

"Make Energy a Consideration in All We Do"

ENERGY

express

The Air Force Civil Engineer Center Energy Newsletter

March 2013

F.E. Warren Heats Things Up and Saves Big

Amy Ausley
AFCEC Public Affairs

Things are about to heat up at F.E. Warren Air Force Base, Wyo., as the base prepares to begin a major heat plant decentralization project. A \$15.5 million contract was awarded to Toltest Inc., to install new gas-fired boilers in more than 80 buildings and the project is expected to save as much as \$1.6 million per year.

Currently the heat and hot water on base is provided by a centralized heat plant, but the system is lagging behind in energy efficiency. Mr. John Nunley, resource efficiency manager for F.E. Warren, says improving that number is a main goal of the project.

"Our current system is only about 50 percent efficient between the boilers and the losses in the distribution system," Nunley said. "We anticipate with the new energy-efficient boilers that we'll be putting in, our efficiency will be jumping up into the neighborhood of 80 to 85 percent."

The higher efficiency of the new system will mean energy savings of at least 100,000 MBTUs per year for the base.

The project is being funded through the Air Force's Energy Conservation Investment Program and is the largest ECIP project to date.

John Byrnes, with AFCEC, says the choice to use ECIP funds was an easy one once all of the variables for the project were considered.

"The project was presented a couple of years ago and we determined the savings were within reason, we could fund it ourselves [Air Force dollars] and we didn't have to pay any finance charge, [as under an ESPC]" Byrnes said. "Each boiler will be maintained by the Air Force as opposed to some sort of contract maintenance which makes it a little bit simpler."

The decentralization began a few years ago at F.E. Warren, but it was a slow process and only happened when the base could find the time and funds to take care of one building at the time. This project accelerates the process.

"The base came up with the idea. They started converting the buildings one at a time and finally decided it would be cheaper and quicker to do them all at once," said Byrnes. "When the project is complete the old heat plant will be demolished."

The project is expected to begin this summer and will continue until the temperatures start to dip. Some

STORY CONTINUED ON PAGE 2

These variable speed frequency drives control the heating and cooling systems in the remodeled AFCEC-Tyndall building. The energy models for the project predict a 24.5% energy savings below the baseline. (U.S. Air Force photo/Mr. Eddie Green)



F.E. Warren Saves Big

CONTINUED FROM PAGE 1

preliminary work will continue during the colder winter months to prepare various buildings, but the main work can only be done during the summer months when the heat is not needed. Installation of all the boilers and demolition of the heat plant should be complete by the summer of 2015.



The centralized heat plant at F.E. Warren Air Force Base is scheduled for demolition as part of a \$15.5 million project on base. Individual energy-efficient boilers are being installed in over 80 buildings at an annual energy cost savings of \$1.6 million. (U.S. Air Force photo)

AFCEC announces call for award nominees

Jennifer Elmore
AFCEC Public Affairs

It's not an Oscar or an Emmy, but for Air Force personnel who win a Federal Energy and Water Management award, it's an honor deserving of the red carpet.

"Energy is critical to the Air Force's ability to achieve our mission to fly, fight and win in air, space and cyberspace," said Dr. Kevin Geiss, Deputy Assistant Secretary of the Air Force for Energy. "These men and women are a great example of what each Airman can do to help the Air Force maintain an assured energy advantage."

The Department of Energy named the Air Force the winner of six FEMP awards in 2012. Winners included Air Mobility Command, Scott Air Force Base, Ill.; Yakota Air Base, Japan; Dyess AFB, Texas; and three individuals – Mr. Lawrence Johnson, Minot AFB, N.D.; Capt. Reid Touchberry, Misawa AB, Japan; and Ms. Elizabeth Toftemark, Scott AFB.

The Air Force Civil Engineer Center collects and evaluates nominations for FEMP awards. The Air Force can submit a total of 15 nominations that highlight outstanding contributions in energy efficiency, water conservation and the use of advanced and renewable energy technologies at federal facilities.

The nominations cover vehicles, aviation and operational energy and



are submitted in one of four categories: project, program, individual and contracting.

