Bureau of Investigation (FBI) databases, such as criminal profiles and fingerprints, must be available to federal, state, and local law enforcement officials 24 hours a day, 365 days a year. In addition to the critical nature of many government functions, some federal facilities, like many manufacturers, rely on automated processes whose disruption can have a significant financial impact. For example, a power disruption at a distribution center for the U.S. Postal Service can result in labor costs associated with rework and downtime in addition to the cost to customer satisfaction as a result of delays in the delivery schedule.

The interest in power quality and reliability has spurred interest in distributed energy resources. Because of its environmental attributes and availability, natural gas is the dominant fuel choice for distributed energy applications. However, more recently, as natural gas prices have proven to be volatile and generally upward trending, renewable energy resources have received renewed attention. These resources have several intrinsic advantages: 1) they are typically local resources whose use can benefit the local community; 2) as renewable resources, they can qualify as green power garnering a premium market value; 3) they are greenhouse gas neutral.

Biomass is the oldest and most prevalent energy resource and even today is the world's most popular fuel for heating. With rising fossil fuel prices and growing environmental concerns, biomass energy systems are reclaiming their positions in schools, factories, military bases, and community energy plants. Biomass recently surpassed hydropower as the nation's leading source of renewable energy and now accounts for more than half of all renewable energy used in the United States. Thousands of large and small U.S. power plants use biomass fuels to produce more than 7700 megawatts of electricity.

Lean-burn engines designed to generate electricity from landfill gas.

In support of the Biomass and Alternative Methane Fuels (BAMF) Super ESPC Program, the National Energy Technology Laboratory has identified numerous on-site power generation opportunities at federal facilities using bio-energy. To date, most of those opportunities have been with biomass waste streams such as wood waste and landfill gas. These waste streams can often be obtained for a relatively low cost relative to fossil fuels. Bio-energy from these waste streams can be cost competitive with fossil energy in many niche applications, while providing waste reduction, along with the other benefits typically associated with renewable energy resources. When these low cost renewable resources are used in combined heat and power (CHP) applications, there is the potential to bring together an unlikely combination of advantages: higher reliability, lower costs and improved environmental performance—so maybe you can have your cake and eat it too.

To find out more about the process for using the BAMF Super ESPC to implement a biomass energy project at your facility, contact one of the following: Christopher Abbuehl, BAMF National Program Representative, at 215-656-6995 (Christopher.Abbuehl@ee.doe.gov); Craig Hustwit, BAMF Technical Lead, at 304-285-5437 (craig.hustwit@netl.doe.gov); or Danette Delmastro, FEMP BAMF Team Lead, at 202-586-7632 (danette.delmastro@ee.doe.gov).

Fort Irwin Privatizes Utility Distribution System

U.S. Army National Training Center enters into privatization agreement with Southern California Edison

On March 31, 2003, Fort Irwin Military Base in California entered into a 50-year contract with Southern California Edison Company (SCE) to privatize their electric distribution system. Completion of this procurement action was in response to a Department of Defense initiative to review the possibility of privatizing all utility systems at military installations in the United States in order to reduce cost and better utilize military resources for mission functions.

Fort Irwin is the U.S. Army's desert warfare training center. It is roughly the size of the state of Rhode Island. The Fort is one of the largest SCE customers, with 5,000 military personnel and their families living at the Fort and another 3,000 people in the civilian workforce. Virtually every soldier deployed to Iraq went through training at the Fort, and the facility is expanding to include both industrial and urban warfare training.

With the credit to be received by Fort Irwin as a result of the sale to SCE, the installation will be able to offset the cost of SCE's Annual Added Facility Charge and more importantly fund over a dozen sorely needed projects (worth more than $3.5 million) on the system. These improvements will bring Fort Irwin's electrical system to a more reliable and cost efficient state and result in fewer outages.

On August 1, 2003, SCE took full responsibility for ownership, operation, maintenance and repair of the electrical system. The sale of the electrical system will allow for vast improvements, including replacing poles and redoing the military substations and meter switch cabinets. These upgrades will save Fort Irwin about $178,000 the first year and $545,000 each subsequent year for the remainder of the 50-year contract.

For more information, contact John Adair of SCE at 626-633-7141 or john.adair@sce.com or Rene Quinones at Ft. Irwin at 760-380-5048 or rene.quinones@irwin.army.mil.