- Project awards are awarded to teams that are exemplary in their implementation of energy efficiency, water efficiency, renewable energy and/or vehicle fleet management projects.
- Program awards are awarded to teams that implement and institutionalize effective management, policy and strategy for energy, water and/or fleet management.
- Individual awards recognize people who gave extraordinary service to their agencies in fiscal 2011 or over their career (e.g. 10 or more years).
- Contracting awards go to individuals who provided exemplary contracting support to their agencies.

The first step for major commands and installations is to submit a summary of information no later than March 13. "We would like to have a deep pool of nominations from which to select," said Ken Walters, AFCEC Performance Measurement and Analysis division chief. "We'll evaluate the summaries, select the Air Force's best and then let bases and

major commands know who continues on to step 2 – complete packages."

The timeline is broken down into several steps. Major commands and installations should enter summary submittals on the FEMP central website by March 13. AFCEC and the Assistant Secretary of the Air Force Energy Office will select the best nominations and notify major commands by March 22. Selected candidates will then develop complete nomination packages and submit them to the FEMP central website by April 19.

FEMP is presenting a Federal Energy and Water Management Awards criteria webinar. The one-hour webinar will provide an overview of the 2013 criteria, eligibility requirements and tips on how to prepare strong nomination narratives. The session also will include a brief live demonstration on how to create a nomination using the online nomination system. The webinar will be held March 7, at 1:00 pm EDT and April 9, 2013 at 2:00 pm EDT. This workshop is intended for federal employees and contractors assisting federal staff in preparing and submitting award nominations for the fiscal 2013 awards cycle.

Related links:

[FEMP workshop registration](#)

[Submit nominations to FEMPCentral](#)

Cape Canaveral AFS wins AFSPC's first Installation Energy Performance Award

1st Lt. Connie Dillon
Air Force Space Command Public Affairs

Cape Canaveral Air Force Station, an installation of the 45th Space Wing, was awarded the Headquarters Air Force Space Command Installation Energy Performance Award for fiscal year 2012.

The IEPA program, developed in 2012, is an AFSPC initiative to recognize the installation that best meets the energy focus for that year.

"In 2012, we needed to improve energy project execution. Therefore, the criteria centered on programming solid energy projects and awarding those projects within 120 days of Authority to Advertise," said Capt. Vincent Bongioanni, Headquarters AFSPC deputy energy branch chief.

Nineteen installations competed for the award and CCAFS won with a total of 39.4 out of 45 possible points.



"Cape Canaveral maxed out points for programming the installation's allotted share of AFSPC Energy Focus Funds and negotiating project bids within 120 days of receiving Authority to Advertise," said Bongioanni. "They also earned extra points for awarding additional projects in excess of their original share of funds."

The Air Force Space Command Installation Energy Performance Award for 2012 was recently awarded to Cape Canaveral Air Force Station. The award recognizes Installations that meet AFSPC yearly energy program objectives. Created using a recycled electricity meter, this unique solar powered trophy will travel to the winning installation yearly. The front of the trophy includes a solar-powered message for the current year winner. (U.S. Air Force photo/Staff Sgt. Christopher Boitz)

The award includes a trophy and command recognition to the winning installation.

The unique travelling trophy is solar-powered and made out of renewable materials and a recycled electricity meter with its own built-in micro-grid. On the back of this trophy, CCAFS has the distinct honor of being listed as the first recipient.

The criteria for 2013's award are being developed with a focus on mission energy.

Save \$100 a year; unplug a mini-fridge

Master Sgt. J. LaVoie
460th Space Wing Public Affairs

Anyone who has had a leaky roof knows even little drops will eventually fill a bucket and flood a house. When spending money on wasted energy, small improvements can add up to big dollars saved.

One type of energy often wasted is standby power; this is the power an appliance uses when it is turned off. Hitting the power button or flipping a switch to an off position doesn't necessarily mean the appliance stops using electricity. Individually, the electronics waste very little electricity while standing idle, but according to the U.S. Department of Energy's Lawrence Berkeley Laboratory, a typical home has about 40 products continually drawing electricity.