A Combined Presidential Awards Ceremony in 2004

In the past, the *Presidential Awards for Leadership in Federal Energy Management* were held the day after the Federal Awards. In 2004, however, the *Presidential Awards* will be combined with another Presidential-level federal awards program, the *Closing the Circle Awards*. The *Closing the Circle Awards* recognize employees and their facilities for environmental achievements, focusing on waste prevention, recycling, bio-based products, sustainable design, and affirmative procurement activities. The nomination period for Presidential Award submissions closed March 15, 2004. The combined ceremony, the *Presidential Energy and Environmental Awards*, will be held in the Summer of 2004.

The annual *Federal Energy and Water Management Awards* will be held in Washington, DC, October 28, 2004.

Winners of the Federal Awards will be chosen from nominations submitted to FEMP, which are due on May 14, 2004. The Criteria and Guidelines can be found at www.eere.energy.gov/femp/services/awards_fewm.cfm.

Nominations for the Louis R. Harris Jr. Award should be in the FEMP office by May 21, 2004. The nomination form can be found at www.eere.energy.gov/femp/services/awards_harris.cfm.

LANDFILL GAS-TO-ENERGY PROJECT AWARDED AT HILL AIR FORCE BASE

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This project was somewhat more complex than most Super ESPC projects since a second agreement was needed with a third party, i.e., an agreement with Davis County/Wasatch Energy Systems to acquire the landfill gas. In turn, the second agreement introduced additional risks to the project since supply of the landfill gas over the next 20 years was outside the control of the Air Force and Exelon. Nonetheless a path forward was developed that equitably shared the risks and in the end was satisfactory to all parties involved.

Is There a Biomass/Alternative Methane Resource Close to You?

The BAMF program enables federal agencies with access to wood and paper wastes, landfill gas, municipal wastewater digester gas, coalbed methane, and other organic materials to displace fossil-fuel derived electricity from the grid with electricity generated onsite using local resources that are renewable and, because they are waste streams, relatively low-cost. Development of BAMF Delivery Orders can be done in a relatively short period of time. The time between contractor selection and award of the Delivery Order at the Hill Air Force Base as an example took only 6 months.

For more information, please contact Christopher Abbuehl, BAMF National Program Representative, at 215-656-6995 (Christopher.Abbuehl@ee.doe.gov), Craig Hustwit, BAMF Technical Lead, at 304-285-5437 (craig. hustwit@netl.doe.gov); or Danette Delmastro, FEMP BAMF Team Lead, at 202-586-7632 (danette.delmastro@ee.doe.gov).

Marine Corps Base Camp Lejeune Elementary and Secondary Schools: Where Education and Energy Savings Meet

To combat spiraling energy costs, Marine Corps Base Camp Lejeune Domestic Dependents Elementary and Secondary Schools (DDESS) developed a plan of action to cut energy costs while also educating students. The schools joined forces with Camp Lejeune to establish an Energy Education Program. This approach is compatible with current curriculums, and involves students, teachers, school administration, and Base personnel coming together to achieve the objectives of decreasing annual utility costs and complying with Executive Order 13123, which mandates a 35 percent reduction in energy intensity by FY 2010. In FY 2003, the schools showed a reduction of 5.2 billion Btu and a savings of $52,555 from lighting retrofits and documented savings from the Energy Education Program.

Camp Lejeune High School Students.

The Energy Education Program was conceived by Jerry Rowlands, C.E.M., Camp Lejeune's Energy Awareness Coordinator in the Energy Programs Office, Public Works Division. Rowlands and the schools worked to create a permanent program that would educate the students as well as staff. The result is a strategy that complements the established Base effort to conserve energy and enables the schools and Base to achieve three goals: educate students, reduce energy costs, and reduce energy consumption.

Large-scale energy conservation takes more than a good idea – it takes commitment. The program has received a high level of support from school administration, teachers, the DOD Education Activity, and students.

The Energy Education Program is now part of the curriculum of the College and Career Development Class, and is taught by Christina Myers. Students' responsibilities include:

- Coordinating Camp Lejeune DDESS Schools Energy Education Program,
- Establishing an energy management plan,
- Recording and monitoring energy consumption,
- Identifying waste,
- Promoting energy awareness,
- Mentoring and training elementary and middle school energy monitors,
- Identifying energy projects, and
- Reporting progress.

"The Energy Education Program has been a new, innovative, collaborative effort for the high school students," Mrs. Myers stated. "This program has shown the students what teamwork and hard work is all about. Amazing—learning can be fun!"

Rowlands and Myers teach the energy education program every Wednesday. The students will create an Energy Management Plan that will establish energy conservation policies and procedures for the school system. This plan will be patterned after Camp Lejeune's Energy Business Plan. Once endorsed by the School Superintendent Robert Brinton, it will become part of the schools' policy. With the support of the Energy Program Office and DDESS

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MARINE CORPS BASE CAMP LEJEUNE ELEMENTARY AND SECONDARY SCHOOLS: WHERE EDUCATION AND ENERGY SAVINGS MEET
(continued from page 13)

District Superintendent Financial Officer, the students will also establish an energy usage baseline for each school. The students will utilize this baseline to calculate and report savings from the program. Student Energy Managers will be trained on energy consumption and costs, and will conduct energy audits locating sources of energy waste. Collectively, the Student Energy Managers will form the Student Energy Conservation and Appraisal Board (SECAB).

Participation in the program will help the students acquire and practice important skills applicable to everyday life, such as:

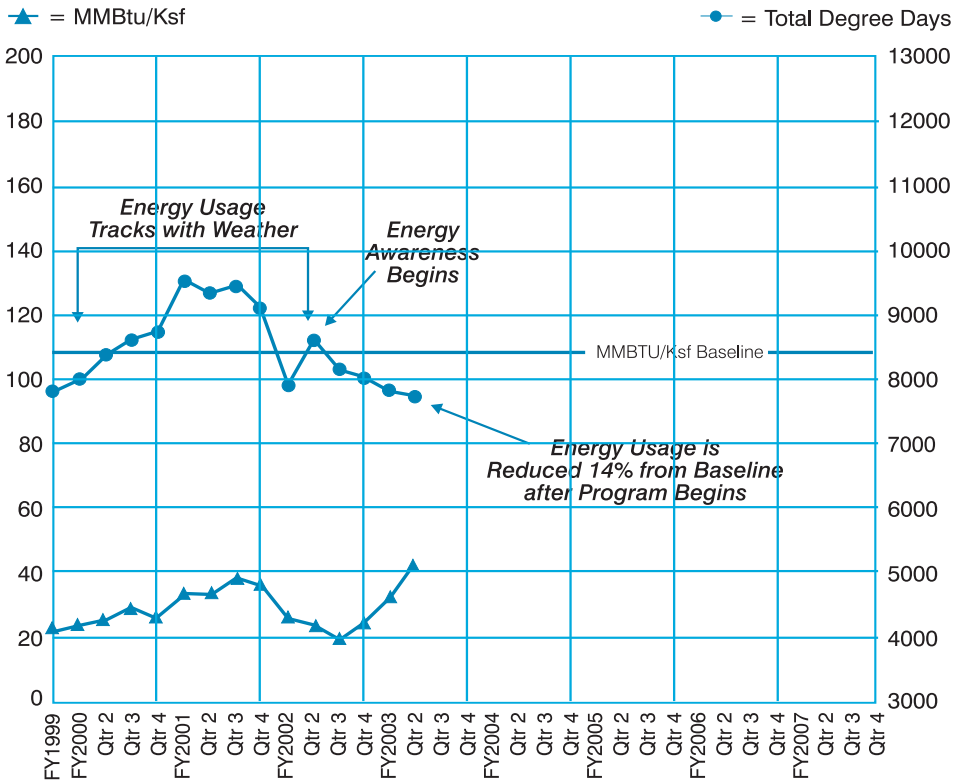
- Applying organizational skills and working within a group to achieve a common goal.
- Practicing business writing and philosophy and "bottom line" thinking.
- Collecting and organizing data and identifying energy projects.
- Practicing and improving public relations skills.
- Preparing presentations and public speaking.

"The Energy Education program was a perfect vehicle for the school and community to form a partnership. The project was a perfect fit with the curriculum and was interdisciplinary. Science, business, art, drama, public speaking, mathematics, computer science—all were addressed as students worked on the project. Students learned; they had fun; they taught others; they provided a service to the community; they're eager to continue the work next year. I know of few learning experiences that can boast of all this," stated Martha Brown, Lejeune High School Principal.