Standby power is the power an appliance uses even when it is turned off. Standby power amounts to almost 10 percent of residential electricity use. (U.S. Air Force photo/Airman 1st Class Riley Johnson)

"Together these amount to almost 10 percent of residential electricity use," the website states.

For instance, leaving a charged laptop plugged in even after it's fully charged can cost a residential user \$33.48 or more a year. At work even small changes can

save the Air Force a tremendous amount of money. If 100 Airmen unplugged their computer speakers, it could save \$252 a year. If half of the workers on a base like Buckley AFB unplugged their speakers, the savings would be more than \$10,000.

In addition to unplugging unneeded items, Airmen can use needed items judiciously at home and work to save money. Running a coffee pot four hours a day costs a residential customer \$121.68 a year, and it costs a base \$65.52 a year. Offices with three or four coffee pots can cost the government several hundred dollars a year. At home or at work, the convenience of a mini-fridge costs \$102.21 and \$55.04 for residential customers and the base, respectively.

With small improvements the Air Force and Airmen can have a little more spending money.

72nd Medical Group recognized with Energy Star

Brandice J. O'Brien
Tinker Public Affairs

The 72nd Medical Group has done it again. For the second consecutive calendar year, the unit won the prestigious Energy Star Award for energy-conservation.

Presented by the U.S. Environmental Protection Agency, the award recognizes small businesses that prove they are reducing waste, conserving energy and recycling.

"This is a great testament to the staff of the medical group," said Col. Dean Prentice, 72nd MDG commander. "It took the effort of the entire team to make the medical group the most energy efficient organization as possible. We plan to continue to lead team Tinker in energy savings," he said. "I am so proud of what the team has accomplished."

The medical group began their energy-conservation efforts in 2009 when Deborah Burge, facility manager for the medical clinic assigned to the 72nd Medical Support Squadron, learned Tinker's clinic was ranked among the worst energy abusers among clinics in the Air Force at number 59 out of 64.

Personnel weren't entirely to blame; the clinic was more than 50 years old. But, the rating alone was enough to motivate Ms. Burge and her staff. She brought the information back to Tinker and, on a mission, encouraged change. Within a year, there were significant results and in 2010, the group won a "most improved" award from the Air Force Health Facilities Division by reducing energy consumption 44 percent, and achieving an Energy Star rating of 75 points.

In 2011, the group continued to persevere and won its first Energy Star award.

The group turned off lights that weren't being used, added light switches where there weren't any, and replaced

incandescent light bulbs with energy-efficient compact fluorescent bulbs. They also shut down unused hot water tanks, repaired leaky pipes and weather-stripped exterior doors.

Despite the group's success, Ms. Burge and her team kept pursuing excellence in energy-conservation efforts. The team submitted work orders to repair processes that wasted an exorbitant amount of energy, including a leaking



Phillip Starks, maintenance technician, left, and George Morgan, maintenance site manager of the new 72nd Medical Group facility, inspect a rain water collection system that filters and pumps the water to holding tanks where the water can be used through the facility for restrooms and in the cooling tower. Unseen by most, this system saves money, energy and ensures a non-potable water system in case of a power outage. This is one of many energy savers in systems and personnel actions that earned them a federal award for their reduced energy consumption accomplishments. (U.S. Air Force photo/Ms. Margo Wright)

underground steam system. Personnel also performed minor renovations and upgrades on the lighting, installing a sensor system in the bathrooms and conference rooms, and they set back the heating, ventilation and air conditioning temperatures during evenings, holidays and weekends.

Their efforts worked. In 2012, as the group prepared to move into a new building, the old facility was rated 35 percent better than the standard building in terms of energy conservation, and against previous years, the medical group reduced its energy consumption by 49 percent.

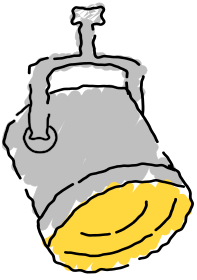
"This is quite the testament to Deborah Burge and her team to accomplish everything they did with an old building," said Britton Young, Tinker's Energy Team point-of-contact in the 72nd Air Base Wing Civil Engineering Directorate. "I'm proud of the med group; they've found ways to save and not sacrifice the mission and that's what it's all about."