The 2003 school year goal to establish the commitment and foundation of the program was met beyond expectations, and the SECAB was very active in its short existence. Established in March 2003, they have already achieved the following:

- Developed the framework of an energy management business plan.
- Set the energy baseline using energy consumption data from 4 previous years.
- Developed a possible solar panel project for Brewster Middle and Lejeune High Schools.
- Implemented an "Energy Conservation Minute" during morning announcements.
- Developed the Lejeune High School energy conservation essay contest and promoted it using flyers and posters.
- During Camp Lejeune Schools Energy Awareness Week, conducted a variety of activities including:
  - Setting up an energy awareness booth at Lejeune High School during lunchtime to promote energy conservation.
  - Setting up an energy awareness booth at Berkeley Manor Elementary School's Spring Festival.
  - Putting on a puppet show and energy conservation skit for elementary students.
  - Making presentations at all elementary schools.
  - Putting on an energy conservation skit for middle school students.
  - Making three presentations at Brewster Middle School.
- Starting in the 2003-2004 school year a member of the SECAB will be a Co-Op student and work in the Energy Programs Office.

For further information on the Camp Lejeune Energy Education Program, contact Jim Sides, Energy Manager, at 910-451-5950 ext 201 (e-mail: SidesJC@lejeune.usmc.mil), or Jerry Rowlands, Energy Awareness Coordinator, at 910-451-5950 ext 202 (e-mail: RowlandsJT@lejeune.usmc.mil).



Camp Lejeune schools have reduced energy consumption by 14 percent since the start of the program.

FEMP Undergoes Web Site Re-Design

If you have visited FEMP's web site lately, you may have noticed some changes. In January 2003, FEMP began restructuring its web site. After a comprehensive review of the site, it was determined that having more than 2,400 pages was burdensome and that the site needed to be more user-friendly and more easily navigable. FEMP staff along with the National Renewable Energy Laboratory and contractor db Interactive, Inc. completed the process in March 2004 of condensing the information and presenting it in a more efficient manner. The same information will be available to users, but will be more concise. As a result of the re-design, the total number of pages has been cut by one-half. One new feature will be the inclusion of news and events in each major area, as they relate to specific programs. For instance, in the Super Energy Savings Performance Contract (ESPC) section, meetings and conferences with specific reference to ESPC issues will be noted on that page. The separate News and Events site will remain for users to browse for all energy-related items.

For more information on the FEMP web re-design, please contact Annie Haskins, 202-586-4536.

NIH Facilities Tour Highlights Energy Projects

Last fall, the U.S. Department of Health and Human Services (HHS) Energy Program sponsored a tour of three exemplary National Institutes of Health (NIH) energy projects at their campus in Bethesda, Maryland—the 23-megawatt cogeneration plant, the central plant expansion, and the utility tunnel expansion. Points of interest included innovative technologies implemented at the site and the sheer size of the NIH Central Plant, which is believed to be the largest district cooling system on the East Coast. Energy professionals from HHS and the Department of Energy attended the tour, which is expected to be offered again next summer. NIH constructed the 23-megawatt cogeneration plant under a utility energy services contract with PEPCO Services. The power plant is one of the largest ever built for the federal government, and will reduce greenhouse gas emissions by roughly 100,000 tons per year and other pollutant emissions and particulate matter by almost 600 tons per year. The power plant expansion project is part of an overall infrastructure modernization program that will improve utility reliability and increase chilled water capacity throughout the campus. The expanded building now houses five new 5,000-ton centrifugal water chillers, primary pumping systems, and secondary pumping systems to enhance the overall distribution of chilled water. The renovations to the plant have increased efficiency and save an estimated $2.3 million in annual energy costs.The NIH underground utilities are located in walk-through tunnels underneath the campus. Miles of tunnels have been constructed to house steam, chilled water, condensate, and compressed air lines. Energy savings have been accrued through the reduction of leaks and the ability to quickly access new leaks.

For more information, please contact NIH Energy Engineer Greg Leifer at 301-402-2100.

GSA Develops New O&M Contract and Language for Meeting National Energy Policy Act Requirements

The U.S. General Services Administration's mission is helping federal agencies better serve the public by offering, at best value, superior workplaces, expert solutions, acquisition services, and management policies. In fulfilling its mission, the GSA's Public Buildings Service (PBS), Northwest/Arctic Region 10, has developed a new performance-based contract to procure operations & maintenance (O&M) services for federal facilities within the region.

GSA has incorporated language into the new contract that would place responsibility for energy conservation and management squarely on the shoulders of the service contractor, and uses incentives to motivate the contractors to not only meet, but exceed, the conservation goals of the National Energy Policy Act of 1992 (EPACT) and related Executive Orders. The new approach is intended to streamline the procurement and improve the performance and administration of competitively-sourced O&M while ensuring continued progress towards meeting the federal energy management goals mandated for 2005 and 2010. Additionally, other GSA regions and government agencies throughout the nation may use this contract for their requirements.

The new contract's Performance Work Statement provides for facility operations and maintenance service including all management, supervision, labor, subcontractors, materials acquisition and disposal, supplies, tools, repair, and replacement parts. The multiple award contract will be the primary procurement method used to obtain any necessary operation, maintenance, and related services required at GSA PBS Region 10 facilities. Firms established on this contract will be provided an opportunity to submit proposals for task orders that will be issued for support of O&M services at specific buildings or groups of buildings.

Additionally the contract includes terms and conditions stating:

> "The Contractor shall comply with all applicable federal, state and local laws, executive orders, rules and regulations applicable to its performance under this contract."
>
> " Furthermore, assets under this Contract are subject to the energy conservation requirements mandated by the Federal Energy Management Improvement Act of 1992 (PL 102-486) and Executive Orders 12759 and 13123. All equipment must be operated as efficiently as possible, considering both demand and the consumption costs of utilities."

Several performance incentives are available for use in considering the requirements of individual task orders. Each informal "request for proposal" and task order clearly identifies those performance incentives that are included (e.g. nomination and sponsorship for various industry awards, reduced level of inspection and oversight, Fixed-Price-Award-Fee, options for various time periods for contract renewals). The GSA also offers a voluntary Energy Savings Award Fee program. The objective of this program is to positively motivate and reward contractors to perform work in a manner that allows the federal government to meet the mandates of the Energy Policy Act and Executive Order 13123 while maintaining high customer satisfaction.

This contract vehicle was awarded in June 2003, and task orders have been written for several GSA sites in the Northwest/Arctic Region including the Alcan U. S. Border Station; David J. Wheeler Federal Building, Baker, Oregon; and Juneau Federal Building, Juneau, Alaska. GSA will be monitoring the success of the contract over time, and invites other federal agencies to review the contract to see if it will fit your needs. The official solicitation (GS-10P-03-LSD-0072) can be viewed in its entirety on the Fedbizopps Web site at www.fedbizopps.gov/.

FEMP would also like to hear how other federal agencies are addressing efficiency with their O&M contracts. If you can provide other examples and language, please contact Cheri Sayer at 206-553-7838 or cheri.sayer@ee.doe.gov

For more information from GSA, please contact Michael Okoro at 253-931-7945 or michael.okoro@gsa.gov.

FEMP COMMITS TO CONTINUOUS IMPROVEMENTS FOR ESPC PROGRAM
(continued from page 6)

approcahes tried, lessons learned, and "best practices." The role of Education Outreach in ESPC is to market to government agencies—both from the top down and bottom up—about the importance of ESPC as a tool for agencies to meet their energy-related goals, however defined, and also how to get access to and effectively use ESPC. Actions include: 1) presentations to government agency leaders at procurement, budget, finance, and energy councils; 2) sessions for government employees at conferences for these professions; and 3) ESPC news briefs in professional magazines and newsletters read by these communities. Other advertising tools include sessions and tracks at conferences and workshops, publications, and Web sites.

This process of continuous improvements through cost reduction and process improvement strategies to the ESPC program will further facilitate FEMP providing efficient and effective service to federal agencies working towards their energy efficiency goals.

For more information, please contact Tatiana Strajnic of the Federal Energy Management Program at 202-586-9230.

Plans for *Energy 2004: "The Solutions Network"* Well Underway

The Energy 2004 organizing committee held their first meeting in October in Rochester, NY, which is the site of the 2004 workshop and exposition. The meeting was devoted to selecting tracks and sessions for the workshop.

FEMP's workshop in 2004 will feature 63 sessions in the following educational tracks:

- Acquisition: Contracting Rules!
- Alternative Financing: Making Projects Happen
- Developing "World Class" Operations and Maintenance
- Energy Security: Supply, Technologies, and Strategies
- New Technologies: Successful Applications for Buildings and Vehicles
- Policy, Planning, and Leadership
- Renewables: Real, Relevant, and Affordable
- Sustainability: From Dreams to Operations

Committee members are now actively firming up each session and putting speakers and moderators in place. Energy 2004 will once again feature interesting and informative tours of businesses in the Rochester area, an extensive exhibition, pre- and post- workshop seminars.

Come to Energy 2004 to establish or improve your energy management program and learn how to save energy in your facilities, procure renewable and energy-efficient products and services, utilize water-saving technologies, incorporate sustainable design concepts, take an environmentally conscientious approach to energy management and improve your organization's transportation systems.