According to the Health Facilities Division, the old clinic was in the top 25 percent of energy conserving medical healthcare facilities in the country, scoring 77 out of a possible 100 points. The Health Facilities Division again

nominated the old medical clinic for an Energy Star and Tinker was one of seven recipients in Air Force Medical Service to receive a 2012 Energy Star.

"This is an exciting thing and it really matters for us. It rewards the hard work of the medical group," Colonel Bruhn said. "It shows the 72nd Medical Group is focused on helping the environment, not just our patients. We do both of those on a daily basis."

72nd Medical Group personnel moved to the new clinic in July. The previous building was demolished in October.



Spotlight on Success



Final FY12 Annual Energy Management Report to Congress

The FY12 Annual Energy Management Report final "big 3" goal performance numbers for energy intensity reduction (21.2%), renewable energy (5.5%) and water intensity reduction (18.1%) exceeded all requirements. Congratulations to the Major Commands for their ceaseless efforts and these significant outstanding achievements. Our current and forecasted budget environment reminds us we have a more challenging path ahead. It compels all Airmen to increase energy consciousness and to continue to strive hard to optimize our energy resources to ensure mission success. These numbers were submitted to OMB and Congress on 31 Jan 2013. (Mr. Camacho, HQ USAF/A7CEN, DSN 612-4249)

Energy Experiment Series - Infrastructure Workshop

The Infrastructure Workshop is a 2033 wargame scenario to explore the complexity and vulnerability of USAF energy dependence, assess the impact of energy initiatives on future USAF systems/bases, and assess the network of energy partners/collaborators. Initial

design of the workshop's three focus blocks (installation complex, logistics, and CONOPS) is underway with review of the draft research questions, focus block composition, team composition, and draft schedule. As the war gaming scenario is developed more Air Staff participation will be recruited as required to participate in weekly development meetings. The Infrastructure Workshop will be held April 9-10, 2013. (Maj Rollman, HQ USAF/A7CEN, DSN 222-9688)

Air Force Energy Reporting System Training Database

The training database for the new AFERS 11g release is now available. AFERS users should contact their AFERS SSA for access to the database. The SSA should select: Application: AFERS Training, Database: AFERS (TRAINING). The user should then register SSA-assigned username via "TAFERS" in the Security Self-Services and Registration page of ACES (Ms. Stone, AFCEC/CNA, DSN 523-6556).

FY13 Energy Evaluations

AFCEC held an initial "introduction" telecon to begin beta-testing for the new Energy Evaluation Playbook. Five installations will complete their 2nd-cycle energy evaluations in FY13, implementing new procedures that leverage their initial Energy Audits and use Energy Managers/REMs to accomplish the assessments (w/ centralized support as needed). The beta-test installations are Columbus (AETC), Hill (AFMC), Osan (PACAF), Vandenberg (AFSPC), and Tyndall (ACC). AFCEC will incorporate lessons learned into the playbook in order to ready the energy evaluation program for implementation in FY14. (Mr. Scott, AFCEC/CNA, DSN 523-6302)

FY14 Energy Conservation Investment Program Projects

OSD released their project selection for the FY14 ECIP. The total funding estimate for all services is \$150M. OSD selected 12 Air Force projects totaling \$34.8M. AFCEC will now begin finalizing the designs for the approved projects to be ready for construction funding and awards in FY14. (Mr. Byrnes, AFCEC/CND, DSN 523-6464)



Reach Back Center
(888) 232-3721 DSN 523-6995
AFCEC.RBC@tyndall.af.mil

The Energy Express is a publication of the Air Force Civil Engineer Center, Tyndall AFB, Fla.

Please send your comments, story ideas, and photos to amy.ausley@tyndall.af.mil, DSN 523-6492.

AFCEC Director Mr. Joe Sciabica

AFCEC Deputy Director Col David L. Reynolds

Director of Energy Mr. Ken Gray

Public Affairs Ms. Amy Ausley
Ms. Jennifer Elmore

Graphic Designer Mr. Jeff Pendleton