Mark your calendars now, and plan to attend Energy 2004, August 8-11, 2004. For complete information, visit the workshop Web site at: www.energy2004.ee.doe.gov.

FEMP Training Reminders

Introduction to Facility Energy Decision System (FEDS)
April 27
Norfolk, VA
www.eere.energy.gov/femp/resources/training/fy2004_feds.html
509-372-4368

Laboratories for the 21st Century Workshop
April 28
Greensboro, NC
www.epa.gov/labs21century/index.htm

Advanced Facility Energy Decision System (FEDS)
April 28 - 29
Norfolk, VA
www.eere.energy.gov/femp/resources/training/fy2004_feds2.html
509-372-4368

Hands-On Distributed Energy Resources (DER) Training
April 28 - 29
Albuquerque, NM
www.eere.energy.gov/femp/resources/training/fy2004_hands_on_der.html
505-844-4383

Federal Renewable Energy Workshop
April 29
Seattle, WA
206-553-7694

Introduction to ESPC
May 4-5
Phoenix, AZ
202-586-7632

Securing Energy Savings Projects for Your Facility
May 25-26
Honolulu, HI
303-384-7407

UESC Workshop for Federal Procurement Teams
June 8-9
Cambridge, MA
303-384-7407

Introduction to ESPC
July 20-21
Washington, DC
202-586-7632

Find complete training list at www.eere.energy/gov/femp newsevents/events.cfm.

Renewable Energy Workshop — Meeting Federal Renewable Energy Goals

April 29, 2004 — Seattle, WA

As part of Executive Order 13123, DOE was tasked to work with the Interagency Energy Task Force to develop goals for use of renewable energy by Federal agencies. The group established a goal of 2.5% of agencies' on-site energy to come from renewable energy sources by 2005 (FY 2005). Federal agencies are now about half way there—but still there is much to accomplish to reach the 2.5% goal!

Learn your best options for pursuing renewable energy projects and green power purchases to help your agency meet the target at a workshop developed by FEMP to be held in Seattle, WA, on April 29, 2004. Information will be presented to give you background on the renewable energy goals, what resources qualify toward the 2.5% target, update on progress by each agency, and opportunities and implementation options for renewable energy projects and green power purchases. There will also be a "provider panel" with information on resources you can use to pursue your goals.

Other renewable energy workshops will also be given by FEMP this fiscal year in other locations. For any of these workshops, go to the FEMP training calendar for more information and registration at www.eere.energy.gov/femp/newsevents/training.shtml.

DOE's Philadelphia Regional Office Offers Super ESPC and FEMP Services with Eight Workshops for Mid-Atlantic Region

The Department of Energy's Philadelphia Regional Office will hold a series of one-day Super ESPC and FEMP Services Workshops for federal facilities this winter called Technical and Financial Assistance to Improve the Energy Efficiency of Federal Facilities and Operations. Upon completion of a workshop, participants will receive a certificate, which may qualify under their agency's Energy Education Training Program.

The workshops focus primarily on the advantages of Super Energy Savings Performance Contracting. The discussion will include a comprehensive presentation on the Alternative Financing service FEMP provides to all federal agencies. The workshop agenda will also address the following topics:

- Technical assistance resources, procurement and financing tools available to Federal facility managers,
- Energy Savings Performance Contracting,
- Biomass & Alternative Methane Fuel,
- Utility Energy Savings Contracts,
- Building audits, including SaveEnergy audits, and
- Facility security and on-site power generation.

This workshop will provide participants with concepts and practices about ESPC and a good overview of all FEMP services and how to obtain them. To view a schedule of the upcoming workshops, visit http://www.eere.energy.gov/femp/newsevents/training.shtml.

For more information, please contact FEMP Alternative Financing Representative Tom Hattery of DOE's Philadelphia Regional Office at 215-370-1362 or Thomas.Hattery@ee.doe.gov.

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If you are interested in *FEMP Focus* via e-mail, visit www.eren.doe.gov/femp/newsevents/whatsnew.html. As always, the *Focus* is complimentary to subscribers.

FEMP Contacts

For information on topics not listed here, call the FEMP Help Desk at 1-800-363-3732.

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"Energy Hog" Tips and Games

Secretary of Energy Spencer Abraham recently launched a national public service advertising campaign to promote energy saving practices. The campaign delivers energy awareness messages through the Energy Hog, a "spokes-villian" who represents an energy waster. Through Web-based games and other fun, interactive approaches, children and their parents are made aware of energy efficient behavior. Visit http://www.energyhog.org/.

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